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W. H. Hardy

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TWO YEARS IN PERU,

WITH

EXPLORATION OF ITS ANTIQUITIES.

BY

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WITH MAP BY DANIEL BARRERA, AND NUMEROUS ILLUSTRATIONS.

IN TWO VOLUMES.

VOL. I.

London:

SAMPSON LOW, MARSTON, LOW, & SEARLE,
CROWN BUILDINGS, 188, FLEET STREET.

1873.

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TO HIS EXCELLENCY

SENOR DON MANUEL PARDO,

PRESIDENT OF THE REPUBLIC OF PERU,

THE ADVOCATE OF PROGRESS,—SCIENTIFIC, INDUSTRIAL, AND
COMMERCIAL,—

AS WELL AS THE INAUGURATOR OF A NEW ERA IN THE
GOVERNMENT OF HIS COUNTRY,

THESE PAGES ARE RESPECTFULLY DEDICATED,

BY HIS OBEDIENT, HUMBLE SERVANT,

THE AUTHOR.

PREFACE.

So many works have been written and published about Peru—from the MSS. of the lawyer Polo de Ondegardo, A.D. 1550, and the fabulous trumpeting in the Commentaries of Garcilasso Inca de la Vega, A.D. 1609, down to the “goody-goody” pages of Dr. Baxley, in 1865—that another may be considered a superfluity.

But Peru has still, within her territory, a mine of archæological lore, as inexhaustible as her treasures of silver and gold. Every one, therefore, who can add his share to the general stock, helps, as Mr. Gladstone happily expresses it, “to piece together, as children do with a pattern map, the fragmentary annals of the past,” and needs no excuse for presenting his mite to the public.

Such an immense amount of error, and exaggeration has been pressed into nearly every volume on Peru which I have read, that I find it difficult to guess, where imagination ends, and reality begins. The whole aim and end of the early Spanish writers seem to have been to puff the Incas as so many "inimitable Crichtons"—to represent them as grand, and perfect in everything—in the discipline of their government, their laws, hospitality, arts, and unlimited treasures of gold, as well as silver. I do not insinuate they did this to attribute more glory to the few hundred soldiers under Pizarro, who subdued the Inca empire. But in doing it, they tried to wipe out all knowledge of the tribes, who occupied Peru previous to the Inca period. So that it is chiefly from what we see of their architecture, and their fine arts, that we have any knowledge of these prehistoric people, nearly all of whose works are erroneously credited to the Incas. All these golden treasures from Chan-Chan, wrought by the Chimoos; the exquisitely dyed cloth from the burying-ground at Huacho; the great forts erected behind the modern Trujillo, as well as those at Chatuna, near San José,—at Paramunca,—in the

Huatica valley, within a few miles of Lima,—at Pacha-Cámac, Cañete, and several other places—are set down by every one to the credit of the Incas. Whilst the latter had no more to do with them, except in hastening their destruction, than any of my readers has had to do with the building of ancient and historic Troy.

It may be scarcely necessary for me to state that, when I first went to Peru in April, 1871, I was in the Inca groove, like most people who take an interest in Peruvian literature. But as soon as I examined,—inquired,—observed,—by travelling along the coast from Arica to San José—a seaboard of beyond a thousand and ten miles—interior farther than Arequipa,—to Ica,—through the Jejetepeque valley,—and up to Maçhucana, I felt convinced that the relics of art and architecture, between the first line of Cordilleras and the Pacific, belong to a time far and away before that of the Incas. Moreover, there appears to me no evidence of the Incas having ever done anything in the parts just named, but to destroy and blot out. The reputed Temples of the Sun, behind Trujillo and at Pacha-Cámac—both visited by me—I believe to be mythical as to accredited

character; and the fortress at Paramunca (in the absence of further proof than the *ipse dixit* of Garcilasso de la Vega, or Dr. Mariano Edward Rivero) I cannot consider as ever having been built to celebrate the Inca's victory over the King of the Chimoos, but to have been erected and garrisoned by the Chimoos themselves. An accurate examination of the large forts, as well as the colossal huacas—rivals with the pyramids of Egypt—in the neighbourhood of Lima, confirms me more and more in these points of faith. But every reader will, of course, claim the privilege to judge for himself, from the facts that I place before him.

I therefore confine myself, as much as possible, in the following pages to what came under my own personal observation;—rigidly avoiding that tendency to gasconade, and magnify, which the proximity of the towering Andes seems to communicate, by endemic sympathy, to all those who come within the influence of their shadows.

For the indefatigable aid, and assistance, in my explorations, rendered by my young friend Mr. J. B. Steer, who, as a naturalist, was travelling for the University of Michigan—and a proud Alma Mater

it should be too if it have many sons such as he! —I cannot find words to express my thanks. He accompanied me through the Huatica valley, as well as amongst the ruins about Chosica, and at Pacha-Cámac,—doing such work with the pick-axe and spade as only a man of iron constitution, and with sympathies in the task, could do.

To Doctor Don Antonio Raimondi, of Lima—one of the most eminent scientists in Peru—I am deeply indebted, for the loan of numerous works of reference, and objects of Art from the Museum of the Facultad de Medicina, as from his own private collection. For a like obligation, I return my thanks to Senor Don Miceno Espantoso, one of the directors of the National Bank of Peru.

The excellent photographs, taken especially for this work, by Mr. V. L. Richardson, of Lima, will speak for themselves. The same may be said of the pencil sketches,—chiefly of ruins in the Huatica valley,—by a young artist, native of Bolivia, Senor Don José Maria Zaballa. And lastly, the etchings of Pacha-Cámac, by Mr. John Schumaker, of Valparaíso, must not be forgotten.

There are two coincidences in this work on which I desire to remark here. The first refers to the fact of having introduced amongst the chapters about Calláo, considerable extracts of my reports on its trade—that for 1870-71, as well as that for 1872—although these were published amongst the Commercial Reports from her Majesty's Consuls, received at the Foreign Office, and presented by command of the Queen to both Houses of Parliament. I have made this transfer as well,—because they are the first Consular Reports on the subject of trade in Calláo, that were published up to the time of their appearance in the respective dates named,—as that I hope to introduce the features of Peruvian commerce to a wider circle of readers, than is generally supposed to be conversant with the literature of Blue Books.

By the second I have to explain, that some articles from my pen, inserted in the *Calláo and Lima Gazette*, as well as in the *South Pacific Times*, during my residence in Peru, have been introduced into the parts of this work, to which they correspond. Of these newspapers—so useful to the English-speaking community, as to the interests of Peru (at home and abroad).—the latter-named

supplanted the former; and both were established by Mr. Lawton during my residence in Calláo. But all the extracts taken therefrom (except where quoted in the usual orthodox mode, with inverted commas), are limited to my own contributions, and in every article, where needed, are abridged or corrected.

To conclude. Peru, under the administration of her citizen President, has entered on a new era. The coming to power of a man so enlightened as Don Manuel Pardo, and the annihilation of the military despotism, which has hitherto kept the Republic in the background, are hopeful presages. With these we have the daily-increasing commercial spirit, chiefly called into life by the Pacific Steam Navigation Company's able, and indefatigable manager, Mr. George Petrie. Through the inexhaustible energy and enterprise of Mr. Henry Meiggs, Peru has a greater length of railways than any other South American Republic, or even than Brazil. She has reformed municipalities,—made grants for bringing out schoolmasters from Europe,—is putting forth educational and scientific schemes,—proposes outlay for immigration purposes,—and through Con-

gress, as well as her Executive, is presenting to the world the *tout-ensemble* of a regenerating progress,—needing only the security of permanent tranquillity to make her hold a primary position amongst the nations of the world.

London, November 1st, 1873.

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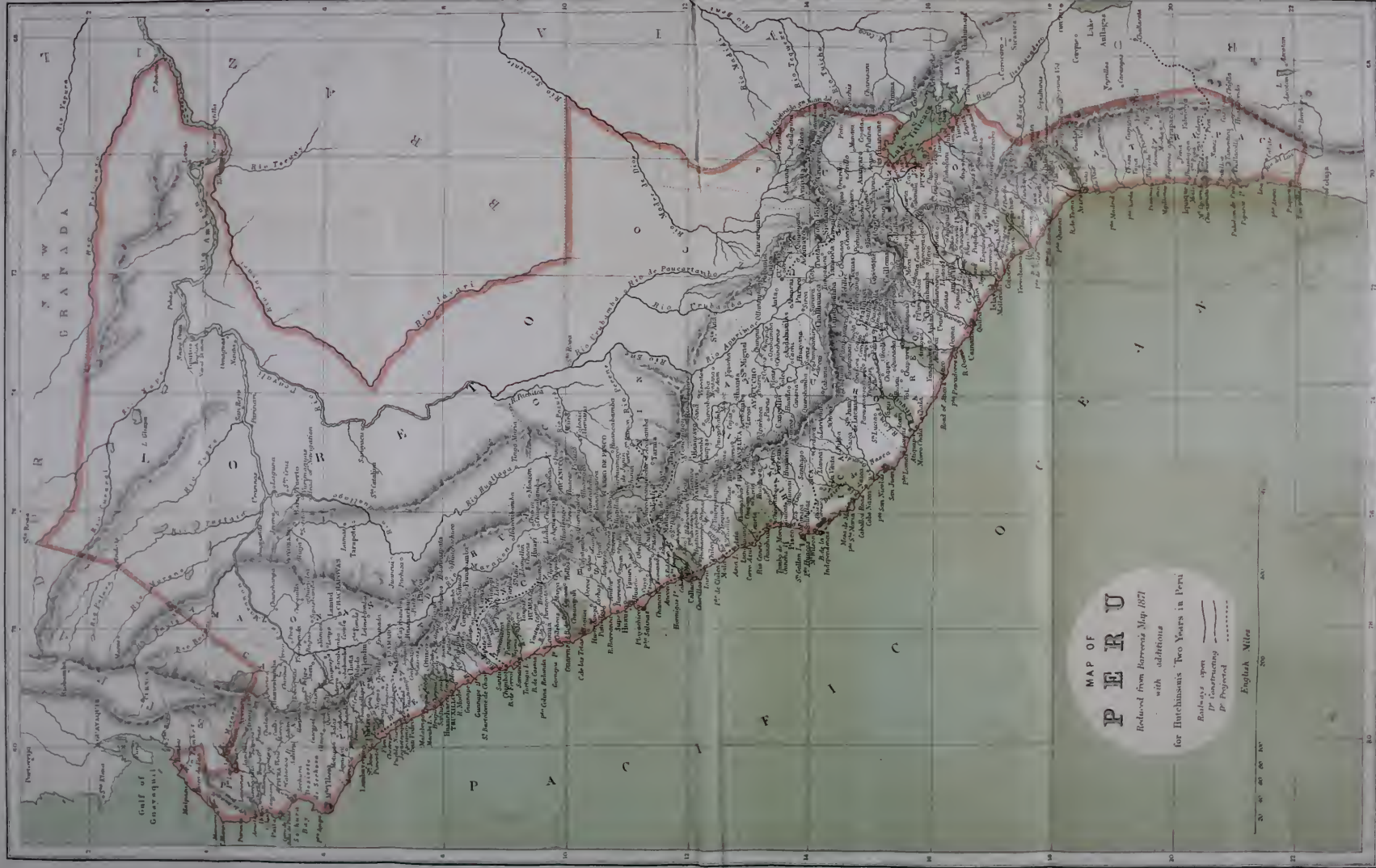
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MAP OF
PERU

Reduced from Barrelet's Map 1877
with additions

for Hutchinsons Two Years in Peru

- Roads &c open
- Under Construction
- Physical

English Miles

TWO YEARS IN PERU.

CHAPTER I.

Outward from Liverpool.—Unusual smoothness of the Irish Channel, and Bay of Biscay.—To Bordeaux, Lisbon, and Rio de Janeiro.—Passing the Rio de la Plata, and entering the Straits of Magellan.—Patagonians and Fuegians.—Peculiarities of scenery passed through.—La Colonia or Punta Arenas.—Murder of British Sailors.—Missionary enterprise at Tierra del Fuego.—Admiral Fitzroy's description of the Natives.—Gold at Colonia.—Civilization of boots.—Beauty of mountains and of glaciers.—Ancient Explorers.—Loss of pre-historic Indian titles.—*Reductio ad absurdum* of Darby Cove.

OUTWARD bound from Liverpool on the 1st of March, 1871, in that fast and commodious vessel, the Pacific Steam Navigation Company's fine steamer "Cordillera," it was very difficult to realize, during the few early days of our voyage, that we were speeding through the generally-troubled waters of the Irish Channel, and across the dread Bay of Biscay.

All my previous passages of nineteen (to and from England in relation with Western Africa and South America) had been made in these latitudes, under the accompaniments (in a greater or less

degree) of equinoctial gales, head-winds, and stormy seas, with their invariable sequence to me of sea-sickness. The smooth ocean, therefore, seemed now to be quite another element. How some of the new hands doubted on the morning of the third day, when, anchor being cast for a few hours in the river Garonne, six miles below Pauillac, to communicate with Bordeaux, as they talked over Dickens's graphic account of sea-sickness in his "American Notes." And the majority came to the conclusion that, if the account of Boz referred to any state of affairs in *that* Atlantic, of which we had had three days' trial, his description was only as much of a romance as any of the marvels of Baron Munchausen, or the extravaganzas of Lilliput. Such a condition, they said, as was described of the "head-wind,"¹ under which the novelist suffered, was simply a physical impossibility in the unruffled water, over which they had just passed from Liverpool.

From the Garonne to Lisbon we touch at the Spanish port of Santander—a wild-looking region, with the hills of Bilbao to the north, and those of Asturias to the south—whilst, as if in punishment of premature presumption, the "Cordillera" had twenty-four hours of regular Atlantic acrobatting between Santander and Lisbon: so much so, indeed, that not a few of the doubters felt disposed to believe in Dickens after all.

¹ "American Notes," Philadelphia Edition, p. 20.

The Pacific Company's steamers call at Santander—chiefly for the purpose of bringing out Basque, Italian, and French emigrants to the River Plate. From Lisbon, too, they carry no small contingencies of the Latin elements in the same direction.

The journey to equatorial latitudes, with its trade-winds, tornadoes, and flying fish; its phosphorescence of the sea by night, with general monotony during the day; the effect of the sun's great heat as well as extent of water, bounded by the bright blue sky; and the small speck of our steamer in such an immensity; have been so often described as not to need being repeated. The magnificent bay of Rio de Janeiro, the next place of stoppage, is familiar to all travellers in the South Atlantic. Lower down, too, in the Rio de la Plata territories,² the run of enthusiastic "gentle shepherds" and aspiring colonists has, for some years, made the Platine countries a beaten track. But when we pass the La Plata, with its broad embouchure of 300 miles across, and approach the Patagonian region,—the mysterious vicinity of Tierra del Fuego, as well as that caldron of the mariner, the terrible Cape Horn, one can scarcely help feeling that he is entering a part of the world which, to no small portion of mankind, is still a *terra incognita*.

² *Vide* Author's two works, "Buenos Ayres," &c., and "The Parana," published by E. Stanford, 6, Charing Cross, London.

When my colleague, Captain Burton, was at my house in Rosario, *en route* to Paraguay, during the year 1868, and spoke of his recent return from the West Coast of South America, he observed that "the beauty and grandeur of the Straits of Magellan were worth being shipwrecked to enjoy, if no other means of seeing them could be had recourse to." The character which all the neighbourhood bears for cold, comfortless, rugged nature, made me rather doubtful of sympathy in such an idea. But *nous verrons*.

From Monte Video downwards, the steamer's track is out of sight of land, except of a long, low bank in the province of Buenos Ayres, about 215 miles from the mouth of the Rio de la Plata, styled Mogola Spit. In four days after our starting from the capital of the Republic of Uruguay, we arrive at the entrance to the Straits of Magellan. Here we are met by the usual kind of stormy weather and huge seas, believed by many to be hereditary to Cape Horn and its surroundings,—by floating seaweed, and flying albatrosses. Here, too, we have an illustration of the grand scale on which everything of the physical world is formed on these American continents; for the entrance has more of the appearance of a large gulf, than what we are accustomed to associate with a Strait or narrow passage.

As the sun rises on the morning of the 2nd of April, the extended coast-line to the north and

west of Cape Virgins is of a bright yellow hue, though bare of trees or vegetation of any kind. When we go in,—leaving Dungeness Spit to the right, and in sight of Cliff Hill, with Mount Dinero in the background,—the extent of the entrance strikes me as more palpable. For the low land to the left, laid down in the chart as Cape Espiritu Santo, or Cape Holy Ghost, appears in the early haze of day to be at least from thirty to forty miles away. But our affable second mate, Mr. Brigstock, always ready to do any calculations or find out any information for me, proves by the map that only seventeen miles and a half intervene between Dungeness Spit, and Cape Holy Ghost,—whilst from the former to Catherine Point we have merely fourteen miles and a half.

Passing Possession Bay, in which we overtake, and leave behind, a Russian war-frigate, with an admiral's pennant at her main, the "Cordillera" enters the first narrows, which constitute a channel of eighteen miles and a half in length, and at part of it only two miles in breadth from shore to shore. Then through a large water-space, called (on the right as we go along) Saint Iago Bay and Gregory Bay—on the left Philip Bay. Hence we get into the second narrows, a length of thirteen miles, and a breadth of four miles at the most contracted part from shore to shore.

From the entrance of the straits up to this on either side no sign of tree, or shrub, or life, human

or animal, is visible anywhere. Save a few sea-gulls that only add to the utter desolation of solitude on all that extent of the coast.

Cropping up to the right, to the left, and in front, as we go along, are rocky prominences of different shapes and sizes, at times having the semblance of islands; but as we approach, the greater number of them are found connected with the *terra firma* either of the Fuegian, or Patagonian shore. For they form the projecting spurs of that great chain of volcanic wonders, which ranges from Tierra del Fuego, through the Cordilleras and Andes of South and Central America, and on beyond the Rocky Mountains, in the United States.

It was night when we arrived at Punto de Arenas, or Sandy Point, on the Patagonian shore, a distance of 125 miles from the entrance. This is a place of call for the mail steamers of the Pacific Navigation Steamship Company, on their way to and from Liverpool, and the West Coast, as high up as Callao. It is likewise a penal colony of the Chilian Government, and its whole population numbers only 850.

As our time of stopping here was very short, I did not care to go on shore, and a photograph of the place, which I subsequently procured at Valparaiso, did not cause me to feel that I had lost much in the way of sight-seeing by not visiting this dreary spot.

The Governor, Senor Don Oscar Viel, a French-

man, whose father served under Napoleon at Waterloo, came on board, and from him I picked up a few items of information about the place. Coal has been found here, and the mine is being worked, but not, I believe, with much success as yet; chiefly because the article realized up to the present is of a rather inferior quality. Quite close to the small compound or canton is a little river, called the Arroyo de las Minas, from which gold can be gathered, as Mr. Viel informs me, "in any quantities." But unfortunately the people are too lazy, and indolent to take the trouble of searching for it, unless when the impulse or necessity for supply comes on them. As illustrative of their idleness, the Governor told me that recently he had offered to some men in the place a dollar each man (or 4s. 2d.) for a few hours' work to put coals on board a ship, but they declined to take, or rather refused to work for it. Yet within the last year 18,000 dollars' worth of gold was sent from this to England.

The jurisdiction of Sandy Point settlement, which is called the Colony, extends along the whole shore of the Patagonian side of the Straits from the Atlantic to the Pacific, and that includes a length of 312 miles.

The Governor informed me that there was an English Bishop residing at Navarin, one of the Tierra del Fuego islands—the most southern of

the lot—and that he communicates from time to time, by means of a small craft at his disposal, with the Falkland Islands. I am rather inclined to think he must refer to Bishop Stanley, whose head-quarters are at the Falkland Islands, but who may now and then visit Navarin.

Every one knows of the missionary enterprise to Tierra del Fuego, undertaken by Captain Allen Gardiner in 1850, and of the horrible sufferings of the party he left there, who died of starvation in 1851. Yet another expedition of the same kind was got up in 1854, which sailed from Bristol under command of Captain Parker Snow. This latter had to be abandoned, after many attempts to form a mission here. Indeed, it is very difficult to hope for success of missionary efforts amongst such people as the Fuegians are described by Admiral Fitzroy in his volume of the “‘Beagle’s’ Adventures round the World.” “The Tekeeneca,” he says, “natives of the south-eastern portion of Tierra del Fuego, are low in stature, ill-looking, and badly proportioned. Their colour is of very old mahogany, or rather between copper and bronze. The trunk of the body is large in proportion to their cramped and crooked limbs; their rough, coarse, and extremely dirty black hair half hides, yet heightens, a villanous expression of the worst description of savage features. The Yakanny-Kurmy, natives of the north-eastern portion of Tierra del Fuego, resemble the Pata-

gonians³ in colour, stature, and (except in boots) in clothing. They seem now to be in the condition in which the Patagonians must have been before they had horses. With their dogs, with bows and arrows, balls (bolas), slings, lances, and clubs, they kill huanacos, ostriches, birds, and seals.”

That they are getting up a taste for boots may be inferred from what they did to the legs of an unfortunate master-mariner a few weeks before our passage through, and which was thus related to me by the Governor. At the time, the English schooner “Propontis” was at anchor in the bay after returning from the scene of disaster, and without her luckless captain.

It appears that the master of the “Propontis” had his vessel anchored close to the Patagonian shore, near Cape Gallant, when some of the Fuegian Indians in their canoes came off, and were climbing up the ship’s side without any previous parley. They were driven off with poles and hatchets, and, strange to say, retreated to the Patagonian beach. Stranger still, and with a sort of perverse fatuity, next morning the captain went ashore with two of his crew and a boy,—all unarmed,—to get water; landing at the distance of

³ Of the Tehuelches, or true Patagonians, the reader may see a memoir of mine about them read at the Ethnological Society, London, Professor Huxley in the chair, in the year 1868, and published in vol. vii. of “Transactions,” p. 313.

only a few hundred yards from where the Fuegians disembarked. Some days passed; none of the party returned; and the boat had likewise disappeared from the part of the beach to which it had been attached. The mate went in search, when he found, not very far from where they had landed, the four bodies murdered, and dreadfully disfigured; the unfortunate captain with his skull stove in as if from a club,—a deep wound in his side, from which had come out his life-blood, and his legs cut off. This last was supposed by the mate to be accounted for by the fact, that he was the only one of the party who wore sea-boots.

We were under way again at eleven p.m., and steamed along the channel at half-speed. It was bright moonlight; and, indeed, under no other circumstances could such a tortuous navigation be effected during the night.

At six o'clock next morning we entered English Reach, and passed close to where the hapless master of the "Propontis" had been murdered. Here, and for a considerable distance forward, the channel is not more than from three quarters of a mile to a mile across. But it seems to me doubtful whether I should write of the mountain scenery around as beautiful and picturesque, or as savagely wild in the desolation of its aspect. Now we have all the hills in the background, covered with snow to their peaks, whilst those near to the

sea are clothed with stunted brushwood down to the water's edge; ravines, valleys, cliffs, glaciers, boulders, as well as islands, creeks, and bays on both sides. Whilst the rising sun makes the snow-capped mountains, in many places, appear as if they were decked out with shining laminae of silver and gold. The beauty and variety of colours, caused by the refraction of the sun's rays on the snow, combined with the varying shade from cloud, and rock, and tree, together with the sombreness of ravines, where the dark green of brushwood muffled the solar light, was pretty in the extreme. Many of the mountain-tops, away in the distance, glistened as if they were fretted with diamonds, whilst the sun was rising a little higher. Passing by Whale Creek we saw the effect last mentioned in its most perfect beauty.

A little farther on there appeared, at the southern side, in a small bay, a column of smoke, indicative of a fire being lighted up. This was on the Fuegian shore; but no sign of humanity was anywhere. As we proceed, the black heads of seals occasionally pop over the water, whilst now and then one or two of the paddle-wheel ducks are seen at a distance.

Around the upper end of English Reach, there appears in front, and as if blocking up our passage, a mountain mass of snow-capped pinnacles of various heights, on which the sun shone with a resplendent glare. This is where we enter Crooked

Reach (in which glaciers abound), by proceeding up the passage to the left of the mountain just



VIEW OF MOUNTAINS AND GLACIERS IN MAGELLAN STRAITS.

mentioned; whereas the channel to the right, though to our view backed by a lofty Cordillera, leads up to what is represented on the chart as a large bay, called Otway Cave, in the Patagonian territory. It is such a short reach, that, at the distance of a few hundred yards ahead, we can see no channel; and, looking back to the same distance, we seem equally land-locked behind. There is little or no snow on the hills that skirt the water, whilst those in the interior, to the very farthest range behind, are covered to their summits.

All through Long Reach, by Swallow Bay, Condesa Bay, Stewart Bay, and past Cape Notch, the mountain scenery is the same as that represented in the illustration of Crooked Reach. An excellent panorama of the journey through Magellan was done by Commander Kennedy, R.N., of H.M.S. "Reindeer," which has been photographed by Mr. Richardson of Lima.

At the end of the Reach last mentioned we turn to the left, past the entrance to the Gulf of Xaultegua, and on the left of that by which we are proceeding we skirt by what is called the Cordova Channel, which leads out at the southern end of Desolation Island⁴ into the Pacific Ocean. On the same side of this passage is a large island, called Santa Ives, island of Sarmiento. Between Swallow Bay and Cape Notch, on the Tierra del Fuego side, are more glaciers, the dark blue, solid glitter of which has little of attraction in them. On the right-hand side of our passage here is another collection of pinnacles, to which I am told is given the name of Westminster Hall. Coming within view of Cape Pilar, in its gigantic haystack form, we see before us the Pacific Ocean; and, though much gratified at having, during some portion of my life, been able to make a transit through these Straits, I am not at all disposed to agree with Captain Burton, that there

⁴ On this island the Pacific Navigation Company's steamer "Santiago" was wrecked in 1870.

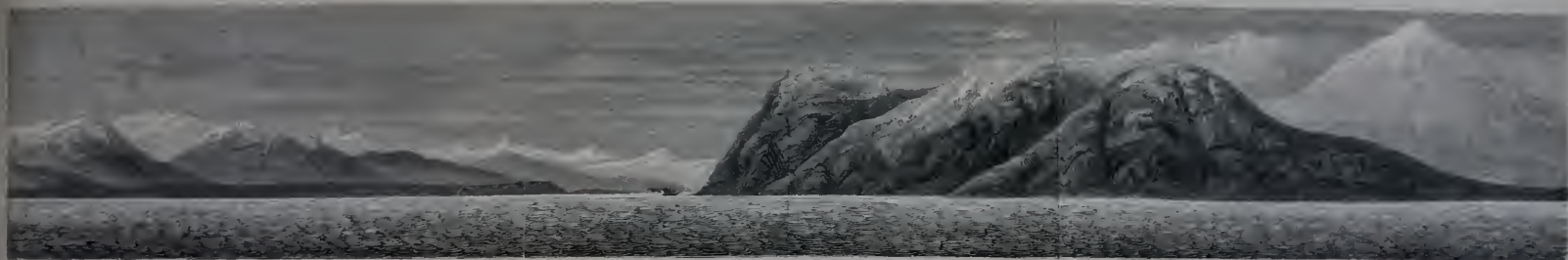
is anything in the whole voyage, which would compensate for the inevitable discomfort, and annoyance of being shipwrecked there.

Although many a famous sea-captain has won laurels in this desolate region, since the bold Spanish navigator, Fernando Magalhaens discovered the passage in A.D. 1519, none could have had the difficulties to contend with that he encountered. The whole voyage through brings to mind memories, not only of him, but of his successors in the exploration—of Frezier, of Captain Basil Hall, Sir Francis Drake, Admiral Fitzroy, and Professor Darwin. The names of bays, points, islets, anchorages, and other topographical bearings are nearly all given by the early explorers—of Saints by the Spaniards—of more practical nomenclature by the English. But of the old pre-historic titles few are preserved. We have, however, the gulf of Xaultegua at the northern end of Long Reach,—the bay of Apuilqua, not far from Cape Ildefonso—the port of Cuaviguilga, contiguous to the latter, and the harbour of Pachachuilga to the westward of Echenique Point. To one who thinks as I do, that these old Indian names (although in cases unintelligible as to their philology) have a grand Homeric ring in their pronunciation, it may seem but a step from the sublime to the ridiculous to go from Pachachuilga as we do, through the port of Churruca to the sheltered anchorage in Darby Cove. What a pity there was not some other

STRAITS OF MAGELLAN.

[From a Sketch by Commander W. R. Kennedy, R.N., H.M.S.S. "Reindeer."]

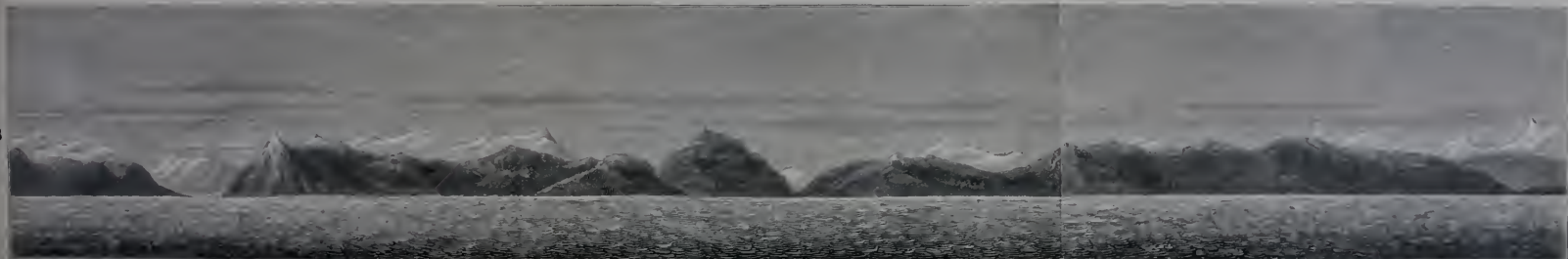
A



PASSAGE TO AND FROM ATLANTIC.

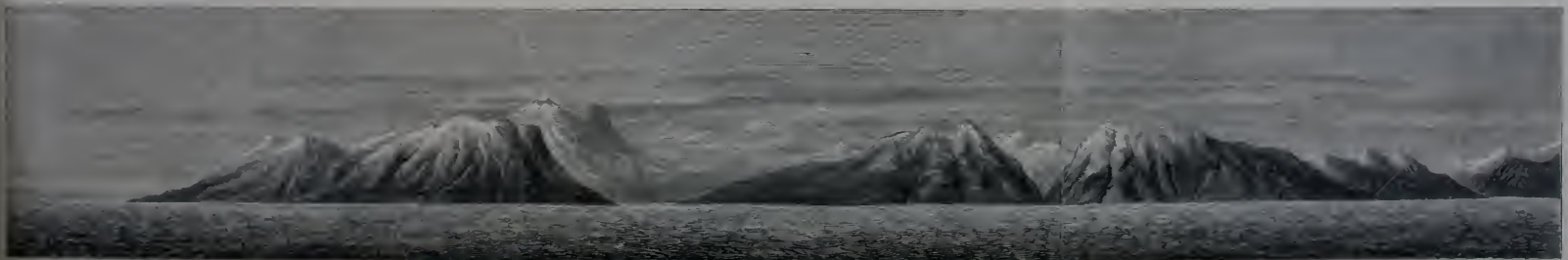
TIERRA DEL FUEGO.

B



PATAGONIAN SHORE.

*Continued
from
A.*



ENTRANCE TO PACIFIC.

EXIT FROM MAGELLAN STRAITS.

*Continued
from
B.*

inlet thereabouts discovered, to which the title of Joan Creek could have been given!

I was very much disappointed, as we approached the end of the Straits, at not having seen any of the Fuegians. From what I had been told by our purser, M. Ditchfield, who had often come across them, I cannot doubt their being the veriest of savages. They wear no clothing except a bit of seal-skin on the back; they live in caves and under rocks, subsisting chiefly on shell-fish; but, when driven to famine condition, they eat their old women. They have canoes made of rushes matted together, and lined with seal-skins. Always with a fire in the canoe, the women do the paddling after the fashion of New Zealanders; their paddles are only like slices of wood. No estimate can be made of the population of Tierra del Fuego; it is guessed at 2000, but this can only be a random calculation.

Tierra del Fuego is a large archipelago, consisting of several islands, on some of which, as those of Sarmiento and Mount Darwin, are mountains of from 6000 to 8000 feet high, covered with perpetual snow.

CHAPTER II.

Misnomer of Pacific.—Geographical extent of Chili.—Chiloë and adjoining Archipelagos.—Valdivia and Lord Cochrane's bravery.—Coronel and the coal-mines at Lota.—The Arauco country and the Araucanian tribes.—Arrival at Valparaiso.—Its bombardment by the Spanish squadron in 1866.—Earthquakes in Valparaiso.—Cleanliness of the city.—The Resguardo, Exchange, and Tramway.—Foreigners' Clubhouse and Market-place.—Drive to the Railway Station.—The Estero de las Delicias.—Excellent arrangements of this Station.—Scarcity of Water in Valparaiso.—Waterworks established by Mr. William Wheelwright.—Railway traffic trebled since 1855.—First triumph of Mr. Henry Meiggs.

ROUNDING Cape Pilar, and coming out into the ocean, I was at once impressed with the idea of this having a *lucus a non lucendo* style of name, in being called the "Pacific." It was blowing a gale worthy of the Bay of Biscay in its equinoctial mood; the sea was rough and the ship was rolling; whilst rain fell as I never saw it fall before, except on the West Coast of Africa. Not very long after going out we met the Pacific Navigation Company's steamer "Patagones," bound to Liverpool, but we only lowered our flags to each other, as the weather was too distressingly bad to stop for any other exchange of courtesies.

Now we are speeding along by the southern part of Chile. This Republic has a coast extent on the Pacific of more than 700 leagues, or beyond 2000 miles. It is said to contain within its territory thirty volcanoes, none of which are permanent, but all having from time to time their episodes of eruption.

To day (April 6th) we are steaming past Chiloë, one of an archipelago of islands. There is no inconsiderable traffic between it and Valparaiso. On looking at the map I find that, since our exit from the Straits, we have passed other archipelagos, as those of the Madre de Dios, the Taytao archipelago, and the Chonos. Somewhat north of Chiloë we skirt the colony of Valdivia, where there is a large settlement of prosperous Germans.

This last-named place has, however, historic reminiscences connected with it, which no English writer should pass by unnoticed. For it was the scene of one of the most gallant exploits of a noble Englishman, whose name must ever have an imperishable halo around it on the shores of the Pacific—I mean the brave Cochrane, Earl of Dundonald.

Early in 1820,¹ and whilst fighting for the Independence of Chile, Cochrane conceived the daring plan of carrying Valdivia by storm—the place at the time being a strong Spanish garri-

¹ See "Chambers' Miscellany," vol. iii.

son. Circumstances beyond his own control had checked him at Calláo (of which I shall speak hereafter), and he now resolved on something completely in his own style. "Cool calculation," he said to General Miller, "would make it appear that the attempt to take Valdivia is madness. This is one reason why the Spaniards will hardly believe us in earnest, even when we commence; and you will see that a bold onset and a little perseverance afterwards will give a complete triumph; for operations unexpected by the enemy are, when well executed, almost certain to succeed, whatever may be the odds; and success will preserve the enterprise from the imputation of rashness." The result proved that these tactics were right. He had with him only a frigate, a schooner, and a brig. On the way down from Valparaiso he narrowly escaped shipwreck in the frigate, and only kept the vessel afloat by continual pumping—Cochrane repairing the pumps with his own hands.

Valdivia, a noble harbour, was defended by a chain of nine Spanish forts; each fort had a ditch and rampart, and the whole mounted 118 guns, manned by 1600 troops. This was, indeed, a formidable place to attack with three small ships. The forts were, however, much isolated, with very indifferent passages between them. Cochrane, therefore, planned with Miller to attack them singly, which was done with astonishing success. In truth, the Spaniards

were so dismayed at the audacity of the attempt on the night of the 3rd of February, that they failed to make due resistance. Fort after fort fell to the invaders; and on the 5th, Valdivia, with the whole of the forts, surrendered to Cochrane. Large quantities of stores were captured, as well as much treasure.²

Pursuing our voyage, on the 7th of April we entered the harbour of Coronel (or the Colonel), in the Bay of Arauco, where there are coal-mines in full work. At each side of the bay in Coronel, which is almost land-locked, except from the narrow entrance at the south, the coal-mining industry is carried on with much vigour. The mines on the right-hand side, in the district of Lota, as we enter, produce from four mines 100,000 to 120,000 tons in the year. Those to the left, in the locale which is entitled Puchoco, realize 80,000 tons per annum from three mines. At Lota, mining operations were initiated in 1850, whilst at Puchoco they were not begun until 1859. There is a small town of Coronel at the Lota side, with about 3000 inhabitants. I was only for a short time on shore here, mounting up to the top

² Up to Valdivia on the Chilian side, and to Point Rosa not far below Bahia Blanca, on the Atlantic, the Chilians claim territory for the Colony,—bounded on the north by the Rio Negro, and on the south by the Straits of Magellan. This, however, is not acceded to by the Argentine Republic, for to the south of Rio Negro is the Welsh colony of Chupat, under the protection of the Buenos Ayres Government.

of a hill, overlooking the sea at the Puchoco establishment.

The country interior to this Bay of Arauco³ is inhabited by the Araucanian Indians, whose possessions, not yet completely submitted to the authorities of the Chilean Republic, are bounded³ on the north by the line of fortifications of the river Malleco, the Andes to Angol, at the foot of the central range of Nahuelbuta, and towards the centre and west of that range by the new military establishments of Puren, Cañete, and Lebu; on the east by the Cordillera of the Andes; on the west by the Pacific, near to which have been founded a series of small towns all along the coast. It is finally bounded on the south by a line drawn from the *morro* (bluff) Bonifacio, at the entrance to Port Corral, in the province of Valdivia, which follows a north-easterly direction as far as the river Mehuin, and from thence in a south-easterly direction as far as the right bank of the river Calle-Calle, where it joins the Malilhue, a little to the east of the mission of Quinchilca. It continues from thence along that river to the Andes. Its northern limit is therefore situated to the south of the first line in lat. $37^{\circ} 51'$, and its southern in lat. $39^{\circ} 40'$.

Fort Purco is situated to the south of the first

³ From a pamphlet on the Araucanian territory, published in 1870, by Messrs. Cox and Taylor, of Valparaiso, "On the Araucanian Indians."

line, in lat. $38^{\circ} 10'$, whilst the second valley of the river Cruces is occupied by civilized people as far as the village of San José, which is located in lat. $39^{\circ} 28'$.

The configuration of this vast territory bears a very marked analogy to the rest of the Republic. The two natural barriers which enclose it to the east and to the west—the Andes and the sea—give to it the form of a long and narrow strip, or rather that of a great parallelogram, very regular in its form.

The Araucanians consist of six different tribes—

1st. The Arribanos, or Muluches, who inhabit the slopes of the Andes, and are more ferocious than the rest of the Indians. These are the gentry who make inroads into the Argentine Republic, from the estancias of which they sweep countless herds of cattle.

2nd. The Abajinos, who inhabit the eastern slopes of the Nahuechuta range of Andes, and who are of the same *Arcades ambos* pattern as the Arribanos.

3rd. The Costinos or Luvquenches, who are found in the proximity of the Coast from Lebu southwards. These are spoken of as being very quiet people, on account of the moral force, in a physical point of view, of the various military establishments in the shape of forts, that exist to keep them in awe.

4th. The Huilliches, to the south of the Cantin.

5th. The Huilliches to the south of the Tolten. Yet it puzzles me to understand why people of the same name should be divided into two different tribes from the accidental division of a river.

Both of these last-named are agriculturists, and breed cattle—both have blacksmiths and silversmiths amongst them, and both manufacture ponchos. Further, I am told that “these tribes, from the circumstance perhaps of their inhabiting the most central part of the territory, are the most independent of all the Araucanians. It is, however, generally believed that, if colonial settlements were founded in their vicinity, it would be a comparatively easy task to bring them completely under the influences of civilization,”—a conclusion with which I regret that I cannot agree.

There is a 6th tribe, the Pehuenches, who inhabit the plains situated in the interior of the Andes, and the slopes of the Cordillera. All the tribes inhabiting the Araucania territory would seem to be of one race. They are of moderate stature, robust and well formed, agile in their movements, of a dark copper colour, and slight beards. Amongst the Maquga Borea, and others, are often-found examples of extraordinary height, of fair complexion, light-coloured eyes, and such characteristics, indicating that they owe their origin to a different race from the Araucanians.

Like all the Indian nomadic tribes, their govern-

ment consists of settlements, to which the Spaniards give the title of *Reduções*. At the head of each of these is a *Caçique*, or chief. Under this chief is a lot of *Moçetones*, or warriors, who in times of peace attend to the practical business of agriculture, as well as to looking after the flocks and herds. Several *Caçicazos* (chieftainships united under one common head) constitute what is called a *Butalmapu*. But the authority of a chief of a *Butalmapu* is limited to the most important matters in connexion with war and its prosecution, by and with the advice and consent of the rest of the *Caçiques* met in *parlamento*. There is no regular order of hereditary succession amongst them, their election to posts of confidence being chiefly a matter of personal prestige.

The population of the Araucanian territory must be a matter of the wildest guess-work. I therefore decline to take the estimates from the number of lances that are accredited to each district.

Of the superstitions of these Indians, or of their religious belief, we know nothing, except that they are in the habit of consulting *Machis*, or wise men, to ascertain the cause of death of any one. And as death is always attributed by these sages to sorcery (*Dano*), it is enough to bear in mind the similarity in idea to what we know of the *Egbo* practices amongst the West Africans.⁴

⁴ *Vide* Author's "Impressions of Western Africa." Longmans, London, 1858.

From Coronel (whence to Valparaiso there is an electric telegraph) we skirt by Concepcion, and a number of smaller ports—without touching at any of them—and in less than thirty-six hours find ourselves rounding the sharp-pointed jutting rocks that form the western boundary of the Bay of Valparaiso.

On entering the harbour it is very difficult for the stranger to conceive any aptitude in the derivation of its name—from the Spanish, *Va* (go), *al* (to), *Paraiso* (Paradise); unless indeed the frequency of earthquakes in the time of its early foundation—a frequency continuing to the present day—made its first inhabitants hopeful of getting up every morning in that heavenly Paradise where “the wicked cease from troubling, and the weary are at rest.”

For here, as well as farther north in Peru, the *temblór*, or *terra-mota*, is an hereditary institution. In 1822 the town was nearly destroyed by one of these convulsions; and only a fortnight before our arrival, in the second week of April, 1871, the whole country round, from Valparaiso to Santiago, and as far south as Talca, was shaken,—to the cracking of walls, the throwing of people out of their beds, the breaking of bottles by tumbling them off the shelves, the frightening of population (chiefly the female part) into the open air, and the general appalling terror which such an occurrence engenders. A gentleman who was staying at an

hotel in Santiago during the last earthquake, and whom I met here, told me that his chief idea, when roused out of sleep by the commotion, was that of somebody knocking at all the doors of the hotel. Not far from the house whereat I was temporarily stopping, the cornice of a store, which was in course of construction, had fallen down on the heads of a boy and a girl who were passing by, but who fortunately received only a trifling shock. Valparaiso is built at the base and on the side of a hill, overtopped by rugged sierras, without the shadow of vegetation. The houses above the level ground are scattered far and wide, here and there in groups, now and then in isolated dwellings.⁵

The most important topic discussed with refer-



VALPARAISO AFTER DESTRUCTION OF THE CUSTOM-HOUSE BY SPANISH BOMBARDMENT IN 1866.

⁵ Twice this year (1873) Valparaiso has been twisted about—

ence to Valparaiso for many years after the event was the bombardment of the city by a Spanish squadron under Admiral Nunez on the 31st of March, 1866. The provoking cause of this was said by the Spaniards to be, that the Chilian Government had allowed Peruvian men-of-war to be supplied with coals at the time that Peru was in a quarrel with Spain. Some insults to Spaniards in other parts of the world, and still unatoned for, were likewise brought forward as an urging cause. Valparaiso was not only perfectly unprotected, unfortified, and therefore undefended at the time of the assault, but contained a far greater amount of foreign property than it did of native. The fact of its bombardment under these circumstances, therefore, excited general indignation. The Custom-house was demolished, and more than three millions' worth of property, belonging to foreigners, was destroyed on the occasion.

When you land at the Mole at Valparaiso, you pass under the archway of the Resguardo or Customs guard-house,—and, crossing into a square, turn round to observe that the back of this building is the Exchange. Then, proceeding onwards, no one can fail to be struck with the extreme cleanliness of the streets, and the

its last shock in June, amongst other peculiarities, whirling round, on the pedestal, the statue of Earl Dundonald put up in the previous month of February.

excellent style of the pavement. These two are effected by the untiring energy and activity of



RESGUARDO, OR CUSTOMS GUARD-HOUSE, VALPARAISO.

the Intendente, Senor Don Francisco Echaurren Hindorro, Governor of the Province, and President of the Municipality. All through the line of street along which the tramway runs—the whole length of the town from the Custom-house stores, still unfinished in their revival, to the Santiago railway station—it is the same.

Valparaiso appears like the inner or middle layer of a sandwich—the sea on one side and the cliffs on the other. It is, in fact, a miniature representation of the Chilian Republic, which a glance at the map will show any of my readers seems but as a slice of the great South American Continent. It may be said to have only one principal street, the southern part of which begins near

the market-place, and stretches along northward to the railway station. This is about a mile and



PLAZA OF VALPARAISO, WHEREIN EARL DUNDONALD'S STATUE HAS BEEN RECENTLY ERECTED.

a half in length, and can be done on a tramway for five cents.

As you travel along this street you see overhead, and as if ready to topple down on you, several house groups on the tops of sierras, with *quebradas* (or ravines) intervening. The sensation of looking at these, whilst remembering the possibility of an earthquake at any moment, is far from comforting to a nervous person. On one of these sierras several English merchants have their private residences. The general appearance of the shops and stores, particularly of the French

and English, would do credit to any city in the world.

Water is very scarce in Valparaiso, the only certain supply being that obtained in the water-works, and chiefly resulting from rainfalls. These were constructed many years ago by that indefatigable friend of South America, Mr. William Wheelwright, whose labours in the Argentine Republic, on the other side of the Andes, are too well known to need recapitulation. All through the main street there are many wells, but those are of salt water, and chiefly used by the firemen (of whom there are several excellent companies here) to extinguish conflagrations.

There is a foreigners' club in the city, many of its members being English. They have recently erected an excellent and commodious, as well as very handsome, club-house. Not far from the club-house is a rather small market-place, enclosed and roofed over. On the front gate is an inscription in Latin: "Domini est terra et plenitudo ejus."⁶ It was erected in 1863.

Making a trip in the tramway carriage to have a look at the railway station, the cleanliness is still palpable everywhere. From street to street at the crossings there are wooden culverts, beneath which the water flows (when it is there to flow), without offending sense of sight or smell. As you come to the end of the main street, Calle

⁶ "The earth is the Lord's, and the fulness thereof."

Victoria, you cross a bridge, and then turn at a right angle to the left down to the railway station. This bridge traverses a large river-bed, now dry and empty, but quite as large as the Corral bed in Madeira, before it debouches into the sea at Funchal. Here it is called the "Estero de las Delicias," or the Salt Marsh of Delights—although it is difficult for a stranger to understand the applicability of the title. Hence to its mouth, which abuts into the sea about a quarter of a mile lower down, and quite close to the station, we pass by a number of small bridges, leading over to the tramway track from the streets of the northern end of the town. These bridges are distant only about 50 to 100 yards from each other. Only a few of them are wide enough to admit any traffic except that of foot passengers. The whole course of this Arroyo, or river-bed, hereabouts is walled in with substantial masonry, to prevent the overflow which would naturally result after a great rainfall in the sierras.

The railway station is very substantial in its arrangements, although its space is rather limited, owing to the intruding of a perpendicular cliff, nearly two hundred feet high. It is excellently arranged in its ticket department, engine sheds, workshops, and goods stores, under the superintendence of Mr. Martin.⁷ Since its first

⁷ I regret to record that Mr. Martin died a few months after my arrival at Callao, and subsequent to my having known him here.

opening in 1855, it has more than trebled its receipts in cargo as well as in passenger traffic.

This railway was constructed under a contract between the Government of Chile and Mr. Henry Meiggs, now the famous railway king of Peru, and was one of his first great triumphs on the shores of the Southern Pacific. I use the word "triumph" advisedly, because Mr. Meiggs accomplished what has been rarely done in Spanish South America, namely, completed the work a considerable time before the period prescribed by contract had arrived.

CHAPTER III.

Trip to Santiago, the Capital.—Stations of Quilpue, Limache, and Quillota.—Ormskirk and Shrewsbury reminiscences.—The Maqui Bridge and Tunnel.—Entrance to Santiago.—The Southern Railroad and Baths.—Poplar-trees everywhere.—Square Squares.—The Alemada.—Zoological Gardens.—The Museum and its Fluffy Birds.—Cathedral and Arcades.—Burning of Jesuits' Church in 1863.—Monument.—Burning of Theatre.—Atrocious insult to Charles Dickens.—Foundation of Santiago in A.D. 1541.—The Mapocho Indians destroy it.—What they left behind.—Connexion of Earl Dundonald with Chile.—Bravery of his eldest son.—Attempted Assassination of Lady Cochrane.—Seizing Treasure of San Martin's.—Reinstatement in his former honours by Queen Victoria.

As the "Cordillera" had to remain for a week at Valparaiso, I took advantage of the occasion, and ran up to have a look at Santiago, the capital of Chile. The distance set down on the railway time-tables is $114\frac{1}{2}$ miles.

So soon as we get outside of the town, we find ourselves at once amongst the Cordilleras, which are here, as well as elsewhere, the spurs of the Andes. The morning being very clear, we had a view of the snow-capped Aconcagua, reputed to be the highest of the Andean chain. At the station of Quilpue, twelve miles from the starting-point,



MACQUI BRIDGE ON VALPARAISO AND SANTIAGO RAILWAY.

little boys and girls came up to the carriages with uncorked bottles of *Chicha*,¹ and holding glasses in their hands, offered the beverage for sale. When we stop at the stations of Limache and Quillota—the first being twenty-six, and the second thirty-four miles from Valparaiso—again the carriages are stormed with vendors of pears, apples, grapes, tuna, and chirimoya; the last-named being considered the unrivalled fruit of the Pacific. I know I shall be held as deficient in taste, for confessing it is a fruit that I never could esteem. But these little incidents, in the far-off country of Chile, brought me back in fancy to the gingerbread of Ormskirk, and the cakes of Shrewsbury.

From Llallai station to Montenegro, a distance of fifteen miles, we have a very steep gradient. Thence we skirt along the valley of Tabon,—rush round a precipice, over the Macqui bridge,—and into a tunnel, amongst a class of scenery, the wildness and majesty of which are very impressive.

From the tunnel to Santiago there is not much time to observe anything, as we are in an express train, and arrive in the city after a run of four hours and a half. The station has a double terminus; one being that into which we have just entered, the other belonging to a line

¹ The *Chicha* sold here is made from grapes; that of Peru is manufactured from Indian corn.

which goes south as far as Curico, on the road to Concepcion. The distance from Santiago to Curico is about the same as from the first-named to Valparaiso—say from 114 to 115 miles.

Down the road of Curico are to be found some of the baths for which Chile is famous, as well as a variety of magnificent scenery. Of the latter I saw beautiful photographs in Valparaiso. The baths of Cauquenes are said to resemble those of Harrogate. But there are others, as Colina, Apoquinda, and Chillian, the constituent peculiarities whereof I am ignorant.

Entering Santiago by railway to the station,



VIEW OF SANTIAGO FROM OUTSIDE.

you pass on each side a row of tall poplar-trees.

From this to the city, along the Alemada, you have two more rows of poplar-trees; and if you drive either to the Campo del Marte, or to the Zoological Gardens, you find poplar trees everywhere,—symbolical of two lines of soldiers in a state of permanent, and perpetual drill. The unbending uprightness of the poplar-trees, with the squareness of all the street blocks, makes one feel the city of Santiago to be exceedingly prim; for it is, as Dickens said of Philadelphia, “distractingly regular.”

The Alemada, however, by which we go down to the city, would be very pleasant for a morning promenade if we could get rid of the perpendicular and quadrilateral ideas, which thrust themselves upon us everywhere. Standing at either end of this, and in the middle of the space between the two rows of trees, I see nothing but two parallel lines of poplars, in front of me—parallel ranges of houses—parallel azequias or water-courses, and parallel rails for a tramway. At the end no more is visible than a patch of sky, which forbids my attempting its mathematical measurement. Still, if I walk outside the line of trees, crossing the azequias and the tramway, at every 150 yards, or at the end of every cuadra, I come to the opening of another line of squares, stretching away too far for me to guess their extent, but having a poplar-tree or two at the extreme end, as if they were notes of admiration against the dis-

tant mountains, and the bright blue sky. Trying to escape from the school trammels, which all these appearances stir up, and ejaculating, "From ghostly poplar-trees, and square cuadradas, good Lord, deliver us!" I speed over the orthodox pavement, to enjoy my walk in the fresh air, and on the clean roads of the Alemada.

The Alemada is as wide, from houses to houses across, as is Sackville Street in Dublin, and whilst strolling along I can have a drink of milk from one of the many cows, that are tied up to trees in my pathway. These have been brought here for the constitutional morning tiffin of the debilitated, or the phthisical. There are several statues in this Alemada; amongst them a bronze one, in which General San Martin is mounted on a charger, pawing the air in an impracticable manner. Some few kiosks are about, dedicated to the sale of sandias (water-melons), grapes, and other fruit; and after about half an hour of rambling, I pass by the beautiful and princely quinta of Mr. Henry Meiggs, to which the title of palace would not be misapplied.

I paid a visit to the Zoological and Botanical Gardens, in both of which the poplar-tree was again too intrusive to allow me to relish anything. The Zoological collection consisted of three monkeys on one side, a sneaking jaguar of diminutive size on the other, and, not far from this, a miserable Jemmy-Dismal looking baboon.

The National Museum is in the square behind

the Cathedral; and one can scarcely help feeling the mustiness of the place to be hovering about him as he enters it. It was originally organized by the Jesuits, who here, at the present time, are only known as the *Padres Franceses*, or French priests. I enter through a gateway, large enough for a mail-coach to pass in; and on either side of the vestibule is a door with the word "*Libreria*" (Library) painted atop. These two doors are locked, and no one to be found to open them. Locked, too, is the entrance of the Museum up a flight of steps in front, after crossing over about twelve yards of a *Patio*. In the corridor I got a peep through a dirty window at some small stuffed birds, that appeared as fluffy and dusty, as if they had been so many cock-sparrows, in Charterhouse Square, during the fire of London in 1667.

The principal plaza of Santiago, where the Cathedral stands, is very pretty, and is rendered doubly agreeable in hot weather by having two fountains, which throw jets of water in columns of spray to the height of more than thirty feet. Of course it is the usual square—square; but the angularity of it is very much rubbed off by a circular flower parterre, protected with iron railings. From this plaza to the adjoining street runs off an arcade, crossed in its centre by another, and both covered over with glass. These are fitted up in so very much of a French style, that when they are brilliantly lighted at night with gas, one might,

without much stretch of fancy, consider himself in the *passage* of the Palais Royal at Paris.

Not far from the Cathedral was, at the time of my visit, an empty space, where once stood the Jesuits' Church. In this were burnt nearly two thousand of the fair sex of Santiago, of all ranks and ages, on the night of 8th December, 1863.



BURNING OF JESUITS' CHURCH, IN SANTIAGO, DECEMBER, 1863.

They were present on that evening at the ceremonies dedicated to the Immaculate Conception of the Blessed Virgin, when some of the

church ornaments took fire, and the conflagration spread with a rapidity that it was impossible to suppress. Women, naturally frightened at such an occurrence, rushed tumultuously to the doorways—of which the two that had been open were soon blocked up by the falling down of the crowd, in their impetuosity to get out.



MONUMENT TO 2000 LADIES WHO PERISHED IN THE FIRE, DECEMBER, 1863.

Those coming after, trampling on the fallen, were, by their very helplessness from terror, mingled up with the struggling mass; and still

they came, and still the blocking up grew more impossible for relief; whilst the shrieks of the living and the groans of the dying made the scene to be most appalling. No help could be given from outside, and they nearly all perished miserably in the flames. The only relic of the sad catastrophe is a monument which has been erected near the spot, and beneath which the charred remains taken out were interred.

When the ruins were searched, nothing but portions of bodies in the condition of cinders was discovered; and it was melancholy, for several weeks, to hear of persons in the city every day becoming conscious of having lost personal friends or relatives. The monument says, "2000 victims, more or less."

Not far from this is the site of a theatre, where another tragedy had nearly taken place last year (1870), when the building was burnt to the ground, in about an hour after a numerous attendance at one of Carlotta Patti's concerts had left the theatre, and gone home.

Santiago is almost as remarkable for the cleanliness of its streets as Valparaiso; and I regretted very much not being able to pass more than one day here, as I wished to see it thoroughly.

Whilst waiting at the railway station till the train was ready, by which I purposed returning to Valparaiso, the name of "Carlos Dickens," yelled out by a news-boy, who had a bundle of books and newspapers in his arm, attracted my attention.

On my calling the youth, to see what works of the immortal spirit of Gad's Hill he had to dispose of, he handed me a volume in yellow paper binding, whilst again screaming out the title, "Los Bandidos de Londres, por Carlos Dickens!" ("The Bandits of London, by Charles Dickens.") I almost flung the book at him, and must confess that I, never in my life, so much thirsted to have the liberty to do anything, as to give that young whelp a whaling on the spot. Here I was obliged to content myself with preaching to him a strong reprimand, in his native dialect, for the infamy of selling such trash under the name of Dickens. How my sentiments were appreciated by the listeners may be inferred from the fact, that whilst I was lecturing the vagabond, a Chilian, who was going by the same train, came up and purchased it. So I had nothing to do but walk to the other end of the platform in disgust, and to make up my mind not to travel in the same carriage with the man who had patronized such an imposture.

The city of Santiago dates its foundation from A.D. 1541, when Senor Don Pedro de Valdivia wrote to King Charles V. of Spain that he "had populated, in the valley called Mapocho, the city of Santiago of the new extremity," on the 24th of February, 1541, constituting a Cabildo,—establishing courts of justice,—and giving it a name in honour of the apostle who was most popular amongst the Spanish adventurers of the period.

It was first peopled with about 200 colonists ;

but six months had not passed away before the adjoining Indians, of the Mapocho tribe, made an assault on it, killing many of the settlers, and burning nearly all the houses that had been built up to that time. These latter were made of straw, and therefore were easily consumed. With them were likewise destroyed by the fire all the provisions they contained, leaving, as Valdivia reported, "only the rags of the regimental clothing, the fire-arms which they had on their shoulders, a pair of young pigs, one guinea-pig, one hen, one rooster, and no more than two breakfasts of wheat."

But the city was soon rebuilt, and established itself as the centre of the colony, taking precedence over the other cities that followed its foundation.

Coming back to Valparaiso, the journey is all down an incline, although nothing like such a steep gradient as is the railway of San Paulo from Rio de Janeiro. Yet between Montenegro and Llallai, the rate at which the train went was terrific.

The express of the morning stops at Llallai for breakfast; and here again we have a repetition of the Ormskirk and Shrewsbury remembrancers, in the excellent sponge-cakes that were hawked about at the station. At Quillote the fruit is very excellent, and very cheap.

I cannot leave Chile without once more re-

calling to mind what this Republic owes to the memory of our illustrious countryman, Lord Cochrane, Earl of Dundonald, whose prowess was one of the chief causes in enabling this people to shake off the Spanish dynasty, and establish their independence. From the memoir that I have already quoted I find that he passed four years in the service of Chile,—years of indomitable activity, and of brilliant enterprise. On one occasion, as he was about sailing from Valparaiso—whereat I am now reading of it—to commence operations against the Spaniards, he received an unexpected volunteer in the person of his eldest son²—a child of five years old, who had escaped from his mother's watchfulness, and appeared, mounted on the shoulders of a lieutenant, waving his little cap, and shouting, "Viva la Patria!" Nothing would satisfy him but to accompany his father, which, no doubt with considerable reluctance, he was permitted to do; and we shall hear more of him again at Calláo.

Whilst Cochrane was carrying on his operations up and down the coast—capturing treasures belonging to the Spaniards on board of their ships of war, as well as intercepting treasure-trains inland—Lady Cochrane, who had taken up her abode in a villa outside of Valparaiso, was attacked one night by a Spaniard, who threatened her with instant death unless she revealed the secret orders,

² The present Earl Dundonald.

which had been given to her husband by the Government. This she heroically refused to do. She was then stabbed with a stiletto, and her life was saved only by the prompt attendance of servants, who secured the would-be assassin.

It appears, further, that the ending of Lord Cochrane's career in Chile was not such as his extraordinary services entitled him to, or as his high and generous spirit had anticipated. He was surrounded by men, who looked rather to their own interests than to the welfare of their country. General San Martin contrived to make himself Dictator, as well as President, of Peru, and then disavowed all obligations to Cochrane, without whose aid, I have no hesitation in saying, he never could have assumed such a position. Cochrane's seamen and marines were at this time almost reduced to want, so that, nearly maddened by what was going on around him, he seized a treasure-ship belonging to the Government of San Martin, with nearly three hundred thousand dollars on board, and paid his poor fellows their wages out of it, as well as supplied them with necessaries. He kept a strict account of these transactions to render to the Chilian Government; but, tired out, and almost unrewarded for his exertions, Lord Cochrane quitted the service of Chile in 1823.

Indeed, this grand old Englishman might, at that period of his life, have lost all faith in the world,

when it is known that upon false charges³ he was expelled from the House of Commons, his name rubbed out of the Navy List, and the Order of the Bath taken from him by his own Government, previous to his leaving England for service in Chile. It is a comfort, not only to his descendants, but to all lovers of justice and truth, to know, that the undeserved accusations which clouded his fair fame in his early manhood were triumphantly rebutted, and, thirty-nine years afterwards, he was reinstated in all his honours, as well as appointed by Her Most Gracious Majesty the Queen to command the West-India squadron.

Since the period of my visit to Valparaiso—indeed, on the 12th of February in this year, 1873—a statue has been erected (with all the pomp and ceremony which such an occasion merited) to Lord Cochrane. It is situated in the plaza behind the Resguardo, and in front of the Exchange,—near to the Intendencia and Corporation House—the first of which is not the least noticeable of the pretty buildings in Valparaiso.

³ Every one is cognizant of the fact, that these charges were connected with what is called the Stock Exchange Fraud of 1814, and in which he was made to appear a *particeps criminis* by the author of the fraud, a Captain de Bourg or Berrenger.

CHAPTER IV.

From Valparaiso northwards.—Chilian labourers.—Approaching Peruvian boundary-line.—Mr. Squier's description of its peculiar physique.—Explanation by Senor Raimondy of rain never falling on the coast of Peru.—Trade of Iquique.—Exports therefrom.—Tarapaca province.—Railways from Iquique to Noria.—New export law of Saltpetre.—Arica and its last earthquake.—Consul Nugent's account of the catastrophe.—Wave fifty feet high.—Corresponding earthquakes elsewhere.—The dead forced out of their graves.—Ships driven on shore.—Relief to the sufferers.—Tacna railway.—Ilo and Moquega railway.

OUR steamer, when leaving Valparaiso to proceed northwards, had on board, besides the few passengers now remaining from Liverpool, over 200 Chilian labourers, to be landed at Mollendo, the seaport of the Arequipa railroad. They did not add much to the comfort of our deck-walking; but they were inevitable, so it was of no use to grumble about them. These were hired in Valparaiso by the agent of Mr. Henry Meiggs.

From Valparaiso we go along without touching at any other port of note in Chile. Indeed, the only two places to be called at in this northern passage (as far as the boundary-line at Chimba Bay between Chile and the little promontory of Bolivia, which runs out there) are Coquimbo and Caldera. Both of these are famous for their

mineral productions; and the latter is noticeable as being the port at which Mr. William Wheelwright's line of Central Argentine Railway, surveyed by Mr. Campbell in A.D. 1852, was to make its exit, after crossing the San Francisco pass and through Copiapo, to the coast. After passing the Chilian boundary we go by Mejillones and the small port of Cobija in Bolivia. Then by the river Loa, which is the boundary-line separating Peru from Bolivia on the coast. In the neighbourhood of Mejillones here are the Caracoles silver-mines. These, at the time of our visit, were being negotiated by their owner, the Baron de la Rivière, who was a fellow-passenger with us on board the "Cordillera" from Monte Video.

As we enter Peruvian waters, I am reminded of what is said by the eminent North American archæologist, Mr. Squier:¹—

"No portion of the globe has bolder or more marked geographical or topographical features than Peru. In no part of the world does Nature assume grander, more imposing, or more varied forms. Along the Pacific coast is a belt of desert, intersected here and there by narrow valleys of wonderful fertility, or relieved near the mountains by oases not less fertile. Succeeding this belt inland is the declivity of the Cordillera, notched

¹ "Observations on the Geography and Archæology of Peru." By E. G. Squier, M.A., F.S.A., late Commissioner of the United States in Peru. (A Paper read before the American Geographical Society, February, 1870, p. 4.) London: Trübner and Co., 1870.

by gorges, through which flow streams of varying size, fed by melting snows, or the rains that fall for part of the year in the interior. On the coast, except as a remarkable meteorological phenomenon, rain never falls—a fact bearing in a marked manner on the aboriginal architecture of that region. Ascending the escarpment of mountains we find a grand, elevated ridge or mountain billow, bristling with snowy and volcanic peaks, and often spreading out on broken, cold, and arid plains; or Punas (deserts), with little of life to relieve their forbidding monotony. This broad and frozen belt, called the El Despoblado (the unpeopled), varying from 14,000 to 18,000 feet in height, is succeeded, in the south of Peru and Bolivia, by the great terrestrial basin of Lakes Titicaca and Aullagas, which is shut in completely by the Andes and the Cordillera. Above, or to the northward of this, the two ranges separate again, forming the vast Andean plateau, the Thibet of America, deeply grooved by streams, which all find their way eastward into the Amazon.”

The fact stated by Mr. Squier, that “rain never falls on the coast,” was not interrupted by any variety of the phenomenon during my residence of two years at Lima and Callao.² As I have seen no explanation of its *rationale* with which I can agree

² In Mr. Markham's translation of the Travels of Piedra de Cieza de Leon, this is also explained by an extract from Captain Maury's "Physical Geography of the Sea." *Vide Op. cit.* p. 216.

so well as that given by Senor Don Antonio Raimondy in his little pamphlet on the province of Loreto. I therefore introduce it here.³ After replying to some of what he considers erroneous ideas on this matter, he continues:—

“In my opinion, the direction of the wind is one of the principal causes of the non-falling of rain on the coast; but it is not the only one, because in this cause is likewise much concerned the formation of the ground over which it passes. To form a clear idea of these phenomena are only necessary very simple notions on meteorology. Therefore, searching the cause from its origin, I should observe, that the sea is the principal fountain source of the watery vapours spread about in the atmosphere. These evaporating from the surface are raised to a point where, the temperature being lower, they reunite, combine, and are condensed, becoming visible in the shape of clouds. The watery vapours through the atmosphere, whether invisible, or condensed under the form of clouds, must necessarily remain immovable, without the aid of winds produced by the inequality of temperature of different localities. Consequently, the winds are the medium by which watery vapours are transported to the interior of continents. A wind will therefore be more charged with watery vapour, the greater that may be the superficies of sea over

³ “Apuntes sobre la Provincia Litoral de Loreto,” p. 6.

which it has passed. But in order that a wind which comes from the sea should transport to the interior a large quantity of watery vapours, it is necessary that it should have a direction almost perpendicular to the earth. Casting an eye-glance over the map, and taking in the shape of South America with that of its coasts, it may be seen that the general form of that continent is triangular, and that at the west side it runs with very little difference from south to north. Now, if we observe the most general direction of winds that prevail on the west coast of America, it may be observed that they are almost invariably from south to north. So that the winds follow in a parallel the line of the coast. Consequently the south wind, which is charged with watery vapours from passing over a certain superficies of the sea, does nothing more than skirt the coast, without penetrating to the interior of the land. Moreover, the watery vapours, transported by the winds to the lofty and snowy regions of the Cordilleras through the lower temperature of these parts, become condensed, fall in rains, and give origin to the little rivulets which, by their union, form rivers. But these watery vapours, for the reasons before expressed, not being abundant, cannot by their condensation give origin to large streams; and we can therefore easily conceive the lack of large currents of water on the western side of the Cordillera."

Mr. Raimondy further explains how the physical formation of the continent tends to the passage of the larger quantity of wind, with its moist vapour, on account of the angularity of South America to the eastern sides; thus accounting for the heavy rains, which go to form the Amazon, the Orinoco, the Parana, and the Paraguay rivers.⁴ The immense extent of sand stretching along the coast of Peru, in some places from fifteen to twenty leagues in breadth, has likewise to do with the absence of rain, because, being a good conductor of caloric, the sand, acted upon by the sun, evaporates a current of warm air, which prevents the watery vapours already spoken of from becoming condensed. In winter time, the atmosphere being, of course, colder, and the sand being a better conductor of heat than the water of the sea, becomes colder than the latter: so that its low temperature causes the condensation from which we have these fogs, so general in winter time, on the coast of Peru. These are said to be the same reasons to account for the non-falling of rain in Egypt, and the east coast of Africa.

Travelling as we are along the coast of Peru, from south to north, and wishing to visit every place of importance, I was very sorry that we did not touch at Iquique—a port which is becoming every day of more importance to British, and

⁴ This is, in fact, the explanation that is given by Professor Maury, as mentioned at page 48 previous.

general commercial interests, from the extending export of its mineral salines. Iquique⁵ suffered much by the earthquake of 1868. Of its products I copy here an extract taken from my last Report on the Trade of Callao, published in the Foreign Office Blue Book of Consular Reports for 1873:—

The reports of the exports of nitrate from Iquique show a marked increase during the last two years. For the month of July I append the following table, which indicates an increase for the same month, compared with the corresponding month in the year 1870, of 861,812 quintals:—

To—	1870.	1871.	1872.
	Quintals.	Quintals.	Quintals.
England	340,672	449,966	260,385
France	187,438	24,443	29,000
Germany	104,929	95,211	202,917
Holland	23,438	38,267	16,540
Belgium	12,200	—	—
Spain	40,643	—	—
Portugal	—	22,001	—
Italy	—	—	9,500
Order	712,675	1,022,964	1,697,168
United States . .	246,546	182,955	311,198
California	15,160	14,687	7,659
Chile and Coast . .	2,454	8,999	4,919
West Indies . . .	—	—	18,681
Total	1,696,155	1,859,493	2,557,967

The exports of nitrate for the month of June,

⁵ For information about the archæology of Iquique and the province of Tarapaca in which it is situated, see Bollaert's "Antiquities of Peru."

1872, amounted to 384,437 quintals against 307,240 in the same month last year.

The following is a comparative statement of the exports of nitrate from Iquique for the first six months in the years 1870, 1871, and 1872, respectively. The increase is prodigious, being 805,624 quintals over the corresponding period of 1870, and 678,658 over the same month in 1871:—

To—	1870.	1871.	1872.
	Quintals.	Quintals.	Quintals.
England	299,663	382,698	260,385
France	168,172	24,443	29,000
Germany	90,586	67,822	202,917
Holland	23,438	21,267	16,540
Belgium	12,200	—	—
Spain	40,643	—	—
Portugal	—	22,001	—
Italy	—	—	9,500
To Order	565,240	854,637	1,423,434
United States	199,560	154,492	249,107
California	15,160	8,082	7,658
Chile and the Coast	1,254	7,440	4,318
West Indies	—	—	18,681
Total	1,415,916	1,542,882	2,221,540

At the beginning of this current month (August, 1872), the prices quoted were dol. 2·55 Chile currency in Valparaiso, but they have since then somewhat declined.

The following represents the total exports of the years indicated up to the 30th of November, 1872; as before, the numerals being quintals, or 100 lbs. weights:—

To—	1870.	1871.	1872.
	Quintals.	Quintals.	Quintals.
England	528,379	661,166	393,700
France	227,115	53,043	92,895
Germany	111,929	180,888	217,917
Holland	23,438	47,537	16,540
Belgium	12,200	—	—
Spain	40,643	14,256	6,000
Portugal	—	22,001	—
Italy	—	—	9,500
To various Orders	1,367,857	1,891,382	2,794,930
United States	411,498	298,214	397,452
California	15,160	22,187	17,071
Chili and elsewhere	—	—	8,280
The Pacific Coast	4,321	12,189	29,567
Total	2,742,531	3,202,964	3,983,798

Writing of this place Mr. Markham⁶ says:—
 “While the desolate Chinchas pour millions into the Treasury, the pampa of Tamarugal, in the Tarapaca province, contributes its nitrate of soda (salitre) and borate of lime to swell the riches of this favoured land. It is calculated that the nitrate of soda grounds in this district cover fifty square leagues, and, allowing one hundred pounds weight of nitrate for each square yard, this will give 63,000,000 tons, which, at the present rate of consumption, will last for 1393 years. In 1860 the export of nitrate of soda from the port of Iquique amounted to 1,370,248 c̄wts., and a good deal of borax is also exported, though its shipment is prohibited by the Government.”

⁶ “Travels in Peru and India,” c. xviii. p. 306. Murray, London, 1862.

Although it is given in a note that these calculations are founded on data from "Bollaert's Account of Tarapaca," it will be seen how erroneous must have been deductions based on "the present rate of consumption" as it existed twelve years ago when we contrast the 1,370,248 quintals of the whole year 1860 with 3,983,798 quintals for eleven months of 1872.

The railways of Peru—the most extensive system of railways in South America—may be said to commence here. From Iquique to the interior nitrate-producing localities of Noria, and La Carolina, as well as from the neighbouring port of Pisagua to the saltpetre places of Sal de Obispo and Zapiga, railway trains have been plying for the last few years. The line from Iquique to La Noria goes through a length of only thirty-five miles. But it is a dreadful ascent and descent—a sandy, salty country to visit,—I am told,—without a drop of water to be found anywhere, except what is distilled from the sea.

This railway from Pisagua was contracted for by Messrs. Don Ramon Montero, and Brothers, of Lima, by sanction of special laws passed on the 8th of November, 1864, and the 15th of January, 1869. That from Iquique to Noria was established by a Supreme Decree of the 18th of November, 1856. The original contract with the Government bears date Lima, 1st of November, 1860, on the part of Messrs. Don Jose Maria Costa and Don

Frederick Pezet, under the rubric of Minister Morales. It has the exclusive monopoly for twenty-five years, and is allowed to extend branches over the whole department of Tarapaca.

Since the accession of President Pardo to the head of the Government, the following law in reference to this place was sanctioned by Congress in the month of January last. It met with considerable opposition, but was carried by fifty-six affirmative votes against twenty-three in the negative:—

“Art. 1st. Saltpetre is a monopoly in the Republic.

“Art. 2nd. The State will pay on delivery, and in cash, 2 soles 40 cents for each quintal of saltpetre, whose grade is not less than 95 per cent., placed alongside the launches in Iquique, or in any of the ports or bays which may be qualified in the province of Tarapaca. Should the State be able to sell the saltpetre at a higher rate than 3 soles 10 cents per quintal, the price of 2 soles 40 cents will be augmented by half the excess.

“Art. 3rd. The Government will take as a base the production of saltpetre in the year 1872, and the producing power of the manufactories on which money has already been laid out, and will make the necessary regulations to establish the monopoly and sale of saltpetre.

“Art. 4. The adjudication of saltpetre grounds is prohibited in every part of the Republic.

“Art. 5. The exportation of the earth from which

the saltpetre is extracted is hereby totally prohibited.

“ Art. 6. The exportation of saltpetre which has not been bought from the State is prohibited, and all which it may be sought to export in infringement of this clause will be confiscated.

“ Art. 7. The Government will inform the next Congress of the results of the monopoly, and are prohibited from making any agreement which may compromise for more than two years the interests attached to it. Every contract, whatever may be its nature or form, which is binding on the State for more than that time, is null and of no legal effect.

“ Transitory Article. This law will come into operation two months after its promulgation, from which date all the saltpetre that may be exported from the Republic will be subject to its regulations.”

It was, however, confirmed by a subsequent law of July last. The argument in its favour, besides the inevitable necessity of covering the deficit of the last Government, is that nitrate of soda at present competes in European markets with guano, and that it is therefore the interest of the State to be enabled to regulate and take advantage of this rivalry. Time only will be able to solve the soundness of this opinion. The last law is published in the *Official Gazette*, and runs thus :—

“ Art. 1st.—The Monopoly of Saltpetre will begin to have effect on the 1st day of September next :⁷

“ Art. 2nd.—From that day the Monopoly Department shall pay 2 soles and 40 cents for every quintal of saltpetre in sack, and placed alongside of the launch at Iquique, Pisagua, Mejillones, Junin, Patillos, or Molle, if its quality proved by proper essay be that of 95 per cent. :

“ Art. 3rd.—If its quality be less than 95 per cent., the price of 2 soles and 40 cents shall be reduced in the following proportions :

“ In 1 per cent. if the quality is 94 per cent.

In 4 per cent. if it come to 93 per cent.

In 8 per cent. if it come to 92 per cent.

In 13 per cent. if it come to 91 per cent.

In 19 per cent. if it come to 90 per cent.

“ For intermediate fractions a proportionate allowance shall be made. Saltpetre being less than 90 per cent. in quality shall not be received, nor that which has 6 per cent. or more of dampness.

“ Art. 4th.—If the quality reaches 96 per cent. the Department shall pay 2 soles and 47½ cents per

⁷ We can scarcely wonder that President Pardo initiated his rule with such edicts, when we know of the impecuniosity of the Treasury at the period of his coming into power. But no stronger evidence of his governing with the country, as well as for the country, need be adduced than the fact that these are now about to be repealed, and an export duty put on in their place.

quintal. If the quality should be above 96 per cent. and the saltpetre should not contain more than 1 per cent. of salt, the Department shall pay 2 soles and 60 cents per quintal.

“Art. 5th.—The quantity of saltpetre that the Monopoly Department shall buy during the year beginning the 1st September, 1873, and ending on the 31st August, 1874, is fixed at 4,500,000 quintals.

“Art. 6th.—To establish the proportion that belongs to each producer in the total of saltpetre that the Department may buy yearly, the Prefect of Tarapaca will appoint a commission, composed of five producers, which commission will draw up and present, within twenty days after nomination, a statement of the producing power of each office interested, and will fix the per centum that may of right fall to the lot of each producer, in the quantity that the State may buy annually.

“Art. 7th.—If the persons named by the Prefect should not accept the charge to make up the first Commission, or should fail to fulfil it, the Prefect shall officially and definitely fix the proportion that may respectively belong to each producer.

“Art. 8th.—While some producers may be unable to furnish their respective quotas, on account of the machinery in their respective offices not being in working condition, the others shall have the

right to furnish the deficit, so that the State may always buy 375,000 quintals per month.

“ Art. 9th.—During the first six months the Department shall not receive more than 375,000 quintals in each month; after the first six months producers may furnish more or less than 375,000 quintals every month; but in such manner that the total amount may not exceed 4,500,000 quintals per annum.

“ Art. 10th.—The selling price of saltpetre that may be disposed of by Government in the first quarter, that is, during the months of September, October, and November next, shall be at S. 2.65 cts. per quintal, being 95 per cent. in quality, and the better or inferior qualities in proportion, that is with an addition of 25 cents upon the price at which it is bought. For the second quarter the addition shall be of 35 cents upon said price. The price that is to guide the sales of the Monopoly will be announced to the public sixty days at least before its operation, and under all circumstances it will be higher than that named for the second quarter.

“ Art. 11th.—Producers may export the quantity of saltpetre that may fall to their quota without delivering it to the Monopoly Department; but in this case they shall pay the difference between S. 2.40 cts. and the prices fixed for the sales of the Monopoly with a deduction of 10 cents per quintal, that is, 15 cents difference in the first quarter and

25 in the second. This exportation shall be made under the supervision of the Monopoly.

“The producers that may desire to exercise this right will communicate their wishes to the Monopoly on the 15th of August for those who may deliver in September ; on the 15th of September for those who may deliver in October, and so on successively. The producers that do not give notice in time shall be obliged to deliver to the Monopoly their respective quotas to the month for which the notice should have been given.

“The ships that may be loading saltpetre on the 31st August next shall be allowed to complete their cargo in the succeeding days, the parties interested paying for each quintal embarked after the 1st of September, the 15 cents spoken of in the 11th article, and without subjecting to the regulations of the Monopoly all the saltpetre that may have been previously embarked.

“The Minister of State in the Department of Finances and Commerce is charged with the fulfilment of this Decree.

“Given at the Government Palace in Lima, on the 12th day of July, 1873.

“MANUEL PARDO.

“JOSE MARIA DE LA JARA.”

Arica, the first port of Peru at which we touch, and where I find myself this morning (the 19th of April, 1871), has a most desolate aspect from the

steamer's deck. This, however, is trifling compared to what it presents when we go ashore. Being situated in a corner bight of the continent, it suffered in a strongly-marked manner from the earthquake of 1868; because the volcanic wave coming from the north, and that from the south, meeting here, as it were, in a sort of confluence, swept everything up the valley before them. One of the chief sufferers was my colleague, Consul G. H. Nugent, who lost 60,000 dollars' worth by the swoop of the wave, and who with his wife and children had a narrow escape of their lives. His description of it, published in the *Panama Star and Herald* of September, 1868, is so graphic that I cannot avoid making a few extracts:—"I had hardly time," he writes, "to get my wife and children into the street when the whole of the walls of my house fell. 'Fell' is hardly the word, for they were blown out as if they had been spat at me. At the same time the earth opened probably two or three inches, and belched out dust, accompanied with a terrible stench as of powder. The air became darkened, and I could not see my wife, who was within two feet of me with the children. If this had lasted any time, so to speak, we must have been suffocated; but in about a couple of minutes it cleared off. Collecting my household together, we started for the hills. How we passed through falling houses, when we saw men struck down—some stone dead, others

maimed—is to me a mystery; but a merciful Providence was over us. We wended our sad way as well as we could towards the hills, with the earth shaking, making us stagger like drunken people, when a great cry went up to heaven from all the town, ‘The sea has retired!’ I hurried on, but before I got to the outskirts I looked back, and saw all the vessels in the bay carried out irresistibly to sea, probably with a speed of ten miles an hour. In a few minutes the great outer current stopped; then arose a mighty wave—I should judge about fifty feet high—which swept in with a resistless rush, carrying everything with it in its awful majesty. It brought back all of the shipping, some of the latter turning in circles, but the whole speeding on to an inevitable doom. Meanwhile, the wave had passed in, crushed the mole into atoms, swallowed up my office as a bit in its giant mouth, gulped down the Custom-house, and, rushing along the same street, carried everything before it in its irresistible force. The whole of these things were done quicker than the changes in a Christmas pantomime.”

In the same short space of time the Peruvian war-steamer “America” lost about eighty-five hands. The United States steamer “Wateree” escaped with the loss of one life. Having a small draft of water, she was carried bodily on the top of the sea, and landed about a quarter of a mile in-shore of the railway track, distant at the spot

more than a quarter of a mile from the sea. The "Fridoma," United States store-ship, was bottom upwards. Every soul on board perished except the captain, surgeon, and paymaster, who were fortunately on shore at the moment. An American barque, laden with guano, was swallowed up along with all her crew, and not a vestige left to tell of her fate. "For nearly two days," adds Mr. Nugent, "we lay on the hills, without covering and without food (his wife, himself, and seven children), in a constant state of alarm, as the shocks of earthquake were for some days incessant."

I must confess that this is not a very comforting style of thing, to be made acquainted with, on first landing in a country that may be one's home for an indefinite number of years.

This earthquake was sensibly felt along the whole coast, although at no place were its devastations so palpable as at Arica. Iquique suffered very much, so also did Mejillones, Pisagua, Ilo, and Chala, as well as nearly all the other towns of the coast. It went inland to Tacna, interior to Arica, and northward to Arequipa, the second city in the Republic. It likewise proceeded farther north, beyond Callao and Lima, at both of which places it was sensibly felt, although with comparatively little damage.

One of the most remarkable incidents of this earthquake was the heaving up, in some place not



ARICA, THE DAY BEFORE THE EARTHQUAKE OF 1868.

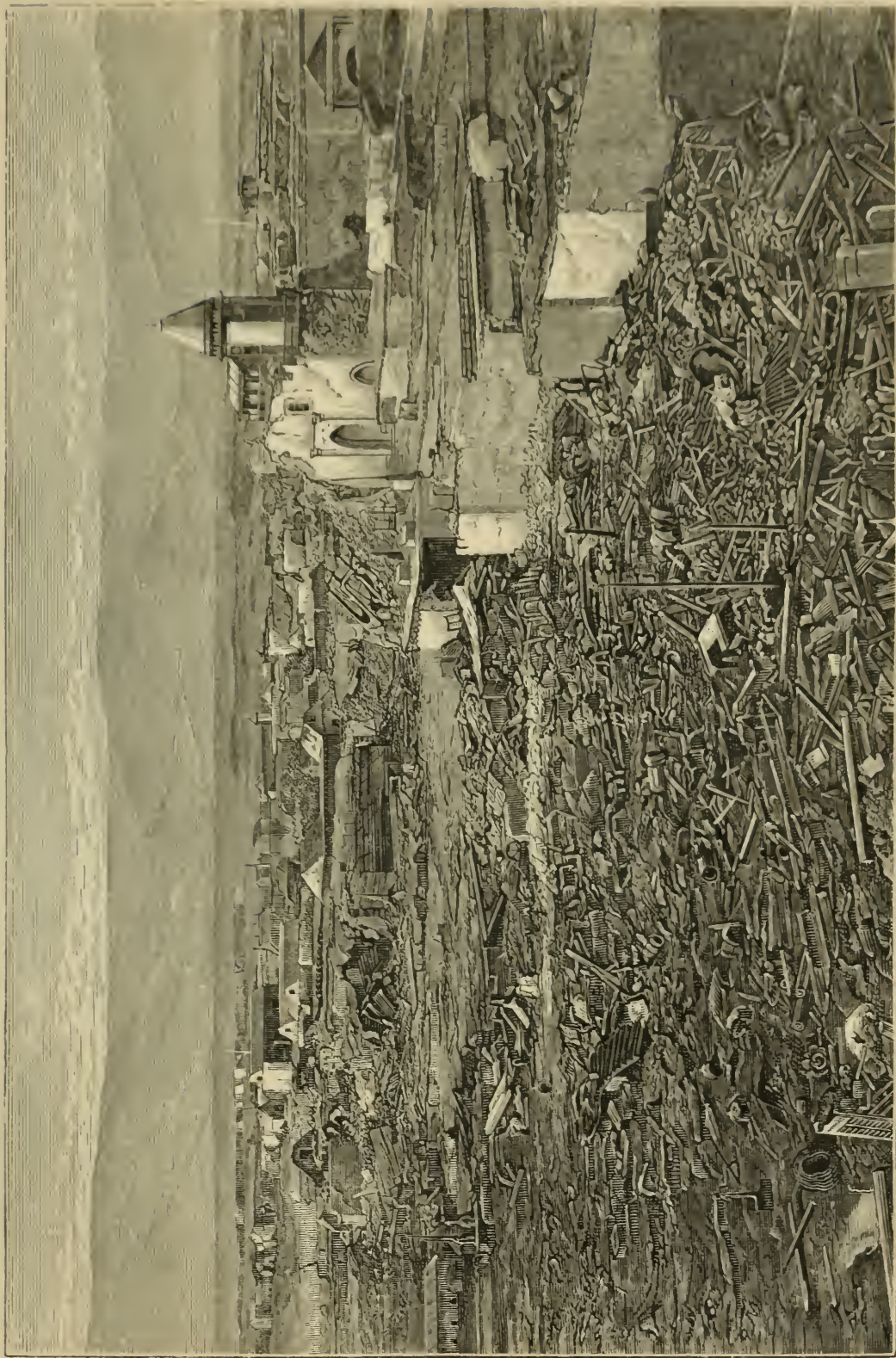
very far from Arica, of a number of bodies, buried in the usual style of interment along this coast—namely, the squatting posture, in which the legs are flexed on the pelvis, and the knees bent in to the chin. They were covered, as usual, with cloth, and padded with cotton flock. They had, as elsewhere, one-half of a bivalve, about the ordinary size of an oyster, attached to the palm of each hand. The usual style of funereal accessories in heads of Indian corn, beans, fishing-nets, needles for making the same, and bits of cloth, were likewise thrown up. From some of the skulls the eyes had been extracted and fishes' eyes put in their place. Of these latter—the eyes of the cuttle-fish—a number were given to me by Mr. Bracey R. Wilson, our vice-consul at Callao, who had been many years resident at Arica, and was intimate with all its bearings. This putting of the fish-eyes into the orbits, from which their original eye-balls had been extracted, may perhaps be considered as a symbol of their fish worship.

As soon as it was possible to be despatched, after the earthquake, the United States war-steamer "Powhattan" went from Callao to Arica, being the bearer from the Peruvian Government of funds and stores to relieve the sufferers. Mr. Henry Meiggs and Mr. Calderon of Lima each contributed 50,000 soles (10,000*l.*) in behalf of the families left destitute by the terrible calamity.

From Arica to Tacna, a distance of sixty miles to the interior, there is also a railway. Our short stay here did not allow me time to visit the latter city, and unfortunately I had no opportunity afterwards. The concession for this railway was made out when General Senor Don Jose Rufino Echenique was President in 1851. The first contractor was Mr. Joseph Hegan, of London, by agreement of 28th September, 1853, and he transferred its privileges to a company, under the title of "Railway Company of Arica to Tacna," on the 23rd May, 1857. In November, 1864, and in January, 1869, proposals were made by Messrs. Dockendorf, as well as several other persons of Lima, for extension of the Tacna line to the frontiers of Bolivia; but this was never carried into effect.

Many likewise were the propositions for the line from the port of Ilo to Moquegua. This was, however, granted to Deves Brothers and Company, of Paris, on the 10th of December, 1870, under the condition of concluding the work in two years and a half, and for the cost of 6,700,000 soles in bonds at par. In six months after, or on the 14th of January, 1871, Deves Brothers made over, as they were authorized to do by the 29th clause of the contract, the affair to Mr. Henry Meiggs, who with his accustomed energy had the line finished and in the hands of the Government in less than two years after transfer of the concession.

Moquegua is said to be a great wine-producing



ARICA, THE DAY AFTER THE EARTHQUAKE OF 1868.

country, but I can say nothing about it, as I never was there.

Not very far from Ilo we stop at the port of Mollendo, and from this is to be the direct route to Cuzco.

CHAPTER V.

Towards Cuzco.—Grandeur of its edifices.—General Miller's description.—Stories about gold.—Ancient roads mentioned by Prescott.—Modern railroads made by Mr. Henry Meiggs.—From Mollendo to Arequipa.—Lively night at hotel in Mollendo.—Concession for the Arequipa railroad.—From Ensenada onwards.—Steep gorge.—Pampa of Cachenda.—Large amount of rolling stock.—Valley of Tambo and station.—Quebrada of Cahuintala.—Serpentine curves.—Station of Vitor.—La Joya.—Sand-heaps.—Huasamayo.—Onishuarani.—Watering-place of Arequipa.—Tingo—Sakacha.

Cuzco! What varied impressions, to be sure, are revived in the minds of every one interested in this part of the world, merely by the name of this grand old Peruvian city! How Prescott¹ tells us that "it stood in a beautiful valley on an elevated region of the plateau, which among the Alps would have been buried in eternal snows, but which, within the tropics, enjoyed a genial and salubrious temperature." How "towards the north it was defended by a lofty eminence, a spur of the great Cordillera, and the city was traversed by a river, or rather a small stream, over which bridges of timber, covered with heavy slabs of stone, furnished an easy communication with the op-

¹ "History of the Conquest of Peru," p. 6.

posite banks.” How, “although the streets were long and narrow, the houses low, and those of the poorer sort built of clay and reeds,” it was still “the royal residence, and was adorned with the ample dwellings of the great nobility.” How amongst its great buildings stood a strong fortress, the remains of which at the present day, by their vast size, excite the admiration of the traveller, as we are told in the “Memoirs of General Miller.”²

On the side facing the city this fortress was defended by a wall of great thickness, and three hundred feet long. It consisted of three towers, one of which was appropriated to the Inca, and was garnished with the sumptuous decorations befitting a royal residence. Twenty thousand men are said to have been employed on this structure, and fifty years occupied in building it.

One of the other grand edifices that ornamented Cuzco was the Great Temple of the Sun—“the pride of the capital and the wonder of the empire”—which was designated *Coricancha*, or the “Place of Gold.” Well it must have merited the name, too, from Prescott’s description.³ The interior of the temple was the most worthy of admiration; it was literally a mine of gold. On the western wall was emblazoned a representation of the Deity, consisting of a human countenance looking forth from amidst innumerable rays of light, which

² Vol. ii. p. 223.

³ Op. cit. p. 41.

emanated from it in every direction, in the same manner as the sun is often personified with us. The figure was engraved on a massive plate of gold of enormous dimensions, thickly powdered with emeralds and precious stones. It was so situated in front of the great eastern portal, that the rays of the morning sun fell directly upon it at its rising, lighting up the whole apartment with an effulgence that seemed more than natural, and which was reflected back from the golden ornaments with which the walls and ceiling were everywhere incrustated. Gold, in the figurative language of the people, was "the tears wept by the sun;" and every part of the interior of the temple glowed with burnished plates and studs of the precious metal. The cornices which surrounded the walls of the sanctuary were of the same costly material, and a broad belt or frieze of gold let into the stonework encompassed the whole exterior of the edifice.

The sentiment of pleasant, though painful, veneration is absorbed in the contemplation of all these records of ancient history. Can these relations be entitled "History," or are they to be believed as all belonging solely to the Inca period, when we find, on examining, that nearly all the history of pre-historic times in Peru has been destroyed by these very Incas, of whom we can moreover learn nothing but from their Spanish conquerors, whose boast it was to have subdued

them? We must, however, try to fancy ourselves amongst this galaxy of grandeur—in this city beloved of the Sun—where his worship was maintained in its splendour, “where every fountain, pathway, and wall,” says an ancient chronicler, “was regarded as a holy mystery; where, besides the great temple, there was a large number of inferior temples in the city and its environs, amounting to three or four hundred—where one of the principal of these religious houses was the Convent of the Sun—this one at Cuzco, consisting wholly of maidens of the royal blood, who amounted, it is said, to no less than 1500.”

But gone now to the “tomb of the Capulets”—if the Capulets ever had a home in Peru—are all these things of grandeur. No more can we have the gorgeous spectacle held in presence of the Incas in lighting up the sacred fire of Raymi. Destroyed, too, are the four roads⁴ that diverged from Cuzco, the capital or navel of the ancient Peruvian monarchy. “One of these roads,” we are told by Prescott, “passed over the grand plateau, and the other along the lowlands on the borders of the ocean. It was conducted over sierras, across rivers by suspension bridges, up

⁴ These roads are first described by Pedro de Cieza de Leon. He gives no account of how they got over the rocky bluffs on the sea-coast, though describing their style amongst the valleys and sandy deserts. *Vide* Mr. Markham’s translation of Pedro de Cieza de Leon’s Travels, page 219. Garcilasso de la Vega takes description of these roads from Don Pedro.

and down precipices by stairways, through ravines filled up with solid masonry. The length of the road, of which scattered fragments only remain, is variously estimated at from fifteen hundred to two thousand miles; its breadth scarcely exceeded twenty feet. It was built of heavy flags of freestone, and in some parts covered with a bituminous cement, which time has made harder than the stone itself.”⁵

Although I am the last person to throw any doubt on descriptions of things and places which I have not seen, and whilst I entertain the most profound faith in the celebrated Baron Von Humboldt, who says that “the roads of the Incas were amongst the most useful and stupendous works ever executed by man,” still I must confess myself as puzzled to understand how “only scattered fragments of these roads remain” at the present epoch when they were done of materials which “time has made harder than the stone itself.” More especially when I know the enormously conservative faculties of the Peruvian climate, and when I have searched at every place I visited from Arica to San José, a coast distance of more than a thousand miles, without ever being able to find out one single yard of such a road as that described by Prescott through “the level country between the Andes and the Ocean.”⁶ That no such level country exists, except in

⁵ Op. cit. c. ii. p. 28.

⁶ Op. cit. c. xi. p. 28.

patches of small valleys, may be seen from what I have already quoted from Professor Forbes.⁷ Besides, all the roads in the valleys show unmistakable evidences of their having been done by the people who were there long before the Incas came,—the Chinchas at Canete, the Yuncas at Rimac, and the Chimoos in their valleys from Supé up to Sechura. Much of these latter roads bear signs of the physical variations made in a country so subject to earthquakes as Peru.

But whosoever desires to go to Cuzco now-a-days, must journey by railway; and in case the incredulous foreigner should doubt the possibility of a railway to Cuzco—in the centre of Peru—across these Andean masses, some of which are above 18,000 feet high, and over them one would imagine that only the Condor could traverse—let him come with me to the place at which we are now, the port of Mollendo near Islay, in latitude $17^{\circ} 5'$ south. There he will find a railway going at present to Quisco, and since January, 1871, to Arequipa,⁸ which in another year will reach to Puno, and in two years after that from Puno to Cuzco—a total distance of 547 miles from the coast of the Pacific.

I believe that, except Mr. Markham, Mr. Pentland, and a few others, there are many persons

⁷ Chap. iv. p. 47.

⁸ This was written more than a year ago—so that it is probable the track is at present not far from Puno.

(like myself, previous to my visit in March of last year) who only know of Arequipa as a city of Peru, very high up in the Andes, yet with three towering mountains overshadowing it,—namely, Misti to the right, Pichu Pichu to the left, and Charcani between, each of these being 18,000 feet above the level of the sea. I had likewise heard of its being a remarkable “head centre” in regard to the matters of earthquakes below and earthquakes above; or, to speak less figuratively, of volcanic shakings and of political revolutions. The first named are said to be most frequent in their occurrence from September to December, and the chronicles tell us, this city has been almost entirely destroyed in each of fourteen different earthquakes. The earliest of these is recorded as having occurred on the 2nd of January, 1582, and the last on August 16, 1868. So extensive were the ravages done by that of 1582, that the Vicunas and Huanacos came down from the mountains, mingling themselves, as if for protection, with the inhabitants in the streets.

The Misti was a volcano in the memory of some of the old writers, but at what period its fire-vomiting ceased I could not ascertain.⁹

⁹ Pedro de Cieza de Leon writes of this volcano, “which some fear will burst forth, and do mischief.”—Mr. Markham’s translation, *Op. cit.* p. 266. He commits an error, however, in saying it is “fourteen leagues from the sea,” for it is more than three times that distance.

Several attempts, I am told, have been made to reach the summit, but they were all unsuccessful from the fact of the rarefied atmosphere having brought on *soroche*, or congestion of the lungs, and *surumpi*, or difficulty of vision. These causes, at all events, acted upon Senor Valdez de Velasco and Doctor Suero, as well as on Senor Hæncke, the German Naturalist, and Mr. Pentland. The last-named gentleman got nearer to the top than any of the others.

The Misti at its summit is 20,300 English feet above the level of the sea: but I must not plunge *in medias res*, or aspire to the top of this mountain before starting from Mollendo.

The roadstead of Mollendo, at the time of my visit, was so covered with sea-foam, on our approaching the beach, as to suggest the idea of its having been the birthplace of Venus—mentioned in the heathen mythology to have been born in this element. It is a very open and exposed roadstead, being often for weeks together impracticable of communication to or from the vessels in the harbour.

Landing on an iron mole and crossing the rails, I passed up to the town, which has all the appearance of freshness in its dwelling-houses as of solidity in the buildings. Amongst these the chiefest are the stores of the railway station.¹ A

¹ The note of introduction, whereof I was the bearer, to Mr. E. C. Dubois, the excellent managing superintendent of this rail-

few years ago Mollendo was a barren, and uninhabited rock, and although the barrenness is not much improved upon, it has a sufficiently numerous population. That it is keeping up with the necessities of its progress is evident from the fact that it has four hotels—one of which is an *Hôtel de Paris*—a custom-house, and a post-office. Of the accommodation at the hotels I can say nothing, as I did not enter them; but a fellow-traveller of mine to Arequipa next morning assured me that he had spent a night in one, under circumstances that he had never endured before at an hotel in any part of the world. He was in bed for six hours, and that period he described as—

“ One of sleeping,
Two of scratching,
Three of hunting,
None of catching.”

Besides the institutions before mentioned, I find here a theatrical company, holding performances on a temporary stage, fitted up in the yard of the railway premises. On the wall adjacent to the post-office, and on a bill nearly as large as that about a Drury Lane pantomime posted up near Temple Bar, the theatre-loving people of Mollendo were told that the play of that night was to be “*La Mujer de un Artista*” (“*The Wife of an Artist*”), with other contingencies.

way, procured me the luxury of hospitality in his comfortable dwelling, for which I shall feel ever grateful.

Alongside of the residence of Mr. Dubois is a pretty little chapel, erected by Mr. Meiggs for the use of the workmen here; and from the front of this house is an extensive view of the Pacific. At this time there were thirteen vessels at anchor in the roads, amongst which were some with materials for fifteen locomotives on board.

The first concession by the Government of Peru for the railway by which I am about to travel was from Islay to Arequipa, by a decree of Congress on the 2nd of October, 1860. To this, on the 28th of January, in the year 1863, a guarantee of 7 per cent. on the same was added, also by Congress. It was made over to Mr. Patrick Gibson, merchant, of Islay.

By the survey of the engineers, Messrs. Blume and Echegarray, as likewise by a recommendation of Senor M. F. Paz-Soldan,² the line of road was changed from Islay to Mejias, which is quite close to Mollendo. Then a project came to the Government from Mr. Paz-Soldan, dated April 20th, 1863, recommending that the concession be made anew to Mr. Gibson. The line was again surveyed by Mr. Oswald Younghusband, civil engineer, whose report is dated Lima, 20th of April, 1864. On this was founded the decree, which under the rubric of Senor Zegarra, Minister of the Interior, and under date May 28th, 1864, proposes to lay the

² At the period holding the post of Director-General of Public Works.

affair before Congress, as there was a difference in the first proposal of the contractors (Soles 17,929,924 32 centimes) and the last (Soles 15,000,000), either of which exceeded that primarily laid before the Government.

The Congress then, on the 18th of November, 1864, sanctioned the concession so as not to exceed 15,000,000 of soles, with the interest of 7 per cent., General Juan Antonio Pezet being at the time President of the Republic. The proposal of Mr. Patrick Gibson, now joined with a Mr. Joseph Pickering, was accepted on the 12th of June, 1864.

But Messrs. Gibson and Pickering carried the matter no farther; for it appears that in September, 1864, or seven years after starting the first idea of this railroad, five proposals were sent in. First from Mr. Edward Harmsen, of Lima; second from Mr. Robert H. Beddy; third from Mr. Benjamin E. Bates; fourth from John Dockendorff and Co.; and fifth from Mr. Henry Meiggs. Bates offered to take the contract for seven millions of soles; Dockendorff and Meiggs each proposed twelve millions. Harmsen projected the formation of a company, in which the Government was to take the initiative by issuing four millions of soles in bonds as representing so many shares, with an interest of 7 per cent., and an amortization of 4 per cent. per annum; whilst Beddy followed in the same track as Harmsen, with the little difference of eight

millions of soles instead of four. This is all stated in a report by Paz-Soldan, but he makes no recommendation in favour of any of the new proposals; the former one of Gibson and Pickering having been declared invalid from their not "coming up to time." Mr. Henry Meiggs sent in his proposal on the 31st of March, 1868, one of not the least important items of which was, that he compromised himself to pay a fine of 20,000 soles or 5000*l.* for each month exceeding the term of three years within which he engaged to finish the work. That he accomplished it in time may be guessed from the fact that the railway was finished to Arequipa, and opened on the 1st of January, 1871, or two years and nine months after signing the contract, instead of three years.

The train started from Mollendo—to the best of my recollection at eight o'clock—its first thirteen miles to the station at Ensenada being southward along the coast and parallel with the sea. About four miles at the Mollendo side of Ensenada we halt inside of Mejia point, where there are a few dirty-looking tents of filthy canvas for houses. This is said to be a bathing-place. Between it and Ensenada is a playa, or level ground, called Chulu, where a hacienda (farm-house) formerly stood, occupying both sides of the track as we go along. The farm just alluded to was represented to me as destroyed by the volcanic wave of 1868—part, no doubt, of that which swept over Arica in

the same year. At this place we observe an extensive space of clover, with horses feeding on it, and a number of trees.

At the station of Ensenada is a reservoir capable of containing 10,000 gallons of water, which is brought by an azequia, or watercourse, from some quebrada (ravine) high up in the country. Hence water has to be carried to the stations—at Mollendo, thirteen miles behind, to Tambo, six miles in advance, and to Cachenda, fifteen miles farther on. To Mollendo is supplied the quantity of 12,000 gallons per day. The portion of line from Arequipa to Cachenda is furnished with water from the former place.

The expense of water, therefore, on this line at the period of which I write must have been an enormous outlay, as the locomotives with tanks were daily employed in conveying it to the different points. Just then, however, an aqueduct from the river Chile³ was being constructed for Mr. Meiggs by Messrs. Hart Brothers, of Lima. It was to conduct water along the whole course of the line. Besides the two locomotives employed in the water transport, with two more—one up and one down daily—on the passenger traffic, there are five engaged in carrying material, or plant, for the road being laid down to Puno *en route* to Cuzco.

From Ensenada commences the three per cent. grade. At Tambo, distant from Ensenada only

³ "Chile" in the Quichua language signifies "a rounded stone."

six miles, we find ourselves on a level plateau, where there is a large collection of stores, engine houses, and machine shops, with a few improvised stalls by the natives, offering plantains and bananas for sale. These are brought from the valley of Tambo, a fertile part of the province, the green fields of which can be seen low down, about a mile or so behind the railway station, and on the right-hand side as we go up. That valley extends for a long distance to the interior—Mr. East, the superintendent of locomotives, tells me forty miles. There is a very neat-looking little hotel close to the station, with bright flowers and creeping plants, that mount up to a lattice-work over the doorway, having bananas growing in front. From this station, at half-past five o'clock every morning, an engine starts with plant and material for the Puno road from Arequipa. The whole of the railway accessories at this place have quite an air of comfortable freshness about them, in strong contrast with the sandy soil around, and the dark brown spurs of the Cordilleras in the far distance.

From Tambo to Cachendo, fifteen miles distant, we go through the "Quebrada de Cahuintala." The journey here is a sort of turning, and tacking on almost parallel tracks, but still mounting up at a grade of four per cent. in a series of serpentine curves. We pass a tank for holding water near where the Posco station is to be, and after a sweep round a hill here, we get out into a bit

of level ground. Then another curve to turn the hill of Posco; and still we go on, gradually creeping up, winding about, and seeming as if retrograding in the same direction, till, looking out of the carriage window down into a gorge, we see, at several hundred feet below us, the trackway on which we have passed some minutes previously.

At the Cachenda station, thirty-four miles from Mollendo, we come on what is called the Pampa of Cachenda. And here I get the first sensation of sharpness in the air, from its being so rarefied owing to our lofty position. There is nothing at Cachenda but a neat wooden station-house with a zinc roof, and an excellent as well as spacious platform. A water-tank likewise. But on whatever side you look you can see nothing except sand-plains, bounded on all sides by the Cordilleras.

The Pampa of Cachenda extends for many leagues farther on. To any one who has travelled, as I have, for thousands of miles over the grass-grown Pampas of the Argentine Republic—particularly that part of it in Buenos Ayres and in the Gran Chaco, at the eastern side of the Andes—the term Pampas here seems an anomaly. For we have nothing but a plain of brown and red sand, shut in on every side by dark and lofty mountains; whilst the Pampas of Buenos Ayres, covered with grass for several thousand square leagues, have no apparent limit but the horizon. The ground, as we proceed, is dotted with large

clumps of cinder rock, resembling basalt, which fell here, no doubt, from some volcanic shower of the early ages. In some parts are boulders of gypsum; whilst several of the far-off sand-hills present the appearance of snow. But this, I am told, is some kind of alkaline pearlsh.

Not the least curious features of these plains are the Médanos, or large mounds of fine sand, of the same class as that with which we are familiar in minute-glasses. These are most frequently seen in the form of a horse-shoe, with the convex part facing the S.W. or the point from which the wind nearly always comes, and the concave side inwards towards the land. I have subsequently seen them, not so much in the vallies that I visited along the sea side, as at a considerable distance inland.

At La Joya station, half-way to Arequipa, we stop for breakfast, and here we meet the down-train for Mollendo. From Cachenda, the previous station mentioned, to La Joya, we have five miles. At La Joya there is not much to be seen, and not much desire to look for anything, except one's breakfast on the table, for which the sharp air has long ago given us an appetite. Twenty-two miles beyond La Joya we stop at the station of Vitor, where commences the Huasamayo district of Sierras. Here the lights, and shades on the distant hills are charming in the extreme. From Vitor to Onishuarani we go through the same style of scenery for eight miles.

At part of the route we turn round a sharp cliff, and, looking down, can see the river Chile, which flows from Arequipa, trickling through a gorge. The side of the latter is almost perpendicular to a depth of several hundred feet. This river rises amongst the small hills, behind the Misti.

Farther on, and down in the valley, we see glimpses of trees and clover, affording a relief to the eye after so many hours' contemplation of sand, and rock. Contrasting this little "emerald gem" with the brown, bare, volcanic, and barren tract, through which we had been travelling for the last four hours, was very refreshing. From this we had the first view of the Misti, towering up gigantic in the distance, its topmost peak peering through a large cumulus, that enwrapped a considerable share of its upper part.

Leaving Onishuarani we have another run of ten miles to Uchu-Mayo.⁴ We are now on almost level ground, the same plateau as the city of Arequipa. After skirting the pretty valley of Congata, at the upper end of which are the thermal waters of Catari, we proceed to the penultimate station of Tingo, six miles beyond Uchu-Mayo, and five miles from Arequipa. A fellow-traveller points out to me the village of Fiavaya—a pic-

⁴ Uchu-Mayo, in Quichua, signifies "narrow river;" and I am informed the Chile river, in its passage here, bears the same name as the locale through which it flows.

turesque little spot, all of green meadows, and trees interspersed with houses, not far beyond Catari—to which the Arequipenos resort in summer time, as to a Sydenham or Richmond. At Catari there are chalybeate waters. But here at Tingo we have the Buxton of Arequipa. There are two Tingos—the Tingo Grande (Big Tingo), and Tingo Chico (Little Tingo). The latter is famous for its thermal waters.

On the rising ground in front, and to the left as we go along, is a ruined cluster of houses on a hill-top, which is entitled Sachaka. Amongst the most notable of these, damaged by the earthquake of 1868, are the remains of a large church, quite a “Triton amongst the minnows.” All the property round here, which is very valuable, belonged to his Grace the Most Reverend Doctor Don José Sebastian Goyanaché, the Archbishop of Lima, who died only very recently from the result of an accident.

CHAPTER VI.

At Arequipa.—Excellence of its station arrangements.—Hotels at Arequipa.—The Soroché and Surumpi.—Rarefied atmosphere.—Earthquaky look of Arequipa.—Appearance of Cathedral.—Number of Monasteries.—Heavy rains here.—The Misti volcano.—The Sillar trachyte.—Celebrated men of Arequipa.—Derivation of its name.—Story of first settlement.—Railways of Mr. Henry Meiggs.—Reflections on their success.—From Arequipa on the road to Puno.—Mineral wells of Yura.—Station of Quisco.—Aguas Calientes.—Hospital here.—Magnetic stone at Cachipesane.

THE station at Arequipa, with its appurtenances of manager's residence, office, artisans' houses, engine-sheds, goods-stores, and so forth, occupies thirty acres of ground. This includes the station for the Puno line, which is divided from that of Mollendo by a road of ordinary width—both communicating by rails. The manager's (Mr. Dubois) house, when completed, will be, as regards comfort, combined with luxury, a palace in miniature. It has a top-story, open at all sides, which is the perfection of coolness and ventilation, as well as an indescribable kind of architecture. From the basement of the building extends the



BARRICADE IN AREQUIPA DURING SIEGE OF 1867.

line of offices for passenger-tickets and of goods-stores alongside the platform. At right angles, is one line of neat cottages for the workmen. Of these there are two other similar lines within the enclosure—one lower, and the other in front of the ticket-office. In fact, everything about here is made on the style of perfect adaptability, which characterizes all the works of Mr. Meiggs done in Peru.¹

Nearly a mile and a half from the station is the centre of the town, to which I was obliged to walk, with a porter carrying my luggage, as there are no conveyances in Arequipa except horses, and bullock-carts of very antediluvian pattern. At the station I met Mr. William Harrison, managing agent for Messrs. William Gibbs and Co., and, although I brought to him no introduction, was invited to share the hospitality of his house.² To tell the truth, the offer was at once accepted, inasmuch as from the general appearance of Arequipa, and from remembrance of what my recent fellow-traveller had experienced on the previous night at Mollendo, I was not at all disposed to venture into an hotel. This, however, I soon learned, in the matter of insectivorous

¹ To Mr. H. J. Bertrand, the station-master (*locum tenens* for Mr. Dubois), I am indebted for the most courteous endeavours to aid me in going about.

² I cannot refrain from expressing my grateful remembrance of the attentions received from Mrs. Harrison and her husband during my few days' stay at Arequipa.

Leotarding, was not so much to be dreaded. For, on remarking about what is here patent to every one on a first visit—of the sensible rarefication of the atmosphere—I was told of an important entomological fact, that fleas do not *thrive* in Arequipa. Indeed, they are never *felt* here, although no doubt they migrate in large numbers with passengers from Lima, Valparaiso, Mollendo, and every place abroad. They are supposed to die a short time after their arrival, but whether from *soroche* (congestion of the lungs), or *surumpi* (inflammation of the eyes), I could not ascertain. So that, after my experiences in other parts of South America, I could not help exclaiming, “Happy Arequipenos!”

It may be difficult for many of my readers, as it was for myself, to imagine what the volcanic earthquake could have done in 1868, when I received from Mr. Harrison the photographic sketches in this chapter, illustrating some of the topographical phases of the city after the Prado siege. This may be explained as follows:—It appears that in 1867 General Canseco was proclaimed in Arequipa, with the character of Second Constitutional Vice-President, whilst the people and the army rose up against the Government of General Prado, at the time reigning as Dictator in Lima. Prado came down with his troops, and laid siege to the city, but with such bad results that he was obliged to retreat precipitately for the coast,

and return with his steamer. The Government of Prado was concluded in January, 1868. Of his successor, President Balta's fate, I shall write when we come to Lima.

Even independent of this bombardment, the city must always have had more or less of an earthquaky appearance, during the whole of the period intervening between the fourteen earthquakes that occurred from the first, recorded January 2nd, 1582, to the last, of August, 1868, or a space of two hundred and eighty-six years. What it was in pre-historic times (if a city existed in these days) must be left to the imagination. Although nearly four years have passed since their houses tumbled about their ears, many of the inhabitants would seem to take the ruined state of things, as an inevitable and irremediable destiny. Here and there something has been done to repair a church, but, with huge piles of stones put up in many places, as if in preparation for building, no mason-work is going on; whilst people look at you, and at the stones with a sort of a *cui bono?* air, as much as to say, "What is the use of building up, when we don't know the moment it may tumble down again? Our strongest houses, built of freestone, limestone, or Sillar, may rattle about our ears as a house made of a pack of cards will do at a single breath."

I must confess, it appears to me that the sensation of living in a place so subject as Arequipa is

to earthquakes cannot be a very comfortable one. And this should not be set down to cowardice. Because from storms, fires, revolutions, or shipwrecks you may have means of escape, in the proportion say of ninety-nine to one of those which you have from earthquakes.

The Cathedral, which was rebuilt many times after convulsions, as well as burned in 1844, presents a sad appearance. In no part of South America, through which I have travelled at both sides of the Andes, have I seen a building of this kind, which, even in ruins, shows such rare beauty of majestic simplicity in architecture as this Cathedral. It occupies the whole northern and most elevated side of the principal plaza. The towers and roof were destroyed in 1868, and the whole edifice shaken. Indeed, at one corner of it there is a rent in the wall from top to bottom. At the other side of the street running out of the plaza, opposite the Cathedral, and towards the left, is the Church of the Jesuits—the topmost part of the tower whereof is in a condition of chaotic ruin. The front of this last-mentioned is a wonderful work of Sillar-stone carving. There are several large quarries in the neighbourhood of Arequipa, whence it is transported into town, dressed in square blocks of about eighteen inches long, a foot broad, and four inches in thickness. These are carried in leathern or straw panniers, on the backs of donkeys—a stone at each side being a load.



AREQUIPA, AFTER THE EARTHQUAKE OF 1868.

The houses in Arequipa are generally built with boveda, or arched roofs, and these are done with the Sillar. Heavy rains fall in Arequipa, and the arched roof is believed to resist the earthquake better than a flat one could.

All the churches of San Augustin, San Marco, San Domingo, Santa Rosa, La Merced, and many others, are in conditions of a most distressingly tumble-down appearance. Santa Rosa is, however, being rebuilt, and one or two others, including that of San Francisco, have been perfectly restored; but the larger number of churches as well as houses still exist in the shattered state, in which they were left by the earthquake of August, 1868.

At the corner of nearly every street in Arequipa we find drinking-fountains, from which water can be taken in any quantities by persons who desire it. In nearly all the streets, we see the usual Peruvian institution of *açequias*, or watercourses, running down the centre. And these are presided over by the turkey-buzzards.

There are two hotels in this city, but of their internal *régime* I can say nothing more than that, judging by externals, I should not like being obliged to risk a trial of either.

On the second morning of my stay in Arequipa, I rode out with Mr. Harrison to see the quarries from which the Sillar³ (trachytic) stone is taken,

³ "The rocks of this volcanic formation," says Professor David Forbes, in his pamphlet on the "Geology of South America,"

and this locale is styled Chilini. A considerable part of our road, after emerging from the suburbs, was simply a bridle-path, alongside of a medium-sized azequia, on the banks of which grew wild nasturtians, forming a cheerful fringe, of nearly a mile in length, by their bright scarlet blossoms. The quarry is situated a few hundred feet above the level of the town, and there was nothing noticeable in it save the *laissez-aller* mode in which the cutters worked. This was also symbolized by the equally impassive pace of the donkeys, wending towards their destination with the square blocks of Sillar fastened to their sides.

From the position of these quarries, the town looks as if it were in a valley or amphitheatre beneath, and the view beyond is limited, as are all views in this part of the world, by a background of Cordilleras. There is an ice, or rather snow, trade carried on at Arequipa, by men who fetch down the glacier element from Pichu-Pichu.

Besides five nunneries and churches innume-

and writing of Arequipa, "are all trachytic, and frequently present a most striking similarity to the domite of Auvergne, being like that composed of quartz, black or brown hexagonal mica, and a weathered-looking felspar. They form some four or six beds, superposed one on another, and of an average thickness of about ten feet each. These are either a white trachytic tuffa, like domite, with abundant embedded fragments of pumice, or a compact trachyte of a reddish or white colour, and similar composition."

rable, there are three monastic establishments in this city. We find also a university here—named after the great Father San Augustin—which my limited stay in Arequipa did not permit me to visit. It is alongside the convent of San Augustin, that, as a religious house, has been suppressed, and is now a college called “Independencia.” But the first rank of colleges in Arequipa belongs to that of San Geronimo, which has sent forth to the world many eminent men—not the least among them being Senor Don Jose Gregorio Paz Soldan, and Dr. T. de Paula Gonzalez Vigil, both men of world-wide fame.

Amongst other institutions at Arequipa is a retreat for poor priests,—the Hospital of St. Peter. The general hospital of the town is unfortunately situated in the very centre of the population, at the convent of San Juan de Dios (St. John of God), the religious ladies whereof constitute its nurses. It has usually less than a hundred patients, all of whom are badly attended for want of funds. The Orphan House suffers from the same poverty as the hospital. One of the most melancholy reminiscences connected with the earthquake of 1868 is the fact that, although not more than 200 persons were killed during that frightful catastrophe, the greater number of victims in any one locale was at this hospital.

Crossing the river from one side of the town to the other, there is a bridge of very massive pro-

portions, which, although only about 100 yards in length, with six large arches and a small one, is said to have cost a million of dollars.

Thunderstorms are reported to me to be very violent amongst the Cordilleras of Arequipa. Many of the Indian *arrieros*,⁴ as well as their mules, perish by the lightning. The drivers have a superstition that, if there happens to be a white mule amongst the troupe, the lightning will single it out from the lot as its first victim.

I learn from a book about the Arequipa railway⁵ that this city was founded by order of Francisco Pizarro, and with solemn proclamation, on the 15th of August, 1540. Its first site was behind Caima—that is, on the right-hand side of the river Chile—but afterwards, and subsequent to one of the earthquakes, it was transferred to its present locale. “The etymology of the name,” says the book, “is very uncertain. Amongst other guesses the Padre Calancha believes it to be derived from two Quichua words, *Ari* and *Quepai*, which signify ‘Yes, stay here;’ because, on the return to Cuzco of the Inca Maita Capac, after having conquered the provinces of Chumbivilcas, Parivacochas, and others, some of his companions, captivated by the beauty of this place, solicited per-

⁴ Mule-drivers.

⁵ Written in Spanish, and without the author's name; published in Lima, at the State printing-office, in 1871, and dedicated to President Balta and Mr. Henry Meiggs.

mission to remain, and the monarch answered them in the words just mentioned”⁶ (upon which I presume to comment).

The Inca who is accredited to have made the first attempt on the coast side was the ninth of his race, Pachacutec. And he, according to Garcilasso de la Vega, crossed over into the valley of Ica, much higher up than Arequipa. Moreover, there was a difference of from A.D. 1126, when Maita Capac came to the throne, and Pachacutec ascended in A.D. 1340. “According to Garcilasso de la Vega, the word Arequipa means ‘sounding trumpet,’” says the book before me. “But whichever of these is correct,” it continues, “there is one thing certain, that this place was inhabited during the time of the Incas.” Of which I can find no other proof or evidence.

I may here take an extract from my notebook made whilst waiting for the train in which

⁶ Pedro de Cieza de Leon devotes only two pages to Arequipa, and says nothing of this legend. This author went to Peru in 1532—the city of Lima was founded in 1535, previous to which time the Spaniards had not come down the coast—Arequipa was founded in 1540, and yet in De Leon’s work, published at Seville in 1553, we are informed (page 267, Op. cit. Markham’s translation)—“Hubinas, Chiquiguanita, Quimistaga and Colaguas, are villages belonging to this city (Arequipa), which were formerly very populous, and possessed many flocks of sheep. *The civil wars of the Spaniards have now destroyed the greater part, both of the natives and of the sheep.*” This after thirteen years seems doubtful. Of its occupation by the Incas he says nothing.

I was to go on the road towards Puno :—“ All these railroads of Mr. Meiggs, taking them in the order of their geographical position—1st, from Ilo to Moquegua ; 2nd, from Mollendo to Arequipa, to Puno, and on to Cuzco ; 3rd, from Callao over the Andes to Oroya, and thence (as I hope it will extend) to the Uyacali, one of the important sources of the Amazon ; 4th, from Chimbote to Huaraz ; 5th, from Pacasmayo to Guadaloupe, and to Cajamarca—seem to me but the initiatory steps, or breaking of the ice, into Peru. I do not speak authoritatively—for I hold no claim to be in the confidence of Mr. Meiggs on the subject—but simply from my own observations of such of them as I have visited. The result of these makes me opposed to a belief I often hear expressed,—that the lines in question can never pay, or, in fact, never can be a commercial success. Admitted that they are not likely to do so for some time ; but they lead to and connect with lines that must pay, because penetrating through the richest mineral districts in the world. That of the Oroya, after branching off to the silver country of Cerro del Pasco, leads on to the valley of Chanchamoya, with its teeming fertility, and thence to the Amazon ; whilst that of Arequipa, before going to Cuzco, branches off from Puno to Lake Titicaca, “ one of the richest in natural soil of the valleys of the world.”

Emerging with the train from the station at Arequipa in a line at right angles from the road

by which we came up from Mollendo, we cross a long bridge, a considerable portion of which may be entitled a viaduct; for only a short fragment of it is required to traverse the Chile river. This bridge is 1580 feet long, and 65 feet high, at the loftiest part of its centre over the water. Soon after crossing, one of my fellow-passengers pointed out to me a place near the Cerro Colorado (Red Hill)—so called, I believe, from its principal stone formation being of a red-coloured trachyte. At this is the position, entitled the “Siete Chumbos” (or Seven Pots of Chicha), from which General Prado bombarded Arequipa in 1867.

The road from Arequipa to the first station at Totoras, a journey of eight leagues, is a series of curvatures and windings about, still ascending, but with no retrograde journey, as we have between Mollendo and Arequipa. At this station and in front, towards the south, we see before us the lofty mountain of Pan de Azucar, or Sugar Loaf, which is behind the Misti, and is calculated as 17,000 feet above the level of the sea.

At the distance of a mile and a half on the north side of this station is the little town of Yura, which has thermal waters. They are chalybeate and sulphurous, having a very extensive reputation. Just about the time of my passing here, a concession had been made to Senor Don Luis Carranza, Don Estanislao Pardo Figares, and Don Leandro Loli, for the construction of a bath

establishment at Yura, and for an exclusive monopoly of the same for several years. There was, however, such an opposition got up against it in Arequipa that the National Government at Lima, under the rubric of the Minister of Finance, Senor Masias, immediately did away with it. One of the arguments against the concession was to the effect, that tradition had recorded these waters having been used for medicinal purposes long anterior to the conquest.

From Totoras to Urajapampa we have a journey of five to six miles,—all the surroundings looking as freshly volcanic as if they were only eruptions of yesterday—basaltic, cindery, ashy, sulphurous, solid lava, copper-coloured, and generally grating to the sight. At the station of Aguas Calientes (Warm Waters), in the valley of Quisco, we are twenty-eight miles from Arequipa, and 3500 feet above that city, as well as a total of more than 10,000 feet above the sea level. The sharpness of the air speaks emphatically of the altitude of the position, and suggests thoughts of *soroche*. There is a small stream of warm water here (whence the name of the place), which has an unvarying temperature of 90° Fahr. Parallel with this, and only a few yards distant, runs a rivulet of cold water from the Sumbay: that I am told is the parent source of the Arequipa river, the Chile.

I visited the hospital with the Padre Augustin Clementin Uriah. This is one of those ambu-

lance hospitals, which Mr. Meiggs has attached to the temporary working-places, or "camps," as they are called, of all his railways. It has accommodation for about fifty patients; but there were no more than thirty in it at the time of my visit,—the chief disease being of the lungs, from which it is not easy to be cured up here in the thin air, more particularly amongst the natives, who do not, in general, attend to the functions of the skin, as an adjuvant to healthy respiration.

The old Padre Augustin is an amateur artist, and showed me some excellent busts, although very small, of Mr. Henry Meiggs and his brother John, which he had chiselled with a penknife out of marble brought from the Guamango department of the valley of Ayacucho. The medical man, Doctor Juan Rafael Sarautz, accompanied me through all the wards, to see the sick. There is a commodious Botica (apothecaries' room) attached, with accommodation for the padre, doctor, and a few male nurses. The whole is constructed of galvanized iron, and can be taken asunder to be removed farther on, as the line progresses to the interior.

Twelve leagues beyond this is the Sumbay camp, where a bridge is to cross the river of that name, with a span of 180 feet, and a height of 120 feet over the water. The only tunnel on this line, as far as Puno, is to be in

the Quisco district, and 323 feet long. At Cachi-
pesané, nearly 100 miles interior from where we
are now, it appears that a quantity of magnetic stone
exists. Mr. Taylor, one of the engineers, who was
a fellow-traveller in my return journey from Quisco,
tells me that in the department of Cachepesané
the railway line is to run between two lagunas or
lakes, at a height of 13,960 feet above the level of
the sea. One of these lakes is six miles long and
two miles wide. They are sixty miles from Puno,
at the Arequipa side.

At Sumbay, on this Puno railroad, and
extending six miles from the rails to the south-
west, has been discovered this year an exten-
sive tract of coal. The reports of the chemical
analysis made on it by Professor Raimondi, of
Lima, as well as of the extent of its veins by the
engineer, Mr. Alexander Hall, give highly favour-
able accounts of the excellent quality of the coal.
In Lima a company has been formed to work it,
under the title of "Industria Carbonifera de Sum-
bay," with a capital of 2,000,000 soles.

CHAPTER VII.

Return from Arequipa.—From Mollendo northwards.—Islay.—Exports thence.—The Chincha people.—The Chincha Islands.—Idols found here at depths of thirty-five feet, and sixty-two feet under guano.—Guesses at the antiquity of these.—Regal emblems from under the guano.—First discovery of guano on the Chincha Islands.—Pisco railway.—Pisco town.—Monotony of railroad to Ica.—Peruvian Sandwich.—Burial-mounds at Ica.—Urn with dis-articulated skeleton.—Foundation of Ica.—Aqueducts of the aborigines, falsely attributed to Incas.—Garcilasso de la Vega.—First coast invasion of the Incas made in the valley of Ica.—Silver work of art from Ica.

RETURNING to Mollendo, I found the question on the *tapis*—and which I was told had been frequently started of late years—to be that of making a railroad from Islay to La Joya, remembered no doubt by my readers, as the mid-way station between Mollendo, and Arequipa, whereat the passengers stop to breakfast. The advocates for this advance two facts:—the first, that in the port of Islay you generally find quiet waters, and therefore an almost unvarying facility of communicating with the shore, whilst in that of Mollendo the tranquillity of the sea is exceptional. The second is, that from Islay to Arequipa there exists a distance

of only seventy-five miles, whilst from Mollendo to the latter there are more than one hundred miles.

Those who support the existing state of things aver that the railway from Mollendo to Arequipa being *un fait accompli*, it would be very ridiculous to do away with it for a railway from Pisco, only ten miles distant on the shore-line. For neither the passenger nor goods traffic could support two lines of railway here.

From Mollendo proceeding northward, the first place sighted is Islay. As we approach, and the steamer's anchor is let down, the appearance of the town from the roadstead is of a large bunch of houses huddled together, without any semblance of street or open space, except the surrounding rocky plateau, to walk upon. High above the houses is the convex, oblong, brown-tiled roof of the church. Islay is said to have about 700 inhabitants. Its chief exports are alpaca, vicuna, and sheep's wool, together with Peruvian bark. Alpaca wool is exported at the rate of sixty to seventy thousand bales per year, each bale from 100 to 120 lbs. in weight. It comes chiefly from Puno, but some of it is likewise brought from Cuzco.

The following data were given to me by Mr. A. Barclay, who is at present her Majesty's Acting Consul at this port:—

WOOL EXPORTED FROM ISLAY, PERU, IN THE YEARS 1869 AND 1870.

		Bales.	Quintals.	lbs.
1869.	1st class Alpaca	18,431	21,298	58
	2nd class Alpaca	6,177	4,676	65
	Vicuña	80	86	75
	Sheep	28,920	19,567	02
	Total	53,608	45,629	00
1870.	1st class Alpaca	17,754	21,285	21
	2nd class Alpaca	3,504	2,775	50
	Vicuña	95	95	05
	Sheep	22,950	15,489	25
	Total	44,303	39,645	01

Between Mollendo and Islay we pass some rocky islets, on which are slight streaks of guano. On the rocks hereabouts, bounding the coast, is something white, presenting the semblance of hoar frost, but which I am told is pearlsh. Past Quilca,¹ twenty-five miles from Mollendo—a small green bight being the only part visible adjoining the shore, and from whence olives, oil, and wine are exported. This place suffered much from the earthquake of 1868. From Quilca, after a voyage of 119 miles, we have a look at Chala—another of these small ports whereat the Pacific Company's steamers call—also producing wine, olives, and wool. Chala has a church with some houses, all of the same colour as the rock

¹ Mr. Markham tells us this was the port of Arequipa till the year 1827, when it was supplanted by Islay. It is mentioned in the same character by Pedro de Cieza de Leon, but the "great rivers" of which he speaks as being here have dried up.—Op. cit. p. 265.

on which they are perched. The population is said to be near 200. About thirty-five miles beyond



STONE IDOL AND WATER-POTS FOUND 62 FEET UNDER GUANO.

Chala we pass Loma, from which the principal exports are cotton and sugar. Then, not much farther on, steaming inside of the Chincha Islands, anchor is cast in the roadstead of Pisco.

Long, long time before the birds and seals began to accumulate guano on these Chincha Islands—indeed, so long that, on looking at the illustrations subjoined, I am almost afraid to guess—the Chincha people must have held sway down here. How many thousand years may have passed—in a case like this it is nonsense to talk of hundreds—since that stone idol was made and worshipped

before it got by design or accident in a position that the daily droppings of birds and seals covered it to a depth of sixty-two feet?² How many



WOODEN IDOL FOUND AT A DEPTH OF 35 FEET UNDER THE GUANO.

decades have elapsed between this evidence of the stone age, and the period of the wooden idol discovered at a depth of thirty-two feet, or with twenty-seven feet intervening? Let us reflect for

² Mr. Bollaert tells us that Dr. Tschudi kept one of the guano birds, the *Lula variegata*, and found its daily weight of excrement to be three and a half to five ounces. This would be an erroneous basis to take for calculation, because Dr. Tschudi's bird, being in confinement, must have left all its deposit in its prison; whereas the guano birds on the Chincha and elsewhere are often on the wing in quest of food, and therefore may be supposed to leave part of their droppings abroad.

a moment. Is there any living, calculating Pedder, who could find out the quantity of birds it would require, in the ordinary action of such cases, to deposit the smaller of these depths—say of twenty-seven feet—about the height of four men and a half, each six feet high? and with this to find out the probable period occupied in such operation? If so, I should like to have it done. And the twenty-seven being doubled, with eight more feet added on, an approximate calculation to be made. “I find myself,” observes Mr. Baldwin,³ “more and more inclined to the opinion that the aboriginal South Americans are the oldest people on the continent; that they are distinct in race, and that the wild Indians of the north came originally from Asia, where the race to which they belong seems still represented by the Koraks and Chookchees found in that part of Asia which extends to Behring’s Straits.”

All my observations hereabouts,—at Chincha Islands, Pisco, Ica, the Cañete Valley, and subsequently elsewhere,—convince me of the correctness of Mr. Baldwin’s opinion in the first sentence stated. The relics of household gods and regal emblems, taken from a depth not known to me, but very, very deep, show there must have been a people in the country, who were driven out either by the Chinchas, or by a

³ “Ancient America.” By John D. Baldwin, A.M.

tribe who preceded them. The Chinchas,⁴ be it remembered, were anterior to the Yuncas, who



REGAL EMBLEMS AND HOUSEHOLD GODS.⁵

were conquered by the Inca Pachacutec in the fifteenth century. Royalty could have had no

⁴ Pedro de Cieza de Leon says, "As to the origin of the Indians of Chincha, they say that, in time past, a quantity of them *set out* under the banner of a valiant captain of their own tribe, and arrived at this valley of Chincha, where they found many inhabitants, but all of such small stature, that the tallest was barely two cubits high." (Op. cit. p. 260.) Whence they *set out* we are not told. Don Pedro does not give the same account of the subjugation of these valleys as Garcilasso de la Vega.

⁵ One resembling the right-hand emblem is in the Christie Collection presented by Mr. Harris, as from Guanape or Maccabee.

residence on such a small place as this Chincha Island. But no doubt these things were hidden in it, when their proprietors were about to be expelled from their altar firesides by the force of some ruthless invader. The emblems in this case are made of very hard wood. Of the idols, five of the figures are wooden, and the other two of very coarse pottery-ware.

The Chincha Islands, three in number, are esti-



WOODEN IDOL FOUND AT A DEPTH OF 33 FEET UNDER GUANO.

mated in $13^{\circ}38'$ S.lat. and $79^{\circ}13'$ W.long. They are nearly front of, and only a distance of ten to twelve miles outside, the open roadstead of Pisco.

From Gore's Liverpool Directory, I find that South American guano was first imported into Liverpool by the brig "Heroine," from Valparaiso, consigned to Messrs. W. J. Myers and Co., and arrived on the 23rd of July, 1836. It was a sample of only thirty bags, and was given away to parties for experiment.

In 1866 there were 351,674 tons of guano exported from the Chincha Islands, of which 74,851 tons were in British ships.

But the regular exportation began only in 1841. It was not until 1853 that the Peruvian Government ordered a survey of the islands, in which they calculated the total amount of guano to exceed twelve millions of tons.⁶ It seems almost impossible for the mind to conceive the length of time, and the number of birds required, for such an accumulation.

"The three Chincha Islands," observes Mr. Markham,⁷ "in the Bay of Pisco, contained a total of 12,376,100 tons of guano in 1853, and as since that time 2,837,365 tons have been exported up to 1860, there were 9,538,735 tons remaining in 1861. In 1860, as many as 433 vessels, with a tonnage of 348,554, loaded at the Chincha Islands, so that at the above rate the guano will last for twenty-three years—until 1883."

I may here point out a few errors in the fore-

⁶ "Geography of Peru," p. 47. By M. Felipe Paz Soldan.

⁷ "Travels in Peru and India," ch. xviii. p. 306. London: Murray, 1862.

going calculation. In the first place, for corroboration of the paragraph ending at the words "remaining in 1861," the reader is referred to a small pamphlet, with plans, published by the Peruvian Government in 1854. Secondly, that they were founded on mistaken data is proved by the fact that the guano of the Chincha Islands has been exhausted two years ago, or in 1871. So that here is the supply for nine years to be rubbed out. And thirdly, to base a calculation for so many successive years on the status existing at the period of "the above rate," must have been a foregone conclusion (as it has proved) without foundation. Because the increasing knowledge of the utility of guano, joined to the daily progressive commerce on the Pacific, should have been considered, to make an estimate approximating to a less exaggerated result than the foregoing.

Writing further of the guano, Mr. Markham^s says, "The Peruvians may consider themselves secure of their strange source of revenue for some twenty years to come." It is very difficult to limit the amount of injury done to the Peruvian Government, as to the Peruvian people, by publication of a statement proved to be so very wide of the mark as this last-mentioned.

Although guano was said to have been discovered only at the period of the small cargo referred to, it appears to have been known to the Peruvians from

^s Op. cit. ch. xviii. p. 308.

time immemorial.⁹ Stevenson¹⁰ tells us, "Some small islands at the entrance to the Bay of Pisco are famous for the manure which they produce, and which is embarked and carried to different parts of the coast, and often into the interior, on the backs of mules and llamas. The quantity of this manure is enormous, and its qualities are truly astonishing. Of this I shall have occasion to speak when treating of the cultivation of maize at Chancay."

On one of my visits to Chancay I saw heaps of guano in the neighbourhood of the Captain of the Port's office, where it is stored for use of the agriculturists in the valley.

From the exposed and unruly sea in the roadstead of Pisco we land by means of an iron mole, seven hundred yards in length. This terminates with the Custom-house on one side, and the Captain of the Port's office on the other. From hence there is also a line of rails laid down to the station which is near the port, along with from fifteen to twenty business houses, in the shape of shops, and one hotel. But to go to Pisco proper we have

⁹ Garcilasso de la Vega, writing of the guano here, says, "Each island was by the Incas set apart for the use of a particular province" (Op. cit. lib. v. cap. viii.); whence we might infer there were only three provinces in the Inca territory.

¹⁰ "An Historical and Descriptive Narrative of Twenty Years' Residence in South America." By W. B. Stevenson. Three vols. London: Hurst, Robinson, and Co., 1825. Vol i. p. 357.

a drive of about a mile, a considerable part of which is alongside of an ill-flavoured açequia, or watercourse, and past the railway station. The town itself is a melancholy-looking place, although having a very large church in the centre of a very spacious plaza, where the market stands. Pisco was founded probably not long after Pizarro's time; for we find that in A.D. 1640, the then Viceroy, the Marquis of Mansera, raised it to the position of a city, with the additional nomenclature of San Clemente de Mansera. Senor Paz Soldan tells us it was sacked by English pirates in A.D. 1622, and A.D. 1685. Then it stood by the side of the sea; but in the earthquake of 1687 it was destroyed by a great wave; therefore it was subsequently erected where we now find it. So early as 1602 it had a convent of Franciscan Recluses; in 1634 was erected a like building of St. John of God (San Juan de Dios); and the temple of San Ignacio was established by the Jesuits in 1700.

To go to Ica¹ by the railway, we must, however, return to the port. I had the pleasure of being accompanied in my trip on this line by Mr. Grundy, one of the engineers, who superintended the track-laying. It is forty-eight miles from Pisco to Ica.

¹ This word is spelt by Senor Don E. Larrabure y Unanue, an eminent *littérateur* of Lima, as Eeca. Mr. Unanue is a frequent and graceful contributor to that excellent periodical, 'El Correo del Peru.'

When first projected, hopes were entertained that it would be prolonged to the interior districts of Huanca, Velica, and Ayacucho—the last-named being celebrated as the locale where was fought, on the 9th of December, 1824, one of the most famous battles of the independence period.

Before starting from Pisco,² I may observe that there are several very large burying-mounds, or huacas, not far distant from this town. Others are



MUMMY FROM A HUACA AT PISCO.

likewise to be seen ranging along the coast up by Tambo de Mora to the Canete Valley. But no difference exists in what I have observed of the mum-

² Coal has been discovered this year at Paracas, about eight miles to the south of Pisco.

mies taken out here, or of the accompaniments in the graves, from those observed in other places.

The road from Pisco to Ica is one of the most dreary and uninteresting that can be imagined. Rocks and sand are everywhere.

There is scarcely anything worth calling a station along the road—our first stopping-place being at Joanquil, about $15\frac{1}{2}$ miles from Pisco. Here there is a cutting through gypsum, and about half a dozen date-trees away to the right, making a most miserable failure to appear as an oasis in the desert. While the train stops I had the first acquaintance of that most unappetizing condiment, the Peruvian sandwich,³ sold by the Cholo women at what may be styled the embryo stations. This and chicha (the brew of Indian corn) seem to be the chief things relished by the natives. The sandwich must be a thing most difficult of digestion, unless to a stomach of ostrich organization. It is composed of a little roll of bread half-baked. Cut in two, we have in the centre a slice of pork, a shrimp, an olive, bit of sausage, over all which is poured some oil for sauce, and the article is ready.

After journeying across forty-eight miles of a country, every inch of which was suggestive of the African Sahara, the freshness of the valley of Ica, with its cornfields, trees, and vineyards, was

³ It is called *Butifarra*, which, I observe in the Dictionary, is the orthodox Spanish word for sausage.

very pleasant. The town itself is enough to give one the glooms for many years. Every house, as at Arequipa, speaks the word "Earthquake" in all its features. There are a few hotels, not the worst of which is the "Hotel Americano," with the anomaly of being kept by an Italian. About one mile outside the town is the hacienda of Senor Don Enrique Martinez, to whose brother I was introduced at the railway station by Mr. Grundy. To this I made a visit for the purpose of exploring a Huaca.

At the farm of Senor Martinez I found nothing in the shape of building, mound, or other erection. In his yard was a portion of ground elevating gradually to the wall, and in no place rising more than a few feet above the circumjacent soil. In this I was told bodies were buried. But, although there were a few arm-bones lying scattered about, and no inconsiderable quantity of bits of old Peruvian crockery-ware, nothing resulted from a few hours' labour of excavation.

At another burying-ground, however, a mile or so farther on, I had better results. Here I employed, for a dollar, a man who worked some hours in digging, and did it in a style that I never saw surpassed by an English navvy. The result was several dishes of very plain pottery, and some few bodies. All of the latter crumbled into ashes the moment they came into contact with the external air. Here also was taken out of a grave

a crock or urn, about two feet high or thereabouts, which contained the whole of the bones of a human being. It came to be rapidly disintegrated on exposure to the air, like those previously disinterred. I did not think of examining whether it was of man or woman. The joints no doubt had been disarticulated, or separated one from the other, before being put into this urn. The last-named likewise contained some burnt cloth, and a quantity of ashes.

The most curious fact connected with this interment of a body in an urn appears that the same practice took place with the Indians at the Bracho⁴ in Santiago del Estero, a province of the Argentine Republic, at the other side of the Andes. These people last-mentioned present a strange feature amongst their Spanish-speaking neighbours, namely, that their idiom is the Quichua, the ancient language of Peru, and that not two out of the whole community can talk a word of Spanish. I sent this urn from Ica to Dr. Barnard Davis; but unfortunately it was broken on the voyage.

The city of Ica was first founded in the year 1563, near Tacaraca, which is four miles to the south-east of the present site. But the terrible earthquake of 1571 obliged the inhabitants to alter

⁴ *Vide* Author's "Buenos Ayres and Argentine Gleanings," p. 175. Stanford, London, 1865.

the position, and the town built after that is now called the old one (*Pueblo viejo*). Subsequent earthquakes in 1647 and 1664 gave it other shakings; and another new town was built close to the ancient. It is very difficult, looking at it now, to imagine that there ever could have been anything of new connected with it. The exports from Ica through Pisco are wine, *Aguardiente*, *Italia* (a sort of brandy), cotton, and *cochinilla*. This city is the capital of the province, which contains seven districts, and a reputed population of 14,000 inhabitants.

Paz Soldan, in his "Geography of Peru,"⁵ speaking of one of these districts called *Nasca*, says, "There can be seen in *Nasca* the remains of the aqueducts of the Incas, that astonish the beholder by the grandeur of their construction. I am sorry not to be able to give an exact description of them. I can only say that they are two walls of rough stone, with flags on top to form the aqueduct, which in parts is so high that one can walk inside without stooping. They are from four to five feet in height, and about three in width. Some of them are narrow. There are so many that it is not possible to count them."

Besides this, Senor Paz Soldan tells us in the next sentence, "At eight leagues from Pisco are the remains of a palace, which in the present

⁵ Page 568.

day is called the *Tambo*⁶ *Colorada* (or coloured milk-shop). Said palace was constructed by the Incas, under the reign of Pachacutec, in whose time the conquest of this valley was effected.”⁷

To these two statements my subsequent travels oblige me to give a most unqualified denial. For neither the aqueducts nor the palace could have been made by the Incas, who came here, as it will be seen, to destroy everything. On these same matters, Garcilasso de la Vega,⁸ from whom Senor Paz Soldan takes his cue, has written a tissue of—to use the mildest terms—the most meagre of fables.

Before going into Garcilasso's volume I wish to point out that another author, and native like him, descended likewise from Incaite blood, has been recently brought to light,⁹ who records the invasion

⁶ The word *Tambo* is also applied to some towns in the north.

⁷ Pedro de Cieza de Leon says, “In this valley of Ica (he spells it *Yca*) there were great lords who were much feared and revered. The Yncas ordered palaces and other buildings to be made in this valley.” It is very curious there is not even a vestige of these Inca palaces, whilst the ruins of the Indians, who preceded them, are about everywhere.

⁸ *Commentarios Reales, que tratan de el Origen de los Incas, Reies que fueron del Peru, de su Idolatria, Leies, y Gobierno en paz y en guerra, de sus vidas y Conquistas, y de todo lo que fue aquel Imperio, y su Republica, antes que los Espanoles pasaron a el, escritos por el Inca Garcilass de la Vega, Natural de Cuzeo, y Capitan de Su Majestad, Madrid, 1609.* Of this work a translation into English has been made by Mr. Clements R. Markham, and published by the Hakluyt Society.

⁹ “Narrative of the Rites and Laws of the Yncas.” Trans-

of the Incas in the coast valleys as from north to south, whilst the former brings them from south to north. Juan de Santa Cruz Pachacuti-Yamqui Salca Mayhua, whose great, great, grandfathers were amongst the first to embrace the Christianity of Pizarro at Cajamarca, after several pages' profession of his faith, thus writes :—"The Ynca Pacachuti obtained great sums of gold, silver, and *umiña* (emeralds), and he came to an island of the Yuncas, where there were many pearls called *churup mamam*, and many more *umiñas*. Thence he marched to the country of Chimu, where was Chimu Capac, the chief of the Yuncas, who submitted (?) and did all that was required of him. The curaça of Cassamarca, named *Pisar Capac*, did the same. The Ynca then marched along the coast [from Chimoo south] to Rimac Yuncas, where he found many small villages, each with its *huaca* (idol). Here he found *Chuspi-huaca* and *Puma-huaca*, and a great devil called *Aissa-vilca*. He then advanced by Pacha-Cámac to Chíncha, where he found another *huaca* and devil. Returning to Pacha-Cámac, he rested there for some days. At that time there was hail and thunder, which terrified the Yuncas. The Ynca did not demand tribute here as he had done in the other provinces." Thus it may be seen, that whilst

lated from the original Spanish MSS., and edited with Notes and Illustrations, by Clements R. Markham, C.B., F.R.S. London, 1873. Printed for the Hakluyt Society. Page 94.

Juan de Santa Cruz traces the Inca progress from north to south, Garcilasso does the reverse—from south to north.

According to Mr. Markham,¹—“Xeres [this was Francis Xeres, Secretary to the conqueror Pizarro] never seems to have heard the word Ynca [so spelt by Mr. Markham in contradistinction to Garcilasso, who has it Inca]. He calls the Ynca Huayna Capac—the father of Atahualpa and Huascar, by the name of ‘Old Cuzco’ throughout—mistaking the name of the capital city for the name of the sovereign. He also calls Huascar ‘Young Cuzco.’ Hernando Pizarro (brother of the conqueror) makes the same mistake.”

From which it might be inferred that the Incas, or Yncas, were not invented till after the conquest—perhaps when Polo de Ondegardo first wrote of them in 1550.

In the 13th chapter of the 3rd book of the Commentaries, we are told that the Inca Capac Yupanqui, the fifth of his race, conquered many provinces in Cuntisuyu, and after subduing the Quichuas, reduced many valleys on the coast of the sea—that is the Pacific. All the people in these valleys were named Yuncas, which signifies “warm ground.” The valleys, so subdued, were called Hacari, Vina, Camana, Caravelli, Picta,

¹ “Reports of the Discoveries of Peru.” Translated and edited by Clements R. Markham, C.B. London. Printed for the Hakluyt Society, 1872. Page 33.

Quellca, and others. Of these I can find only Acari (no doubt Hacari), Camana, and Quilca—three which are to the north of Islay, between it and Nasca—on the latest map of Peru, published with this book.

The chief invasions of the coast valleys took place under the reign of Pachacutec,² the ninth of the Incas, and were chiefly carried on by the Inca's brother, named Capac Yupanqui, and his son and heir, Inca Yupanqui, a lad of only sixteen years old on his first expedition. Pachacutec, with his brother and son, set out from Cuzco with an army of sixty thousand men, one half of which was to remain as a *corps de reserve* at the appointed halting-place, which was Rucana, seen on the map as San Juan de Lucana. Here the Inca stopped with thirty thousand men, whilst the other moiety went on to Nanasca (no doubt the present Nasca). Thence the brother general sent a peaceful kind of message to the rulers of the Ica and Pisco valleys—namely, that he came to put them under the sweet government of the Incas, with the provision that they should give up adoring their heathen gods, and worship the sun, who was the father of Pachacutec.

These people, having found that they could get no succour from the neighbouring tribes of the valley of Chincha, submitted. All the Yuncas

² Op. cit. b. vi. ch. xvii. p. 191.

of the coast at the time worshipped the sea and its products—more especially sardines—where-with they manured their land. This was of course independent of their family idols.

Polo de Ondegardo tells us :³—“ The Incas were for a long time unable to conquer more than the provinces bordering on Cuzco until the time of Pachacuti Yuca Yupanqui. His father had been defeated by the Chancas and retreated to Cuzco, leaving his troops in a *pucara* (fortress). Then the son formed an army out of the fugitives, and out of the garrison of Cuzco, and out of the men of Canes and Caneches, and turned back to attack the Chancas. Before he set out, his mother had a dream—that the reason of the victory of the Chancas was that more veneration was shown for the Sun than Pechayachic, who was the universal creator. Henceforward a promise was made, that more sacrifices and prayers should be made to that statue.”

This, it may be seen, is diametrically opposed to Garcilasso de la Vega, who makes the Pacha-Cámac,⁴ (no doubt, the prototype or *alter et ego* of Pachayachic,) to be worshipped only interiorly, whereas here he is spoken of as regards his statue.

³ “ Narrative of the Rites and Laws of the Yucas.” Translated from the original Spanish MSS., &c., by Clements R. Markham, C.B., F.R.S. Printed for the Hakluyt Society. London, 1873. Page 154.

⁴ *Cámac* means *Creator*, and *Pacha* the *world*.—Cieza de Leon, *Op. cit.* p. 253.

In the valley of Ica—Garcilasso continues⁵—“the Incas ennobled themselves by making most beautiful azequias, or aqueducts, to bring water from the lofty mountains, on its journey from east to west. For the small river which ran through the valley carried very little water in the winter time, and the residents suffered much from want of it. But with the help of the azequias, which were larger than the natural stream, their crops were plentifully supplied, so that ever after they lived in great abundance and prosperity.”⁶

In the next column to this we are told that the conquering Incas, having gained the allegiance of the valleys of Ica and Pisco, sent like messages to the ruler of the Chincha valley—a powerful chief, who was recommended to give up the idolatry of his people, and come over to the true faith of the sun worship. With this was sent the advice, if they did not do it willingly, to take up arms as soon as they pleased, for the Incas came to compel them. They replied to the first message, that they did not want the Inca for their king, nor the sun for their god; that they had gods of their own to adore, and a king to serve; that their chief god was the sea, of which they had a higher opinion than they could have of the sun; that the former gave them fish, whilst the latter scorched up their soil and

⁵ *Op. cit.* p. 192.

⁶ This is copied from Cieza de Leon.

prevented its yielding sufficient fruits; that their land and climate was hot enough without making devotions to the sun, who made it hotter. They wanted no strangers in their land, and there was no necessity for Pachacutec to advise their taking up arms, as they were always prepared to fight in defence of their gods, their liberty, and their country. Their god, they added, was Chinchacamac, who was the creator and supporter of their native place. So that the Incas had better return to their own country, and not begin a war with the Lord and King of Chinchacamac, the brave Chucui-Mancu, who was one of the most powerful of princes.

These Chinchacamac people, Garcilasso confesses, were not the original occupiers of the soil here. For they, according to a tradition of their own, had come from foreign parts, although they knew not whence, and with a captain-general,⁷ as religious as he was brave, took possession of this valley by force of arms. War in this case did not require much, as their predecessors—the old story—were a vile, contemptible, and sneaking race. Therefore they were all rooted out without leaving one. Here an inquiry may be suggested: Were the Chinchacamacs, or their predecessors, the builders of these mounds and fortresses in the valley which bears their name?

⁷ Likewise copied from Pedro de Cieza de Leon. *Vide* chap. vii. p. 106.

No information on this subject can, at any rate, be gained from Garcilasso; for in the next chapter I feel myself once more puzzled by the author's anachronisms.

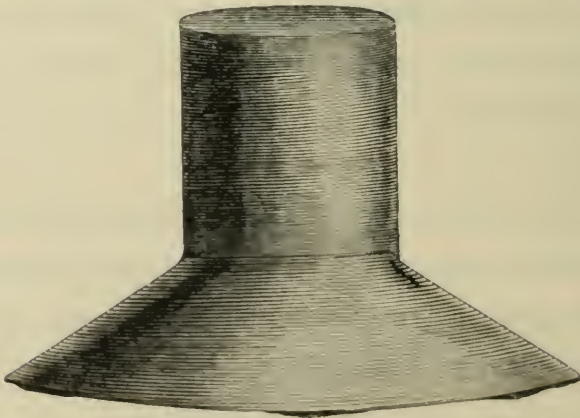
We are expected to believe that the Incas, coming down here to make war, carved out, as they must have done in such a short time, and by something of the Jack and the Bean-stalk process, azequias for the Yuncas to bring water from the lofty mountains. In the same page with this we learn that the campaign proceeded with great cruelty and slaughter on both sides, "the Yuncas fighting to defend their country, and the Incas to enlarge their empire, honour, and fame." Now and then the Incas sent messages to the besieged, offering peace and friendship on the old terms, all of which were refused most courageously. The fighting continued for several months, during which the army from Cuzco had to be renewed three different times, 90,000 men being thus required.

But the General Capac Yupanqui tried the plan of starving them out, by laying waste their crops, as well as by besieging them more closely. Moreover, says Garcilasso, "he ordered to have their azequias or aqueducts broken up, so that they could not irrigate their fields; and this was most sensibly felt by the Yuncas, because, as their land is so warm, and the sun burns it up so much, it was indispensable to have it

irrigated every three or four days to enable it to give fruit.”

Depriving them of water was, of course, successful in bringing the operations to a close—of water brought to their fields by aqueducts, which must have been made by the Yuncas themselves, or their predecessors. For the Incas, never having been in this locale previously, could have nothing to do with the azequias on the sea-coast valleys.

Garcilasso denies, what he says some authors state, that this war lasted many years instead of months: but the more I read of his book the less faith have I in it. Especially when he tries to depreciate the Yuncas of Ica, Pisco, and the Chincha valleys as dirty and of idle habits—qualities not at all likely to be held by people who were



SILVER CYLINDER FROM ICA.

so advanced in the arts, as is shown by the silver cylinder accompanying this. The figure is caused by stamping from behind, and the form of the

whole work is exactly similar to one which I hold in my possession, that was taken out of a burial-place at Chau-Chan, the capital of Chimoo, and nearly a thousand miles farther north. This one was got in a burial-place at Ica. It was lent to me, for taking a copy, from the collection



FACE OF PREVIOUS SILVER CYLINDER.

of Senor Don Miceno Espantoso at Lima. In art, therefore, as in craniology, we may recognize a persistence of type.

CHAPTER VIII.

The Valley of Chincha.—Tambo de Mora and Cañete.—Cerro de Azul roadstead.—Chuqui-Mancu.—Sugar estates in Cañete Valley.—Necessity of exploring the ruins about here.—Creation of Society of Fine Arts by President Pardo.—Exhuming skulls from the Cerro del Oro.—Particulars of things got out.—Bosina, or shell-trumpet.—Ride through the Cañete Valley.—Chinese labourers.—Their joss-houses.—Prescott's opinion of Garcilasso de la Vega.—Progress of the invading Incas through Cañete Valley.—Huarcu and Runahuanac.—Reputed Inca fortress at Hervay.—Olives from Seville.—Vessels of Pacific Steamship Company.—Limits of Callao jurisdiction.

STILL I am bound northward from Pisco, past the small rivulets of Pisco and Caucato, beyond which the equally diminutive stream of Chincha empties itself into the sea. From hence, skirting a long stretch of valley by Tambo de Mora, and Chincha Alta, in which I recognize ancient and modern institutions quite close to each other—namely, the grave-mounds and ruins of old forts adjacent to sugar manufactories, with their lofty chimneys, indicating the presence of steam-engines. The best way to get into the Chincha valley, or Cañete (as it is now called, from the extensive plantations of sugar-cane), is to land at Cerro Azul, whence I can get up in a tramway to

either of the three haciendas belonging to my very good friend, Mr. Henry Swayne, of Lima.

The province of Cañete is a very important one, as well as very extensive. It is about fifty-seven miles in width, and occupies a shore face to the Pacific of 270 miles, namely, from Tambo de Mora, which is its southern boundary, outside the province of Pisco, to the hacienda of San Pedro, dividing it from the province of Lima, a few miles south of the far-famed Pacha-Cámac. The whole valley is occupied with sugar plantations, and it has often been a wonder to me, that a railway hence to Lima has not been opened, as I believe no better paying railway could be established in Peru. The roadstead of Cerro Azul is one of the most violent on the coast, and sometimes for many days communication cannot be made between the shore and ships, riding at anchor a few hundred yards off.

After what I have submitted of Senor Paz Soldan's dogma about aqueducts and the palace of the Incas at Ica, it may perhaps be unnecessary to state that I cannot agree with him or with Senor Don E. Larrabure y Unanue in reference to the azequias and the old palace here. These are accredited by both gentlemen just named, as well as by Garcilasso de la Vega (from whom, no doubt, they took the idea), to have been works of the Incas. Mr. Soldan speaks of the "Palacio del Inca" (Palace of the Inca) as well as of a fortress

in the valley of Limahuaná, one of the districts of Cañete, both of which works he writes of, as done by the Incas. The grand fortress, it appears, was nearly all pulled down in the seventeenth century, by the Viceroy Conde de Monclova, to build up the castle of Callao.

Yet Senor Unanue does not go so far as Mr. Soldan. For though to a certain extent walking in the tracks of Garcilasso de la Vega, he describes the ruins of Canchari, which he suggests was either the residence of some powerful Yunca, or of the King Chuqui-Mancu himself. The description which he gives of it would apply to many such ruins of greater extent, that I have visited only a few miles outside of Limâ in the Huatica valley. He then sketches the fortress of Chuqui-Mancu, no doubt the one over the desecration of which Mr. Soldan mourns. This fortress stood not far from the river Cañete, between a chain of small hills, that bounded the valley on the eastern side. The conquest of the brave king who occupied it was not a walk over, like that at Ica and Pisco, as Senor Unanue tells us that bloody battles were fought during eight months, and the army of the Inca had to be renewed four times from Cuzco. Each of these levies consisted of thirty thousand men, so that there was needed a force of one hundred and twenty thousand.¹ The account of the bulwarks resembles exactly a description of the

¹ "Correo del Peru," Nos. 13, 14, and 16, vol. i.

grand ruins of La Campana, and San Miguel in the Huatica valley, of which I shall speak hereafter.

Chuqui-Manco was called the lord of four valleys—Chillea, Huarcu, Runahuanac, Malla—and his subjugation was a great thing. But I am inclined to believe many readers will agree with me in requiring other evidence than that of Garcilasso de la Vega, to suppose that the so-called monument of Hervaë was built in the valley of Huarcu by the Incas to commemorate their great victories here.² When Garcilasso de Vega came to look at this place in 1560 (less than two hundred years after it was reported to have been built by order of Pachacutec), it was in a state of deplorable ruin—a thing perfectly impossible after such a short period, in a climate so conservative of everything as Peru. This building is described as having been constructed of the best materials of workmanship. There are many more niches in the walls of it than in either of the other two edifices, and therefore it is more likely to have been a temple for the heathen gods of the Yuncas, than a memorial erected by people, who professed that they came to root out idolatry, and to substitute for it the worship of the Sun. The principal walls were built of *Adobones*, or colossal mud bricks,

² Dr. I. Von Tschudi, speaking of Paramanca, a similar edifice to this, but farther up the coast, says, "It was not, however, built as a monument of victory; for such monuments were always erected in Cuzco, the capital, and never on the field of battle." (Tschudi's "Travels in Peru," p. 289.)

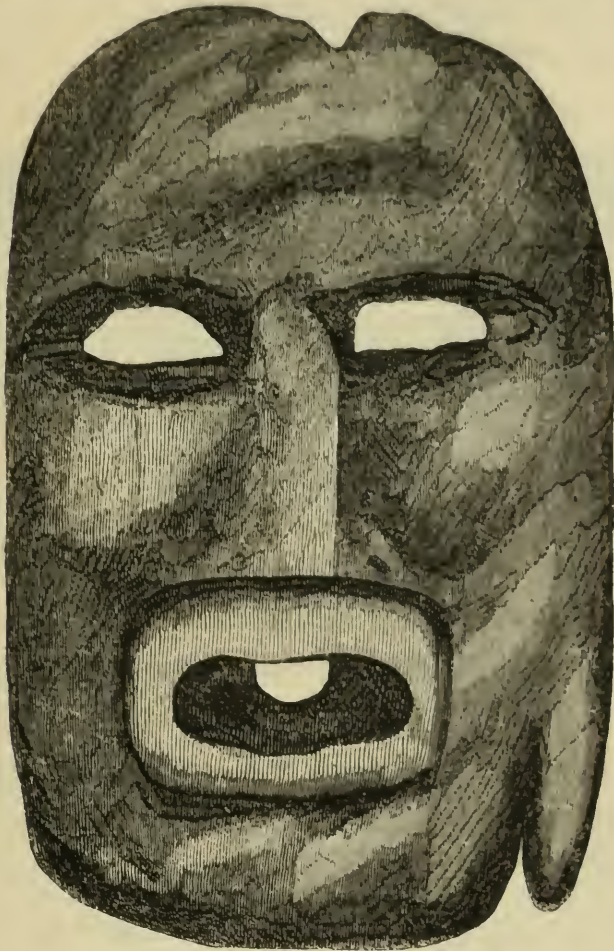
in the same style as the fort of Chuqui-Mancu. Its walls had been scratched over by some of the conquerors coming here with Pizarro, who apparently had no one to fight against in these valleys, and whose soldiers, probably, were some of the first that dug down into the building under the ridiculous impression that the Incas had hidden treasure here.

All through this valley, over much of which I rode in company with Mr. Martin (the superintendent of Mr. Swayne's hacienda at Quebrada), burial-mounds are passed everywhere. Of such as these Mr. Squier speaks in relation of his exploration in the United States:³—"The mounds and their contents, as disclosed by the mattock and the spade, serve more particularly to reflect light upon their customs, and the condition of the arts amongst the natives who built them. Within these mounds we must look for the only authentic remains of their builders. They are the principal depositories of ancient art; they cover the bones of the distinguished dead of remote ages, and hide from the profane gaze of invading races the altars of the ancient people." That the existing Government of Peru is about, even at the eleventh hour, to take these principles into consideration, is shown by the fact that it is keeping pace with the progress of the times. The

³ "Ancient Monuments of the Mississippi Valley." Published by the Smithsonian Institute, 1847.

first step has been taken by a decree of his Excellency the President, Senor Don Manuel Pardo, issued on the 17th of December last, constituting a Society of Fine Arts (*Sociedad de Bellas Artes*), one of the objects of which is to have a National Museum in the Exhibition Palace at Lima.

From one of these burial-grounds at Cañete has



TERRA-COTTA MASK FOUND IN A HUACA.

been dug out a mask of terra-cotta, similar to that of which there is a drawing in Mr. Squier's report of his explorations in the State of New York. The

latter was discovered some years ago in making excavations for the St. Lawrence canal. The one illustrated here is to be seen in its original amongst the articles, shown at the Exhibition Palace, from the National Museum at Lima.

During my stay at Cañete I rode on another day,



BOSINA, FRONT VIEW.⁴

in company with Mr. Swayne's general superintendent, Mr. William Renwick, to the top of the hill called the Cerro del Oro. Some people say it

⁴ The shell called "Bosina," I am informed by Senor Raimondy, was used as a trumpet by the Indians, to announce the approach of any great man into a town. The title above indicated is given on account of the sound produced by blowing into it having resemblance to the roar of a bull. The tassels on it are of human hair, and the leather strap holding it is of exquisite workmanship. It was lent to me for photographing by Mr. Walter Shaw (Pacific Steam Navigation Company), of Callao, but I learnt subsequently it had been dug up at Cañete.

derives this title from the quantity of gold found here by the Spaniards. That they made extensive excavations is evident from the fact of some thousands of human skulls lying exposed to the sun, mingled with leg, arm, and rib bones, as well as with pieces of cloth, and masses of cotton flock, that enveloped the bodies in their interment. These are all on the side of the hill which faces the south. On the top are very extensive ruins of



BOSINA, BACK VIEW.

houses, consisting of only parts of walls, and in the centre of which appears to have been a large fort. From these graves, too, were taken out several copper and silver pins, of the class with which shawls are fastened, tweezers for pulling out the hair of eyebrows, of the eyelids, and whiskers, as well as silver drinking-cups.

On the day that I went across part of this valley with Mr. Martin, we passed through ruins innumerable—ruins of houses, walls, burying-mounds,

and forts. To all of these in Peru the name of Huaca is indiscriminately given. The word Huaca, according to Garcilasso de la Vega, is derived from a verb which signifies "to weep," and therefore appears to me to be applicable only to the mounds, which are known to contain dead bodies. At one part of our journey, after rounding a hill beyond Hualcara—the principal sugar estate of Senor Ramos of Lima—we came to an aqueduct, or azequia, which had half a mile in length of a tunnel, and that was from four to five feet in height. This is reputed to have been constructed by a Spanish padre named Olairda, who wrote a book under the title of "El Evangelio del Triunfo" (the Gospel of Triumph). It runs under the Cerro de Andala, and is a work of pre-eminent utility to the lower grounds. For my part, I am not inclined to believe it was done by other persons than the original holders of the soil here, unless better testimony than the *ipse dixit* of any man can be given to me.

On returning to the sugar manufactory of Quebrada, we passed through what is called the Pueblo Viejo. It is said to have been the site of the ancient Huarco, where Pizarro and Almagro met in one of their conferences. We also skirt the hacienda of Montalvan, formerly belonging to the celebrated O'Higgins, one of the heroes of Independence. This estate was presented to the valiant old man by the Peruvian Government; but

it is now in the hands of an Italian company, having its head-quarters at Lima. Another tunnel is reported to be on the estate of La Imperial, and accredited to have been made by the Conde de la Vega, when viceroy at Lima. But I did not care to see it, as I have no faith in such work having been done at any time by Spanish priests, or viceroys.

Mr. Swayne has got four estates here, namely, Quebrada, Casa Blanca, Huaca, and Carillos, all of which are communicable one with another by tramways. The ploughing on these is done by steam ploughs. Besides, he has a farm near Cerro Azul, another close to Chilial, and a hacienda at Ungara on the southern side of the second range of hills, that run transversely through the valley, and south of the Cañete river. His property in this valley includes an extent of more than ten thousand acres, and has an annual produce of more than two millions of dollars' worth in rum and sugar.

At the Quebrada I first saw Chinese labourers on the coast of Peru. Their treatment is exceptionally good, and on Mr. Swayne's different properties they number beyond fifteen hundred. They have their joss-houses, and their opium-smoking saloons, without both of which it would be as difficult to make them work as the proverbial impossibilities "to wash the blackamoor white, or make the leopard change his spots." There is a hospital for them, which is daily

attended by the Doctor from Cañete town, and they seem to be as happy as the day is long.

Owing to the state of ill-health in which I was when down at Cañete, I regretted very much not being able to explore any more of it. But I brought away with me some specimens of skulls from the Cerro del Oro, procured through the kind assistance furnished by Mr. William Renwick. These form part of the instalment which I sent to the Anthropological Institute of London, that were exhibited on the 1st of April in this year, and about which a paper was read by Professor Busk, F.R.S., President of the Society. In the illustration of these the celebrated craniologist, Dr. J. Barnard Davis, of Henley, took part, and I believe they created considerable interest at the meeting.⁵

Besides these relics of humanity I obtained some slings that were found in the graves, with a few specimens of little wooden idols, one of which is very curious, as representing the large lobes of the ears of a warrior with a cocked hat, and holding what appears to be a shield in his hand. He is not armed, and may therefore be supposed to be doing only the "head-work." In this we have such a case of enlarged ear-lobe as is spoken of by Mr. Harrison,⁶ although in the case before us certainly not traceable to the Incas.

I did not leave Cañete at all satisfied with the

⁵ *Vide* Appendix A.

⁶ "Journal of the Anthropological Institute of Great Britain

account of the conquest of these Chincha valleys given by Garcilasso de la Vega, whose book I studied during my stay of a week at Mr. Swayne's



WOODEN IDOLS FROM HUACA.

sugar estate of La Quebrada. The more I read of this work, the more it appears to me as made to order,—to glorify the Incas, and by consequence to re-glorify the Spaniards who conquered them.⁷

After the nineteenth chapter, in which it is and Ireland," July and October, 1872, p. 190. On the Artificial Enlargement of the Ear-Lobe. By J. Park Harrison, M.A.

⁷ Prescott says, "His commentaries are open to a grave

denied that, according to some false rumours, the war lasted here for several years instead of months, we are brought back to Cuzco to witness the principal festival of the Sun, and the preparations made for it. But this chapter terminates with an account of how Capac Yupunqui, the general, and brother of Pachacutec, sent once more for another army, that he wanted to punish some of these Yuncas, who were not only disobedient, but actually rebelled against the new laws, and customs introduced by the Incas. Thence it was supposed that their dereliction of common sense must have arisen from these people being accustomed to commit unnatural crimes, such as caused the destruction of Sodom and Gomorrah in the days of old. For this there was only one cure, namely, that “el suave gobierno de los Incas”

objection, and one naturally suggested by his position. Addressing himself to the cultivated European, he was most desirous to display the ancient glories of his people, and still more of the Inca race, in their most imposing form. This, doubtless, was the great spur to his literary labours, for which previous education—however good for the evil time on which he was cast—had far from qualified him. *Garcilasso, therefore, wrote to effect a particular object.* He stood forth as counsel for his unfortunate countrymen, pleading the cause of that degraded race before the tribunal of posterity.” (“History of the Conquest of Peru,” p. 129.) Although there are few writers for whom I have a deeper respect than for the illustrious historian of Mexico and Peru, I believe him to be too lenient in his judgment here. Garcilasso might have effected the glorification of his own race without trying so earnestly to disparage, as he does, everything done by their predecessors on the coast.

(the mild government of the Incas), as Garcilasso styles it, "should make prisoners of all those who were known to have rebelled,"⁸ and in one day burn them alive,—have their houses knocked down,—their crops scattered about,—their trees torn up by the roots,—so that no memory should remain of anything they had planted with their hands. The women and children were burnt for the sins of their fathers, without anything of humanity being considered as involved in it, because they had been guilty of a vice which the Incas detested with the most fervent earnestness."

Then we have eight chapters devoted to an account of the religious ceremonies to the Sun at the capital, as well as of military and civil discipline. These devotions to the Sun included the sacrifice of goats, sheep, and cows,—because they were his property. The details are too minute to transcribe. So after all this worship the General Capac Yupanqui went back again to carry his invasion farther north. In his previous visit he had only destroyed the Chinchas of the Cañete valley, whereas he comes now with ministers, arms of war and ammunition (it is a pity we are not told of what kind they were), commissary stores, and everything necessary to invade the beautiful valley of Runahuanac, governed over, as already mentioned, by Chuqui-Mancu, the lord of four valleys. The disputed philology of the word

⁸ Op. cit. chap. xix. p. 195.

Runahuanac occupies more space than I care to devote to it. It appears, however, to be not only the name of the valley, but of a river, in crossing which many of the invaders were drowned. In these times the valley was densely populated, as may be seen by any one who wanders through it in the present day. On the first attempt at crossing of the river, the King Chuqui-Mancu came to meet the invaders, and several bloody battles took place. The Yunca king, not being up to the strategy of war, made battle in the valley of Huarco (now Cañete) instead of Runahuanac, and was therefore defeated. It took only one month to do this, according to Garcilasso de la Vega, but Señor Larraburé y Unanue says it cost the Inca eight months' fighting, with an army, as I have before stated, four times renewed, and requiring one hundred and fifty thousand men. Others say the war lasted four years—a period, probably, much more likely than either of the previous.

But hunger soon made the people importune Chuqui-Mancu to give up; for, although it is not stated so, we may suppose it natural that the Incas chief did here as he did elsewhere, namely, tear up the crops, and destroy the watercourses. The Incas people had begun to threaten the Yuncas that they would soon hand them over to their old enemies, the neighbouring Chinchas, or, we may suppose, as many of them as were left after the general burning mentioned in the previous page. But the subjects

of Chuqui-Mancu, having their patience worn out by the length of the siege, with its accompaniments of thirst and hunger, came out in a multitude to the Inca, and, "going down on their knees, asked mercy and pardon for their faults, adding that they rejoiced to become vassals of the Inca, since the Sun his father, sent him to conquer the whole world."

The Inca's uncle and nephew received them with much meekness, made them presents of clothes and other things, sending them all back contented to their homes. To this succeeded the surrender of the other three provinces; and then, all the people, not conscious of the good that was brought to them by the children of the Sun, boasted that the Incas took four years to subdue them—that they conquered them by hunger and not with iron. Moreover, they said a great many things about their own deeds and their bravery, "besides several other items of talk which we don't care to mention," says Garcilasso, "because it does not affect history." Very true and trite indeed.

As a trophy of this victory, he continues, the Incas built, in the valley of Huarco, a fortress, small in compass, but grand in proportions, and of wonderful workmanship. The sea beat on it, and injured it; and "it was left for many centuries (*muchos siglos*) without repair,⁹ which was the cause of its being so destroyed when I passed there in 1560."

⁹ Op. cit. p. 209.

Garcilasso seems to forget it was less than two centuries previous to the coming of the Spaniards that these valleys were conquered by the Incas; and that, therefore, if the fortress in question had evidence of "some centuries" of decay, it was out of the question that it could ever have been built by the Incas. Yet this I believe to be the one of which Mr. Markham



PERUVIAN PREHISTORIC POTTERY-WARE.

writes, "The best preserved Inca edifice of which I took measurements is at Hervay."¹

Previous to my departure from Lima, I got from Mr. Richardson a copy of some prehistoric crockery-ware, which, on showing to an archæological friend of mine there, were said by him as

¹ "Journal of the Royal Geographical Society," vol. xli. p. 323. London, 1871.

known to have been taken out of burying-grounds in some part of the Chincha valley. If such be the case, and that the Yuncas in this part, or their predecessors, were the artificers of these beautiful things, they can hardly be considered as the savages, which many parts of Garcilasso's book would lead us to believe.

In several portions of the Cañete valley we see groves of olives, which were brought out some years ago, by Senor Don Francisco Carabantes, from Seville. In the valley are also vines, the original of which were introduced from the Canary Islands, by Don Antonio Rivera. There is a copper-mine in this province, in the district of Coayllo, but it has been abandoned.

All through Cañete are about twelve to fifteen sugar-cane establishments for the manufacture of sugar and rum. Of these Senor Laraburre y Unanue writes :²—

“In all these plantations there are some differences which are worthy of being noted. That of Unanue attracts attention by its splendid Gothic palace, without a rival in South America (if we are to believe some travellers), and by its railroad, that places in communication the most remote parts of the farm, as well as facilitates the transport of the sugar-canes. The manufactory of Montalban (O'Higgins) is famous for its sugar-refining, according to the best systems practised

² “Correo del Peru,” vol. i. No. x. p. 77.

in Europe. That of Aroma (Don Pedro Paz Soldan's) for the beauty and picturesqueness of its hillocks. Whilst Hualcara (Ramos's) is well known for the excellence of all its products. The same can be said of Santa Barbara (formerly belonging to Mr. Carillos, and now owned by Mr. Swayne). But those of the Huaca, Casa Blanca, (White House) and La Quebrada, (the ravine) of Mr. Swayne, surpass all the rest, not only by their discipline, but by their steam-engine works, that are the most perfect in the valley. They likewise realize the largest amount of products."

To meet the trade daily increasing in Peru, vessels of the Pacific Steam Navigation Company—one of the best managed, and therefore one of the most successful, companies in the world—ply twice a week from Callao to Cerro Azul, the port of Cañete, and *vice versâ*. In case of a considerable shipment required, the large steamers of the Straits line will touch here.

From Cerro Azul to Callao is a distance of less than eighty miles by sea; and Cerro Azul is the southern boundary of the Callao jurisdiction. I prefer, however, asking my readers to accompany me on a visit to Pacha-Cámac, which may be seen, by the map, to lie between this and Lima. For we can go the voyage at any time by sea.

CHAPTER IX.

Inca progress to Pacha-Cámac and Rimac.—Account of it by Garcilasso de la Vega.—Cuys Mancu, or Hatun Apu, Lord of Pacha-Cámac and valleys adjacent.—Temples of Pacha-Cama, and Delphic Oracle of the Rimac.—Message sent to Cuys Mancu.—Machiavellianism of the Incas.—Craft of Cupa Yupanqui.—Treaty of the Incas with the Yunca Chiefs.—Conditions of same.—Unconditional surrender of Cuys Mancu.—The Devil coming to have a finger in the pie.—Author's visit to Pacha-Cámac.—Cyclopean work.—Mr. Steer's tracking.—Evidence of niches for idols as of sacrificial fires in supposed Temple of the Sun.—Skulls with sutures in the frontal bones.—General conglomeration of ruins.—Unsatisfactory results.—What Stevenson says of Pacha-Cámac.—Wonderful messengers.—Dr. A. Smith's opinion.

THE King, Chuqui Mancu, having been subdued, according to Garcilasso, as well as orders given to him that the government, laws, and customs of the Incas should be introduced to his people, the conquerors passed on from Huarco (or Cañete) to annex the valleys of Pacha-Cámac, Rimac, Chancay, and Huaman. This last-named place may be observed on the map as Huaura, near to Supe—a little farther northward. The Spaniards afterwards gave to it the title of Barrancas, or the banks. All these were governed over by a powerful chief, named Cuys Mancu, who did not presume to call

himself king, for there was no such word amongst the Indians, but whose official rank was expressed by the title of *Hatun Apu*—that is, Great Lord. A glance at the map will show my readers what an extensive territory these valleys included. The names mentioned cannot give half an idea of its greatness. For in it are included the valley of *Lurin*, near to *Pacha-Cámac*—the large and formerly densely-populated valley of *Huatica* in the triangle, formed by *Chorillos*, *Lima*, and *Callao*, and bounded on the west by the Pacific Ocean,—the valleys of *Ancon* and of *Pasamayo*, which have burying-grounds in them with thousands and thousands of bodies,—the valleys of *Chancay* and *Huacho*, with all the signs of an enormous population intervening.

Before getting to *Pacha-Cámac*, *Garcilasso* tells us that the Incas, with the natural brightness which God gave them, had first started the idea of *Pacha-Cámac*, which signified a great being—the maker and sustainer of the universe. This faith was spread throughout all territories both before and after their conquests. It was because this spirit was invisible that they made neither temples nor sacrifices to him as they did to the Sun; but they adored him interiorly in their hearts, with great expressions of demonstrative devotion of head, eyes, arms, and body, when the name was pronounced. This doctrine having been spread about with the fame of the Incas, it had

been adopted by the predecessors of Cuys Mancu, who built a temple at Pacha-Cámac, and gave the same name to the valley in which they founded it—which in these times was one of the most famous on the coast. In the temple the Yuncas had their idols,—figures of fishes, as well as of the female fox.¹

The temple of Pacha-Cámac was one of the most solemn edifices of the kind in Peru. Here the Yuncas made sacrifices, not only of animals, but of men, women, and children.

In such things I may interpose they did no more than their conquerors. For Polo de Ondegardo, the first writer who mentions the Incas, speaking of their sacrificial doings at Cuzco, says, “On these occasions they killed the girls, and it was necessary they should be virgins, besides offering them up at special seasons, such as for the health of the Inca—for his success in war—for a total eclipse of the sun—on earthquakes, and on many other occasions suggested by the devil.”²

Besides the temple of Pacha-Cámac there was another in the valley of Rimac, four leagues farther north than the former.³ The term Rimac signifies

¹ Op. cit. c. xxx. p. 208.

² *Vide* Mr. Markham’s translations of “Rites and Laws of the Incas.” Op. cit. p. 161.

³ In “Peruvian Antiquities,” by Mariano Eduardo Rivero, p. 168, I find the following note :—“Tradition relates that the celebrated temple of the idol Rimac, in the valley of Huatica, was continuous to Limatambo ; and that the destroyed town has

one that speaks. The Deity, therefore, was the Delphic oracle of this part of Peru. Some of the Spanish historians confounded the temple of Rimac with that of Pacha-Cámac; but, it appears, they were entirely different.

A similar message to that formerly sent to the Chinchas was now forwarded to Cuys Mancu—namely, that Pachacutec had come to show him and his people the true religion of the Sun—that they should give up their idols and conform to the Inca's government, laws, and manners—and that he proposed in the first place a peaceable surrender, as he purposed to enforce his religion whether they liked or not. To which the great Cuys Mancu, having called all his nobles, ministers, and soldiers about him, sent a reply—that his vassals had no need of another master—that they had no want of other laws than their own—and that they did not require knowledge of any gods than those they had—that they adored their Pacha-Cámac, the creator of the universe,—that they likewise worshipped Rimac, who spoke to them, and gave them answers when they consulted him. They also venerated the she-fox for its caution and astuteness, and the sea, because it gave them so much fish. But the Sun they did not care for, as their ground was hot and dry enough; so they begged the Inca

passed into that of Magdalena." That this is a mere conjecture, without any foundation as regards the site, may be seen hereafter.

not to molest them, as they did not need his Empire.

Then the Incas came out with their Machiavellianism—although I believe the author of that system was not born in these days. They rejoiced that the Yuncas had such veneration for Pacha-Cámac, whom they themselves adored interiorly as the highest god. So they proposed not to make war, but to have a general palaver, and invited Cuys Mancu to the conference. This latter had already set out with an army of men to defend his territory, but the General Cupac Yupanqui sent to him a request not to fight till they talked more over their gods, as he wished to tell him that the Incas, besides adoring the Sun, also worshipped Pacha-Cámac. Although they did not build temples to him, nor offer sacrifices, because they had not seen him, and did not know what sort of a being he was, interiorly in their hearts they worshipped him, and therefore there was every reason why the Incas and the Yuncas should be brothers, and friends, instead of fighting. Moreover, Pachacutec would guarantee that, for the future, the Inca kings, besides adoring Pacha-Cámac, and holding him for creator and supporter of the universe, should worship and adore the oracle, Rimac, on condition that the Yuncas would come over amongst the children of the Sun—a god better deserving of adoration than either the earth or the sea, the she-fox or any

animal. He suggested, likewise, that they should obey the Inca, his brother, who was a son of the Sun, and the pattern of everything element, pious, just, and merciful—that they would do well to consider these things over dispassionately, and come to the peaceful arrangement proposed, instead of offering to resist the power of the Incas, that no force of arms was able to subdue.

So, after a short truce, peace was concluded on the following conditions:—“That the Yuncas should adore the Sun as the Incas do; that they should build for this worship a temple apart (*templo aparte*), like that of Pacha-Cámac, but no more human blood should be shed, as it was against the law of Nature to kill a man that he should be offered up in sacrifice.⁴ That they must remove their idols from the temple of Pacha-Cámac, because he, being the creator and lord of the universe, was only to be adored in their hearts, and not with idols—that for the better ornament and grandeur of the valley of Pacha-Cámac, they should found a house of selected virgins,⁵ in combination with the Temple of the Sun, in the style which they had it in Cuzco—that the King Cuis Mancu should hold his rights, as well as the other Curacas or chiefs,—obeying the Inca as supreme lord, to follow the laws, customs, and

⁴ See extract from Polo de Ondegardo, at page 149 of this chapter.

⁵ Which they never did, or of which, at all events, no vestige remains at the present day.

manners of the latter—that the Incas should maintain much esteem and veneration for the oracle Rimac, and send orders to all his kingdoms to observe the same.”

After the conclusion of this treaty, and everything was arranged for the Inca executive in the valleys of Pacha-Cámac and Rimac, the next step was for the General Copac Yupanqui and his nephew to return to Cuzco, with an account of their mission to the Inca. In this journey they were accompanied by Cuys Mancu, in order that the Inca king should know him, and give him thanks with his own hand. Nothing is said of Chuqui Mancu, who was not so easily brought to terms as the other. But Cuys Mancu went; the great Inca came out from Cuzco to receive him, and he was overpowered with feasting and with presents—all the Incas of the royal blood being bidden to the feasts to do him welcome. These things passed, Cuys Mancu was sent back rejoicing, and “perfectly convinced that the Inca was a true son of the Sun, worthy to be adored and served by the whole world.”⁶

I must confess that it shakes my faith in Garcilasso's narrative when I find him continuing—as I am now about to quote—in the same strain of seriousness with which the previous account was written, and in the very sentence succeeding the last:—“It must be known that as soon as the Devil (*El Demonio*) saw that the

⁶ Op. cit. c. xxxi. p. 211.

Incas were about to lord it over the valley of Pacha-Cámac, and that his temple stood emptied of the many idols it contained, he put himself up for the particular lord whom the Indians adored," and more bosh to the same effect. In part of Prescott's work on the "History of the Conquest of Peru," we find the Devil spoken of in the same serious manner.⁷ The dreadful battle of Puna was caused by Pizarro "having abandoned his wretched prisoners, ten or twelve in number, to the tender mercies of their rivals of Tumbez, who instantly massacred them before his eyes." Then the people of Puna sprang to arms, and with fearful yells and menaces went in to battle. But Hernando Pizarro conquered them, having put them into a state of panic-strike by his terrible array of steel-clad horsemen, with the stunning reports and flash of fire-arms. "Yet the victory was owing, in some degree, at least if we may credit the conquerors, to the interposition of Heaven; for St. Michael and his legions were seen high in the air above the combatants, contending with the arch-enemy of man, and cheering on the Christians by their example." This story is told with such seriousness, as being translated from Montesinos, I am almost afraid to desecrate its gravity by suggesting that, according to what I have been taught on the subject, the arch-enemy of man, being up in the air, must have been out of his

⁷ "History of the Conquest," chap. i. p. 144.

element, or like a fish out of water; so that we need scarcely wonder at his being conquered. At all events, it is quite clear that the Devil in old times has had his fingers in many pies amongst the Peruvians.⁸

It was not until a few weeks previous to my departure from Callao that I was able to visit the ruins of Pacha-Cámac. As we are here on the spot with the Incas and Yuncas of old, I deem this an appropriate place for giving my account of it. Premising that I am indebted to Mr. William Sterling, managing director of the Lima and Callao Railway, for having kindly supplied me with horses for my party and self. These consisted of Lord Cochrane; Mr. J. B. Steer, a celebrated North American explorer, from the University of Michigan; Mr. John Schumaker, of Valparaiso; Mr. Woodsend, of the London Bank of Mexico and South America, at Lima; and Mr. George Wilson, the son of our Vice-Consul at Callao. We started from Lima for Chorillos by the first train, at 8 a.m., taking with us some commis-

⁸ Cieza de Leon devotes considerable space to the pranks of the Devil in Peru. In chap. xlix. and after, much is left out by Mr. Markham as "unfit for translation"—I should suppose from its indecency. He says (page 182), "In all parts where the holy Evangel is preached, a cross is placed, at which the Devil is terrified, and flies away." Chapter cxviii. is devoted to accounts of a Chief, who, when he wished to be converted, "saw the Devils visibly." As he sometimes "saw them when he was sitting with a glass of liquor before him" (p. 416), perhaps their colour was blue.

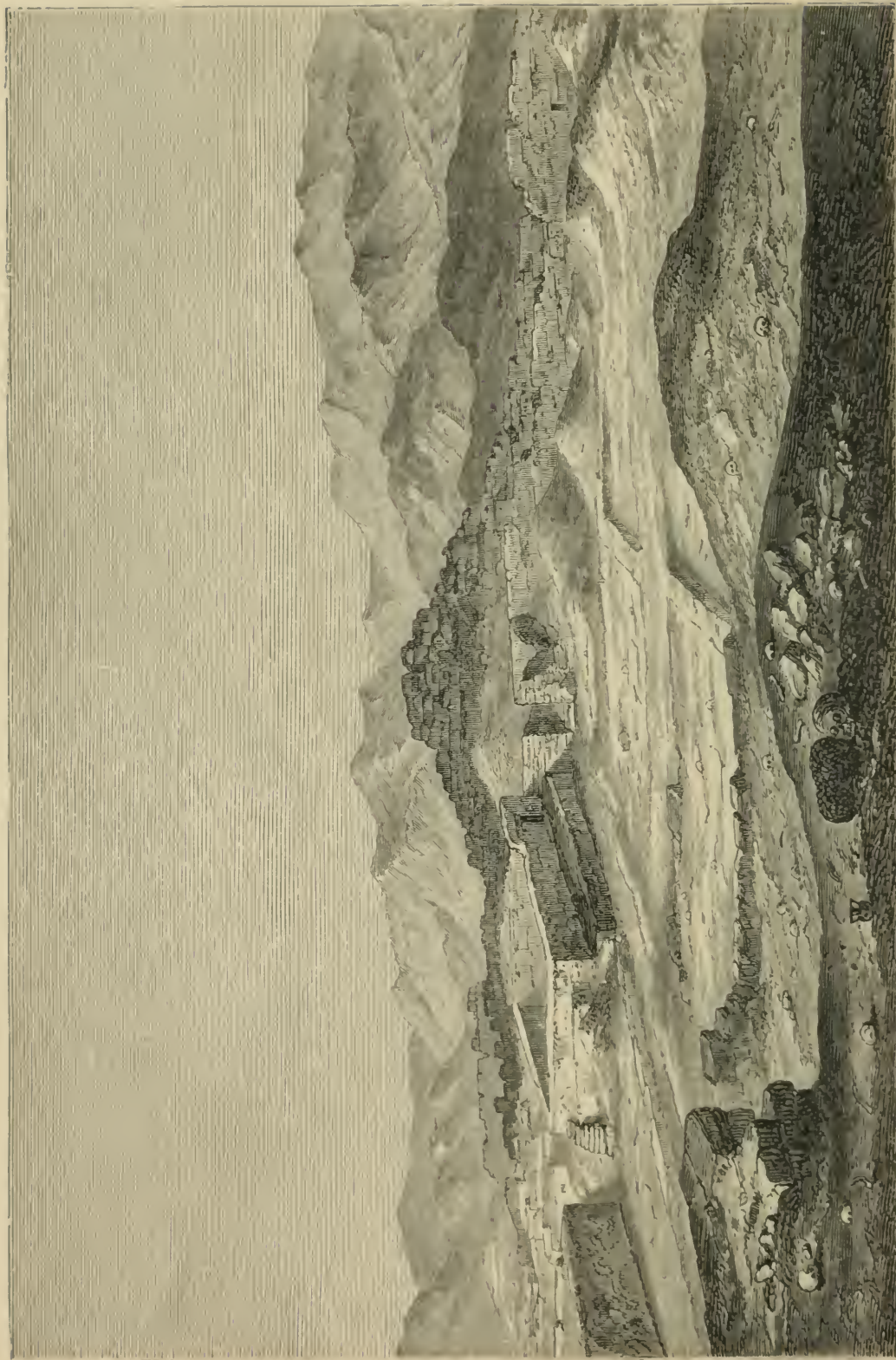
sariat necessaries, and a few large sacks to bring anything back, that might be worth appropriating.

At Chorillos we met the horses sent down for us by Mr. Sterling—three mules with provender and sacks having gone ahead on the previous day. Here, too, we were received by Senor Don Vicente Silva, Colonel and Commissary of the National Guard, and Prefect of Lurin, to whose hacienda at San Pedro, two miles from Pacha-Cámac, we were invited on the day before, and from whom we received the most courteous attention during our night's stoppage at his house.

The road going eastward from Chorillos passes, at the distance of a few hundred yards outside of the town, one of those grand old forts, with high walls, bastions, embrasures, and a wonderful work of architecture, that are so plentiful over Peru. I expressed to Mr. Schumaker my desire to have a sketch of it, but unfortunately time did not permit him to do more than the five excellent drawings of what we saw at Pacha-Cámac, and which accompany this chapter.

Our ride, after passing by the hacienda of Villa,⁹ only half a league distant from Chorillos, was along the sea-shore. This style of journey occupied more than half the way. We started from

⁹ The old fortress and the hacienda in this place are the property of one of the Goyanaches—family of the late Archbishop of Lima, who is said to have died worth twenty-five millions of dollars.



GENERAL VIEW OF PACHA-CÁMAC INCLUDING ANCIENT CITY, AND RUINS OF BURIAL MOUND.

Chorillos (after breakfasting at the Hotel San Pedro) at ten o'clock, and reached the ruins of Pacha-Cámac at about two p.m.

Whilst Senor Don Vicente Silva proceeded to his house to make preparations for our breakfast, we commenced our explorations. The immense size of the débris,—of huacas, temples, city, and burying-grounds, at once convinced me that nothing more than a cursory inspection could be taken. A Cyclopean mass of earthwork is before us as we enter on the sacred place of these ruins. This is more than two to three hundred feet high, and forms a semi-lunar shape, that is beyond half a mile in extent, stretching with its concave side to the south. We mounted to the top by a roundabout passage on horseback; but here the place was such a confused mass of wreck, that a measurement was impossible unless we could stop a week at it. The first glance showed what Dr. Archibald Smith, writing of it, describes¹ “like the temple of Cholula on the plains of Mexico;—a sort of made mountain or vast terraced pyramid of earth.”

Mr. Steer commenced by tracking the topmost terrace. One ledge he found 248 paces, or yards, in length, whilst some of the lower ones were only 150. The height between four of these terraces is from six to eight feet each; but there was so much

¹ “Peru as it is.” By Archibald Smith, M.D. London, Richard Bentley, 1839. Two volumes. Vol. ii. p. 306.

disintegration of stone walls about, and such a quantity of earth mixed up with them, that the measurements were very difficult to be defined. I did not ask him to attempt any further, when he told me, after half an hour's pacing and calculation, that the top measured ten acres square, and this at a height of nearly 300 feet from the base.

On the western side, and about twelve feet beneath the highest part, is a row of arched recesses, or alcoves, high enough to admit a man of ordinary stature to stand upright in any of them. From each end of these, but on the terrace above, are the remains of a large wall, about three feet thick, and stretching backwards to the east. The wall facing north is built of stones outside and of adobe, or sun-dried brick inside, whilst that fronting the south has adobes in its fore-part, and stones within. One can scarcely imagine these recesses could have been used in worship of the Sun, from the simple reason of their facing towards the setting of that luminary instead of its rising. Unless, indeed, we were to allow the faculty mentioned by the poet Moore of—

“The sunflower turns to its God when he sets,
The same look that it turn'd when he rose.”

Much of these walls are washed over with a red paint, and in three or four places are square niches, apparently of the same shape and size as we see in the ruins of Pagan

temples on the lowlands. Of this colouring—done probably with ochre—Dr. Smith likewise remarks, that, although executed many centuries ago, it is as inviolate and fresh on the mud plaster, as if it were the work of yesterday. He further adds, “By-the-bye, it may not be impertinent to mention, that, among these paintings, we find what is called the Grecian scroll, which, if I am not mistaken, the Grecians borrowed from the Egyptians. This may serve to throw some light upon the origin of Pacha-Cámac. Like that of Mexico,—nay, with still more emphatic gesture,—the gigantic architecture of Peru points to the Cyclopean family, the founders of the temple of Babel, and of the Egyptian pyramids. I believe that the temple of Pacha-



RUINS OF REPUTED TEMPLE OF THE SUN AT PACHA-CÁMAC.

Cámac was standing when that part of the coast was conquered by the Incas, so that there is no knowing its age.”²

From one side, going towards the north, is the relic of a wall, which is covered with soot—possibly the remnant of fires to make sacrifices—and nothing can better illustrate the conservative tendency of the Peruvian climate than the fresh appearance of this soot. Two questions at once suggest themselves whilst I am resting here: If this were a Temple of the Sun, built as it is on the top of a large huaca or burial-ground—for



ARTICLES TAKEN FROM GRAVES IN THE BURYING-GROUND AT PACHA-CÁMAC.³

right under where I am seated—though a few hundred feet below—Mr. Steer and Mr. George

² *Op. cit.* p. 306.

³ 1, Copper chisel; 2, flute of sheep shank; 3, smoking pipe of deer's horn; 4, copper implement; 5, terra-cotta figure; 6, wooden bowl; 7 and 8, grinding-stones with grinders.

Wilson, accompanied by four Chinamen, are, with pick-axe and spade, disinterring bodies—why should we find niches for heathen deities and evidences of sacrificial fires? Or whose hands carried up the enormous quantities of earth, that fill every space, and allow no definition of rooms, halls, or indeed of anything but the clay itself, and the walls cropping up from amongst them?

On the uppermost terrace I saw two sticks stretching sideways out of the clay, and, having the place opened, found three bodies inside, with the same style of swathing as those taken down lower—the only difference being that the grave was lined with stone. Some of the old Yunca people I should suppose buried here in the Temple of the Sun by the Incas—if I am to believe



VIEW (FACING EAST) OF RUINS AT PACHA-CÁMAC.

that the Temple of the Sun was built on the top of a Yunca huaca, and afterwards filled with clay. On the centre plateau, descending about seventy feet, I observed some graves opened, which were lined with sun-dried adobes; but in the lower ground, where Mr. Steer and Mr. George Wilson have dug, and are still taking out relics, they are buried very thickly together, and simply in the clay. It was from these that we got several bodies, so very old that, on opening the wrappings in which they were enveloped, they all fell to pieces. I managed, however, to get together a few score of skulls for the Anthropological Museum. We likewise obtained no inconsiderable number of curiosities. Amongst them were the matters designed on the accompanying engraving, together with a lot of rude figures of wooden faces. Some of these were stuck in the cloth encircling the head, and not a few of the heads had bags of coca-leaves fastened on the top. Several of the female bodies had with them the toilette of "a lady of the period," consisting of a very small apron of about ten inches in width, and four inches deep, with strings attached for fastening them round the loins.⁴ All of these human remains were rolled round with cloth, and encircled with rope in the same style as those we got at Chosica—hereafter described. The eye-sockets of

⁴ Garcilasso de la Vega speaks of these as the dress of married ladies. Mr. Markham's translation, vol. i. chap. xiii. p. 57.

many were stuffed with masses of cotton flock, and some of the men had slings enclosed in their wrappings. In the skulls I brought with me were two with holes, evidently caused by the stroke of stones flung from slings, and two others having frontal fissures like those I had previously obtained at the burial-place of Pasamayo, about ten miles north of Aneon, on the Lima and Huacho railway.

Accompanied by Mr. Schumaker, I rode over to a distance of about a quarter of a mile, northward from the great mound, to where was a very interesting ruin of a square building. It might have been a place for worship of some kind, for although the edifice was only about twenty yards each side, the inner rooms were full of square niches.



VIEW (FACING WEST) OF PREVIOUSLY-MENTIONED ACCREDITED TEMPLE AT
PACHA-CÁMAC.

The walls of this were about two yards in thickness, made of *Adobones*, although on a stone foundation. Several of these niches had bevelled cornices of perpendicular direction, and one or two of them were rounded at top. On the opposite side of this was an arched vault, which in the original state, and judging from the level of the circumjacent ground, was from eight to ten feet in height. Even still it is beyond five feet, reaching up to my chin as I stand before it. In three of the niches alongside of this are horizontal indentations of about six to eight inches wider than the niches themselves; and these have on them marks of cord pressure into the adobe when fresh,—suggesting that from them hung down pieces of cloth, fastened in by wood, to hide the faces of their deities from the vulgar gaze. From this, towards the west, ran out two strong adobe walls, each two and a half yards in thickness, which apparently constituted part of the enclosure of the temple in the days of its integrity. The basement of these walls is built with large masses of stone, fitted into one another with perfect art, without any mortar or cement.

Besides the similarity of the frontal suture to some of those skulls I had dug up at Pasamayo, as already mentioned, many obtained here had bits of copper in the mouth, like several of those last named. All through the ruins of the town, inside the walls of what once seemed houses, as well in large

squares, skulls were everywhere lying about, together with the different bones that belonged to them. Thus extensive excavations had been made here by the treasure-hunters. Many small bits of crockery-ware were scattered amongst the ruins, and I saw two very large vases, each capable of holding from twenty to thirty gallons. But their enormous size prevented my bringing off either of them. They were from four to five feet in height, and of proportionate rotundity. Neither of them, however, were perfect, as each had been broken, to a certain extent, from the manner in which they had been tossed about as useless, by men who came here only to seek silver and gold.

Whilst I was with Mr. Schumaker during his sketching of the last small temple, Lord Cochrane rode over to the ruins of some old walls, which stood about three quarters of a mile distant in the direction of Lima. On his return, he told me they stretched away from east to west, or from the sea inland to a length that he could not attempt to calculate. I therefore concluded that these were some of the boundary walls of the old city.

From the topmost part of the mound, and looking seaward, we can observe the Pacha-Cámac group of islets, ten in number, that seem like so many volcanic boulders, either dropped into the sea, or pushed up out of it. The largest and most northern has the shape of a

sugar-loaf, and is remarkable by being covered with a whitish something that may be guano of bird or seal, or might be a soda efflorescence.

In his notice of Pacha-Cámac, Stevenson⁵ likewise goes in the Garcilasso de la Vega track. "In September, 1533," he says, "Don Francisco Pizarro arrived at Pacha-Cámac, a large town belonging to the Indians, where a magnificent temple had been built by Pachacutec, the tenth Inca of Peru, for the worship of Pacha-Cámac, the creator and preserver of the world. This rich place of worship was plundered by Pizarro, and the virgins destined to the service of the Deity, though in every respect as sacred as the nuns of Pizarro's religion, were violated by his soldiers. The altars were pillaged and destroyed, and the building was demolished. However, when I visited it in 1817, some of the walls still remained, as if to reproach the descendants of an inhuman monster with his wonted barbarity." Then wandering amongst the remains of this temple, Stevenson enters into a strain of moralizing about the impiety of Pizarro's work in destroying "an edifice destined by its founder to be a monument of national glory, or even personal honour;" and more of the same kind, of what is scarcely removed from rant. He goes on about "the remains of a building once sacred to a large portion of our fellow-creatures, and raised by them in honour to

⁵ Op. cit. vol. i. p. 144.

the Great Father of the universe, wantonly destroyed by a being, in whose hands chance had placed more power than his vitiated mind knew how to apply to virtuous purposes,"—concluding with the climax of—"we cannot avoid cursing him in the bitterness of our anguish."

I can scarcely consider the term "rant" as too severe applied to such sentiments. Because, even independent of the uselessness of cursing Pizarro, it might be a matter of justice to inquire whether he is the party who ought to receive the malediction. For Mr. Stevenson seems to me rather rapidly coming to a conclusion, that the founder of this edifice was Pachacutec, instead of inquiring into the possibilities of its having been made a ruin of by that Inca's brother and son, who were the invading parties here, or perhaps by the original founders of it—possibly the Yuncas—to prevent its being turned to use by invaders. All the revelations of ancient historians about this place incline me to the belief that Pizarro found it in 1533 as it was in 1817 when Stevenson visited it, and as it stood in the month of April last, 1873, when Lord Cochrane, myself, and our party were on the top of it. If it were not so, how account for its being now filled up with clay? We have no relation of any fighting, as a feature of the "conquest," having been at Pacha-Cámac, or in the neighbourhood. We find no record of by whom, or wherefrom, were brought the hundreds of

thousands of tons of clay that fill up those rooms, or altar-places. In fact, we see but one large building on the top of this immense mound or huaca, and there exists no indication as to where the house of the nuns stood. Was it inside the walls of the temple, or in the town? Until these points be settled, I cannot help looking on the whole of the story of the plunder of this place by Pizarro, and the violation of the nuns by his soldiers, as a piece of braggadocio, founded on imposture. The ancient Peruvians, whose history was wiped out by the Incas, were, most probably the builders of Pacha-Cámac. And if such a thing be proved, as probably it may be, by further investigations amongst the mounds, it will reveal another illustration of how the mighty spirit of truth seems advancing, before all things, to be the great triumph of the nineteenth century—the triumph of our humanity, and our civilization.

On our way to Don Vicente Silva's house we crossed a pretty suspension bridge over the river Lurin, and along a road, as wide as any highway in England, perfectly level, and shaded on each side with trees. The village of Lurin has nothing remarkable except that its houses, in anticipation, no doubt, of earthquake contingencies, are built of reed and mud—called *Kinshin*.⁶

⁶ This resembles what in West Africa is styled the "wattle and dab"—a framework of bamboo stems over which clay mortar is slapped on.

It has a most melancholy-looking little plaza or square, over which towers a spacious chapel, with a huge dome—a house of worship apparently large enough to hold the populations of two or three towns of the same size. In the valley of Lurin, or as it was formerly styled Pachacámac, there are seven sugar-cane plantations, besides that of Senor Silva; and wherever we go John Chinaman is prevailing. Here, as in many other places in Peru, there is a legend that at a place called Chimeroo, not more than ten leagues distant, the gold is concealed, which was being sent from Cuzco to Cajamarca for the release of Atahualpa, and that the Indians, who were the bearers thereof, either scattered about, or hid, it as soon as they heard of their monarch being murdered. It was a pretty tidy sum—eleven thousand llamas, each carrying a hundred pounds in weight of gold,—or eleven hundred thousand pounds of the precious metal, as we are told by Rivero, Tschudi, Prescott, and many others.⁷

I rode back to Lima in company with Lord Cochrane and Mr. George Wilson, together with our *arriéro*; the last-named having charge of two mules, that carried more than fifty skulls, with other items of our excavations, on their backs.

⁷ No less than half a dozen different places in Peru are accredited with the storage of this strayed money—Casma and Yupanqui amongst them.

It is impossible to conceive anything more dreary and desolate than this road—through soft sand half-way up to the horses' knees, and with a line of rocky hills three to four hundred feet high on either side of us. Not a drop of water to be seen anywhere—no well, rivulet, or azequia, till we came within six or eight miles of Lima, where we passed over one of the streams from the Rimac river, that debouches above Lima to water the valley of Huatica. The distance from Lima to Pacha-Cámac is calculated to be only eight leagues, and from Chorillos five. But I think a couple of leagues might be tacked on to the first named, without much fear of exaggeration.

Writing of the Chasquis, or messengers of Peru in the time of the Incas, we are told by Stevenson⁸ that the Incas had relays of messengers on all the principal roads, who relieved one another in carrying messages from the coast to Cuzco, or *vice versa*. The distance from Cuzco to Lima Stevenson makes out only a hundred leagues, or three hundred miles; but I believe it is nearer double that amount. By means of Chasquis, we are asked to believe, "the court of the Incas was supplied with fresh fish from the sea near Pacha-Cámac,—probably from the Bay of Chilca,—where a village of Indians is still employed in fishing. It is the place to which Pizarro was directed

⁸ Op. cit. vol. ii. p. 65.

by the Indians, when in search of a good harbour before that of Callao was discovered. The distance from this part of the coast to Cuzco is more than a hundred leagues, yet, so vigilant and active were the Indians, Garcilasso affirms “*that the fish often arrived at Cuzco alive.*”

After this, surely no statement of Garcilasso can be doubted; unless, perhaps, by some one who might be credulous on the point of the fish not being acclimatized to the rarefied atmosphere on the Andes' summit of 14,000 to 15,000 feet, over which they had to cross in their journey of beyond one hundred leagues. If the *modus operandi* of this transport were known, I feel confident it would be highly appreciated by Mr. Frank Buckland.

On the morning after my return from Pacha-Cámac, I consulted other works that were in my possession, which had been written by actual visitors to this historic place, for the purpose of seeing how far I could have depended upon them. Opening Rivero's book,⁹ I found as follows, under what the author styles the particulars of the history of Pacha-Cámac:—“On the conical elevation, near the bank of the sea, 458

⁹ “Peruvian Antiquities.” By Mariano Edward Rivero, Director of the National Museum, Lima, &c. Translated by T. L. Hawks, D.D., LL.D. New York: Putnam and Co., 1853. Page 288.

feet above its level, are found the ruins of the ancient temple of Pacha-Cámac. At the foot of this hill are seen at the present day the decayed walls of the edifices, which were intended to receive the strangers who came on pilgrimages from the most distant provinces of the empire to present their offerings to the deity."

Commenting on Senor Rivero's account, as I proceed, I have here to observe, that at the foot of the hill in question there are no decayed walls of edifices. Moreover the term "hill" is scarcely applicable to what Dr. Smith styles a "made mountain," and such as I believe it to be.¹ At a distance of about 200 yards from its base we find ruined walls, supposed to be ruins of the town of Pacha-Cámac. But that they were intended to receive strangers, who came from a distance for the pilgrimage, seems to me an assumption, for which I cannot recognize any proof. In the next paragraph Senor Rivero says, "The whole was surrounded by a wall of adobes, nine feet in width, and probably of considerable height, for some parts of it are twelve feet in height, although in its average extent it is not more than four or five." Such a wall as is here described only exists at the northern side of the town—running from the sea inland, and separates all the ruins from the desert track to Lima. He

¹ *Vide* page 157.

continues, "The material throughout the whole fabric is not hewn stone, as in the edifices of Cuzco, but adobes, easily crumbled." What fabric may be meant here? The "ancient temple of Pacha-Cámac? decayed walls of edifices? or the wall surrounding the whole?"—because, although no hewn stones are in either of the two last, the chief component of the structure on top of the hill is from hewn stone; and the quarry whence they may have been taken, as of a like geological formation, is only about half a mile distant, before crossing the iron bridge over the river Lurin.

Then "the upper part of the highland, or ridge, which is about 100 feet high, is artificially formed by walls—each one thirty-two feet in height, and from seven to eight feet wide. In the most elevated part is seen the temple, with the sanctuary of the deity towards the sea. Its door was of gold, richly inlaid with precious stones and coral; but the interior was obscure and dirty—this being the spot chosen by the priests for their bloody sacrifices before the idol of wood, placed at the bottom of the enclosure, the worship of which succeeded the pure and abstract worship of the invisible Pacha-Cámac. At present there remain of this temple some niches only, which, according to the testimony of Cieza de Leon, contained representations of several wild beasts; and we have detached fragments of paintings of animals made on the

wall upon the whitewashed clay. We can, however, still distinguish the place of the sanctuary, according to the description of the early chroniclers."

The only thing on the high building at the period of my visit which could be taken for a sanctuary of the deity are the niches, of which Mr. Schumaker has taken a sketch. The whole of this mound appears to me artificial. But I could not discover where had been any place for door of precious stones, coral, and gold; because the building, whatever it was in old times, has lost all shape or form, leading to being recognized, by being filled up with earth. There is no whitewashed clay, unless that can be called so (Hibernically) which is of a red colour. I saw no traces that could be indicated as paintings of animals.

"The opinion is erroneous," he goes on to say, "which deems these ruins to be the Temple of the Sun. It is one, however, which has been adopted by almost all modern authors, although diametrically opposed to that of the historians contemporaneous with the conquest, as well as to the account given by Hernando Pizarro, brother of Francisco, and destroyer of the temple."

My readers will see by this, we are informed that the ancient temple of Pacha-Cámac was, according to Rivero, not the Temple of the Sun. Yet consulting a work of his fellow-traveller,

Dr. Tschudi,² we are told, “Pacha-Cámac was the greatest deity of the Yuncas, who did not worship the Sun till after their subjugation by the Incas. The temple of Pacha-Cámac was then dedicated to the sun by the Incas, who destroyed the idols which the Yuncas had worshipped, and appointed in the service of the temple a certain number of virgins of royal descent. In the year 1534 Pizarro invaded the village of Lurin (two miles away from Pacha-Cámac); his troops destroyed the temple, and the Virgins of the Sun were dishonoured and murdered.”

But instead of the old temple of Pacha-Cámac being converted into a Temple of the Sun, as Tschudi says, I find again, on returning to Rivero,³ “Outside of this edifice (that was the old Pagan temple, with its doors of gold and coral and precious stones) there were in Pacha-Cámac a Temple of the Sun, a royal palace, and a house of virgins—monuments erected by the Incas, Pachacutec, and Yupanqui. According to our investigations, the Temple of the Sun extended from the foot of the mountain,⁴ on which was situated the temple of Pacha-Cámac, towards the north-east, and on the

² “Travels in Peru during the years 1838 and 1842.” By Dr. J. J. Von Tschudi. London: D. Bogue, Fleet Street, 1847. Page 205.

³ *Op. cit.* p. 290.

⁴ The “made mountain,” he might have said, as I believe it to be the work of human hands.

side towards the north-west, as far as the Lake of Sweet Water, and at the foot of the mountain from the south-east of the temple of Pacha-Cámac to the house of the chosen virgins."

Not a vestige of any ruins, save of old walls, of the same character as the rest, existed in the direction indicated when I was there last April. From the chief mound on top of which the ruins of the old building described by me are found, both in a north-east and north-west direction, extend smaller mounds to the distance of half a mile, where they are bounded by the river Lurin. But I must ask a few questions. If the Incas had a Temple of the Sun here when Pizarro came, and that it was a different building from that on the high mound, how does it happen that it has disappeared, whilst the relics of the old Pagan temple remain? If the latter, according to Tschudi, had been converted into a Temple of the Sun, who filled it up with clay, so as that we can now walk on its very summit, with all the walls underneath our feet as we look down? Not being able to find or invent a reply, I lay aside the works of Senor Don Mariano Edward Rivero and Dr. Tschudi, to ruminate on the old fairy story of "Jack and the Beanstalk," as well as on what Stevenson tells us of some people's belief that Don Quixote was buried at Trujillo.

CHAPTER X.

Calláo Bay.—Earl Dundonald and the island of San Lorenzo.—Cutting out of the “Esmeralda.”—The concrete works of Mr. Hodges.—Pacific Steam Navigation Company.—First appearance of steamboat on the Pacific.—Earliest report of Pacific Steam Navigation Company in 1843.—Hardihood of directors.—Present status of the Company.—Organization in Calláo.—Programme of sailings.—Large trade created by it.—Additional steam lines.—Floating-dock of Calláo.—Original establishment.—Utility to Pacific shipping.—Muelle y Darsena (mole and dock): great work of Brassey and Co.—Calláo trade for 1872.—Imports and exports.—Guano existing in deposits.—Amount of supply for future.—No fear of Government securities.—New discoveries of nitrates and of silver-mines.—Immense increase of Custom-house receipts.—Port dues.

FROM Cerro Azul we have a little over seventy miles of sea voyage, in which, after passing by Pacha-Cámac and Chorillos, we enter one of the finest bays in the world at Calláo.

This harbour is situated in lat. 12' 8" S. and long. 79° 45' W. The port can be entered (if coming as we are from the south) through the Boqueron channel, which separates the island of San Lorenzo from La Punta (the Point)—a low peninsula composed of the *débris* of marine shells, and rubble of ordinary paving-stone size,

the latter of which is being constantly added to by the surging in of the ocean. Another entrance is by going round San Lorenzo to its northern extremity, whereon a lighthouse stands, and straight into the anchorage. San Lorenzo is about four miles in length, and a mile in width. It is a barren mass of brownish grey colour, without the semblance of vegetation, except, as I am told, some wild potatoes that grow on the top, which is about eleven hundred feet high.

On entering the Boqueron channel, and looking up the side of the island, one can recognize the figure of a cross, made with what appear large clumps of basalt, or some volcanic-looking boulders—no doubt the work of the early Spanish padres. The island is considered as about six miles distant from Calláo, and it has its old historic memories. The brave Earl Dundonald, very early in his operations on this coast, was able to liberate from this island thirty-seven Chilian soldiers, who were imprisoned by the Spaniards for seven years.¹ They had been forced to work in manacles, and at night were chained by the legs to iron bars in a filthy shed. “Cochrane established a laboratory in San Lorenzo, and while rockets and fire-ships were being prepared there, he sailed hither and thither, capturing treasure-ships belonging to the Spaniards, and intercepting

¹ *Vide* “Chambers’ Miscellany,” part iii. p. 27.

treasure-trains inland." In September, 1819, he came from Valparaiso to attack Calláo; his indomitable spirit determined to give no peace to the Spaniards till they were rooted out of the Pacific shores. He was accompanied by a squadron of seven vessels, with two fire-ships, and four hundred soldiers to act as marines. He sent a flag of truce, challenging the Viceroy of Peru to fight him ship for ship, which was, of course, prudently declined.

But his greatest feat in Calláo bay, subsequent to the storming of Valdivia already recorded, was the cutting out of the Spanish war-frigate "Esmeralda." This is so graphically described by Stevenson² that I am tempted to give it in his words—more especially as he at the time was secretary to Lord Cochrane, who was Vice-Admiral of Chili; and Stevenson was a sharer in the attack:—

On the 3rd of November, 1820, his lordship astonished the inhabitants of Calláo by sailing through the narrow passage that lies between the island of San Lorenzo and the mainland, called the Boqueron. Never had the Spaniards known a vessel of more than fifty tons attempt what they now saw done with a fifty-gun frigate. Expecting every moment to see us founder, the enemy had manned their gunboats, and formed themselves in a line, ready to attack the instant

² Op. cit. vol. iii. p. 289.

they should observe us strike. To witness which the batteries were crowned with spectators—but, to their utter astonishment, we passed the strait, leaving them to ruminate on the nautical tactics of the admiral of the Chilean squadron.

Having passed the Boqueron, a ship and a schooner hove in sight. The ship proved to be English, the schooner to be the “Alcance” from Guayaquil, bringing news of the revolution and declaration of independence, and having on board the ex-governor, with other Spanish authorities. Guayaquil had followed the example of the other South American cities in the manner in which she threw off the colonial yoke. The Spanish mandatories were deposed, and a new Government established on the 9th of October, without any bloodshed, or even insults offered to the authorities set aside.

The adventurous spirit of Lord Cochrane immediately formed the project of performing the most gallant achievement, that has honoured the exertions of the patriot arms in the new world. The two Spanish frigates, “Prueba” (Proof) and “Venganza” (Vengeance), had left the coast of Peru, and the only vessel of respectable force at Calláo was the frigate “Esmeralda.” She was at anchor in this port, guarded by fifteen gunboats, two schooners, two brigs of war, and three large armed merchantmen, besides the protection of the forts and batteries on shore, and a floating boom

surrounding all the vessels, open only on the north side, lying close to the shore of Boca Negra. His lordship determined on cutting out the frigate, the brigs, and schooners, with as many of the boats and merchantmen as might be possible. This daring enterprise was to be executed by volunteers alone. But when the act was proposed, on the 3rd of November, to the crews of the different vessels, the whole of them wished to share in the glory of the undertaking. On this account it became necessary to issue the following proclamation, which was received with the enthusiasm, that the voice of a hero causes when he speaks to those who know his character :—

“Soldiers and Sailors,—To-night we will give a mortal blow to the enemy; to-morrow you will present yourselves before Calláo, and all your companions will look on you with envy. One hour of courage and resolution is all that is necessary to triumph. Remember that you are the victors of Valdivia, and fear not those who have always fled before you.

“The value of all the vessels taken out of Calláo shall be yours; and, moreover, the same sum of money offered by the Government of Lima to the captors of any vessel of the Chilean squadron shall be distributed amongst you. The moment of glory is at hand. I hope, Chileans, you will behave as you have hitherto done, and that the

Englishmen will act as they are accustomed to do, both at home and abroad.

“Nov. 4th, 1820.

COCHRANE.”

On this day, the 4th of November, fourteen boats belonging to the Chilean vessels of war were manned, and left the ships, filled with volunteers, at half-past ten at night. But this was only intended by his lordship to exercise the men. On the 5th, being the day determined on by the admiral for the gallant enterprise, the signalman of the flag-ship was sent to the signal-staff erected on the island of San Lorenzo, where he hoisted two or three flags, and was answered by the “O’Higgins.” The “Lantaro,” “Independencia,” and “Araucano,” immediately weighed anchor and stood out of the bay, leaving on board the “O’Higgins” (the admiral’s ship) the boats and volunteers. This *ruse de guerre* completely succeeded, and the Spaniards were persuaded that they had nothing to fear that night, for they supposed that some strange sail had appeared in the offing, and that our vessels had gone out in pursuit of it. All being thus ready, at ten o’clock at night we again embarked in the boats, and proceeded towards the inner anchorage. The boats, containing two hundred and forty volunteers, proceeded in two divisions—the first under command of Captain Crosbie of the flag-ship—the second, of Captain Guise, of the “Lantaro,” both under the immediate direction of his lordship. At midnight we passed the boom. Lord Coch-

rane, being in the first boat, was hailed from a gunboat, but, without answering, he rowed alongside her, and, standing up, said to the officer, "Silence or death! Another word, and I'll put you every one to the sword!" Without waiting a reply, a few strokes of the oars brought the boats alongside the "Esmeralda," when his lordship sprang up the gangway and shot the sentry; the one at the opposite gangway levelled his musket and fired. His lordship returned the fire and killed him, when, turning round to the boats, he exclaimed, "Up, my lads; she's ours!"

The soldiers and sailors now boarded her in every direction, and possession of the quarter-deck was immediately taken. The Spaniards flew to the fore-castle, where they defended themselves, and kept up a continued fire of musketry for seventeen minutes, when they were driven below and obliged to surrender. We had scarcely obtained possession of the quarter-deck when a gunboat, close astern of the frigate, fired a shot into her. The shot tore up the deck under the feet of Captain Coig, commander of the "Esmeralda," and wounded him severely. It also killed two English sailors and one native. But the officer and crew of the boat immediately abandoned her.

The frigate was in an excellent state of defence, and her crew under good discipline. The men were all sleeping at their guns, and the guard of

marines on the quarter-deck. So prompt were the latter, when his lordship jumped up the gangway, that they appeared as if they had been ordered out to receive him. Indeed, had not the men in the boats, under the command of Captain Guise, boarded almost at the same moment behind the marines, the admiral and many others who accompanied him on the starboard side must have fallen by their fire. His lordship at this time received a shot through the thigh, but until the ship was ours he paid no attention to the wound except binding a handkerchief round it. After which he stood on one of the guns of the quarter-deck and laid his leg on the hammock netting, where he remained till three o'clock in the morning, and then went on board the "O'Higgins" to have it dressed by the surgeon.

Well might Captain Downes, of the United States war-ship "Macedonia,"³ have said in a despatch to General San Martin, "I do most sincerely congratulate Lord Cochrane upon the capture of the 'Esmeralda.' The exploit was executed in a gallant style never surpassed." Well, too, did Sir James Mackintosh say in the House of Commons:⁴ "Lord Cochrane is such a miracle of nautical skill and courage; his cause of banishment from his country is so lamentable; his adventures have been so romantic, and his achievements so splendid, that no Englishman can read

³ Op. cit. vol. iii. p. 299.

⁴ *Idem*, vol. iii. p. 279.

them without pride that such things have been done by his countryman, and without solemn concern that such talents and genius should be lost to the land that gave him birth."

But not less remarkable than the courage shown in capturing the "Esmeralda" was the ability with which she was taken out of her barricaded position. "It was the intention of Lord Cochrane," continues Stevenson,⁵ "to clear the bay according to the instructions given; but being wounded, and the resistance made by the Spaniards on board proving much greater than was expected, Captain Guise ordered the cables to be cut, which being done, the frigate began to drift from her anchorage. The batteries were pretty active during the engagement, and when the 'Hyperion' (English frigate at anchor in the port) and 'Macedonia' (United States frigate in same position) sheeted home their topsails, and began to move out of the way of the shot, the firing increased. These ships showed two lights—one at the mizen peak, the other at the jibboom—as distinguishing signals, which, being observed by Lord Cochrane, he immediately ordered the same to be shown on board the 'Esmeralda.' Thus she was brought out of the anchorage with less damage than either of the other two sustained. Indeed, excepting the shot from the gunboat, the 'Esmeralda' sustained none whatever."

⁵ Op. cit. vol. iii. p. 297.

With this we find the “Esmeralda” had, from the lists that turned up, three hundred and twenty persons on board, besides some visitors—the latter, no doubt, from what had taken place the previous day, not suspecting any danger.

On the following day, when the prisoners were mustered, their number amounted to only a hundred and seventy-three; thus their loss was inferred to be a hundred and fifty-seven, besides several wounded, who were sent on shore with a flag of truce. The loss of the attacking party under Lord Cochrane amounted to eleven killed and twenty-eight wounded.”

Although the capture of the “Esmeralda” must have proved not only a death-blow to the Spanish naval forces in the Pacific, but have given additional strength to the cause of Independence and South American emancipation, this great victory was not appreciated by General San Martin, whose petty jealousy, exhibited in his treatment of Lord Cochrane, is one of the greatest blots on the memory of the self-elected Dictator of Peru. From this time for two years afterwards, the paltry vanity of San Martin, added to his lack of honesty in breaches of promise, of justice, and humanity, made his name odious to every lover of the principles of truth and right. But at the end of 1822, and whilst residing on his estate at Quintero, Lord Cochrane received the following communication from Peru—a document that

reflects much credit on the Congress of that Republic :⁶—

“The sovereign constituent Congress of Peru, contemplating how much the liberty of Peru owes to the Right Honourable Lord Cochrane, by whose talents, valour, and constancy, the Pacific has been freed from our most inveterate enemies, and the standard of liberty has been displayed on the coast of Peru, resolves, that the junta of Government, in the name of the Peruvian nation, do present to Lord Cochrane, Admiral of the squadron of Chile, expressions of our most sincere gratitude for his achievements in favour of this country, once tyrannized over by powerful enemies—now the arbiter of its own fate.

“The junta of Government, obeying this, will command its fulfilment, and order it to be printed, published, and circulated.—Given in the Hall of Congress, Lima, the 27th of September, 1822. (Signed) Xavier de Luna Pizarro, President; Jose Sanchez Carrion, Deputy Secretary; Francisco Xavier Marreategui, Deputy Secretary.

“In obedience we order the execution of the foregoing decree. (Signed) José de la Mar, Felipe Antonio Alvarado, El Condé de Vista Florida. By order of his Excellency Francisco Valdivieso.”⁷

⁶ Stevenson, *Op. cit.* vol. iii. p. 463.

⁷ Creditable though this document be, the general public will regret to know, it was the only recompense given to the man

The island of San Lorenzo, likewise, deserves notice now-a-days as we pass it by. During the last year, a governor has been named to it by President Pardo. There are nearly three hundred workmen living thereon, part of whom are employed in the quarrying for Mr. Hodges, C.E., in reference to his great work of the Muelle y Darsena (the mole and dock); and the remainder are employed in Messrs. Harris and Co.'s smelting furnaces.

The first thing to attract attention in the harbour of Callao, as we round the Punta, is the extensive machinery for making concrete which has been put up here by Mr. Hodges; and the next is the great extent of yards, engine-shops, and manager's residence of the Pacific Steam Navigation Company. When the eye ranges over these, and takes in the stores, as who, before all others, was the main instrument in achieving Peruvian independence; whilst General San Martin, who made himself Dictator chiefly by the help of Earl Dundonald's labours, was rewarded with a pension for life of 20,000 dollars per year, and a present of a large sum of money. Better late than never. It may be hoped that the existing Peruvian Government will follow the example recently set by one of the most eminent of Brazilian statesmen, who moved in the Parliament at Rio de Janeiro, that Earl Dundonald's family should receive a further reward due to them for their father's service, in achieving the freedom of Brazil. The motion was received with enthusiastic applause, and without a dissenting voice, and was soon followed by an award of 40,000*l.* Those who appreciate the sense of justice due to such services, will join me in saying,—“May it be no less in Peru!”

well as the large number of steamers in the bay, we can at once comprehend how the Pacific Steam Navigation Company has come to be the greatest British power on the West Coast of South America.

It may not be *mal-à-propos* here to relate an incident connected with the commencement of steam navigation on the waters of the Pacific.⁸ The first steamer that arrived on the coast of Peru was one called the "Telica," its captain and owner, Senor Metrovitch, having made the voyage with it, under sail, from Europe round by the Straits of Magellan to Guayaquil, where he took on board the machinery, together with the Colombian flag, and several passengers. After a trial trip in the river of Guayaquil on the Sunday before departure, he set out seaward in the direction of Calláo. But, delayed in his voyage on account of the fogs along the coast, the supply of fuel got short, and the captain became exasperated by the complaints of his passengers, which were heaped upon him to increased aggravation one day, whilst they were breakfasting in the port of Guarney. Whereupon Metrovitch discharged a pistol into a barrel of powder, causing the steamer to fly up into the air (*hizo volar el vapor*). All of the passengers and crew perished, with the exception of a few that were on shore, and a man named Tom

⁸ From a volume published in Spanish at Lima in 1871, about the Railway of Arequipa.

Jump, who, standing at the ship's bow at the moment of the explosion, leaped into the water, and swam to land. The hull of the steamer may still be seen at Guarmey.

“The most curious part of the notice,” says the writer, “and for which I am indebted to the amiability of Senores—Captain in the navy Don Aurelio Garcia y Garcia, Don Frederick C. Fremdt, and Colonel Don Manuel Odriozola—the most curious, I repeat, is that this affair happened forty years before steam navigation was established between Europe and America. One of my informants, M. Fremdt, had been a passenger on board the ‘Telica.’”

In the first report of the directors of the Pacific Steam Navigation Company, of a meeting held at the offices, in Austin Friars, London, on Friday, the 18th of August, 1843, it appears there was some little stumbling-block at the threshold of its operations, by an accident to the Chile steamer, as well as by the books on the Pacific stations being allowed to fall into arrear, and no accounts therefore forwarded to England. At this time the steamers of the company were limited to two, the “Peru” and the “Chile.” They had likewise purchased a schooner for the purpose of keeping up communication between Calláo and Panama; but, owing to calms and currents, this vessel was sailed at a loss. The “Peru” and “Chile” had, at the first, been limited

to the navigation of the coast between Calláo and Talcahuano in Chile,—the latter near the Arauco bay, and whence coal was obtained. The services of the steamers were then prolonged northward to Guayaquil,—a short time previous to the sale of the schooner. At the period of which I am writing, the paid-up capital of the company was only 91,630*l.*, added to which the loan of 20,000*l.* made up a sum of 111,630*l.* In the account presenting such statement there was shown a loss of 13,695*l.* 8*s.* 10*d.* Yet that this did not frighten the directors may be assumed from the following resolution which they adopted:—“The directors deem it their duty, however, before closing this report, to call the attention of the proprietors to the necessity of *sending a third steamer to the Pacific*, to provide against casualties, or any interruption to the traffic in which the two are now engaged, in the event of either being laid up for temporary repairs.”

Looking at the large fleet of steamers in the bay whilst I am penning this, one may nevertheless admire these bold buccaneers of Austin Friars, having the hardihood to propose a third boat for the Pacific in the face of such a loss. Because at the period the company was but an experiment, which possibly never would have weathered the storm of such a “heavy blow and sad discouragement” to its financial operations, if it had not for its promoters and managers such

men as Mr. William Wheelwright,⁹ the founder and originator of the company, Mr. George Petrie, who is still manager at Calláo, and Mr. Richard Just, in the same position at Liverpool. Let us see how it has progressed from its three steamers thirty years ago.

The company was organized in 1839, and in February, 1840, was obtained the charter of incorporation. Its head-quarters in South America are at Calláo. The brain and heart of the company's works are in a comparatively small office in the Calle del Muelle (the Street of the Mole); but these works cover an area of over 60,000 square yards, at a portion of the old Calláo town, called Chucuito. They comprise stores convenient to the Custom-house, and from which a mole, with locomotive and steam-cranes, assist in loading and discharging. A little farther on is the house of the manager, with extensive stores underneath, as well as another mole with steam-crane. Spacious iron and brass foundries; carpenters' and blacksmiths' shops, in which is a quantity of steam-power; a steam washing-house for the linen of the steamers worked by Chinese, and capable of turning out 1000 pieces of linen per day; a steam-bakery, with one of Perkins' ovens large enough to hold 124 four lb. loaves at a

⁹ This indefatigable friend of South America—and most amiable of men—died at his residence, Gloucester Lodge, in the Regent's Park, London, on the 26th of September this year, and whilst the proofs of this work were going through my hands.

baking; brass casting apparatus; a residence for the workmen in an enclosed block of buildings called "Glasgow Terrace," wherein there is likewise a well-fitted theatre; a butchery, with enclosure of stalls for cows and sheep, needed in the provisioning of steamers. There is also an hospital, which was opened in 1865, but had to be closed in 1869, when the Peruvian Government enacted the hospital tax law referred to elsewhere.

In the year 1870 the steamers of this company brought to England about 106,000 bales of cotton, amounting to nearly 9,500 tons.

The line of this company's steamers in connexion with South America, from Liverpool, has hitherto been bi-monthly in their voyages, carrying cargo, passengers, and her Majesty's mails. Although that just referred to has been running for little more than three years, yet it appears that the "company contemplate, early next year, having a supernumerary fleet of some twenty steamers, of between 3,000 and 4,000 tons each, in order to maintain weekly communication to and from Liverpool."

Of the new arrangement the following itinerary is proposed:—

From Liverpool every Saturday; from Bordeaux every Tuesday; from Lisbon every Friday; touching at Rio de Janeiro every Saturday; calling at Monte Video every Thursday; arriving at

Valparaiso every Wednesday. From Valparaiso every Thursday, calling at Monte Video every Monday; at Rio de Janeiro every Saturday; arriving at Liverpool every Thursday. Each alternate steamer is to proceed as far north as Calláo, stopping at Arica, and Islay,—going and returning.

Besides these the company has steamers running four times a month between Calláo and Panama. Those of the 14th and 28th of each month bring mails and passengers from Calláo, destined for England, the Continent, United States and elsewhere, by the royal mail steamers from Colon, on the opposite side of the Isthmus of Panama. The first-mentioned steamers return to Calláo (whence, it may be needless to state, there is almost daily means of passage along the coast), leaving Panama on the 10th and 26th of each month, thus effecting the communication, within a month, between Calláo and England or the Continent. The third steamer on this line is that which leaves Calláo on the 22nd of each month to correspond with the New York steamers, as well as the Mexican and Californian lines from Panama; and the fourth leaves Calláo on the 6th of each month for the French Compagnie Transatlantique, to and from Colon.

I have elsewhere shown the amount of hospital tax paid by the Company's steamers. In Calláo, at the offices and works, they have about 480

hands employed, independent of the commanders, officers, and crews of more than twenty steamers that are daily arriving and departing for different parts of the coast.

Last year the company had forty-four steamers comprising their fleet; whereas now they have fifty-four, with an aggregate of 106,980 registered tons, and a combined force of 19,680 horse power. Sixteen of its vessels were laid to sail from Liverpool out hither, and through the Straits of Magellan, in the five months from the end of July, 1872, to the end of December in the same year.

Between Calláo and Valparaiso there is a bi-weekly steam communication to Valparaiso besides the line of Magellan Straits steamers. There are generally from ten to twelve of the company's steamers in the Bay of Calláo, arrivals and departures being of daily occurrence. Since the first of this year the Pacific Company has had an opposition in a line of French steamers of the "Compagnie Générale Transatlantique" between Valparaiso and Panama, touching at Calláo. Messrs. Ismay, Imrie, and Co., of Liverpool, have commenced, on the 5th of October 1872, a second series of steamers for the West Coast of South America—"The White Star Line"—to come through the Straits of Magellan to Calláo. With these, German steamers have begun to voyage through the Straits from Hamburg to Calláo, the first of

which, the “Karnak,” together with the first of the White Star Line, the “Republic,” arrived at, and left Calláo in the month of December last year.

As proofs of the large trade created by the Pacific Steam Navigation Company, I may add a few facts. During the single month of May in the year 1872 its steamers conveyed from Calláo, either *viá* Panama transit, or through the Straits of Magellan, more than 5,000 bales of cotton. From Saturday evening, the 7th of December, to Monday morning, the 9th of the same, or in the space of thirty-six hours, there arrived in the Bay of Calláo the following steamers of this company with the corresponding cargo:—

The “Quito,” from San Jose and intermediate ports, with 1,769 packages and 506 in transit.	
The “Trujillo,” from Panama, Guayaquil, and Payta, with 3,081 and 1,124 in transit.	
The “Pacific,” from Valparaiso and intermediate ports, with 757 and 74 in transit.	
The “San Carlos,” from Pisco and intermediate ports, with 256 and 77 in transit.	

Total for Calláo	5,863
In transit	1,871
Grand Total	7,734

Before going ashore, we must have a look round and see what other matters are to be noticed in the Bay of Calláo. Besides the immense forest of masts, we cannot help observing the floating dock and the new Muelle y Darsena (mole and dock),

being constructed by Mr. Hodges, C.E., for Messrs. Thomas Brassey and Co., of London.

The floating dock is one of the most important institutions on the Pacific coast of South America.

The privilege for this dock was granted by the Peruvian Government on the 14th of April, 1863, to Mr. George Petrie, manager of the Pacific Steam Navigation Company, with the obligation to form a separate company to carry out its objects.

The Dock trust was to have the exclusive privilege for twenty years for the establishment of docking accommodation in the Bay of Calláo. On the 16th April, in the same year, Mr. Petrie announced in Calláo "The Calláo Dock Company," capital 500,000 dollars (75,000*l.*), in 500 shares of 1,000 dollars each, of which half the number should be offered to the public of Peru. 404 shares were at once taken there, and 250 shares in England as soon as Mr. Petrie could proceed to place them. The dock was made at Glasgow by the eminent firm of Randolf, Elder, and Co., for a sum of 42,000*l.*; the whole expense of freight, insurance, &c., from Glasgow being at the cost of the Dock Company.

The material, consisting of plates, rivets, angle-irons, pipes, machinery, &c., was sent out by sailing vessels, and amounted to nearly 2,900 tons in weight. The launch-ways were constructed

by Mr. James Anderson, who is still the dock master. The structure is called the St. George's.

It draws only four feet of water. The measurement in length is 300 feet, and in breadth 100 feet outside, inside 76 feet. It can be put down sufficiently to take in a vessel of twenty-one feet draught, and can lift about 5,000 tons of dead weight. It is sunk by opening the valves and letting water in, and pumped out by a pair of steam pumps of twenty-five horse-power each. As it has been from the beginning, so it is still, i.e. the following tariff of charges for the use of the dock is to be calculated by measurement, viz.—

For Steamers and Ships of War :

1 sole (3s. 9d.)	per ton	for first day.
75 cents of a sole	„	four following days.
50	„	subsequent days.

For Sailing Vessels :

50 cents of a sole	per ton	for first day.
25	„	following days.

From these rates 33 per cent. has to be allowed to the Peruvian Government, and a reduction of 25 per cent. is made to the Pacific Steam Navigation Company; use of dock hawsers, stages, blocks, shores, &c., 50 soles (10*l.*) for vessels under 500 tons, and 100 soles for those over 500 tons.

The following are facts with reference to this dock that may be depended on:—

1. That it is perfectly rigid and firm as it was

when first launched six years ago, in spite of all the weight that has been put on it.

2. That a vessel of any tonnage can be lifted in from an hour and a half to two hours, according to its weight.

The foregoing details have been given to me by Mr. Noel West, who is the very efficient manager of the dock in Calláo. Last year the company paid 12 per cent. to the shareholders, whilst reserving 5 per cent. for a depreciation fund.

When I was leaving Calláo in May of this present year, I was informed by Mr. James Hodges,¹ C.E., the principal of the great work of the Muelle y Darsena, that he had then seven hundred men employed on it, together with three locomotives, fifteen steam engines, and a steam dredger, two tugs, and thirty barges. These combined powers manage to put *in situ* from 2,000 to 2,500 tons of material per day. Of this, from 40 to 60 blocks of concrete form no unimportant portion,—each block weighing ten tons. At an angle from the turn of the inner bay, going up to the old mole, and crossing down a length of 1,200 feet, opposite the parish chapel, they are filling up what is to be a

¹ As a guarantee of the solidity and perfect nature of the work, I may add that this is the gentleman, who built the Victoria Bridge over the St. Lawrence near Montreal, in 1853 to 1859. In the last-named year it was opened by the Prince of Wales on behalf of her Majesty.

large embankment of reclaimed ground, necessitating nearly 500,000 tons of earth. In the works of the Punta they turn out from 536 to 560 blocks of concrete (ten tons each) within the fortnight.

The proceedings at this mole had been carried on in a slow manner, till the original concessionists, Messrs. Templeman and Bergmann, of Lima, handed it over to Messrs. Thomas Brassey and Co., of London, on the 13th of July, 1870. These world-renowned contractors sent out Mr. Hodges to do the work.

It may be understood by a few figures what is the extent of this undertaking.

The dimensions of the blocks of concrete are 8ft. 2 in. by 4 ft. by 3 ft. $3\frac{1}{4}$ in., and the average weight of each 8 tons. The depth of water here may be guessed from the fact of seven layers of blocks being required to come up to low-water mark.

The area of the mole and dock over all is to be 984 feet by 820 feet — 806,880 superficial feet. Besides this, there is a large space of water and old pier place to be reclaimed, approximately, 490,000 superficial feet. The whole is to be completed in June, 1874.

It appears that the primary concession, granted by the National Government to Messrs. Templeman and Bergmann for this work implies the following privileges:—They are to hold it for sixty years, for the first ten of which it is to be an exclusive

privilege. At the end of ten years the Government may claim the right to purchase it, and when sixty years shall have terminated, it will belong to the nation.

All vessels above 10 tons entering the Bay of Calláo must pay 10 cents. of a sole per ton register, for which they can make use of the dock, by means of their boats, in shipping provisions and so forth. Ships of war of any nation are not to be charged.

Vessels entering the dock of above 10 tons are to be charged 75 cents. of a sole per ton for all goods landed or shipped.

Owners of goods will have to pay the actual present cost of landing and shipping, with a reduction of 5 per cent. on same.

In no case can the charge exceed 2 soles 50 centanos per ton measurement, and 1 sole 50 centanos per ton weight: that is, in fact, from 9s. to 10s. in the first case (measurement), and from 5s. to 6s. in the second (weight).

I have not been able to ascertain what are the terms or conditions of purchase in case the Government should be disposed to effect this at the end of ten years.

Messrs. Brassey and Co. have likewise, together with the concrete manufactory, a forge and saw-mill worked by steam, close to the new mole.

From statistics supplied to me by Senor Don

Manuel Palacios (late Captain of the Port in this city), I find the following number and tonnage of vessels entered and cleared during the first six months of the present year, 1872 :—

SHIPS ENTERED.

Nationality.	Number of Ships.	Registered Tonnage.	Average Tonnage of Cargoes.
Peruvian	193	31,932	42,470
British	103	88,472	117,668
North American	46	48,582	64,614
French	43	22,093	29,384
Italian	21	12,067	16,049
German	12	9,259	12,315
Central American	35	11,808	15,705
Swedish	19	10,938	14,547
Others	10	5,166	6,870
Total	482	240,317	319,622

CARGOES ENTERED.

Species of Cargo.	Number of Ships.	Registered Tonnage.
General Cargo	84	50,678
Lumber, chiefly from United States	49	25,846
Coal	33	38,039
Railway Plant	1	1,047
Wheat and Flour	33	8,710
Chinese Immigrants	15	11,544
Cattle	1	150
Guano from Guanape	15	14,009
" Macabi	24	18,047
Fruits	156	16,073
Ballast, coastwise	34	23,506
" foreign	37	32,110
Total	482	240,317

Class of Ships.	Number of Ships.	Respective Tonriages.	Number of Passengers.
Sailing Ships	482	240,317	42
Steamers	236	180,176	22,554
Coasters	319	3,072	84
Total	1,037	423,565	22,680

Whilst I cannot account for the omission, in the previous summary, of 6,535 Chinese amongst the passengers entered (which thus makes a total immigration to the country of 29,215, instead of 22,680), I may point to the fact, that the cargoes cleared include no Chinese, although their engagement is supposed to be only for a term of eight years.

SHIPS CLEARED.

Nationality.	Number of Ships.	Registered Tonnage.	Average Tonnage of Cargoes.
Peruvian	188	29,012	38,586
British	96	83,236	110,704
North American	49	54,265	72,172
French	39	19,266	25,624
Italian	15	9,290	12,356
German	15	10,643	14,155
Central American	38	13,089	17,408
Norwegian	3	1,410	1,875
Swedish	17	9,674	12,857
Others	10	6,023	8,011
Total	470	235,908	313,758

CARGOES CLEARED.

Specimens of Cargo.	Number of Ships.	Registered Tonnage.
Guano for England	4	5,239
„ France	11	4,614
„ Belgium	17	16,778
„ Havana	4	1,313
Assorted Cargoes	168	25,146
„ „ and Fruits	12	4,255
In Ballast for Ballestas Islands	1	159
„ Guanape „	74	73,982
„ Macabi „	38	34,512
„ Coastwise	47	20,009
„ Foreign Ports	94	49,901
Total	470	235,908

Class of Ships.	Number of Ships.	Tonnage.	Passengers.
Sailing Vessels	470	235,908	657
Steamers	239	159,288	22,243
Coasters	298	2,933	323
Total	1,007	398,129	23,223

BALANCES OF PREVIOUS TABLES.

	Tonnage.		Numbers.
Imports	240,317	Passengers came in	22,680
Exports	235,908	„ went out	23,223
Surplus of Imports	4,409	Surplus left the country	543

Of the vessels entered and departed the highest amount of tonnage was English, then in succession, North American, Peruvian, French, and Italian.

Vessels with guano are less in number than in the last six months of 1871. This may be partly accounted for by the fact that many ships left

the guano islands of Macabi and Guanape for their destinations without calling at Calláo. During the present year, however, an edict has been passed, rendering it obligatory on all vessels laden with guano to touch at Calláo before they start for abroad.

Amongst the fifteen vessels that brought Chinese, ten were Peruvians, two French, two Portuguese, and one Dutch. They embarked from Macao 7,206 Chinese, of which number 6,535 arrived in Calláo—showing a loss of 671 in transit—that is, an average of $\cdot 093$, or nearly ten per cent.

At the time of the foregoing table being compiled by the Captain of the Port, there were eighty foreign vessels in the Bay of Calláo.

That the greatest number of craft trading to Calláo are British will appear at once from an extract of the commercial circular, published by Messrs. Bryce, Grace, and Co., of this city, on the 28th of May last. This gave the names of 133 vessels cleared, sailed, and loading at different foreign ports—for Peru—the larger number being for Calláo. They are classified as follows:—

Nationality.	Tonnage.
British	55,815
North American	42,619
French	6,404
Norwegian	1,349
North German	2,936
Salvadorian	1,654
Others	1,879
Total	112,656

It appears to me more than probable that no small amount of this shipping may be credited to the exaggerated reports that have been circulated in England, the States, and on the Continent, about enormous supplies of recently-discovered guano deposits. The *Field*, in its issue of the first week of June, 1872, prints the following statement:—

“PERUVIAN GUANO.—The supply of Peruvian guano receives an immense accession from an unlooked-for quarter. We learn from private sources that a vast deposit of guano has been revealed some distance to the south of Lima, and several miles inland. The guano lies under successive beds of black salt (?), nitrate of soda, and borax. The deposit consists of many millions of tons.”

This no doubt refers to the neighbourhood of Pisco, nearly opposite the Chincha Islands, about which some absurd rumours were got up in Lima, but that I ascertained, on inquiry, were perfectly foundationless. The statement² that the Peruvian Government has still available 300,000,000*l.* sterling of guano, is so enormously misleading, and so entirely without proof, that I consider it my duty to say it has no foundation.

Another report was published at Calláo in the month of May last, with reference to an extensive deposit of guano having been found recently on the mainland near to Supé, which is only ninety-

² Made by Mr. Consul Vines of Islay, and published in Consular Reports for 1872.

one miles north of Calláo, and is the northern boundary of the Calláo Consular Jurisdiction. This guano was said to extend to Gramandel, Colorado Grande, Punta de Santander, Casma, Caleta de Mongon, and the vicinity. It was accredited to be calculated at about 1,000,000 tons, and to be equal, if not superior in purity, to the guano of the Chincha Islands.

Guano being, since its discovery in 1836, one of the principal sources of Peruvian wealth, I have done all in my power, since my arrival in Calláo, to ascertain its probable actuality as regards future supplies. I have been informed, after very cautious inquiries at the Guanape and Macabee Islands, that the former are calculated to possess still about 500,000 tons, and the latter to have approximately 750,000 tons. This report comes to me only a month ago,³ when at Guanape there were forty-seven vessels loading at the rate of 600 tons per day; and fifteen ships at Macabee, loading at the rate of over 300 tons per day.

Added to the quantity just mentioned at the Guanape and Macabee Islands, I am assured, on the best authority, that the guano on the Lobos Islands, which are situated farther north, does not exceed 750,000 tons. So that the whole exportable guano which Peru possesses to-day may be safely estimated as under 3,000,000 tons.

³ In the month of November, 1872.

The large number of seals and sea-lions, which frequent the localities where guano is found, makes it extremely probable that some of this deposit is left by these animals, as well as by birds. Corroborating impressions of such conviction have been conveyed to me by Mr. Steer, from the University of Michigan, in the United States, who has collected, bottled up, and analyzed specimens which he knows to have been deposited by seals, and which is perfectly analogous to the guano of commerce.

Statement showing the nett product of Guano sold in 1871 in the consignments to Europe and to Messrs. Dreyffus Brothers and Co.

Consignments.	Tons sold.	Nett Product.		Sterling.		
		Soles.	c.	£	s.	d.
Great Britain . . .	111,456	4,095,910	73	767,983	5	3
France and Mauritius .	106,736	3,940,267	16	738,800	1	10
Belgium	77,625	3,093,391	60	580,010	18	6
Germany	24,615	888,109	20	166,520	9	6
Italy	5,571	217,027	80	40,692	14	3
Holland	6,686	318,176	02	59,658	0	1
Spain	30,511	1,187,183	48	222,596	18	0
	363,200	13,740,065	99	2,576,262	7	5
Dreyffus Bros. and Co.	30,526	1,116,690	92	209,379	11	0
	393,726	14,856,756	91	2,785,641	18	5

Guano existing in the deposits of the consignments on June 30th, 1872:—

	Tons.
Great Britain	187,757
France and Mauritius	68,416
Belgium	6,174
Italy	9,330
Spain	10,628
United States	99,521

Actual Tons 381,826

On the voyage, to August 31st, 1872 :—

	Tons.
Great Britain	24,892
France and Mauritius	7,931
Belgium	25,509
Spain	937
Italy	580
Holland	3,625
United States	2,187
	<hr/>
Tons (register)	65,661

Loading on August 31st, 1872 :—

Great Britain	8,137	
France and Mauritius	7,104	
Belgium	7,459	
United States	1,550	
	<hr/>	24,250
		<hr/>
Tons (register)		89,911
Add 33 per cent. (approximate) for actual tons		29,670
		<hr/>
Actual Tons		119,581

Relating to the future supply of guano I have to add, that during arrangement of materials of this work, the following appeared in one of the London papers (July 15th). I put it here for the object of adding my testimony to the statements of his Excellency, Senor Don Pedro Galvez, the Peruvian Minister Plenipotentiary, although I have had no communication with that gentleman on the subject :

“PERUVIAN BONDS AND GUANO DEPOSITS.—Noticing the calculations, founded on a report of the British Consul at Calláo, as to the supposed insufficiency of the guano deposits in Peru as a

guarantee for the external debt of that nation, the Peruvian Minister in London writes :—The quantity of guano in the deposits of Peru cannot be calculated with any certainty, neither can an approximate measurement be obtained. At present the Government is quite satisfied as to the quantity remaining, and there is not the least ground to fear that the guano will be finished within the next ten years, calculating the demand to be, more or less, about 500,000 tons per annum. Assuming that Mr. Hutchinson's calculation is correct,⁴ there is still no cause for alarm. Supposing the stock of exportable guano on the island to be 3,000,000 tons, and the quantity in stock or on the way to be 500,000 tons, which is putting it at a very low figure, we have a total of 3,500,000 tons. This, at the net price of 8*l.* 10*s.* per ton, gives us the sum of 29,750,000*l.*, which we can calculate upon as disposable for the payment of the Peruvian Loan of 1872, 36,800,000*l.* But of the amount of this loan 15,000,000*l.* are by the terms of the contract to be exclusively applied by degrees, during a period of several years, to various public works in contemplation, which when completed are to form one of the guarantees offered to the bondholders. In the same loan is also included the sum of 15,000,000*l.* of the loan of 1870; this has been

⁴ As it appeared amongst Consular Reports, published by the Foreign Office in May, 1873.

employed in the construction of railways, some of which are completed and others very far advanced, and these works, like those in contemplation, are an additional guarantee to the bondholders. Another security for the bondholders is the nitrate of soda, the demand for which increases every year. In 1871 the exportation of this article was 200,000 tons; this, at 16*l.* per ton, gives a sum of 3,200,000*l.*, on which the Government could levy a tax of 10 per cent., and this would give us 320,000*l.*, or nearly enough for the service of the loan, even supposing the demand did not increase. The development of the country is such that during the year 1871 the Customs produced 1,200,000*l.*, and this source of income is increasing immensely every year. If we add to this the fact that already upwards of 1,000,000*l.* of the loan of 1872 had been paid off, I think that even taking, as I have, Mr. Hutchinson's statement as a basis on which to form a calculation, I have at least shown that there is no cause for the alarm of the bondholders."

In this I firmly believe, from my two years' experience of Peru. I therefore have no hesitation to endorse the conclusion, that "there is no cause of alarm to the bondholders:" whilst I cannot consider it other than highly improper to allow such an unwarrantable assertion, as that of three hundred millions of pounds sterling⁵ of guano still

⁵ *Vide* p. 206.

existing, to go before the public without being contradicted. There seems to me not the slightest danger in Peru for guarantee of its external debt. The progressing prosperity of the Republic may receive a cogent illustration by the following figures:—

RETURNS FOR CUSTOMS OF CALLAO DURING ELEVEN MONTHS
OF 1872.

1872.	Currency.		Sterling.		
	Soles.	c.	£	s.	d.
January	303,185	87	56,847	7	0
February	303,514	52	56,908	19	5
March	305,148	39	57,215	6	6
April	316,294	05	59,305	2	8
May	371,830	00	69,718	2	6
June	403,027	63	75,567	13	7
July	402,468	46	75,462	16	9
August	414,956	67	77,804	7	6
September	408,380	21	76,571	5	9
October	472,388	49	88,572	16	10
November	537,196	66	100,724	7	6

Another item of evidence of the increasing trade at Calláo may be deduced from the fact that Senor Morales rented the mole-tax from 1st October, 1870, to 30th of September, 1872, for the sum of 85,000 soles, or 15,937*l.* 10*s.*, whilst the same concern, put up to auction, was rented by the same gentleman from 1st October, 1872, to hold on till 30th September, 1874, for the sum of 169,200 soles, or 31,725*l.*, nearly double the first amount, at the nominal exchange of 45*d.* per sole.

No better proof of the monthly increasing trade

of Calláo need be adduced than what is proved by this last table. From which it may be observed, that in the month just passed (November, 1872), the Custom-house receipts amounted to 537,196 soles, or 100,724*l.* 7*s.* 6*d.*, being an excess over the preceding month of October in the same year of 64,808 soles 17 c., or 12,151*l.* 10*s.* 8*d.* A glance at the table will likewise show that each successive month had a progressive increase over its predecessor, till the Revolution in July put a temporary check to it.

The Government has published that the receipts of the several Custom-houses in the Republic for the ten months of the present year, ending 31st October, show a total of 5,740,656 soles 87 c., or 1,076,373*l.* 3*s.* 3*d.*

Not only, in the words of the Minister, does the demand for nitrate of soda increase every year, but, what is better, the supply is found to exceed the demand. And no doubt that further explorations through the province of Tarapaca, where Iquique and Pisagua are situated, will show, as is being done daily, new sources of this wealth. Moreover, the railroads of Mr. Meiggs are already leading to discoveries of silver—a great excitement being recently created in the neighbourhood of Chilete, on the Pacasmayo railroad, by the extraordinary argent riches of that district.

I have received from Major Williamson, United States' Consul, a lengthened table of statistics of

the particulars of North American commerce with this port of Peru for the year beginning 1st October, 1871, and ending the 1st October, 1872. I must, however, make a synopsis of it, as the whole would occupy too much space. By this table I learn that in the quarter from 1st December, 1871, to 31st December same year, twenty-six merchant vessels bearing the United States flag came into this port of the aggregate of 24,297 tons. The cargo of these consisted of lumber, 5,469,000 feet; wheat, 41,750 bushels; coals, 3,706 tons; sperm oil, 3,937 gallons—said cargoes being valued at 758,945 soles, or 146,468*l.* 17*s.* 1*d.* Of these ships, twenty-five left, one being sold, and fourteen of them sailed with guano—the united cargoes of their 23,750 tons being estimated at 948,750 soles, or 177,890*l.* 12*s.* 6*d.* In the quarter from 1st of January to 31st of March, 1872, there came in twenty-eight United States vessels with an aggregate of 29,588 tons, consisting of coals, 10,234 tons; lumber, 1,814,000 feet; wheat, 34,000 bushels, 30,900 railway ties, valued at 1,084,110 soles, or 203,270*l.* 12*s.* 6*d.* These ships all sailed, fourteen of the lot being with guano cargoes; and the value of total cargoes being 985,172 soles 87 c., or 184,719*l.* 18*s.* 3*d.*

The quarter from 1st April to 30th June shows twenty-seven North American vessels of the aggregate of 29,934 tons, and cargoes valued at 433,935 soles, or 81,362*l.* 16*s.* 3*d.* Of these vessels thirteen

left with guano, two were sold, two remained in port at the end of the quarter; and the total cargo brought away by those that sailed valued at 696,980 soles, or 130,683*l.* 15*s.*

In the last quarter, from 1st July to 30th September, the number of United States vessels entering was thirty-seven of 40,266 tons, and cargo valued at 1,364,705 soles, or 255,882*l.* 3*s.* 9*d.* All of these sailed together, with some that had remained from the previous quarter, comprising an aggregate of 46,615 tons, and a value of cargoes of 1,408,450 soles, or 264,084*l.* 7*s.* 6*d.* Of these twenty-seven left with guano.

Of French and Italian shipping at Calláo I find the following during the respective years:—

FRENCH.

Years.	Arrivals.			Departures.		
	No. of Ships.	Tonnage.	Crews.	No. of Ships.	Tonnage.	Crews.
1863 . .	147	75,842	2,504	141	72,965	2,423
1869 . .	144	78,192	2,505	141	76,879	2,460
1870 . .	151	79,282	2,635	139	72,203	2,421

ITALIAN.

Years.	Arrivals.			Departures.		
	No. of Ships.	Tonnage.	Crews.	No. of Ships.	Tonnage.	Crews.
1869 . .	183	87,232	2,568	190	90,680	2,570
1870 . .	141	73,821	1,987	135	70,037	1,884

MOVEMENTS OF MERCHANT SHIPPING IN CONNEXION WITH THE
PORT OF CALLAO DURING THE YEAR 1869.

Flags.	Entered.			Cleared.			Total.		
	Ships	Tonnage.	Crews	Ships	Tonnage.	Crews	Ships	Tonnage.	Crews
Peruvian . . .	301	26,442	1,634	335	32,804	1,720	636	59,246	3,354
North American . . .	264	256,597	4,598	267	268,039	4,601	531	524,636	9,199
English . . .	734	630,890	20,994	749	644,822	21,255	1,483	1,275,712	42,249
French . . .	139	75,768	2,424	141	76,878	2,460	280	152,646	4,884
Italian . . .	183	87,232	2,568	190	90,680	2,570	373	177,912	5,138
German . . .	38	24,056	637	39	26,088	650	77	50,144	1,287
Swedish . . .	39	22,115	578	44	23,496	626	83	45,611	1,204
Norwegian . . .	55	33,790	967	52	24,445	745	127	58,235	1,712
Portuguese . . .	8	1,607	87	8	1,435	86	16	3,048	173
Belgian . . .	8	7,613	153	7	6,220	121	15	13,833	274
Danish . . .	1	472	18	...	...	...	1	472	18
Russian . . .	1	671	16	2	1,205	28	3	1,876	44
Greek . . .	1	325	7	1	325	16	2	656	23
Central American . . .	10	3,562	134	37	13,975	460	47	17,537	594
Guatemala . . .	8	1,759	77	3	740	27	11	2,499	104
San Salvador . . .	39	16,649	534	27	11,702	358	66	28,351	892
Chilean . . .	2	162	10	...	...	...	2	162	12
Argentine . . .	1	688	16	1	417	15	2	1,105	31
Sandwich Islands . . .	1	454	11	2	606	18	3	1,060	29
English Steamers . . .	239	168,150	9,175	235	165,769	8,973	474	333,919	18,148
	2,072	1,349,002	44,638	2,140	1,389,696	44,729	4,212	2,748,648	89,367

The amount of coal imported in British vessels in 1869 exceeded 30,000 tons. But in 1870 it amounted to over 36,000.

The value of cargoes by American ships (United States) imported to Calláo in 1869, consisting principally of lumber, railway material, wheat, ice, cattle, and coal, is estimated at about 2,063,000 dollars (386,812*l.*). The weight of coals by American ships having been 17,560 tons.

Dues on shipping coming to Calláo or other ports of Peru are paid for six months. Peruvian ships in the coasting trade, and under 200 tons

burden, pay only every twelve months. The following are the principal dues:—

1. Light dues	$\frac{1}{8}$ real per ton.
2. Tonnage dues	2 reals „
3. Port dues—1st ports	8 dol. per ship.
„ 2nd „	5 „ „
4. Water dues, per ton of water	4 reals per ton.
5. Ballast dues—Ballast	1 dol. „

The water thus costs $1\frac{1}{2}$ dollar per ton at ships' tackles. The ballast 2 Bolivian dollars per ton on board.

Consignee of ship is paid	150 dol. = 22l. 10s.
Commission on freight	5 per cent.
Recovery of freight	$2\frac{1}{2}$ „
Purchase of return produce	$2\frac{1}{2}$ „
Payment of duties and disbursements	1 „

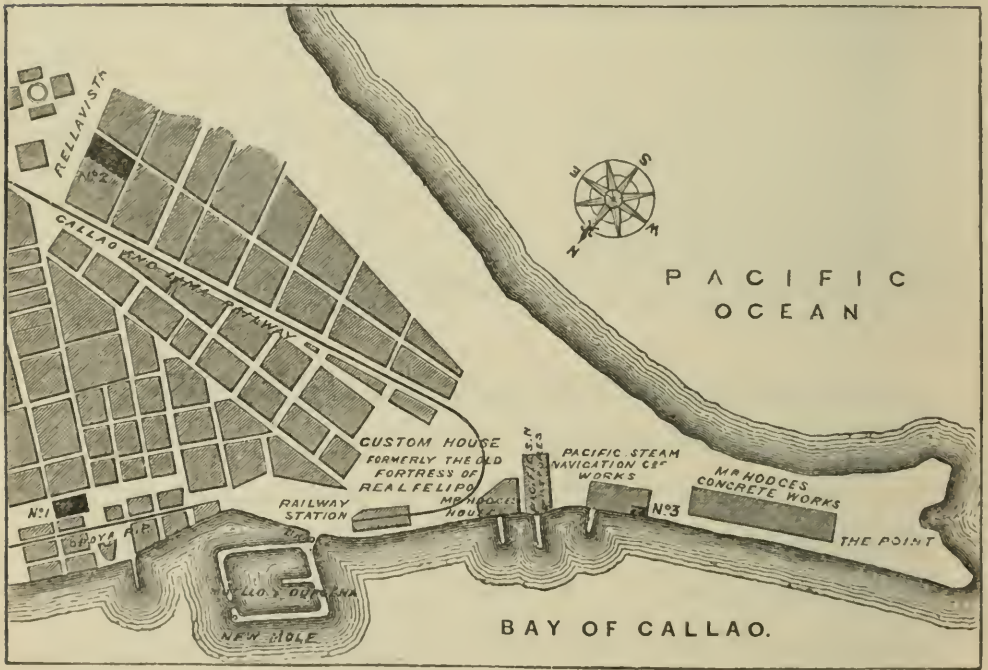
Goods may be bonded for five years on condition of paying only storage.

The ratio of increase in the Calláo trade may be estimated by the fact, that the revenue of the Custom-house at the port for the single month of May of the year (1871) was 325,089 soles 22 centavos—60,954l. 3s. 9d.; whereas in May, 1861, it was 166,027 soles 24 centavos—31,130l. 1s. 3d.,—thus doubling in ten years.

We likewise find the preponderance of British trade may be assumed by another fact, that there arrived in Calláo on one day, the 24th of September in this year, 1871, no less than twelve vessels

from foreign ports, representing the aggregate of 8,842 tons, classified as follow :—

	Vessels.	Tons.
British	8	6,969
Swedish	2	1,904
French	1	442
American	1	327
		9,842



CALLAO.

CHAPTER XI.

The "Painter" at Calláo.—Its different appearances.—Analysis of water during its existence.—Extent of "Painter" on the whole coast of Peru.—Author's observations of appearances of water.—Frezier's writings about Calláo.—Earthquake of 1746.—Number of convents and of chapels.—Dreadful effects of earthquake.—On shore at Calláo.—Lima and Calláo Railroad.—Club.—The royal fort.—Its great size and extent.—Fight for independence.—Bombardment of Calláo by Spanish fleet in 1866.—The native hospital in Calláo.—Revenue of Beneficencia Society.—Hospital tax on shipping.—Silver in Peru.—Misfortunes of 1868.—Parish of Santa Rosa.—La Punta.

STILL in the bay of Callao, and previous to our going ashore, there is an interesting peculiarity here, worthy to be noticed—more particularly as I am not aware of its having been discussed by any previous writer on Peru.

This is called "the Painter"—the palpable evidences of which consist in a changed colour of the sea water (most generally to a muddy white),—an odour most fœtid, nauseous, and depressing,—with the accompaniment of the white paint on ships and boats, inside as well as outside, becoming totally discoloured, and often partially black. Some persons attribute this to conveyance of miasmatic matter from the Andes, by means of

the river Rimac, into the sea. Others say it proceeds from the decomposition generated in the bay by the excreta of Calláo washed into it. In neither of these, exclusively, have I faith. Because, knowing that the whole coast of Peru is super-volcanic, as well as believing that Calláo bay has been the crater of an extinct volcano, I am induced to attribute this emanation chiefly to submarine volcanic action, generating sulphuretted hydrogen gas. The vicinity of Calláo, too, is generally of that boulder or rubble formation in its upper geological stratum, through which such gas could be eliminated without any difficulty. Although met with at Calláo in its most aggravated form, the "Painter" is likewise found along the coast as far as San José de Lambayeque, nearly five hundred miles north. From the end of December until April, is the time when this phenomenon mostly exists.

I have before me an analysis of the sea water of Calláo, bottled up during the existence of "the Painter," and having some mud from the bottom of the bay contained therein. This was sent by Mr. Hodges to London, and was there analyzed by Mr. T. Keates, F.C.S., Consulting Chemist to the Metropolitan Board of Works, &c. Mr. Keates reports that, after being allowed to rest, the water poured off proved to be sea water, and that the black mud left, after the water had been decanted, was in a state of active decomposition—large



PLAN OF CURRENTS RUNNING INTO CALLAO BAY.

quantities of sulphuretted hydrogen gas, as well as sulphate of ammonia, being given off. The black colour of the mud was found to be owing to the presence of sulphate of iron, which was formed as a result of the decomposition mentioned. Whilst this latter was due to the sulphur of the organic matter combining with the iron present in the mineral part of the mud, to produce the black sulphide.

So far it appears to me, the idea of an origin from vegetable malaria coming down from the Andes, or of local causes, be they animal or vegetable, may be considered without foundation.

1000 parts of the mud dried at 230° Fahr. yielded,—

Water	769·6
Dry mud	230·4
	<hr/>
	1000·0

100 parts of the dried mud yielded by analysis,—

Organic matter	10·50
Chloride of sodium, alkaline sulphates, &c.	6·43
Salts of lime	3·75
Alumina of oxide of iron	16·00
Silicious matter	63·25
Loss	·07
	<hr/>
	100·00

Mr. Keates further tells us, “ This mud appears to be ordinary river mud, or silt deposited at the mouth of a river, and lying in sea water.

It contains a considerable quantity of vegetable and some animal matter, and under the microscope shows abundance of dialomaceous remains."

As perhaps a few of my readers may not understand the penultimate word of this last extract, I shall explain it, according to Sir Charles Lyell's definition:—"There is a variety of dry deposits in the earth's crust, now proved to have been derived from plants and animals, of which the organic origin was not suspected until of late years, even by naturalists. Great surprise was therefore created by the recent discovery of Professor Ehrenburg, of Berlin, that a certain kind of silicious stone, called tripoli, was entirely composed of millions of the remains of organic beings, which the Prussian naturalists refer to microscopic infusoria, but which most others now believe to be plants. They abound in fresh-water lakes and ponds in England, and are termed Dialomacea by those naturalists who believe in their vegetable origin. The substance alluded to has long been well known in the arts—being used in the form of powder for polishing stones and metals. When examined with a powerful microscope, it is found to consist of silicious plates or pustules, of the above-mentioned Diolamaceæ, united together without any visible cement. It is difficult to convey an idea of their minuteness, but it is estimated there are 41,000 (forty-one thousand) millions in every cubic inch.

The remains of these Diatomaceæ are pure silex."

Mr. Keates further adds, that when the mud was sent to him, the organic matter which it contained was rapidly decomposing. "It was in a very foetid state, and was giving off a large quantity of the gas called sulphuretted hydrogen."

No doubt it was. And equally probable that if this mud were examined, at the place from which it was taken, it might have given different results. For it is more than probable that the change of temperature between Calláo and London, as well as transition from the natural condition to that of being bottled up, must have caused no trifling chemical reaction in the elements of which it was composed.

The supposition of its deadly influence from being on the banks of the river, and therefore intermittingly exposed to the influence of a tropical sun on the ebb of tide, leads to erroneous inferences on the part of the analyst. Because the Painter locale is not near the river, and the chief part of the bay of Calláo, which is affected by the rise and fall of tide, is covered with rubble, devoid of any mud.

That the current, sweeping as it does round the bay, and past the mouth of the Rimac, brings from that river a considerable quantity of drift, there can be no doubt. But if these were

the causes of "the Painter," why should we have it only at intermittent periods—in fact, only for a few months of the year—and then always previous to the heavy rains, which may be supposed to bring down, on the floods, a greater quantity of silt than when the river is very low?

During one of several periods that I was enjoying the hospitality of Mr. Hodges, and when "the Painter" was in full blow (in the month of January last), I took notes of its appearance. Mr. Hodges' residence is on the edge of the bay, in what was formerly the "ice-house," when this part of Peru was supplied with that article from Wenham Lake, and before the monopoly for its artificial manufacture was given to a company in Lima. This house is built of wood, and is situated on the very shore of Calláo bay, between the stores of the Pacific Steam Navigation Company and the railway station to Lima. In the course of a few days I observed the water of the bay under four different aspects.

1st. Ochre-brown, with somewhat of a reddish tinge, and opaque. This, when examined under the microscope, showed animalculæ of a spheroid or circular form, and of like colour to the water. In twelve hours after it was—

2nd. Of a dark green, and still thick, aspect, in which by the microscope was visible another class of animalculæ of an hour-glass form, round and

broad at each end, but contracted in the centre. Although there was but one drop of water under the glass, a large number of these jumped about.

3rd. The next morning, or in fourteen to sixteen hours afterwards, the water was a muddyish white. This time the smell in the harbour was most pungently nauseating. It is considered the "true Painter" period when white paint becomes black, and headaches are general with everybody under its influence. No animalculæ were visible through the microscope in this state of affairs. From the second to the third condition, I may add that in the intervening period we had a shock of earthquake at about five o'clock in the morning, and during the occurrence of which, it may be conjectured, submarine volcanic action destroyed all the animal life of these insects seen the two days previously.

4th. This is the ordinary water of Calláo bay, different in its colour in proportion as it is near to the drainage outlets of the town, or to the neighbourhood of the current, which flows through the Boqueron Channel. This latter meets the larger sea-stream coming from the south round the north end of San Lorenzo Island, and which makes a back-water detour of the bay, as shown by the sketch in previous chapter.

The present site of Calláo, it may scarcely be necessary to add, is some distance to the north of

the city which was destroyed by the terrible earthquake of 1746. That occurred thirty-three years after the visit of M. Frezier, Ordinary Engineer to the King of France. Frezier's description of the coasts of what he styles "Chily and Perou" was published in Paris in 1716—157 years ago—and gives a very lucid account of every place at which he touched.

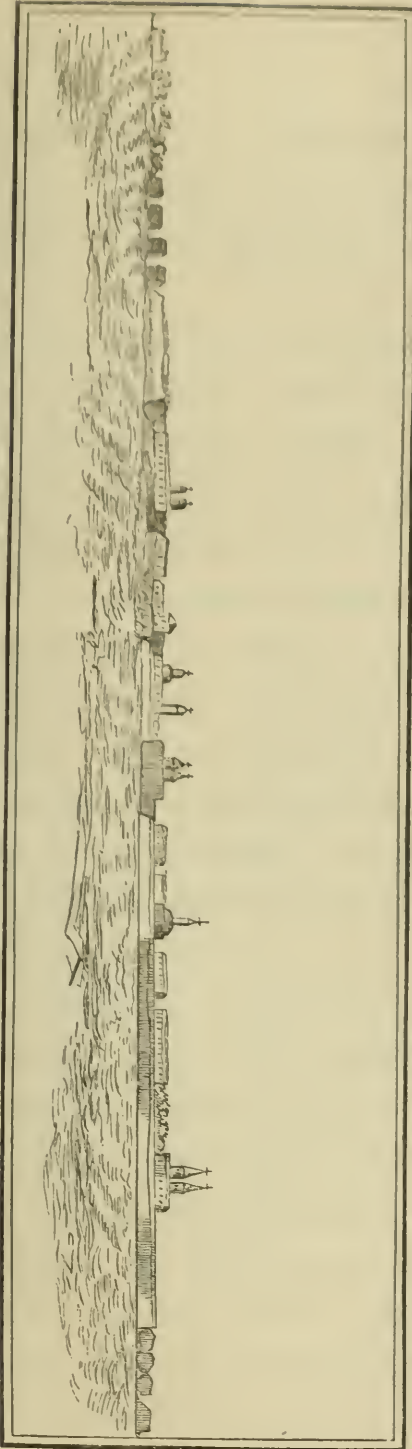
Senor Paz Soldan¹ tells us, that at half-past ten o'clock on the night of the 28th October in the fore-mentioned year, the earthquake came on: "It could not be well described or conceived as a simple shaking of the earth, but as a convulsive throe, by which the heaving up of the sea-bottom in one place, and its depression in another, caused an enormous wave to sweep over the town, and at one gulp to destroy 5,000 inhabitants."

Frezier, thirty-three years previous, set down the number of inhabitants at 400 families, although they themselves claimed 600.

The old city of Calláo was of triangular form, and was surrounded by walls, with bastions and buttresses, built up when the Marquis of Mansera was Viceroy. These fortifications cost 369,000 dollars. In 1671 the Viceroy, Count of Leinus, declared it a city, and in 1694 it had an excellent mole, constructed of stone from the island of San Lorenzo.

¹ "La Geografia del Peru," p. 555.

CALLAO BEFORE THE EARTHQUAKE OF 1746. FROM FREZIER.



But the earthquake did not spare these more than any of the religious buildings. At the time of its occurrence, together with the Viceroy's palace and the Governor's house, both near the sea, were the six chapels of La Matriz (the parish chapel), San Augustin, the Jesuits', Santo Domingo, San Francisco, San Juan de Dios, and La Merced. There were also five convents of religious orders — the Dominicans, the Augustins, the Cordeleros, the Fathers of Mercy, the Jesuits, and the Brothers of the Hospital of San Juan de Dios (Saint John of God). Besides these, each of the thirteen bastions of the walls was named after a saint, as—1, Saint Michael; 2, Saint Ignacio;

3, Holy Cross; 4, Saint Catherine; 5, Saint James; 6, Saint John the Baptist; 7, Saint Dominick; 8, Saint Philip; 9, Saint Louis; 10, Saint Lawrence; 11, Saint Francis; 12, Saint Peter; 13, Saint Anthony—all being, of course, in the Spanish tongue, from which I have translated them.

In less than three minutes the whole town of Calláo was either swallowed up, swept away, or demolished into ruins. Only a few hundreds of the total population are said to have escaped—some of these reported as washed over to the island of San Lorenzo—an incident in which I have no faith. The Jesuit priest, Father Lozano, wrote an account of it to the Reverend Bruno Morales, of the same company, residing in Madrid, giving a description of the dreadful catastrophe. From this, as well as the relation given by Senor Paz Soldan, it would appear to have been precisely the same kind of thing, which took place in 1868, as already described, at Arica. For there was a like sweeping in, and sweeping out, of a Cordillera of volcanic wave. Out of all the monks in the six convents, there was only one saved—the Padre Arispe, of San Augustin. How he managed to get off we are not told. The Viceroy at the time was the Conde de Superunda, and his heroic exertions to assuage the miseries of the dreadful calamity deserve immortal record.

Going ashore at Callao, we find ourselves in the middle of one of the most bustling of places at the mole. The odor of this at once strikes us as nothing of an improvement on "the Painter" which we have left in the bay. The examination of our luggage at the "Resguardo" is conducted with great courtesy. We land, not at the old mole, but at the new stairs of Mr. Hodges' great work; and the first large building which attracts the attention of strangers is the spacious edifice of the railway station. Besides the offices for tickets and stores for luggage and cargo, it has an up-stairs series of apartments, in the most extensive of which we find the club of Calláo. This was organized in 1867, and is the club of the English-speaking community here. It has a spacious verandah, overlooking the sea, excellent and well-supplied reading-room, with two billiard tables.

The first sod of this railway was turned on the 30th of June, 1850, by Senor Don Ramon Castilla, at the period President of the Republic; and it was opened for traffic on the 5th of April, 1851, although not completely finished till 1852. The distance hence to Lima is only seven miles. The Callao station is 12 feet, the Bella Vista station 48 feet, and the Lima station 485 feet above the level of the sea. The original contractor was a native Peruvian, Senor

Don Pedro Candamo, from whose hands it passed into those of an English company.

The Lima and Chorillos Railway was laid down by the same company, and was opened for traffic in November, 1858. This is nine miles long from Lima to Chorillos, which latter may be said to be the Brighton of the Peruvian capital. Some few years ago, Chorillos was a very small fishing village, but now it is a most fashionable bathing-place, and owes its first rise to General Castilla, who was the owner of much property there. The Chorillos station is 137 feet above the level of the sea.

The affairs of this company, of which the headquarters exist in London, are excellently conducted by a local manager, and two consulting directors here. The manager, Mr. William Stirling, to whom I am indebted for these details, has likewise furnished me with the following statistics of the railway operations:—

“The Annual Traffic Receipts of the Railways during the ownership of the present Company have been as follows:—

	1866.			1867.			1868.			1870.																	
	Soles c.	£	s. d.	Soles c.	£	s. d.	Soles c.	£	s. d.	Soles c.	£	s. d.															
Passenger and luggage traffic	423,963	0	79,493	1	3	391,413	0	73,389	18	9	444,254	0	83,297	12	6	484,237	0	90,794	8	9	584,527	0	109,706	16	3		
Goods traffic	134,523	0	25,223	1	3	134,222	0	25,166	12	6	183,489	0	34,404	3	9	258,350	0	48,449	12	6	332,721	0	62	3	5	3	9
Total traffic receipts	558,486	0	104,716	2	6	525,635	0	98,556	11	3	627,743	0	117,701	16	3	742,587	0	139,235	1	3	917,248	0	171,981	0	0		
Annual increase . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	19½ per cent.	...	...	18	8	10 per cent.	...	...	23½ per cent.	...	...	...	...
Proportion of working expenses to revenue . . . . .	...	50 per cent.	...	...	54 per cent.	...	...	...	...	...	52½ per cent.	...	...	...	...	47 per cent.	...	...	...	...	43½ per cent.	...	...	...	...
Number of passengers carried . . . . .	...	1,346,977	...	...	1,230,835	...	...	...	...	...	1,297,511	...	...	...	...	1,365,626	...	...	...	...	1,511,616	...	...	...	...
Net tons of goods carried . . . . .	...	...	...	...	...	...	...	...	...	...	63,718	...	...	...	...	94,905	...	...	...	...	120,604	...	...	...	...
Number of train miles run . . . . .	...	...	...	...	...	...	...	...	...	...	106,260	...	...	...	...	113,570	...	...	...	...	137,770	...	...	...	...

“For the eight months of the present year ending with October, 1871, there is an increase in the passenger traffic of 73,000 soles, equal, to 13,687l. 10s., over the same months of last year, while the goods traffic is almost exactly what it was in 1870.”

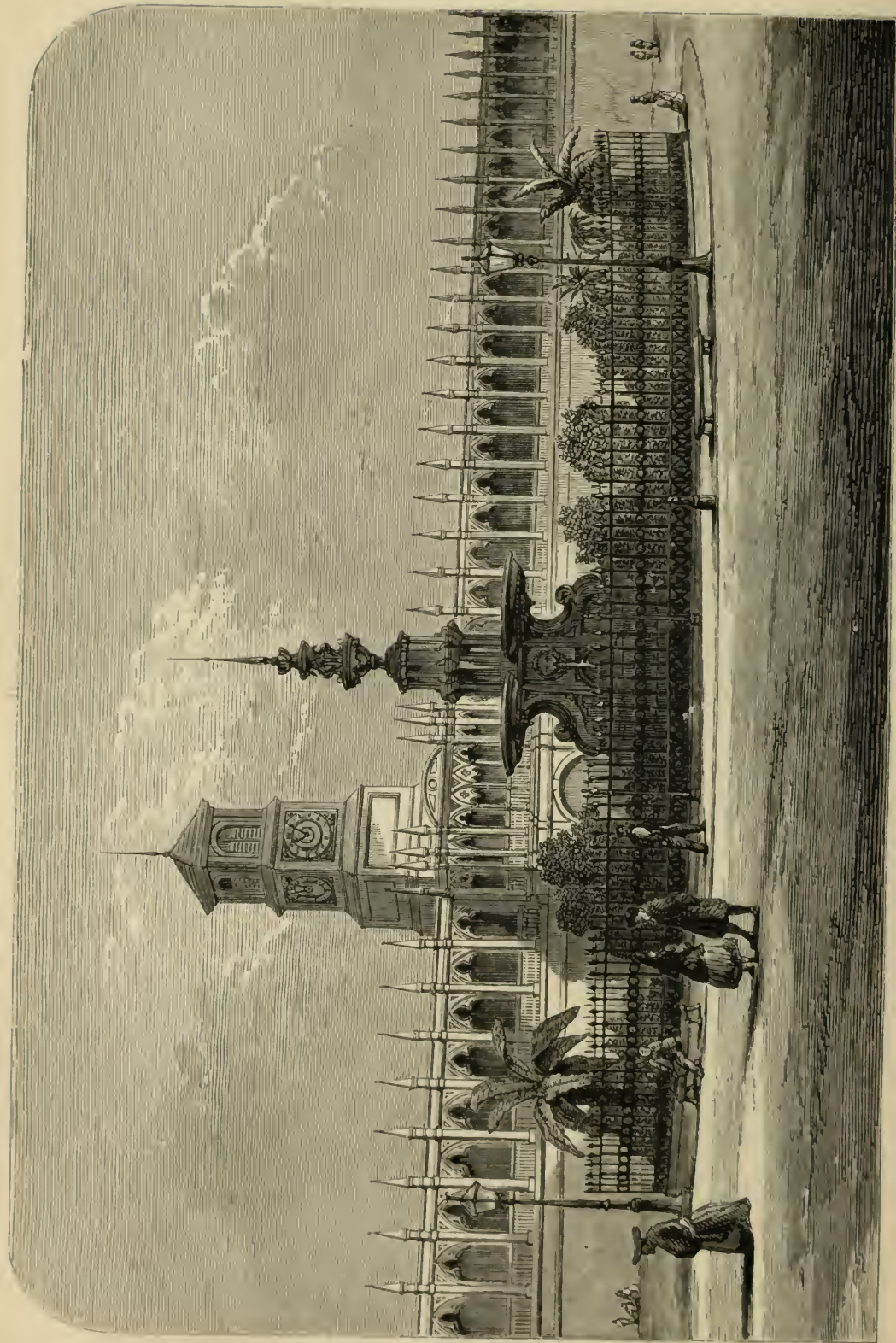
Of its traffic in 1872 Mr. Stirling has supplied me with the annexed:—

NOTE OF TRAFFIC FOR THE NINE MONTHS ENDING
SEPTEMBER 30, 1872.

Number of passengers carried on the Calláo line	1,004,961		
" " " Chorillos line	461,310		
Total			<u>1,466,271</u>
		£	s. d.
Receipts from passengers and luggage	100,936	14	0
Number of tons of goods carried, 99,989.			
Receipts from goods traffic	58,369	19	0
" other sources	3,569	9	0
Total receipts	<u>£162,876</u>	<u>2</u>	<u>0</u>

There are two barracks in Calláo, and one at Bella Vista, which latter is about a mile outside of town, on the line of railway to Lima. Adjoining the Custom-house is the military and naval Intendencia. Together with the three Catholic chapels of the town, there is likewise a Protestant church (having a school attached), of which the manager of the Pacific Company for the time being, the British Consul for the time being in Calláo, and the United States' Consul for the time being in the same place, are trustees. It was originally built, and the ground on which the building was raised, bought by funds raised through Mr. Petrie, and friends, in 1864. Part of material for building was likewise given for it by Mr. Wheelwright.

The church is vested in the foregoing trustees



IN FRONT OF PRINCIPAL ENTRANCE TO ROYAL FORTRESS AT CALLAO.

for the use of the English-speaking Protestant community in Calláo. These trustees were appointed in 1869, when the title-deeds were made out in their names.

At Bella Vista is a foreigners' burial-ground, originally enclosed by the British Government in 1830, but now under management of a committee.

There is not much that may be deemed worthy of remark in the architecture of Calláo—its chief public building being the old fortress, Real Felipe, erected some time between 1770 and 1775, nearly thirty years after the great earthquake. It is said to have cost the Spanish Government thirty millions of dollars—a sum considered so large that the king of the period, Philip III. of Spain, ironically ordered a telescope to be carried to the top of his palace in Madrid, that he might have a look at the fortifications. Covering nearly twenty acres of ground, it has very thick walls, and parapets about twenty feet high on the sea side. It contains two round towers—the Torreon de la Patria, and the Torreon de San Fernando. Between it and the sea is the smaller tower of Santa Rosa, and these are accredited, at the time of Earl Dundonald's exploit in the capture of the "Esmeralda," to have mounted a total of 300 guns. In the great fight for Independence, the fortress stood out for eighteen months when besieged by Bolivar and the patriots of the time,—only surrendering

from sheer starvation on the 22nd of January, 1826.

The last famous battle in which it was engaged was the celebrated bombardment of Calláo by a Spanish fleet, under General Castro Mendez Nunez, on the 2nd of May, 1866. That squadron came up here fresh from its unopposed battering at Valparaiso; and after allowing six days for neutral vessels to leave, opened its fire on the town. From a description of the event by Mr. William De Courcey, of Calláo, who was an eye-witness (published in the *South Pacific Times*),² we are told that the Spanish commander-in-chief addressed a circular to the Diplomatic Corps in Lima, "allowing four days for the foreign inhabitants to move themselves and effects, as he would positively raze the port and city of Calláo." Whilst such was his assurance, that he publicly declared, and it was as positively asserted, that he invited the captain of a French man-of-war, then in the harbour, to take a glass of wine at the Governor's house before he would burn it down. Although the Spanish fleet did not fire the first shot until thirteen minutes after twelve o'clock, at two minutes past five in the evening, they had all got such a peppering, as obliged them to beat a retreat. The squadron consisted of thirteen

² The English newspaper of Calláo, and one of the best conducted journals in South America. Edited and owned by Mr Isaac Lawton, from Jamaica.

sail, six of them being first-class frigates, with an aggregate compliment of 275 guns, and 500 supernumeraries brought out by three transports. The 2nd of May is, therefore, the great holiday for Calláo and Lima.

In Calláo we have also the Prefect's house, a theatre, and the hospital of Guadaloupe, down near the Oroya railway station. The market-place is nearly half a mile outside the centre of the town, and on the inside of it (for the railway runs by the opposite) is erected a cross to celebrate where one of the ships in the great earthquake of 1746 was driven up. Near to the sea, at the northern end, we find a sugar manufactory belonging to Mr. Ramos, of Lima. This is quite close to the Oroya railway station, at the other side of which is the Guadaloupe Hospital.

This institution is under the management of the Beneficencia Society of Calláo; but its chief revenue is derived from a tax levied on all shipping that comes into the port, under a decree of the National Government, dated 27th October, 1868.

In a sanitary point of view, the hospital could not be in a worse position. It is admirably managed by the good sisters of charity under the Beneficencia Society. It has a ward, called the St. George's ward, devoted to sick sailors speaking English; and the Board of Trade has appointed Dr. T. A. Roe, formerly of the Royal Navy, as

medical inspector, to watch the condition of our sick seamen. Joined to his assiduity and attention, Doctor Roe has effected several useful reforms in the establishment.

The decree already mentioned provides:—

“Art. 3. An established hospital revenue will be formed in favour of this charitable society (the Beneficencia), obliging all foreign and national sailing-vessels and steamers to pay the sum of four cents. of a sole every six months, for each and every ton register, and that the said society will be obliged to assist and receive all seamen from all foreign and national sailing-vessels and steamers free of all charges whatsoever.”

I have ascertained by inquiries that English and North American trading ships, with the Pacific Company's steamers, have paid since the date of passing that Act as follow:—

BRITISH SHIPS.

	Soles.	c.	£	s.	d.
From January to December, 1869 .	8,174	6	= 1,541	5	4
„ January to December, 1870 .	9,240	16	1,742	3	0
„ January to September, 1871 .	4,401	20	829	16	2
	<u>21,816</u>	<u>12</u>	<u>£4,113</u>	<u>4</u>	<u>6</u>

PACIFIC STEAM NAVIGATION COMPANY'S STEAMERS.

	Soles.	c.	£	s.	d.
From January to December, 1869 .	800	0	= 150	16	8
„ January to December, 1870 .	1,200	0	226	5	0
„ January to September, 1871 .	1,400	0	263	19	2
	<u>3,400</u>	<u>0</u>	<u>£641</u>	<u>0</u>	<u>10</u>

NORTH AMERICAN VESSELS.

	Soles.	c.	£	s.	d.
From January to December, 1869 .	5,077	68 =	957	6	11
„ January to December, 1870 .	5,658	20	1,066	16	1
„ January to September, 1871 .	3,140	56	592	2	5
	13,876	44	£2,616	5	5

These calculations into currency, made at the average rate of exchange for the three years, of $45\frac{1}{4}d.$ per sole, constitute a sum total of 7,370*l.* 10*s.* 9*d.*

This does not, however, include payments of hospital tax by German, French, Italian, Spanish, Chilian, Peruvian, or ships of any other nation. And these by the lowest estimate of a rough guess at their numerical proportion, may be calculated at 3,000*l.* during the time indicated; in fact, showing a contribution of about 3,000*l.* per annum from all the shipping to the hospital. By their own account the Beneficencia Society has a rent of 77,279 soles—(at $45d.$ per sole, 14,489*l.* 16*s.* 3*d.*)—of which they consider the ships pay 16,800 soles (3,150*l.*), the rest being derived from land and household property.

The Beneficencia expended the last year, 1870, 67,871 soles (12,725*l.* 16*s.* 3*d.*), leaving a surplus of 9,408 soles (1,764*l.*).

Throughout all its history, the name of Peru has been associated with unbounded mineral wealth; and the tales that are told of the immense hoardings up of silver and gold turned out, since the conquest of the Incas by Pizarro in the

sixteenth century, seem almost fabulous. Mines have been, and still are, worked with varying success. But I have no doubt that an enormous impetus will be given to this class of enterprise, more particularly in the copper and silver mines, as soon as the railways of Mr. Meiggs shall be completed. These metals are found at many places between the coast lines and the centre range of Cordilleras;—notably so of silver at Cerro del Pasco on the Oroya line,—at Salto and Gualquayoque behind Trujillo,—and at Chiliété, interior to Pacasmayo.

On the island of San Lorenzo, at the south and west of Calláo Bay, there has been lately erected an establishment for smelting ores. This is managed by Colonel Harris, who represents the only English mining company now working in Peru. Amongst the projects submitted to President Pardo, that were brought before the extraordinary session of Congress, called together on the 9th of November, 1872—the anniversary of the battle of Ayacucho—was one for the establishment of a school of mines.

Going southward from the railway station along a plank road, we see evidences of what is being done by the foreign element in Peru. To the right, this planking leads down to Chucuito, and half-way to the Punta.³ These

³ The Punta is now becoming the fashionable bathing-place for the Chalacos (as the Calláo residents are styled).

are in the parish of Santa Rosa, which is extra-parochial to that of Calláo. We pass for the first few hundred yards between the rails and the old fortress; then skirt the house where Mr. Hodges dwells. Next to that we come to the stores of the Pacific Steam Navigation Company; and if we turn downwards, skirt the fortress of Santa Rosa, to the comfortable dwelling of Mr. Petrie, attached to the company's works. Following towards the point, we arrive at the new stores, erected by Messrs. Dockendorff and Co., and near the extremity to the extensive concrete works of Mr. Hodges. At the Punta we find four hotels—the Grand Hotel of Senor Rivero being the largest. From this returning to the back of Santa Rosa chapel on the Lima and Calláo railroad, there is now a locomotive engine with carriages running, so as to correspond with the trains from Lima. If we take this train either up or down, we can have a view of the extensive foundries of Messrs. De Courcey, and Clarke; of the spacious iron yards of Messrs. Beansire and Dartnell; of the steam flour-mill at Chucuito; of the railway works; of the gas establishment; and of a new line of store-houses being built on the embankment behind the old fortress,—in front of the Pacific Ocean.

During the year 1868, Calláo was visited with a triad of misfortunes. On the same evening that

the great volcanic wave swept over Arica, came a similar one, though less in volume, to menace Calláo. Accompanied as it was by terrific earthshakings, many of the inhabitants fled to Lima and Bella Vista. Nearly at the same period, a large portion of Constitution Street, close to La Matriz, or the parish church, was consumed by fire; and, to crown all, appeared the yellow fever, which swept away in a short time nearly two thousand of the inhabitants.

CHAPTER XII.

Hygiene of Callao.—Senor Paz Soldan's calculations of increase of population.—Mortality at the native hospital.—Excess of deaths over births in the town.—Census of population.—Chinese immigration.—Mortality of Chinese immigrants in the middle passage during the last decade.—Mortality of same in 1871 and 1872.—Law of Congress prohibiting Chinese immigration in 1856.—Its reauthorization by Congress in 1861.—Particulars of contracts.—Mission of Peruvian embassy to China.—Existing convention between Peru and Portugal touching emigration from Macao.—Coolie immigration to the West Indies.—Sir G. Young's paper on the subject.—Difference of mortality in Guiana and Calláo.—Speculators in the Chinese immigration.—National Company of Navigation.—Its intended extensive monopoly.—Decree revoking the concession.—New bill for import duties.—Monopoly of nitrate of soda.—Guano from Mejillones.—General *resumé* of railroads in Peru.—Drainage of Calláo by Mr. Clarke.

I REGRET that my two years' experience of Calláo do not give me the same favourable results of its comparative mortality as I find recorded by Senor Paz Soldan.¹ In 1860, he tells us, there were 729 births, and 365 deaths all through the year. During my time I took careful note of the statistics, furnished by the Beneficencia, or Benevolent Society's Registrar, and therefore on data

¹ "Geografia del Peru," p. 361.

that cannot be disputed. This latter gentleman published in *El Porvenir*, the local newspaper, a table of the deaths in connexion with the native cemetery of Calláo, from its inauguration on the 1st of January, 1862, to the 31st of December, 1871. From it I learn that in these ten years there has been a total of 11,561 interments, amongst which are recorded 3,980 cases of fever. Of these last-named, the yellow fever year of 1868 shows 1,454, whilst during the very last year of all (1871), which was considered a normal year, and whilst I have been commenting on these things in the Calláo press, we have had 623 cases of fever amongst the mortality. Contrary to what happened in the year 1860, noticed by Senor Soldan, from the tables published by the Registrar before mentioned, I find we have had in 1871 :—

Births at Calláo during the year	. 1,251
Deaths „ „ „	. 1,570
	319

Thus showing an excess of 319 deaths over the births. The supposition, therefore, that Calláo has from 22 to 25,000 inhabitants, appears to me only a wild guess. I take from *El Comercio*, Lima paper, of 5th of August, 1871, the following statement with reference to the population of this city :—

“The Census of 1859 gave to Calláo 18,792 inhabitants; that of 1862, 17,539; and that of 1866, the last taken, 14,801.”

Therefore, instead of increasing, it would appear

to be diminishing in population. Moreover, as the yellow fever committed great havoc in 1868, and no census has been attempted since 1866, I am inclined to think that from 15,000 to 18,000 is a very approximate calculation of the present inhabitants of Calláo.

From the "Estadística del Callao," published by the "Sociedad de Beneficencia," I learn that there were buried in the native cemetery from 1st January to 30th June, 1872, the number of 911, and in that of Bella Vista, 91. Out of this total 278 were cases of fever. *That fever is endemic to the town, and proceeds, in the opinion of every one, from the absence of all attempts at hygiene.*

During the six months indicated, the number of births recorded amounts only to 614, whilst the number of deaths reached 1,002—thus leaving a surplus of 318 deaths over the births in the space of six months.

Another fact evidencing the decrease of population in Calláo is seen from what I am told in a statistical table, published by the former Captain of the Port, Don Manuel Palacios, in his report to the Minister of War and Marine, to the following effect:—

"In the same six months just referred to, I there find of the passenger traffic to and from Calláo—arrivals, 22,680; departures, 23,233, showing a surplus of 543 who have left the country."

Some of the mortality tables of the Guadalupe Hospital, given to me by the Mother Superioress, Madame Stephanie, are before me, and I translate them :—

In September, 1871, there were 483 patients in the hospital, of whom 53 died in the month, or at the rate of nearly 11 per cent. per month. Of these there were 117 Chilians, who had been working on the Oroya railroad, and of whom 17 died.

In October, 1871, there were 471 patients in the hospital, of whom 42 died—a mortality of 9 per cent.

In November of the same year there were 445 sick in the hospital, of whom 46 died, or 10·33 per cent. during the month.

The month of December, 1871, shows a total mortality of 39 out of 691 patients, or 5·66 per cent. during the month.

In January of this year there were 699 patients, with a total mortality of 57, or 8 per cent.; and in February there were 755 in the hospital, with a mortality of 48, or 6·33 per cent. in the month.²

Connected with the mortality of this hospital, the most important feature is that of the Chinese.

I have heard from the Mother Superioress of the Sisters of the Native Hospital in Cállao, that since the 1st of January to the end of October,

² The foregoing gives an average of 8 per cent., which is exactly what we find recorded of the great plague of London in A.D. 1663.

1871, their books show of statistics in reference to the Chinese:—

Entered the hospital	733
Came out convalescent	519
Died	214

Thus constituting a death-rate of nearly 30 per cent. in ten months.

This fatality amongst the Chinese in the hospital is well worthy the attention of all humanitarians. In the middle passage from Macao it is not so bad, although even there it has reached in some cases to 31 and 26 per cent. during the voyage of a hundred days.

It occasionally happens that Chinese mutiny on the passage, although this is said to be a voluntary emigration. And whilst their engagements are accredited to be from five to eight years, I cannot ascertain that a shipment of any back to their own country has ever been made.

The following is worthy of attention, particularly as it is, like all my statistics, derived from official sources:—

During the year 1870 a few dreadful cases occurred of the burning of ships containing Chinese bound to this port. In normal voyages it may be seen by the ensuing tables that 7 per cent. die on the middle passage, whilst 30 per cent. have departed this year in the native hospital at Calláo.

IMMIGRATION OF CHINESE TO CALLÁO.

Year.	Arrived.	Sailed from Macao.	Deaths on Passage.
1860	1,413	2,007	594
1861	1,440	1,860	420
1862	1,003	1,716	713
1863	1,628	2,301	673
1864	6,410	7,010	600
1865	4,540	4,794	254
1866	5,929	6,543	614
1867	2,184	2,400	216
1868	4,266	4,387	121
1869	2,291	2,366	75
1870	7,544	7,917	373
Totals	38,648	43,301	4,653

Deaths were 7 per cent. on the voyage from Macao to Calláo.

The Captain of the Port in 1871, Senor Palacios, has furnished me with the following :—

SUMMARY OF CHINESE IMMIGRATION FROM JANUARY 1 TO SEPTEMBER 30, 1871.

Month.	Sailed from Macao.	Arrived.	Died on Passage.
January	1,810	1,693	117
February . . . . .	.	.	.
March	1,650	1,579	71
April	2,244	2,128	116
May	1,119	1,064	55
June	1,777	1,648	129
July	721	543	178
August	372	366	6
September . . . . .	.	.	.
Totals	9,693	9,021	672

Showing an average mortality during the voyage of 7 per cent.

From our present Captain of the Port, Senor Don Juan A. Moore, I have obtained the following statistics, showing the immigration of Chinese up to the end of September quarter, 1872, with the mortality on the voyage :—

IMMIGRATION OF CHINESE INTO CALLÁO, FROM JANUARY 1 TO OCTOBER 3, 1872.

Date of Arrival.	Nationality of Ship.	Name of Ship.	Tons.	Embarked in China.	Died on the Voyage.	Arrived at Calláo.	Mortality per cent.	Consignees.
1872.								
January 20	French .	Mille Jonnes .	735	432	39	393	9	Canevaro.
" 21	Peruvian .	Hong Kong .	458	314	8	306	2½	" Figari.
" 24	" .	Providencia .	574	416	5	411	1¼	"
February 12	" .	Peru .	570	400	10	390	2½	"
" 12	" .	Callao .	1,049	629	19	610	3	Compania Maritima.
March 24	" .	Lola .	890	592	4	588	½	Ugarte.
April 12	" .	Fray Bentos .	410	375	6	369	1½	Figari.
" 24	Portuguese .	Cecilia .	533	380	8	372	2	Compania Maritima.
" 25	Peruvian .	Clotilde .	1,314	760	9	751	1¼	Candamo.
May 16	Dutch .	Johann den Villen .	494	260	13	247	5	Canevaro.
" 17	Peruvian .	Lama Canevaro .	1,043	739	192	547	26	"
" 11	Portuguese .	Emigrante .	965	499	107	392	21½	"
June 12	Peruvian .	Rosalin .	816	457	64	393	14	" Dimaly Filgueira.
" 13	" .	America .	1,562	690	105	585	15	Compania Maritima.
" 30	French .	Antares .	401	263	82	181	31	Canevaro and Co.
August 31	Peruvian .	Camilo Cavour .	854	650	57	593	8½	"
September 10	" .	Sara .	638	346	23	323	6½	Ugarte.
" 12	" .	Hong Kong .	458	314	37	277	11½	Canevaro.
" 16	French .	Canadienne .	853	507	19	488	3½	Compania Maritima.
" 19	Peruvian .	J. Bigam .	337	193	7	186	3½	Ugarte.
" 22	" .	Callao .	1,049	695	10	685	1¼	Compania Maritima.
" 22	" .	Providencia .	574	422	10	412	2¼	Figari.
" 27	" .	Peru .	570	406	34	372	8½	"
" 28	Dutch .	Lurust .	836	453	45	408	10	Canevaro.
" 29	French .	Radama .	487	305	4	301	1¼	"
October 3	Peruvian .	Macao .	603	436	39	397	9	Compania Maritima.
		Total .	—	11,933	956	10,977	—	

Average Mortality about 8 per cent.

Few subjects connected with trade in Peru deserve so much attention from the world of humanity as that relating to the Chinese labourers brought hither. On the 6th of March, 1856, the immigration of Chinese was prohibited by law of Congress, but another law of the succeeding Congress again authorized it in 1861. To prove any of the horrors of this traffic may be unnecessary, when we find in the table just quoted that in this year, 1872, the French barque "Antares," Captain Natle, arrived in Calláo at the end of June last with a cargo of Chinese from Macao. Out of 263 put on board at the port of embarkation, only 181 reached Calláo—having had the appalling mortality of 31 per cent. on the voyage. Eighty-two had died.

The run from Macao to Calláo averages from 100 to 120 days.

The mortality in the previous table, therefore, of 82 out of 263, or 31 per cent. in the "Antares," of 105 out of 690, or 15 per cent., in the "America," and of 64 out of 457, or 14 per cent., from the "Rosalin," proves that there is a serious cause for inquiry into this matter.

The Chinese are contracted for during a service of eight years at the rate of 450 dol., or about 75*l.* per man. During their period of service they receive generally 4 soft dol., i. e. 13*s.* per month for their food supplies, besides getting a pound and a half per day of sweet potatoes, rice, yuca

(a kind of arrowroot), and Indian corn—that is to say, a pound and a half of vegetable material. They are not, however, so well fed as this on all the haciendas.

Since the elevation of Senor Don Manuel Pardo to the Presidency, on the 2nd of August last, his Excellency has made public his intention to send a Plenipotentiary to China, chiefly with the object of establishing the Chinese immigration on a better footing. For several months that mission was arranged to go in the Peruvian war-frigate “Independencia.” But the latter plan was set aside, and it was despatched per mail steamer *viâ* San Francisco. Senor Don Manuel A. Garcia y Garcia is the Minister Plenipotentiary appointed, and Senor Don Frederico Elmore, first Secretary of Legation, together with a staff of officials. The mission set out from Calláo per mail steamer on the 22nd of December last.

The existing convention under which Chinese are brought into Peru is one celebrated between the respective High Contracting Parties at Lisbon on the 24th of February, 1872. And that is founded on a previous Treaty, concluded between Peru and Portugal on the 26th of March, 1853, called a “Consular Convention.” The text is based on the fact, that the peninsula of Macao, in China, being owned by Portugal, the contingencies of exportation should be carried out in a legal manner, according to the provisions of Portuguese

law. Such a rule is still observed, although it appears that the Chinese Government has recently forbidden emigration to Peru.

Every Chinaman coming to Peru is furnished with a copy of contract, printed in Spanish and Chinese, by which he is bound for a period of eight years. Four hundred and fifty dollars are paid by the owner of farm, or employer in other labour, to the contractor, for this service. One item of the terms of agreement provides that "the period of service of eight years being concluded, the Chinaman is free to dispose of his labour—no debt of any kind being sufficient to impede his liberation, as any such debt must be recovered by the laws of the country." But there being no security given for his return at the end of service, this liberation rarely proves more than a delusion.

It may not be out of place to contrast the present condition of Chinese who come to Peru, in the relations already stated, with what we learn from Sir G. Young's paper, read at the last meeting of the British Association at Brighton, under the title of "Is the Asiatic emigration to the West Indies likely to be a permanent fact in modern geography?"

Of the mortality in this latter immigration Sir George says:—

"It would be asked if it were possible that the results of the introduction of Africans during the time of the slave-trade could be matched by the

immigration of Asiatic volunteers, brought from a greater distance by Government ships, under a system liable to be stopped at the first outcry of philanthropists, and so closely guarded that, as we learn from the last report of the Emigration Commissioners, the mortality during the middle passage had been reduced to below 20 in the 1,000,—a better rate than obtained in many parts of England.”

The mortality of 2 per cent. in the passage contrasts vividly with that I am obliged to record of Chinese immigration to Peru.

Again, Sir George speaks of mortality in Guiana :—

“The mortality for the first ten years was frightful; the Commissioners lately in Guiana estimated that it reached 10 per cent. per annum.”

As antithesis to this, I must point out that in my last year’s report on the trade of Calláo,³ I had to show a mortality to the enormous rate of 30 per cent. in the ten months to end of October, amongst the Chinese at the hospital of Guadaloupe in this city.

Sir George continues :—

“In 1851, one-third of the whole number introduced within six years was already dead. The improved regulations of this passage, however, and the very great efforts of the planters and Colonial

³ Published by the Foreign Office, amongst Commercial Reports from her Majesty’s Consuls. Presented by order of her Majesty to both houses of Parliament.

Governments had brought down the mortality to a mere fraction of the former death-rate. In Guiana and Trinidad it fluctuated between 3 and 4 per cent.

“An important Government department was charged with the supervision of all matters, in which the interests of the coolies were affected. A special labour law, on which great pains had been spent, was administered by stipendiary magistrates, in order to secure them work at fair wages. Medical aid was provided gratuitously, and no estate was without its hospital. After 20 years of this improved, and still improving, system, we found in Guiana that, of a population of 200,000, one-fourth, or 49,000, were immigrants from Asia, while 6,000 more were children of those immigrants, called creole coolies in the colony. In Trinidad, with a population of 100,000, there were 24,500 immigrants, and 5,500 creole coolies,—making 130,000 in all. The female sex was as yet sadly deficient in numbers. The Colonial Office insisted on a minimum of 40 to every 100 males who were recruited, and would increase the proportion but for the extreme difficulty of making up the quota, without resorting to women of a character likely to neutralize all the benefits intended by their introduction. At the present time there were in Guiana women in the proportion of 42·21 to every hundred males, showing that the equalizing influence of the rising generation was beginning to tell.”

After instituting an interesting comparison of the relative working qualities of the coolies and negroes, Sir George concluded by saying, that he was inclined, though not without hesitation, to stake his credit, as an observer, upon the permanent establishment there of the negro, with a reservation, however, in favour of the Chinaman, if the Chinese immigration were resumed.

To the statement already mentioned as given to me by the Superioress of the Guadaloupe Hospital in Caláo, referring to the mortality of Chinese in the last year, I regret having no more favourable one for the present. These two items of 7 to 8 per cent. mortality on the voyage, with 30 per cent. in the hospital during 10 months, are matters pre-eminently calling for investigation.

In the Lima newspaper, *El Pueblo*, of the 20th December, I find the following:—

“From 20th January of present year up to date, 32 ships, solely engaged in the Chinese traffic, have arrived at Calláo. They brought a sum total of 13,380 Chinese coolies. Having taken on board 14,494 at Macao, there died on the voyage 1,114, or 7 and $\frac{6}{10}$ per cent. In the year 1871, the Chinese immigration had amounted in its totality to 11,812 individuals—this year being an excess on the previous one of 1,478.”

By a reference to my Trade Report of last year, it will be seen that 7 per cent. was the mortality on the middle passage.

“Thus,” continues *El Pueblo*, “we have had in the past and present year brought to Peru 25,192 colonists, representing for the speculators in human flesh a capital of 11,714,280 dols., equal to 1,757,142*l.*, if we calculate the worth of each colonist at the sum of 465 dols., or 69*l.* 15*s.*, which is the minimum value.”

The term “colonist,” in this case, appears to jingle with the expression of “speculators in human flesh,”—more especially as there is no provision in the Peruvian system of immigration for the female element.

In the month of March last (1872) a Decree was attempted to be passed,—was approved of by the late President Balta, and sanctioned by the Finance Minister of the time, Senor Don Felipe Masias. Although the document bears date the 9th of March, it only appeared in a Lima paper, *La Patria*, on the 1st of June, when the originator of the scheme, Don Rufino Pompeyo Echenique, was on his way to England, *viâ* United States, by the steamer that started two days before publication, to procure the necessary capital for the work.

The absurdity of trying to crush all existing maritime interests, by such an extensive monopoly, caused universal indignation, and it was rescinded by the same minister, Don Felipe Masias, a few days after its publication. The following is the official announcement of the affair, under the title of “National Company of Navigation:”—

Lima, March 9, 1872.

In consequence of the present proposal of Don Rufino Pompeyo Echenique, and having to view the following considerations, viz. :—

That guano, saltpetre, and other products of raw material exported to foreign ports necessitate the employment of a considerable amount of shipping; that the investment of capital in a company, for the purpose of shipping, to the extent of 100,000 tons, would be advantageous and in every way profitably secure; that besides these advantages, assured to the country by the investment of so much capital, its industry would be protected or favoured by guaranteed cheap freights; that these provisions, which the company and the country would derive from the existence of a mercantile marine of the extent indicated, will be better understood, as the transports would offer, at reasonable prices, to carry all articles necessary to extend the national products; that by means of vessels, constructed with specific conditions, to provide convenient or cheap passages, a considerable immigration would be facilitated, at low rates, to families abroad; that the plant, indispensable for the railways in construction, and for the works of irrigation that have to be undertaken, the possession of a mercantile marine would provide the cheap transport of the productions of the country and of the workmen needed to cultivate the ground to be irrigated; that in view of these great results,

it is indispensable to procure the services of such shipping, it cannot possibly be denied that the concession solicited is a means of protection ; that the grant of these means will invite no prejudice of any kind in the State, but, on the contrary, adjust effective economy, and, what is indispensable, fix certain conditions which will insure the standing of the projected company :

It is accorded to Don Rufino Pompeyo Echenique, as a means of protection for the immediate establishment of the company proposed with the following title, "Compañia Nacional de Navegacion" (National Navigation Company), the concessions following :—

1st. The Government guarantees to the company, for a term not exceeding nine years, that it will be solely in the ships of the company, to the extent of its power to comply, that the Government will transport all articles of whatever class, for account of the Government, that have to be brought from foreign parts, and from points that are under the sphere of action of the company.

2nd. Equal guarantee is conceded, and for the same time, for as much as it is possible for the company to transport, of all products, articles, and objects of national dominion, or property of whatever kind or nature they may be.

3rd. Whether or not the actual contracts for providing coal have terminated, the company will furnish coal, for the said term of nine years, all

that the Government requires, at the strictly cost price, embarked in Europe, charging the corresponding freight, insurance, commission, and the usual charges customary, in a commercial point of view; the Government making the respective payments on receipt of the articles.

4th. The Government will impose the conditions on these parties in charge of the construction of railways and public works, on account of the State, and on those who may rent or hire such railways or properties from the State, that they use only the shipping of the company, under pain of indemnification to the same, in transporting every kind of material required, and to buy or purchase from the company, on the terms stipulated in the above clauses, all the coal necessary for the use of those railways or properties which the company are able to furnish.

5th. The nine years which are referred to in the first and second clauses will commence to go into operation from the moment one or other of the ships of the company receives the first cargo, and commence to comply with the stipulations, as regards the Government, and the contractors of the State from the time when the company have one or other of their sailing-vessels in sea-going condition.

6th. The ships of the company will be, at all times, free of every inconvenience of a fiscal character in all the ports and creeks of Peru.

7th. The company undertakes not to charge, under any motive or any pretext whatever (in cases where it refers to the clauses 1, 2, 3, and 4), more freight or commissions than those current in the place or places where, and at the time when, they receive the cargo.

8th. The company are obliged to provide accommodation, if needed, in every one of their ships for fifty emigrants, allowing the Government to proportion the charge for the passage, and healthy and abundant food, of each emigrant 2*s.* daily for adults, and for boys from two to thirteen years of age 1*s.* The days will be calculated from that on which the ship sails from the port of departure till the day when she arrives at the port of destination. If, for whatever motive, the voyage is delayed, they will not recover, on any pretext whatever, more than 12*l.* sterling for an adult and 6*l.* for each boy.

9th. The company obliges itself to place its management in such a manner that each ship will, at least, make three round voyages every two years. If six months pass, counting from the date of the document of this concession, it will be considered made without effect.

Passed to the Direction of Administration, in order that they may extend the corresponding document.

[Rubric of his Excellency the President]

(Signed) FELIPE MASIAS.

This was abolished by the following documents,

which came to light a few days after the first was published :—

By Supreme Decree of the 9th of March last, issued by the Minister of Finance, a privilege for nine years has been granted to Don Rufino Echenique to establish a navigation company, with the exclusive right to transport all produce, objects, and articles, of every description, being national property, as well as those belonging to railroad companies and public works, which in future may be established, and to sell to the Government, and to the companies referred to the coal they may require.

Such a concession is an infraction of the constitution, because it restrains the liberty of industry. It is equally contrary to the law of privileges, as it does not refer to an invention, nor the introduction of a new industry ; it also violates the laws in force as to contracts with the State ; and, finally, it involves an usurpation of faculties of Congress, as far as it exonerates the company referred to from the payment of all fiscal dues.

In consequence, the undersigned deputy proposes :—

That the first representation be made to the Government to derogate the Supreme Decree of 9th March, as it is an infraction of the constitution and the laws.

(Signed) RICARDO W. ESPINOSA.

Lima, June 3, 1872.

DECREE revoking the Concessions granted to Don Rufino P. Echenique :—

Lima, June 4, 1872.

On reconsideration of the petition of Don Rufino Pompeyo Echenique, in which he asks the concession of certain privileges for the establishment of a National Navigation Company, the Decree of 9th March granting them is hereby revoked, and consequently the corresponding document extended by the Notary Public is to be cancelled.

Signed by the President and the Minister of Finance.

So that the very persons who sanctioned the affair (the late President and Minister), were the same who squashed it in three days after its publication.⁴

The following is substance of a bill on imports which has been introduced by the Minister of the Interior, in pursuance of the recommendation of President Pardo, at the opening of Congress, on the 2nd of August last, and which came into law on the 1st of April, 1872.

Article 1.—Ten per cent. duty to be charged on

⁴ Since my return to England I have seen account of a demand made by Senor Echenique for what he calls "compensation" regarding his losses in this speculation. The Government of President Pardo, however, at once crushed his claims, by denying the possibility of such a monopoly to be sanctioned by the State.

merchandise, now duty free. The following articles only are free from all duties :—Anchors and kedges of iron, tar, quicksilver, live or stuffed animals, iron buoys, pitch, fire-engines with utensils, bank-notes, iron-chains, iron anchor stocks, ships, extincteurs, dried fruits (except cocoas), waste, felt for ships, shackles for anchors, instruments and tools when introduced by mechanics, but according to the law ; printing-presses and utensils, scientific instruments when introduced by professors ; machinery of all kinds (except sewing machines), money, gold in powder or paste, presses and articles for printing on stone, plants or herbs, silver in paste or manufactured, newspapers, produce of fish caught by national ships, ships' masts, seeds, printers' inks, vegetables, ornaments, such as vases or other articles of good taste (but subject to the law) ; articles for use in national hospitals (subject to law) ; articles for public companies, subject to agreement made between the contractor and the Government ; personal effects (according to law) ; national produce which may return to the country, having been proved to be such ; articles belonging to the steward's department of ships, and for consumption on board, excepting such as may be re-shipped or transhipped with this object ; provision and merchandise imported by whaling vessels to the value of 400 soles, as per tariff ; straw (toquilla and macora) and coal.

Article 2.—Five per cent. more will be charged

on the value of goods in all the Custom-houses in the Republic.

Article 3.—Special duties are charged on the following:—

		Currency.		Sterling.		
		Soles.	c.	£	s.	d.
Aguardiente of all kinds .	Per dozen	4	20	0	15	9
" in jars or barrels to 30 degrees .	Per gallon	1	20	0	4	6
Beer and Cider	Per dozen	1	75	0	6	6 $\frac{3}{4}$
" " in barrels.	Per gallon	2	10	0	7	10 $\frac{1}{2}$
Aguardiente, in jars or barrels, over 30 degs. .	" "	2	10	0	7	10 $\frac{1}{2}$
Liquors or sweet wines .	Per dozen	3	50	0	13	1 $\frac{1}{2}$
Champagne and wines of that class (excepting Asti)	" "	5	60	1	1	0
Wines of Borgoña, Brussels, Cheprie, Sherry, Madeira, Port, and Vermuth	" "	3	50	0	13	1 $\frac{1}{2}$
The above in barrels .	Per gallon	1	00	0	3	9
Wines of other kinds .	Per dozen	2	00	0	7	6
" " " " " "	Per gallon	0	50	0	1	10 $\frac{1}{2}$
Cigars of all kinds	Per lb.	0	88	0	3	3 $\frac{1}{2}$
Tobacco of all kinds	Per 100 lbs.	28	00	5	5	0
Cards (playing)	Per gross	4	20	0	15	9
Coffee	Per 100 lbs.	7	00	1	6	3
Cocoa	" "	4	00	0	15	0
Cheese	" "	4	00	0	15	0
Tallow	" "	3	00	0	11	3
Common Soap	" "	5	00	0	18	9
Candles of all kinds	Per lb.	0	12	0	0	5 $\frac{1}{2}$
Biscuits	Per 100 lbs.	2	00	0	7	6
Butter	" "	12	50	2	6	10 $\frac{1}{2}$
Tea	Per lb.	0	25	0	0	11 $\frac{1}{4}$
Sugar of all kinds	Per 100 lbs.	4	80	0	18	0
Flour	" "	1	80	0	6	9
Wheat	Per 135 lbs.	1	80	0	6	9

Article 4.—The Government to give to the

Chamber immediately a report in detail of the results produced by the changes now made in duties to be charged by the Custom-house, so that Congress may consider what alteration may be necessary.

For the two months after this law came into operation, I find, by *South Pacific Times* of June 28th, the following proof, in spite of this enactment, of the steady progress of trade in Calláo :—

The receipts of the Calláo Custom-house for the last two months have been—

In April	S. 366,135 91
In May	403,086 66
	<hr/>
Total	S. 769,224 57

The revenue from this source, during the same months last year, was—

In April	S. 316,294 05
In May	371,330 46
	<hr/>
Total	S. 687,624 51

It will thus be seen that, notwithstanding the activity in March, to avoid the payment of the augmentation of 25 per cent. in the import dues, this has been sufficient to produce an increase of S. 81,600 06 as compared with the two months' same of the preceding year. Another law relating to the taxing of exports is also under

the consideration of the Government. It provides—

Article 1.—In the exportation of saltpetre, will be charged 50 per cent. on the difference between the cost price and the market value, which is to be decided by a commission to be appointed.

Article 2.—In the exportation of the raw material (caliché), a duty of twenty-five cents. will be recovered on every 100 pounds.

Article 3.—The Government to adopt any means that may suit to collect this duty.

Article 4.—This law to commence and take effect six months after its publication.

The latter law, however, in respect to Article 1 of 50 per cent. on the profits, has been altered by establishing the production of the nitrate of soda, to a Government monopoly—the State paying two soles and 40 c. (or about twelve shillings) per quintal (100 lbs.) to the producers, and reserving to itself the privilege of fixing a market price to purchasers of the article. For the Peruvian Government knows, now that the whole realizable amount of guano cannot be calculated at over 3,000,000 of tons, the nitrate of soda to make artificial manures must become more valuable in the European markets.

An addition to this has been made in proposing to have the nitrate sold at the markets of Iquique and Lima.⁵

⁵ My readers may, however, see by referring back to my

From the port of Mejillones, which is between Chile and Peru, the Pacific Company's steamer "Penguin" took a load of guano to England in the month of November.

As nothing can be more intimately connected with the progress of Peru than its railways, I append herewith translation of part of a paper read last year by Mr. Hohagan, C.E., before the Royal Geographical Society of Berlin. These have appeared in the memoirs of the Society, but some errors, typographical and general, have been corrected for me by Mr. John Meiggs, brother of the great contractor:—

The following Government railroads are now in course of construction, or have been completed by Mr. Henry Meiggs:—

Names of Railroads.	Length in English Miles.	Cost in Peruvian Soles.	Equivalent in Pounds Sterling.	Will be finished in the Year
Calláo and Oroya, now about half finished	130	27,600,000	5,175,000	1874
Mollendo and Arequipa—working—gives Government 3 per cent. until 1872, after that date 4 per cent.	107	12,000,000	2,250,000	1870
Arequipa to Puno, in construction, about half finished	222	32,000,000	6,000,000	1873
Puno to Cuzco, just begun	230	25,000,000	4,687,500	1874
Chimbote to Huaraz, just begun	172	24,000,000	4,500,000	1876
Ilo to Moquegua, will be finished this year	63	6,700,000	1,256,250	1872
Pacasmayo, Guadalupe, and Magdalena	83	27,100,000	1,331,250	1873
Total	1,007	134,400,000	25,200,000	

Chapter on Saltpetre at Iquique, that this monopoly is being done away with.

According to this, the kilometer costs Government 108,536 soles 80 c., or 20,350*l.* 10*s.*; and it is certain that Mr. Meiggs is the contractor of highest rank known.

Besides these, the following State railroads are to be constructed by private individuals:—

Names of Railroads.	Length in English Miles.	Cost in Peruvian Soles.	Equivalent in Pounds Sterling.	Will be finished in the Year
Tacna to Bolivia—part Government has in it, 80,000 soles or 15,000 <i>l.</i>	108	6,000,000	£ 1,125,000 0	1876
Lima to Huacho, finished up to Chancay	89½	4,000,000	750,000 0	—
Pisco to Ica, finished	48	1,455,000	372,812 10	—
Paita to Pura, in construction	63	1,800,000	337,500 0	—
Lima to Pisco, not yet begun	144	10,000,000	1,875,000 0	—
Huacho to Sayan, in construction	36	2,400,000	450,000 0	—
Total	488½	25,655,000	4,810,312 10	

PROJECTED RAILWAYS TO BE COMMENCED SOON.

Names of Railroads.	Length in English Miles.	Cost in Peruvian Soles.	Equivalent in Pounds Sterling.
Chancay to Cerro de Pasco—private	120	Soles. Not known to outsiders.	£ —
Oroya to Chanchamayo—State	80	„	—
Tacna to Puno—State	301	„	—
Salaverry to Ascope—State	40	„	—
Oroya, Jauja, and Ayacucho—State	240	„	—
Oroya and Cerro de Pasco—State	40	„	—
Trujillo to Eten—private	148	„	—
Huacho to Lambayeque—private	560	„	—
Total	1,529	210,000,000	39,375,000

PRIVATE UNDERTAKINGS—RAILWAYS ABOUT HALF FINISHED.

Names of Railroads.	Length in English Miles.	Cost in Peruvian Soles.	Equivalent in Pounds Sterling.
		Soles.	£
Cerro de Pasco to Pasco (silver mines)	15	Not known.	—
Iquique to the Noria (saltpetre district)	37	„	—
Pisagua to Sal de Obispo	35	„	—
Eten to Ferrenafe	28	„	—
Total	115	„	—

RAILWAYS ALREADY WORKING.—ENGLISH COMPANIES.

Names of Railroads.	Length in English Miles.	Cost in Peruvian Soles.	Equivalent in Pounds Sterling.
Arica to Tacna, with 6 per cent. security	39½	Soles.	£
Calláo to Lima and Lima to Chorrillos	15½	} 6,000,000	1,125,000
Total	55			6,000,000	1,125,000

With these data to calculate upon, we arrive at the result that there are now in Peru, lines traced with an aggregate length of 2,979 English miles, and a total value of 382,250,000 soles, or 71,671,875*l.*, so that to every ten square miles, and for each thousand inhabitants, there is one English mile of line.

To the amount above stated ought to be added the sum of 85,800,000 soles, or 16,087,500*l.* spent chiefly upon water-works, besides the immense sums required for the ramifications of some rail-

ways, for which Mr. Meiggs has also contracted, and which cannot be quoted at less than 125,000,000 soles, or 23,437,500*l.*

The details of mortality in Calláo already submitted by me having demonstrated a sad state of hygiene, I am happy in being able to add that, to afford some remedy for this state of things, there has been drawn up, in the month of September of this year, by Mr. Thomas Charles Clarke, C.E., a scheme for the sewerage of Calláo. The temperature of Calláo being rarely below 65 degrees Fahrenheit, or above 77, it ought to be one of the healthiest towns in the world—more particularly as it has almost always the pure wind blowing into it from the South Pacific.

The details I have already submitted will show how such a scheme is needed. Mr. Clarke's plan is to consist of—1st, a main outlet for sewerage; 2nd, pumping station for lifting the sewage; 3rd, line of main sewage; 4th, branch sewage; 5th, flushing and ventilation of sewers. To this succeeds the estimated cost of eighteen miles of sewers with junctions, forty inspection and ventilation shafts, twenty-five flushing chambers, and forty gullies with gratings—the whole amounting, in Mr. Clarke's estimate, to 494,958 soles, or 92,748*l.* 7*s.* 6*d.*

The station for pumping (to be worked by a windmill, with an auxiliary steam-engine) is fixed at the Calláo side of river Rimac. By these

machines, calculating a provision for 30,000 inhabitants (which I believe to be an over-estimate), and allowing 25 gallons per day for each person, or a total of 750,000 gallons of water daily, no doubt that a new era of health would dawn in Calláo. Mr. Clarke has been the supplier of a similar system to this, and with perfect success, to the cities of Oxford and Portsmouth in England. The plan has been received favourably by the municipality of Calláo at its meetings. But the only action taken in the matter up to the time of my departure from Calláo was an advertisement from the municipality for plans for the construction of sewers through the town, as well as for a general slaughter-house. These were to be received at the municipality up to the 31st of January, 1873, and a premium of 2,000 soles (or about 400*l.*) to be given for the design of sewers, and 200 soles (or 40*l.*) for that of a slaughter-house—both plans to become property of the municipality.

CHAPTER XIII.

From Calláo through the Huatica valley.—Bella Vista.—Viceroy's palace.—Custom-house stores.—Spasmodic efforts to make suburban residences.—Ruins of old city of Huatica.—Ruins of castles, temples, and fortresses.—Senor Cerdan's pamphlet about water-supply.—Tracking the Pando burial-mound (huaca) by Mr. Steer.—Measurements converging to multiples of 12.—Extraordinary dimensions.—Made up of small sun-dried bricks.—Masses dislodged by earthquake.—No notice of these things by Rivero.—Huaca de la Campana (Marengo, or Arambolu).—Legend about this mound.—Characteristic features of architecture.—Filled up with earth.—Fortress entitled San Miguel (Huatilee).—Adjacent temple.—Wedge-shaped walls.—Fortresses to protect old city and burial-ground.—Ancient temple of Delphic Oracle Rimac.

THERE are few portions of Peru which I have visited, that seem to me more worthy of a searching exploration than the valley of Huatica, whereto I am about to introduce my readers. What I mean by exploration is such a one as that recently conducted by Mr. Smith for the *Daily Telegraph*, in Assyria, amongst the ruins of Babylonia and Mosul, as well as what has been done by Dr. Henry Schliemann in Priam's Troy. In one of the letters of Mr. Smith,¹ describing his visit to Babylon, he says, "The first mounds I exa-

¹ Vide *Daily Telegraph*, June 25th, 1873.



PLAN OF HUATICA VALLEY.

mined were those of the ruins called now Babil, but sometimes Miyelliba; it is the most northern set of mounds. These ruins consist of one vast oblong mound, surrounded by some smaller mounds, and the ruins of a wall which had once enclosed its structure." Quite similar to what we find in the Huatica valley, as will appear by the accompanying illustrations.

From Calláo our way lies through Bella Vista, situated about a mile to the east, and on the road to Lima. It is the only stopping-station of the train between these two cities on the upward journey; but, on the downward, all the trains halt at the back of Santa Rosa church, whereby easier communication can be had with many parts of Calláo, and from where the train starts for "the Point" (La Punta).

Bella Vista was founded in 1747—the year after the great earthquake—by the then Viceroy, Conde de Superunda. It certainly deserves the name, on account of the pretty view that can be had from the top of what was the Viceroy's palace in times gone by. This is now the property of a Lima gentleman, Don Pedro Bezanillo. It is situated in front of a very handsome and capacious plaza, or square, having a circular flower parterre, surrounded with iron railings, and ornamented with a fountain. Behind Don Pedro's house in the parallel square is what formerly was the chief barracks in the epoch of the Spaniards; but, shortly before my leaving the

country, it was converted into a lying-in hospital. Besides the passenger line of rails to Bella Vista, there is a track for train communication between the Custom-house and its corn stores, which form a considerable building here. In the same square as the old barracks we find a Government iron foundry, in which are done all the iron works necessary for keeping the Peruvian navy in order. A considerable portion of property in this town belongs to Senor Don Gregorio Real, who was Alcalde (or mayor) of the Municipality during the first year of my residence here; and more of it is the property of Senor Gregorio Garcia, who was President of the Beneficencia Society when I left Calláo. Both of these gentlemen deserve credit for trying to make Bella Vista a suburban residence. But although it ought to be healthy from its position at a height of forty-eight feet above Calláo, and exposed to the fullest of the pure breezes from the South Pacific, all the spasmodic attempts to make it appreciated have failed, and its average mortality shows the same rate as Calláo.

Between Calláo and Bella Vista, on the side next the sea, is the site of the former race-course with its grand stand, beneath which is a liquor-shop, under the style of the "Derby Arms." Still nearer to the sea than this runs a line of rails by which Mr. Hodges procures, from a farm called Chacra Alta, material of earth as filling stuff for the piece of ground that is being

reclaimed near the old mole of Calláo. It is a pleasant feature of daily life amongst the native indolence with which one is encompassed in Peru, to see a train of twenty trucks, making a journey out here of two miles, and doing it ten times in the day, bringing in a daily contribution of about 800 tons of material.



RUINED WALLS OF OLD CITY OF HUATICA.

Near Bella Vista we see also partial tracks of a line of rail that was formerly planned to Magdalena, but had to be given up on account of some landed proprietor refusing a concession.

Our road, now on horseback (in company with my friend Senor Don G. Salcedo y Ruiz, from Talambo), is to have a look at the old ruins in the valley of Huatica. So, skirting a very long wall, with loop-holes for muskets, that stretches to

a mile in length behind the old barracks of the Viceroy, we find ourselves, after half an hour's ride, in the midst of what I believe to be the ruins of the old city of Huatica. I may add that, in the country all around, extending from the railroad to the sea, and as far as this, not more than four



VIEW FROM WEST SIDE OF HUACA OF PANDO.

miles from Calláo, I counted seventeen different huacas (as they are entitled here), but some of which have no appearance of being burial-grounds. I therefore set them down as residences, castles, or fortresses. The burial-mounds of various sizes are, however, in the proportions of four to one of the architectural matters. At the farm of Don Manuel Salazar, about a mile out from Bella Vista, the house is built on one of these old mounds; and quite close to the ruins of the ancient city is a place

called Las Palmas, at which some Italians are located, and where they produce excellent grapes, from which red wine is manufactured.

Amongst the ruins here it is impossible to make out anything but fragments of walls. These are thick and close, over a space of a few square miles, and are enclosed within a triple wall—so destroyed in many places that it is impossible to follow its outline. In Don Ambrosio Cerdan's² little book, from which I shall have to quote more hereafter, mention is frequently made of "La ciudad, o Huatica,"—the city, or Huatica. Whence it may be supposed that the original water corporation may have had its head-quarters here. The triple wall whereof I have already spoken was pointed out to me by Mr. Steer, who tried to trace it for some distance, but found it very much broken down,—even the foundations in places, probably rooted up to make way for vine plantations. These walls were respectively one yard, two yards, and three yards in thickness, being, in some parts of their relics, from fifteen to twenty feet high.

To the east of these ruins is the enormous mound called the Huaca of Pando; and to the west, with the distance of about half a mile intervening, are the great ruins of fortress which the natives entitle the Huaca de la Campana (the huaca

² "Tratado General sobre las Aguas que fertilizan los Valles de Lima," por Don Ambrosio Cerdan de Landa, Simon Pontero Oidor de la Antigua Audiencia de este Capital. Lima, 1828.

of the bell). From Mr. Cerdan's book I believe this to have been the great fortress of Arambolu, presided over by the Yunca Chief, Huachiçi.

The huacas of Pando consist of a series of large and small mounds, and—extending over a stretch of ground incalculable without being measured—form a colossal accumulation. The principal large ones are three in number; that holding the Spanish name of La Concha (the shell), with



VIEW FROM EAST SIDE OF CENTRAL HUACA OF PANDO.

a wooden cross on it, and not far from where the train passes nearly every hour between Callao and Lima, is apparently separated from the others by a modern wall running through. But as there are many small cultivated farms about, this may have been a recent division; the distance from it to what I call the central mound of the Pando group being only about 100 yards.

My first visit to this so impressed me with its importance and magnitude that I made a second in company with Mr. Steer, who tracked and took measurements of it. It was calculated 103 to 110 feet in height. At the western side, looking towards Calláo, there is a square plateau with an elevation of about 22 to 24 feet, which measured 95 to 96 yards each way—that is, from north to south, and from east to west. At the summit it was tracked 276 to 278 yards long, and 95 to 96 yards across. On the top there are eight gradations of declivity, each from one to two yards lower than its neighbour, counting from west to east, or in the direction lengthways. Tracking these in the length of the mound, Mr. Steer found them to measure as nearly as possible,—

1st plateau	.	.	.	96 to 97 yards.
2nd „	.	.	.	„ „ 25 „ to 26
3rd „	.	.	.	23 „ 24 „
4th „	.	.	.	11 „ 12 „
5th „	.	.	.	„ „ 24 „ „ 25
6th „	.	.	.	23 „ 24 „ „ „
7th „	.	.	.	35 „ 36 „
8th „	.	.	.	„ „ 36 „ „ 37

Total of 278 yards.

The broken structure of adobes, with the scattered earth, made the tracking process of measurement impracticable to an exact foot or two.

This was measured over twice, in order to avoid errors. Returning back, or rather descending, we found the square plateau first mentioned, at the

base, to consist of two divisions, one six feet lower than the other, but each measuring a perfect square of 47 to 48 yards—the two joined forming, as I mentioned at first, a square of 96 yards. Besides this, and a little forward on the western side, was another square of 47 to 48 yards.

On the top, returning again, we still find the same symmetry of measurement in the multiples of 12.² Tracking it in its breadth from north to south, three levels were found in this measurement. The first lower down could be made out as 17 to 18 yards wide; the second or highest summit, 59 to 60 yards across; and the third descent again, 23 to 24 yards. In all these measurements the difficulty increased more and more of footing it correctly. And the same would exist if measuring it by rule, as much on account of the disintegration of its elements from great antiquity, as to what is plainly evident on its western face, of how it has suffered from earth-

³ Further investigations amongst the prehistoric monuments may bring to light, that amongst these people was possibly made the first Zodiac, or lunar calendar in Peru. In Mr. Bollaert's "Antiquities," &c., p. 146, is an illustration with an account of "golden breast-plate or sun," sketched by Mr. Markham when in Lima, and which, although in the possession of General Echenique of that city, was accredited as found at Cuzco. This Mr. Bollaert supposes to be a lunar calendar or zodiac—the only example he knows of. He describes the twelve months of the Inca Zodiac, as represented on that plate. The persistence of the multiples of twelve in the measurements of nearly all the ruins in the Huatica valley is a very curious fact.

quakes. The mound is of the truncated pyramidal form, and was calculated by Mr. Steer, allowing 100 feet greater breadth at its base, to contain a mass of 14,641,820 cubic feet of material.

One of not the least extraordinary things connected with this great work is the fact of its chief



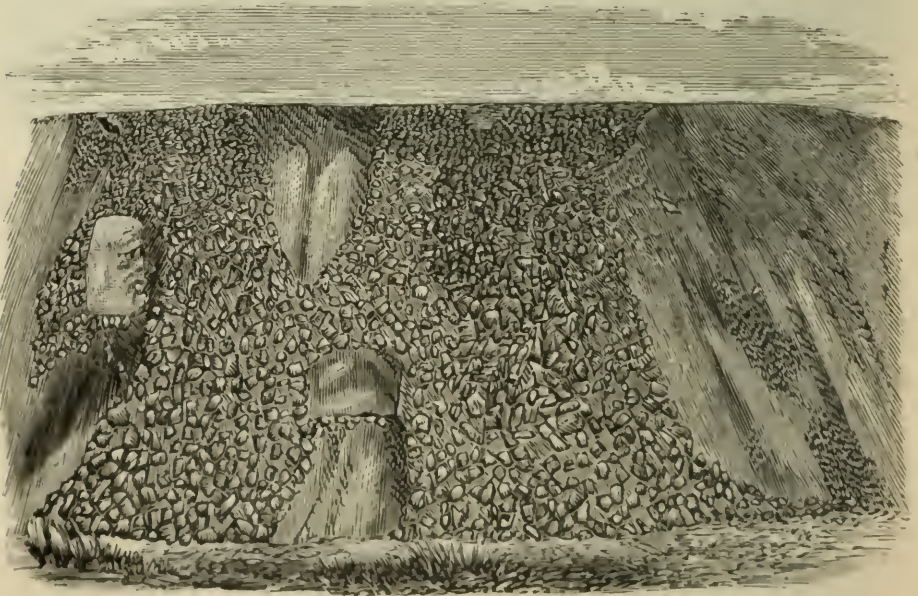
SKETCH TAKEN OF PARTS ON TOP OF CENTRAL HUACA OF PANDO.

architectural composition being made up of sun-dried bricks, or adobes—each of these being six inches long, four inches wide, and two inches and a half thick. More wonderful still is it that many of these adobes have the marks of fingers on them,—leading us to believe that they were the labour of human hands.

But this, as I have already said, does not constitute more than one-third of the Pando huaca. Walking down past the southern corner, where the

adobes are tumbled into a conglomerate mass by some earthquake, we see skulls, with bones of arms and legs, cropping up in many places. The same adobe work is visible throughout, and the whole length of these structures, although made in an ovoid form, may be calculated, in Mr. Steer's opinion as well as my own, to range between seven to eight hundred yards of length. The remainder are all lower than the central one, except that of Concha, which, although quite as high, is only about half the length of the previously named.

Before passing through the ruins of the old town, and looking back at these colossal mounds, I cannot help wondering what Senor Don Mariano Eduardo Rivero means by a note,⁴ wherein he talks



SKETCH OF PORTION OF HUACA OF PANDO, SHOWING EFFECTS OF EARTHQUAKE.

⁴ "Peruvian Antiquities," p. 168.

of "a large number of huacas of different sizes, some being more than fifty yards in length, and about fifteen in height, from Limatambo to Marengo."

Now, Limatambo is a small farm on the railroad from Lima to Chorillos, about a few miles outside of the capital, and Marengo is the very next farm to the so-called Huaca de Campana, this grand old fortress of Arambolu, which is here within a few hundred yards of us, and certainly not more than four miles outside of Lima. Therefore this author's observation was not very extensive, or he would not have written of these grand works only as measuring "more than fifty yards in length and about fifteen in height." Yet Senor Rivero, by the title-page of his book, was "Director of the National Museum of Lima," as well as "Corresponding Member of various Scientific Societies in Europe and America."

The legend about the name of the Huaca de la Campana (or Huaca of the Bell) is almost too ridiculous to repeat here. But I "tell the tale as 'twas told to me" by Mr. Campbell, a Scotch resident at the chacra, or farm, of Desemparados, not far from the town of Magdalena.⁵ This is, that in times gone by, the Devil (of whose interest in Peruvian affairs we have already had several incidents⁶)

⁵ I cannot pass by the opportunity of thanking Mr. Campbell for his kind help, and hospitality, given to me on several occasions of my visits to the Huatica valley.

⁶ *Vide* chap. ix. p. 149.

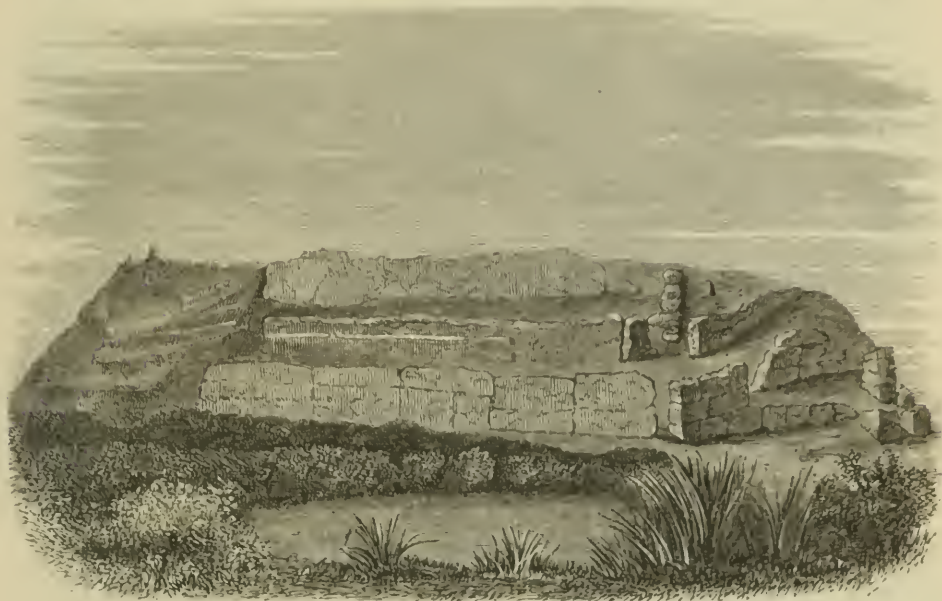
managed to get hold of a bell, that by some magical means had been brought to the top of this old fort. Some of the clergy, desirous of getting it away, had dug round it for the purpose; but the more they dug, the deeper went down the bell, until probably it sunk, in the words of Milton, to that deeper depth which, "deeper than the deepest depths," is found below.

On my last visit here, with Mr. Steer, I sounded the hole, in which the bell is reputed to have been, with a piece of cord, having a stone attached, and found it to be forty-two feet deep. It is about the compass of an ordinary well. The Capitaz of Senor Osma, who was with us, at once took the ring out of the bell, by telling me that he knew of the hole in question being dug by the father of Senor Osma, and some other gentleman, in quest of treasure. The place where this opening is cut passes through adobones,⁷ or large square masses of mud brick—generally from a yard to a yard and a half in length, and of equal thickness. These I observe everywhere as a characteristic feature of the architecture, to distinguish the fortresses from the burial-mounds.

The fortress, mayhap the castle of Arambolu, or Marengo, is a huge structure, calculated by Mr. Steer to be eighty feet high, and found by tracking to be from 148 to 150 yards in measure-

⁷ Adobones are large mud bricks—some from one to two yards in thickness, length, and breadth.

ment—in length as in breadth—thus constituting a perfect square. Some of the adobe walls, a yard and a half in thickness, are still quite perfect. That this was not likely to have been a burial-mound may be presumed from its formation. Great large square rooms show their outlines on the top, but all filled up with earth. Who brought this earth here, and with what object was the filling up

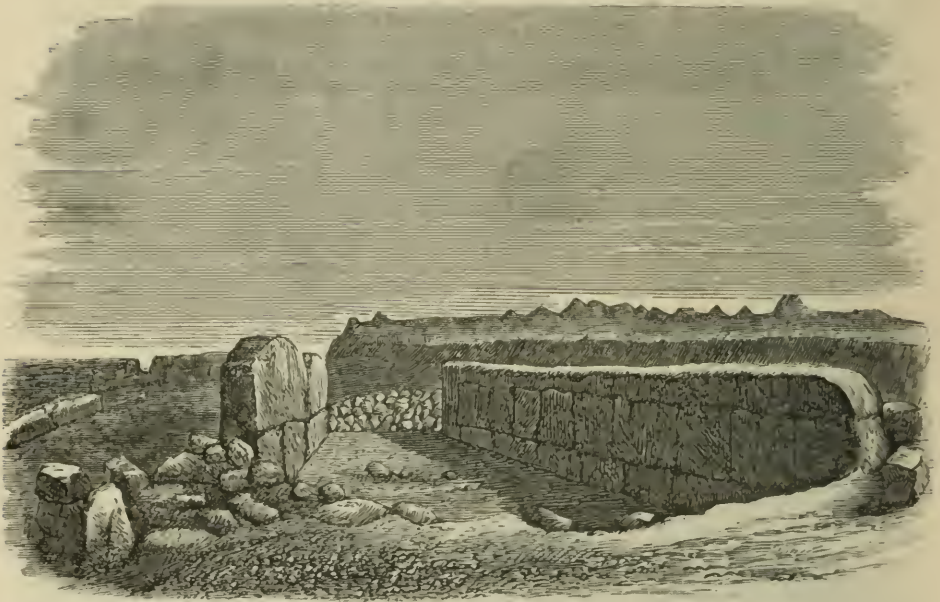


RUINS OF PRINCIPAL HUATICA FORTRESS (ARAMBOLU).

accomplished? for the work of obliterating all space in these rooms with loose earth, must have been almost as great as the construction of the building itself.

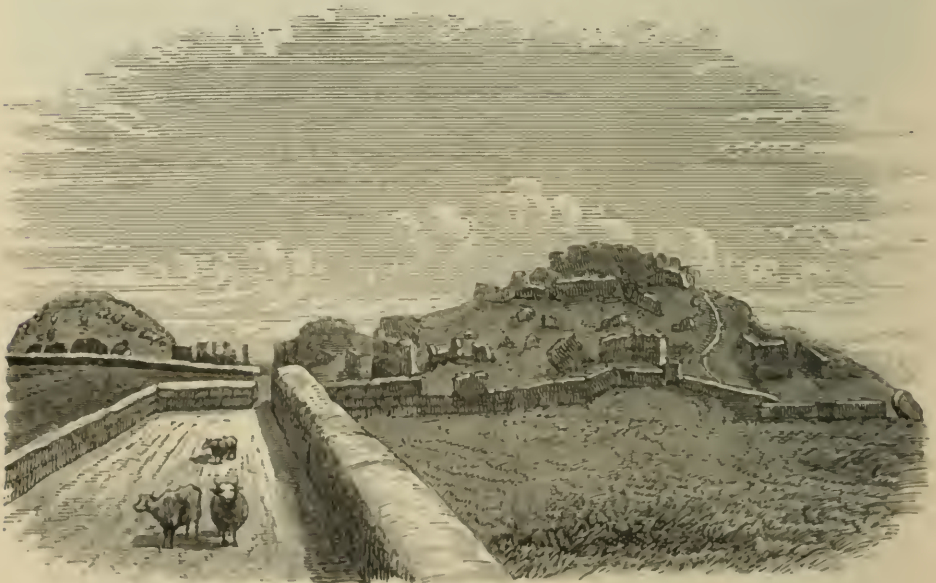
About two miles south of the last-named large fort, and in a parallel line with it as regards the sea, we find another similar structure, probably a little more spacious, and with a greater number of apartments, or divisions by walls, on the top of

which we can walk now, as it is likewise all filled up with clay. This is called San Miguel. But from



SKETCH OF ARAMBOLU FORTRESS, TAKEN ON THE TOP.

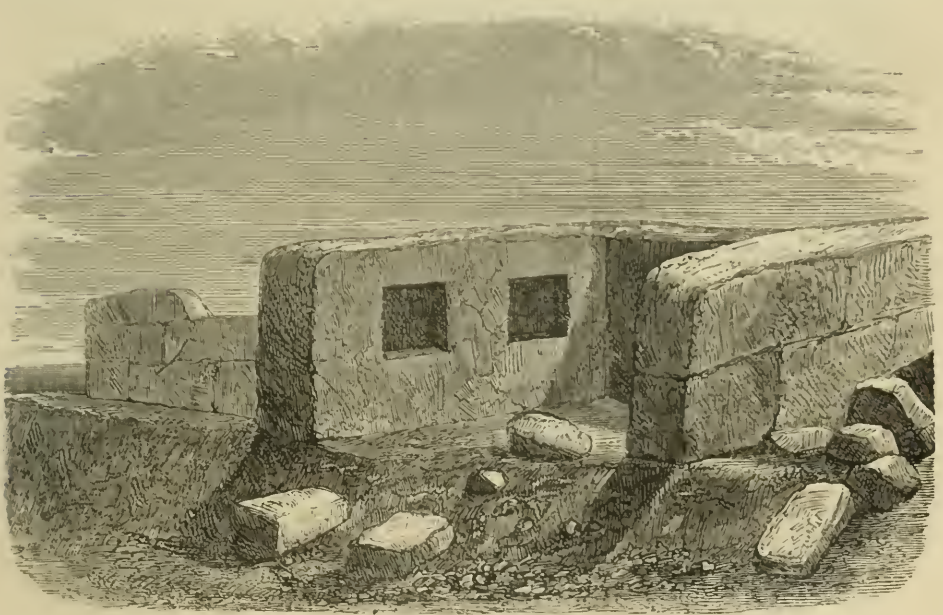
Senor Don Ambrosio Cerdan's pamphlet, already noticed, I believe these to be the ruins of the old



RUINS OF SMALL FORTRESS.

fortress of Huatilleo. It is nearly 170 yards in length by 168 to 170 in breadth, and is one enormous structure of nearly 90 feet high. Indeed, I agree with Mr. Steer, that if the *débris* of broken adobones at the base could be cleared away, it might be as perfect a quadrilateral as any of the others. That it was as important as Arambolu may be assumed from the fact of the ruins of small forts quite close to it, and those of a little temple, with niches in the walls for idols, about three hundred yards off.

The whole of these ruins, big fortress, small forts, and temple, were enclosed by high walls of adobones, but all of wedge-shape form, with the sharp edge upwards. Mr. Steer calculated the



RUINS OF OLD TEMPLE.

cubic measurement of the fortress of Arambolu at

20,220,840 cubic feet, and that of Huatillee at 25,650,800 feet. These two buildings were constructed in the same style—having traces of terraces, parapets, and bastions, with a large number of rooms and squares—all now filled up with earth.

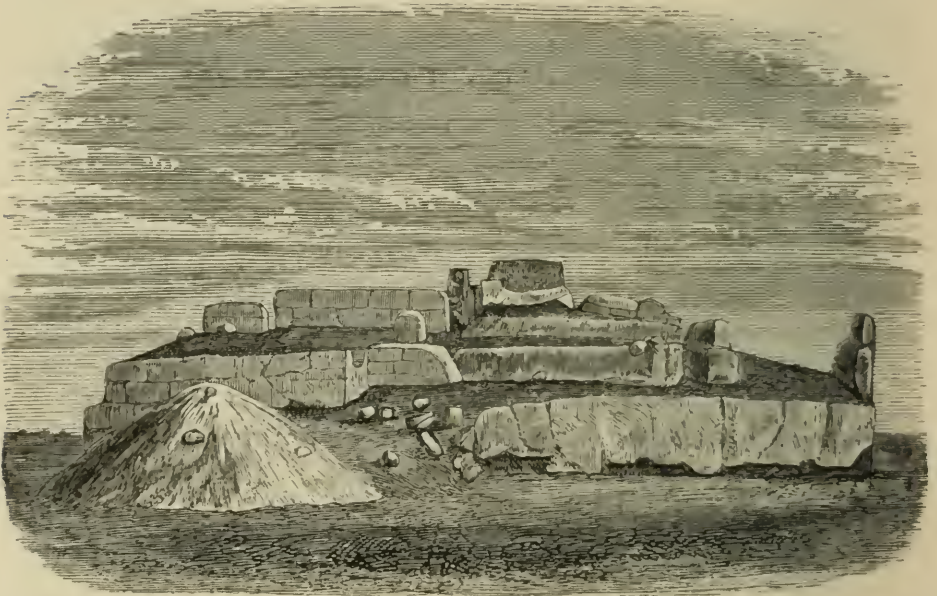
From the relative positions of the relics described in this chapter, I come to the conclusion, that the fortresses of Arambolu and Huatillee were to protect from invaders the city of Huatica, with the burial-mound of Pando behind. Because the first-mentioned buildings are nearer to the sea, and more to the south, from whence the enemy might be expected. The fortress of San Miguel, or Huatillee, may be supposed, however, to have a more direct bearing in reference to the old temple of the god Rimac, as it stands in almost a line direct between the latter and the Pacific Ocean.

CHAPTER XIV.

Fortresses near Senor Osma's quinta. — Fortress of Garmendi. — Village of Magdalena. — Ruins of temple in four groups. — All filled up with clay. — Ruins of temple of Rimac. — Immense extent of enclosure. — Turkey buzzards amongst the relics. — Country residence of Viceroy here. — Railroad from Lima to Magdalena. — Iconoclastic barbarity. — Bad roads. — Warracochee Castle. — Chacra of Conde de San Isidro. — Painting of San Isidro. — Winged Seraph at the plough. — Burial-mound of Pan de Azucar. — Partial exploration of it. — Articles found. — Senor Raimondy's opinion. — Measurement of this huaca. — Burial-mound of Juliana (Ocharán). — Enormous structure. — Multiples of twelve. — Enclosure of half a million square yards, or 117 acres. — Mr. Steer's calculations. — Adobes building the mound. — Cave of hermit who was burned by the Inquisition in 1673. — Mira Flores. — Chorillos. — The friar's leap. — The hereditary asses. — Central part of Chorillos.

ABOUT half a mile distant from the Arambolu fortress, along one of the roads from Bella Vista to Magdalena village, we find the ruins of what Mr. Campbell agrees with me, in believing to be the remnants of the old temple, dedicated to the god Rimac. This supposition is not founded on any remarkable architectural features, as on the fact of its being an immense large square—composed of four huge masses of ruins—one on either side of the square, and another quadrilateral space in the centre. I believe this

to be erroneously considered, as Mr. Campbell tells me it is generally supposed, the place where the hermit, Mateo Salado, dwelt for some time. He was burnt by the Inquisition at Lima—in 1673, or just 200 years ago.



RUINS OF A FORTRESS, OR CASTLE, ON RIGHT SIDE OF SENOR OSMA'S FARM.

On many of the old ruins we often find half a dozen turkey buzzards—"the scavengers of nature," as Swainson calls them—which render such material service to Calláo and Lima. Here they look rather indolent, as it appears probable they have come out to whet their appetites in the pure air of this valley for the offal feasts in the streets. Our road passes by the farm of Senor Osma, and in this half-mile of progress there are no less than from six to eight remnants of buildings. Of these Senor Zaballos took two sketches for me.

There was an old fortress of Garmendi in this

valley, which may have been that of San Miguel, for much of our exploration can be no more than conjecture. After leaving behind the farm of Senor Osma, we come to a bifurcation of the road—that to the right leading down to the village of Magdalena, and by the chacra of some gentleman from Lima, whose name I forget; that to the

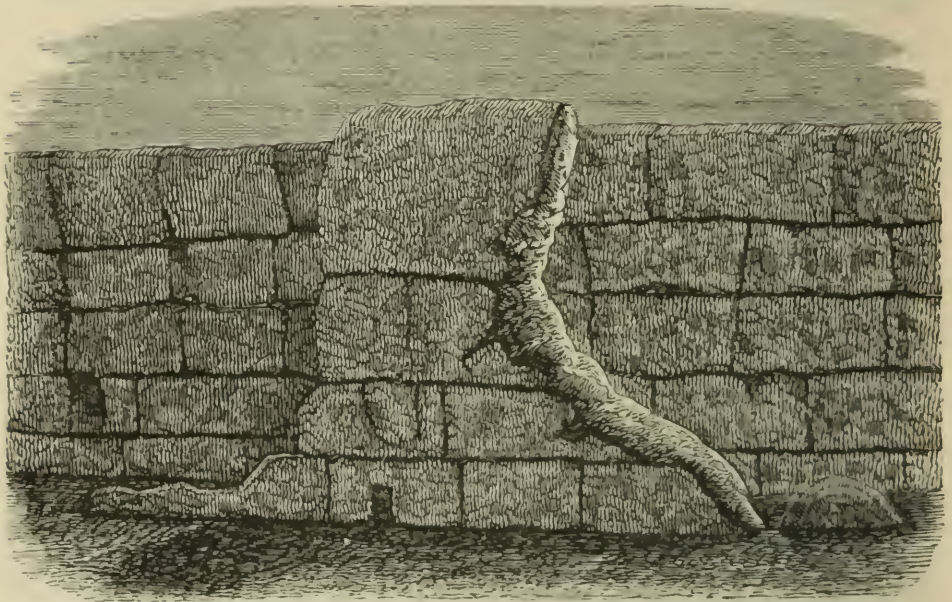


RUINS OF CASTLE ON LEFT SIDE OF SENOR OSMA'S FARM.

left skirts the ruins which we are about to examine. Branching off by Ascona, (another farm,) this latter comes out by the race-course, and the penitentiary after a ride of three miles to the city of Lima. On this last-named road we take a turn round the corner of the old wall, enclosing the temple, to have a sketch of part of these which remain.

Mr. Steer's measurements of them are as follow:—The most southern of the four masses—

that represented in the illustration,—he ascertained to be 70 feet high and 153 yards square at the top—the cubic contents calculated at



PART OF RUINS OF DOUBLE WALL AT TEMPLE OF RIMAC.

14,536,989 feet of material: This is only one, though apparently the largest of those within the enclosure of the big walls. The ruins, tracked by him, measured 560 yards in one direction, and 424 yards in the other—thus constituting a quadrilateral enclosure of 237,440 square yards, or about 49 square acres.

On the top of this, as on the fortresses of Arambolu, and San Miguel, were also discernible the outlines of large square rooms, filled up, as all the others, even to the topmost height of 70 feet, with earth or clay.

Hence our road lies through the little village of

Magdalena, which has nothing about it to justify Senor Rivero's suspicion of its being erected on the site of the old Huatica city. It is a town with a few hundred inhabitants—all of the *fes-tina lente* class—a chapel, with the Curé's house alongside—an aqueduct coming from the Rimac and separating the square from the chapel; one comfortable-looking little house, reported as formerly occupied by a Viceroy; and an extensive view from a look-out (Mirador) on the top of the same. Between it and the farm of Mr. Campbell, only about 1,000 yards off, is a considerable-sized mound as regards extent, from which bricks have been made, and wherein bodies were found buried. On Mr. Campbell's own farm there are no less than thirteen of such heaps, all of which, when explored, turned out human remains.

From this we go across the line of the railway now being constructed between Lima and Magdalena, with the object of making a new sea bathing-place for the former. The valley through which this railway has to pass is certainly one of the prettiest, and most picturesque—with all the charms of fresh air, and rural scenery. The new town, or "Pueblo Nuevo," a title which grates upon my ear in the midst of these grand old Indian names, is situated close to the sea, as that of Chorillos is. There is, however, a precipitous bank of 60 to 70 feet high to be cut away to make a descent

to the shore, and the locale on which it is situated is right in front of the Pacific, instead



VIEW OF ONE QUARTER OF SUPPOSED TEMPLE OF RIMAC.

of being sheltered by a protecting rock as Chorillos is. The line passes through several burial-mounds, and I have been told, on good authority, the working-men at this place—the navvies—have smashed up into small bits several precious mummies that were taken out in their integrity. Such iconoclastic barbarity ought not to be permitted.

The roads about here are certainly badly in want of a Macadamite reformer. Wherever water manages to lodge itself, by breaking out of an aqueduct, there it is allowed to remain; and as nearly all the roads outside of Lima, as well as Callao, are knee-deep in fine dust, the consequences to travellers may be imagined.

We are on horseback, however, and manage to get along gaily, after a good breakfast from our hospitable friend, Mr. Campbell. Turning a corner, by General Echenique's house, we travel along in the centre of ruins. One is pointed out to me by



REMAINS OF FORT TO THE LEFT OF RIMAC TEMPLE.

Mr. Campbell as what is called Warracoochee Castle, from which there is a mile of a straight road. Then, turning down to the right, we find ourselves amongst another collection of old fortresses, castles, towers, palaces—or whatever they may be—and go in for a while to the stately-looking farm-house of Senor Paz Soldan. This is called the Chacra of Conde de San Isidro, after its former Spanish owner. It consists of a large house, with a lofty square tower, a great extent of out-houses, a yard, and a spacious garden, with a considerable-sized orchard of olive-trees on its southern

side. In the principal sala is a painting of San Isidro, represented in a “My-name-is-Norval!” style of attitude, and a roll of paper in one hand. He is dressed in a green frock-coat, fastened round the waist by a strap, and, if I were not told otherwise, would take him for a French post-boy. On the right side is a pair of oxen ploughing,—driven by a winged seraph, having a garter on one leg, and the other naked. This picture did not at all chime in with the wingless Cholos whom I saw, not driving, but seemingly drawn along by some bullocks that were ploughing in a neighbouring field. But San Isidro was the patron saint of agriculture.



SUGAR LOAF HUACA (SAN ISIDRO).

In front of Senor Soldan's house, that is to say between it and the Ocean, and at the distance of about a quarter of a mile (as we have a *détour* to make), is one of the real huacas,

or burial-mounds, called the Pan de Azucar (or sugar-loaf), from its shape. I had previously been informed by Senor Raimondy of his having made considerable explorations of this mound, and finding nothing in it but bodies of ordinary fishermen, relics of nets, and some inferior specimens of pottery. He likewise told me that it was all constructed of layers of loose earth over layers of bodies—whence he inferred that all the huacas, or mounds, in the Huatica valley were of a similar nature. On my first visit, Senor Soldan, junior, was kind enough to furnish me with a man, as well as the loan of pickaxe and shovel. Neither of these proving of any use, I made a second trip, with Mr. Steer and Mr. George Wilson of Calláo. We brought with us one of the mule-cars, kindly lent by Mr. Sterling, of the Lima Railway Company, two shovels and pickaxes, with some sacks, and had a grand day's exploration. Senor Zabalos, too, was amongst our company, to take sketches.

This huaca, measured by Mr. Steer, proved to be 66 feet high at its central point. Its broadest measurement was 80 yards at the base, and its longest 130 to 131 yards in extent. It was a mound very difficult of calculation on account of being so irregular in formation. But Mr. Steer, allowing an average height of 30 feet, estimated it to contain 3,736,800 cubic feet.

Numbers of skulls, parts of legs, and other fragments of humanity, much of which I believe to

have been the result of Senor Raimondy's excavations, lay scattered about. I did not, however, like to take these. So Mr. Steer with pickaxe, and Mr. George Wilson with shovel, commenced to excavate. We did not find what Senor Raimondy described—a layer of loose clay over a layer of bodies. For in several places we came to enclosures made with adobones. Although the generality of these were done in a rough, shapeless manner, as if the work had been one of great urgency.

Amongst the things turned out, and which I sent with about forty skulls to the Anthropological



HUACA OF JULIANA (OCHARAN), FROM EASTERN SIDE, TAKEN AT A MILE DISTANCE.

Institute, were a few bits of red and yellow dyed thread, being relics of cloth; a piece of string made of woman's hair, plaited, and about the size of what is generally used for a watch-guard; some pieces of

very thick cotton cloth, bits of fish-nets, portions of slings, and two specimens of crockery-ware of excellent material. The place appears to me to be one mass of human bodies; but the man who came with us from Mr. Soldan's house tells me that in the time of Senor Raimondy's exploration, several specimens of pottery, together with many of silver, were taken out of it. I may add that this mound has got a broken wooden cross on the top, which is not included in the sketch: for in such a spot, and with the carelessness of the people to its influences, I believe the holy symbol to be not far from desecration.

About a mile farther on, in the direction of Mira Flores, is, however, the largest of the burial-mounds in the Huatica valley. The sketch may not be recognized by those who pass there daily between Lima and Chorillos, for in its actuality there is a small wooden house, constructed to shelter the watchers who guard the vineyards about. As this anomalous structure in such a place always reminded me of the idea of a fly on the back of an elephant, I asked Senor Zabalos to omit it in the drawing.

An old man here told me this was the burying-ground of Ocharán—a district in which the Chief Cacique, named Pacallár, was the governing power long before the time of Cuys Mancu. How this Solomon came by his knowledge I cannot tell; but on looking over the small map of

the district, published by the Lima, Calláo, and Chorillos Railway Company, I see these very names noted down, as connected with locales between Mira Flores and Chorillos.

This mound presents as it is approached, the appearance of an imposing and enormous structure. To the eastward are three large squares of rubble stone, probably the burial-places of some of the *plebs*. The direction of the structure in its length runs from north to south, and the declivities of the terraces on the top go from nearly the centre;—the greater number being on the northern side. It is 95 feet of elevation in the highest part. It has an average width of 55 yards on the summit, and a total length of 428 yards. By compass bearings, its track is from S.W. to N.E., and its terraces or esplanades at top measure as follow:—

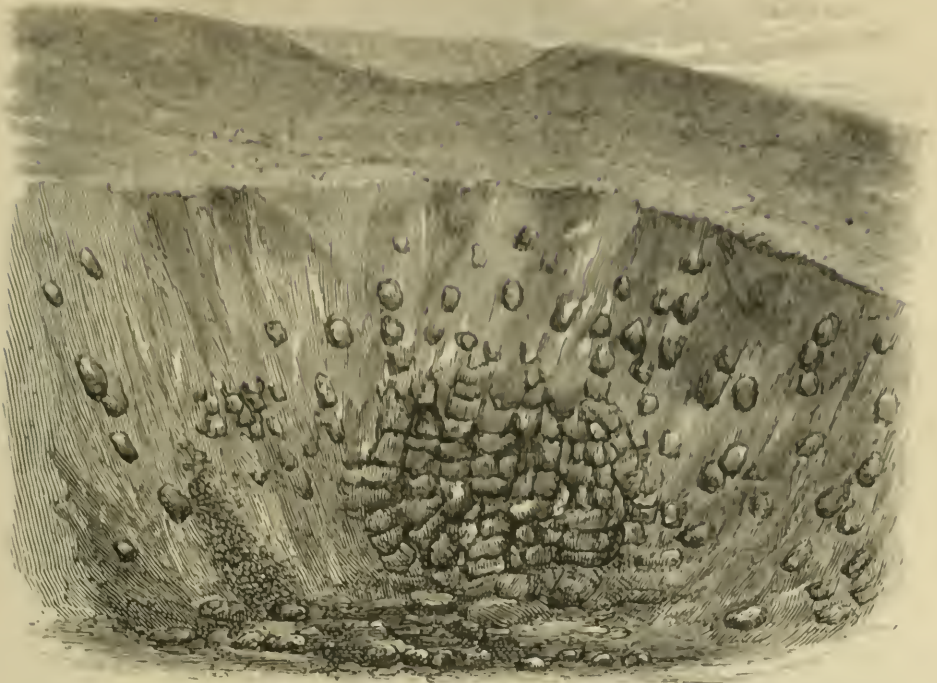
1st grade	.	.	90	yards	long	by	52	broad.
2nd ¹ „	.	.	130	„	„		60	„
3rd „	.	.	38	„	„		52	„
4th „	.	.	45	„	„		54	„
5th „	.	.	40	„	„		59	„
6th „	.	.	85	„	„		86	„

Sum total 428 yards, multiplied by
3

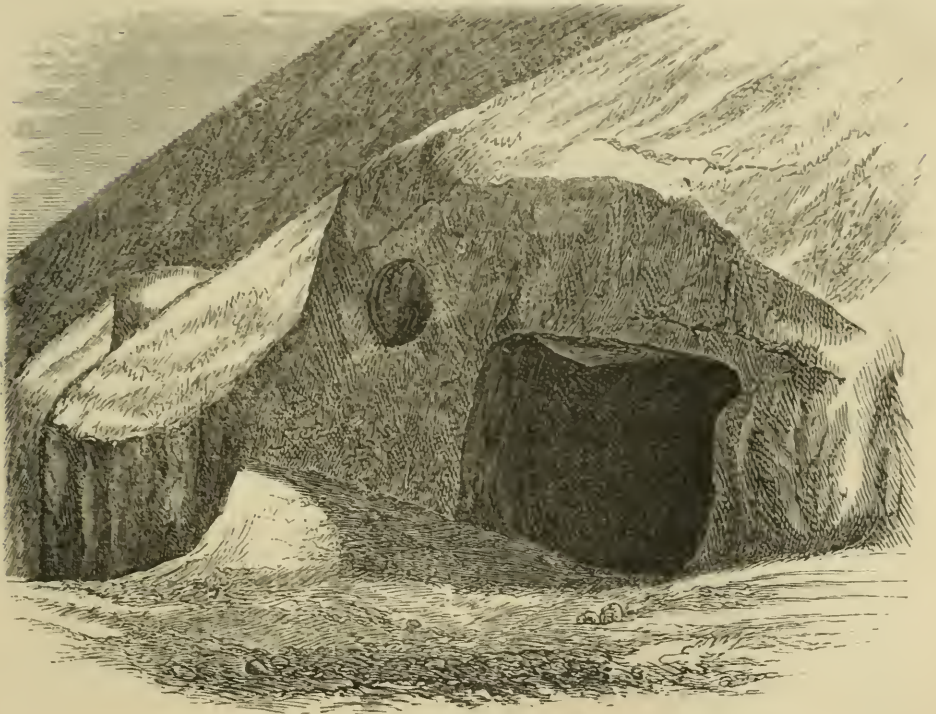
giving 1,284 feet, which may be observed as another multiple of 12.

But the most wonderful part of this mound

¹ This is the highest, as the measurements are reckoned from south-east to north-west.



SKETCH OF TOP OF HUACA OF JULIANA (OR OCHARÁN).



SOUTH END OF HUACA WITH HERMIT'S CAVE (MATEO SALADOS).

is, that it has been enclosed by a double wall somewhat similar to that of the Rimac temple, although not quite so thick. This wall, tracked by Mr. Steer, measured 816 yards in length, by 700 yards across, as far as the vestiges can be traced, thus giving an area of enclosure of 571,200 square yards, or 117 acres. May I not ask here, what are the great squares mentioned by Mr. Markham² at the old Chimoo town, near Trujillo, of 276 yards one way, and 160 the other, when compared to this?

Within the enclosure are the square places of rubble stone, already mentioned, which are about eight feet high, and not included in Mr. Steer's calculations. From the top of this mound I brought some sun-dried adobes, larger than those at Pando.

Mr. Steer further calculated the contents of the mound to be 12,711,600 cubic feet. This is made on the allowance of 60 feet average to the height. But it appears to me that, the whole building being of the somewhat truncated pyramidal shape of Pando, the calculation is under-estimated.³

² "Journal of the Royal Geographical Society," vol. xli. 1871, p. 322.

³ At the southern end of this huaca is the cave, on previous page, into which I crawled to find its extent. It goes in to a length of twelve feet, is about three feet across, and the same in height. I believe this to have been the dwelling of the Frenchman, of whom Rivero speaks, "Mateo Salado, who passed for a hermit, until he was burned in 1573 by the horrible tribunal of the Inquisition." (Op. cit. p. 168.) Nowhere else in this valley is there evidence of such a thing.

The Huaca of Ocharán was used as a vantage ground by the artillery of General Echenique in the war of 1854, when General Castillo fought him here—the army of the latter being stationed near Mira Flores. The fight took place on the 4th of January in the year just mentioned, and next day General Castillo entered Lima triumphant. Echenique's squadron was stationed at sea in front of this position, and, I am informed, fired right into Mira Flores. But of this I confess myself doubtful, as they would have to shoot over a sea-bank eighty feet high, and the place aimed at behind was invisible to the fleet.

Between Ocharán and the sea are from fifteen to twenty masses of ruins, like those already described. Whilst from the top of the main structure we have a view of Lima and the surroundings, with the little village of Mira Flores about a mile distant. Towards the west, the Pacific Ocean stretches out with its great glassy sheet, and the southern view is bounded by the bathing place of Chorillos—the Brighton of Lima,—backed by a bluff high rock called the Morro. This is overtopped by a cross, and from behind it is reputed to have jumped into the sea one of the friars of old in times gone by. Consequently, it has the name of Salto del Fraile, or Friar's Leap.

Many illustrations of Chorillos are given in Dr. Manuel Fuente's handsome work on Lima.⁴ The

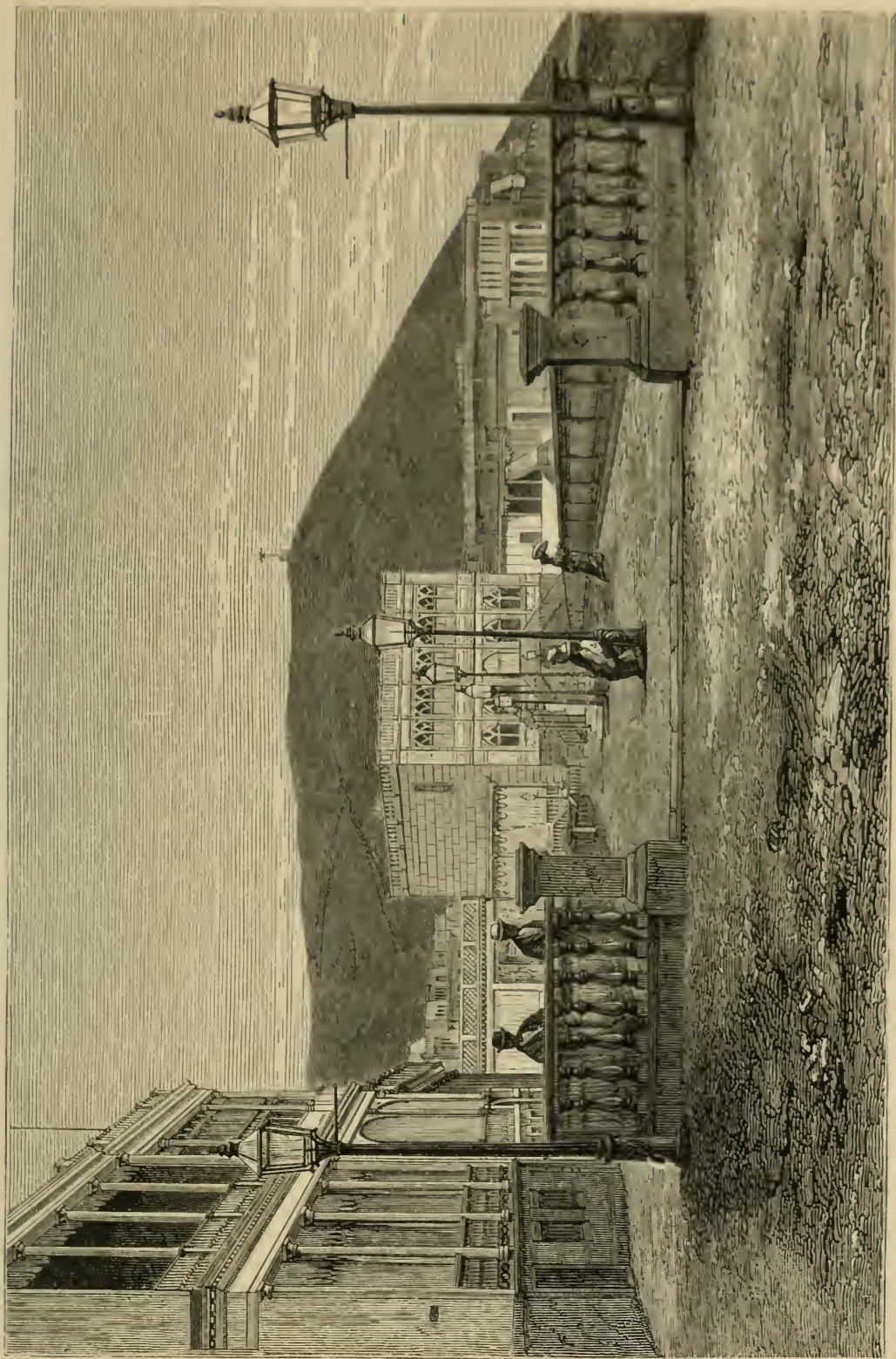
⁴ "Lima; or, Sketches of the Capital of Peru: Historical,

chiefest features of it are its propinquity to Lima,—being reachable by a nine miles' trip on a railway, as well as its airy Maleçon, or quay, constructed by General Castillo, to whom Chorillos owes most of its present success. Some of the so-called ranchos (or huts) here, especially that of General Pezet, in front of the railway station, resemble palaces more than houses for a bathing-place. The original Indians of Chorillos were fishermen; and, before the railway, the women used to carry their fish to Lima on a mule's or ass's back. They were likewise the general messengers of the gentry temporarily located here. On St. Peter's Day there is always a grand ceremony and a procession in this town, terminating in a wooden statue of the saint being brought out to sea in a canoe, to inaugurate the fishing season. From the luck of the catch on this occasion is augured the good or bad condition of the approaching fishing time.

Amongst the legends of Chorillos is one connected with Palm Sunday. —“The history of Las Burras del Señor” (the Lord's she-asses), says Dr. Fuente,⁵ “is well known. The first ass employed for the procession, many long years ago, naturally became an object of veneration for

Statistical, Administrative, Commercial, and Moral.” By Manuel a Fuentes, Advocate of the Peruvian Tribunals and Member of several learned societies. London: Trübner and Co., 60, Paternoster Row, 1866.

⁵ Op. cit. p. 107.



MALECON (OR PROMENADE) AT CHORRILLOS.

the Indians, who not only allowed it to remain at liberty and unworked, but also fed it well. Rest and abundant food had made the animal very fat. It had the free range of the village and the neighbouring valleys; but on Palm Sunday it spontaneously went to the church, accompanied by its young one. The race of this sagacious ass is not extinct. Its descendants still perform the same services, and enjoy the same privileges and attentions as their predecessors. It is said that down to the present time there has been no instance of the ass having failed in its attendance, or of its having come without a foal."

The central part of Chorillos would, doubtless, be more agreeable as a sea residence if the streets were a little wider. Here there is a much better regulation of hygiene than either in Calláo or Lima. For the streets are not only well swept, but all the sweepings are burned.

His Excellency Senor Don Manuel Pardo, the existing President of the Republic, occupies in summer time one of the prettiest houses—I cannot call it a rancho—in Chorillos.

CHAPTER XV.

Lima.—The “City of the Kings.”—Number of authors who have described it.—Foundation by Francisco Pizarro, the conqueror.—Its former wealth.—Streets paved with blocks of silver.—Confounding calculations.—Knocking down of the old walls.—Boulevards made by Mr. Henry Meiggs.—Want of fire-places in Peruvian houses.—Principal plaza and cathedral of Lima.—Body of Pizarro in the vaults.—Doubts of its genuineness.—Place of assassination of Pizarro.—Palace of the Executive.—Plaza de la Independencia.—Bolivar’s statue.—Chambers of senators and deputies.—House of the Inquisition.—University of San Marcos.—Foundation in A.D. 1576.—Mint in Lima.—Large number of chapels.—English kings doing duty for Incas.—Penitentiary.—Public buildings of Lima.—Its deficient hygiene.—Dr. Baxley’s opinions of the immorality of Lima.—Author’s contradiction of it.—*Saya y Manta*.—Literary ladies in Lima.

ALTHOUGH Lima is entitled by some of its admirers “the Paris of South America,” I am afraid there are not many travellers, who, at the first visit will endorse the simile. By others it is said to be “the heaven of women, purgatory of men, and hell of asses.”

Under the name of “City of the Kings” (*Ciudad de los Reyes*), the Peruvian capital was traced out on the 6th of January—the Epiphany—in A.D. 1535; but the actual foundation did not take place till the 18th of the same month, when it was done with all Spanish pomp and form by the

conqueror, Senor Don Francisco Pizarro. In all the histories, or descriptions of Peru that I have read, there is not a word said about Pizarro's having received any opposition from the natives in the valley of the Rimac, nor even any mention of this place in the pages of Garcilasso de la Vega, from the time of its conquest by Pachacutec, the Inca, till Pizarro came unopposed to settle down in it. For which reasons, it seems to me, the antiquity of these places described in the valley of Huatica may be allowed to be of a far more remote age than they are usually considered.

Lima has been well described, and by many writers—by the brothers Ulloa, by Frezier, by Stevenson, Markham, Bollaert, Paz Soldan, Dr. Baxley, and by a score of others. But the City of Kings has had so much of transition about it that what was written of it, even so late as ten years ago, cannot hold good to-day. Moreover, every traveller has his special peculiarities of noticing what strikes his own faculty of perception, so that I may possibly hit upon one or two features of Peruvian characteristics in the capital, that have not been noticed by previous writers.

During the colonial period Lima had forty-one Viceroys—from Pizarro to Pezulla. Of its wealth and magnificence in some of these times Frezier¹ tells us that two days after his arrival in the

¹ "Relation of a Voyage from the Sea of the South to the Coasts of Chily and of Peron, done during the years 1712, 1713

capital he witnessed the celebration of the Festival of San Francisco de Assiz, to which he devotes several pages in describing all its ceremonies. These were flourishing days for the convents, no doubt, as one of them is said to have accumulated 350,000 dollars in one year. That wealth was on almost as magnificent a scale, as the neighbouring Andes are in their towering majesty of rock, may be inferred from the following, which I translate:—

“As in the cities of Europe carriages are reckoned to calculate magnificence, at Lima they have 4,000 caleches, the ordinary carriages of the country, drawn by mules. But to give an idea of the city, it is sufficient to relate that the merchants showed riches at the end of the year 1683, at the entry of the Duke de Palata, when he came to take possession as Viceroy. They paved the extent of the cuadras (150 yards long) of the Merced and Mercaderas (by which he had to enter the Royal Square—the Plaza Principal—where the palace is) with ingots of silver, which weighed on an average 200 marcs—were twelve to fifteen inches long, four to five inches wide, and two to three inches thick. This amounted to the worth of 80,000,000 (eighty million) crowns, or about 32,000,000 (thirty-two million) pounds of our money on the basis that it stands at present.”

Without being hypercritical, I may here observe and 1714.” Published at Paris in 1716, by Monsieur Frezier, Ordinary Engineer of the King.

that Mr. Frezier's arithmetic puzzles me. I have copied these figures as they are in his book, one 8 and seven 0's (expressing 80,000,000) of crowns with 32 and seven 0's (representing 32,000,000) of pounds of our money. And whether the pound in this case, as conveyed by the word "livre," means a French synonym of the 20 franc, or of an English pound sterling, neither can supply a sum of 32,000,000 by any kind of calculation that I am aware of from 80,000,000 of crowns, which I have always supposed to be 5s. each. But this was in the days before Gough and Voster.

Stevenson says²:—"When the Viceroy, Marquis de la Palata, entered Lima in 1682, the streets through which the procession passed were *all* paved with bars of silver." The word *all* is put in italics by me to do it honour, as it seems only in the same ordinary type as the rest in its original. Indeed, I doubt whether it should not be put ALL; for from the entrance-gate of the Calláo road to the Plaza the number of streets (of course, meaning squares) is not less than from twelve to fifteen, and these being ALL paved with silver, it was a great shame for Frezier to have said there were only two.

The city of Lima was surrounded by a wall, Paz Soldan tells us, in 1685, by order of the Viceroy, Duke of Palata, just mentioned. They were afterwards repaired by the Viceroy Abascal,

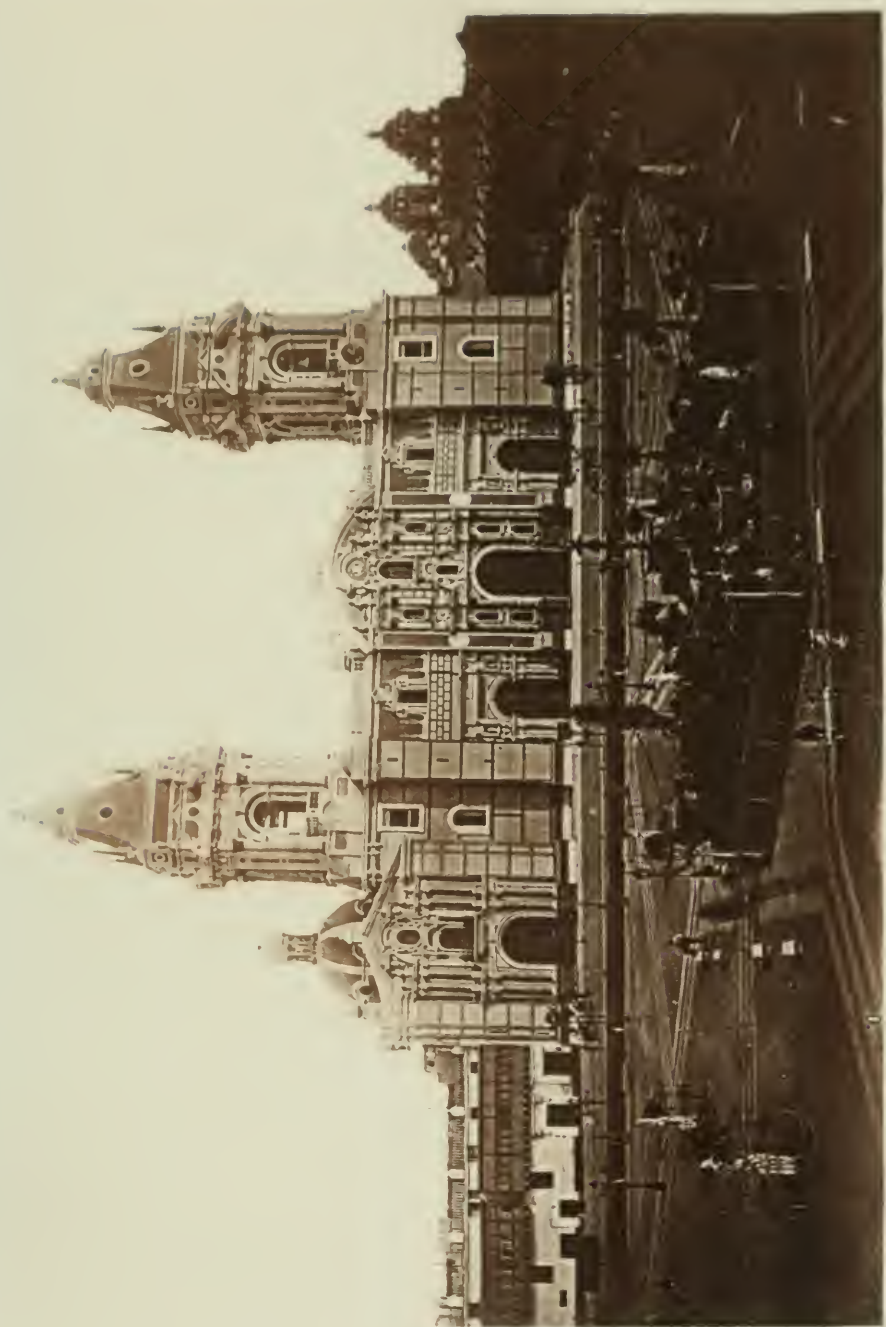
² Op. cit., vol. i. p. 324.

during the time of the struggle for independence. Wonderfully strong, they were about five yards high, and four yards thick, with thirty-four bastions and twelve gates.

These were, however, of recent years, gradually becoming useless, the walls tottering and the gates broken up. But in the present year (1873) an effectual *coup de grace* has been given to their inutility, by the fact of the greater portion of them having been bought, (to be turned into practical usefulness), by Mr. Henry Meiggs. To effect this a considerable length in the neighbourhood of the Exhibition Palace, between which and the walls in question the Chorillos Railway runs, have been pulled down. A boulevard of more than a mile long has been planted with trees, extending from the front of the palace to the gate of La Piedra Liza,—that by which the traveller makes his exit for the road to the ruins of Pacha-Cámac. On each side of this boulevard the ground is levelled for the building of houses, and the whole arrangement will admit of an increased quantity of fresh air from the Pacific into Lima.

Much of the first impressions of a visitor to this city must depend on the period of the year at which he arrives. If he comes when the *Garuas*³ prevail—from May till November—the streets appear the epitome of discomfort, and the insides of

³ *Garuas* means very small rain, which is more like a heavy dew than even a Scotch mist.



111-20

CATHEDRAL OF LIMA.

houses scarcely less so. For in Peruvian dwellings there are no fire-places, and the sense of their absence is doubly palpable when one is obliged to feel his feet moistened from slipping on the muddy streets, as to have his clothes saturated with damp.

The Plaza Principal, or principal square is, of course, the first attraction for the new comer. In this he will see one of the stateliest cathedrals in South America, founded by Pizarro, but requiring, after its foundation, ninety years to complete the building, owing to earthquakes and political imbroglios. It cost beyond 100,000*l.* The original building was nearly totally destroyed in the earthquake of 1746, but was rebuilt by that excellent man, the Viceroy, Conde de Superunda. Descriptive details of its architecture are given by Dr. Fuentes, which are unnecessary for me to repeat.⁴

During my residence in Lima I went on two different occasions into the crypt under the choir for the purpose of seeing what is there shown as the remains of the conqueror, Francisco Pizarro. I had previously been told by Senor Raimondy, that a finger had been taken off one of the hands. Dr. Fuente says that⁵ "in this pantheon is preserved the head of Francisco Pizarro, with the remains of his daughter Francisca, who bequeathed considerable property to pay for the celebration of daily mass at the high altar. The cost of ornaments and the other

⁴ Op. cit., part ii. p. 18.

⁵ Op. cit., p. 24.

expenses occasioned by this mass are paid with the interest of 1,000 gold piastres left for the purpose." The negro sacristan who brought us down, and held a lighted candle, showed me a body of a well-proportioned man, not only with one finger off, but with all the metacarpal bones up to the wrist taken away. He was in a niche, and over him was an old silk cloak, from which I was permitted to slice off a bit as a relic. I very soon threw it away, however, on being told by the Rev. Mr. Strong-i'-th'-arm, an English Roman Catholic clergyman attached to the cathedral for many years, that he believed a great many skeletons, and no inconsiderable number of silk cloaks, had been doing duty for the memory of the great Pizarro, since the Conqueror was accredited to have been deposited here.

For there is in reality no vouchable proof that his remains were ever brought to this cathedral. All that history tells us is, that on the 26th of June, 1541, or only six years after the foundation of the city, he was assassinated at his own residence—it never could have been a palace as it is entitled by some writers—in a narrow alley leading from the western side of the plaza down to the Calle de Plateros (street of the silversmiths) in the adjoining square. These assassins were the followers of his rival, Almagro, and, to the number of eighteen or twenty, cut him down on the stairs of the house. I went to have a look at it one

morning; and it certainly appears a very out-of-the-way place for the conqueror of Peru to reside in. The alley is now called the Callejon de Petateros—the mat-makers' lane. Besides mat-makers, there are one or two fourth-rate Italian eating-houses in it.



FRONT OF PIZARRO'S PALACE.

Facing the entrance from the principal square to the mat-makers' alley is the front gate of Pizarro's palace, now used as offices for the Government Executive, as the Ministry for Foreign Affairs, the same for Treasury, War, and Marine Department, as well as Ministry of the Interior, with official apartments for the President himself. The last President, his Excellency Senor Don Jose Balta, together with his family, resided here; but the present Executive, Senor Don Manuel Pardo, prefers to remain with his family in his own private

house some five squares off, or at Chorillos in the bathing season,—coming hither every day to perform his functions as Citizen President. Here, or at his own private house, he is always accessible to the humblest person in the Republic.

This palace has been very appropriately described by Senor Paz Soldan,⁶ as “a confused, intricate, and heterogeneous agglomeration of saloons, disproportionate in their dimensions, drawing-rooms and closets of different forms of construction that constitute a labyrinth.” The palace occupies a whole square, including the police barracks outside and a few public offices in the same position.

It requires a large appreciation of Republican liberty to persuade oneself that the palace of the head of the Government could be occupied, as this is at its base in the side facing the plaza, as well as that up the Calle del Palazzo, or Palace Street, with little huckster shops, in which are seen gridirons for sale, and old hatters' stores adjoining. “The divinity that doth hedge a king” is certainly sadly wanting in the case of the surroundings of a Peruvian President, as the old palace of Pizarro plainly testifies.

In the middle of the plaza is a bronze fountain, that pours its waters out over a pretty collection of flowers, enclosed within iron railing. From this plaza going to the northward, we might cross the river Rimac over the handsome bridge, and away

⁶ “Geografia del Peru,” p. 292.

to the Alameda, or to the Ancon railway station. But I prefer asking my readers to accompany me three squares directly east from Pizarro's palace, along the Calle Arzobispo, or Archbishop Street, to the Plaza de la Independencia, as it is called now, with a statue in its centre, of Bolivar,—one of the great heroes of South American Independence.

This is from a model, the work of the sculptor Adam Tadolini, and was made at Miller's art foundry in Munich. It is of bronze, and has on one side the inscription—

“To Simon Bolivar,
The Liberator.
The Peruvian Nation,
In the year MDCCCLVIII.”

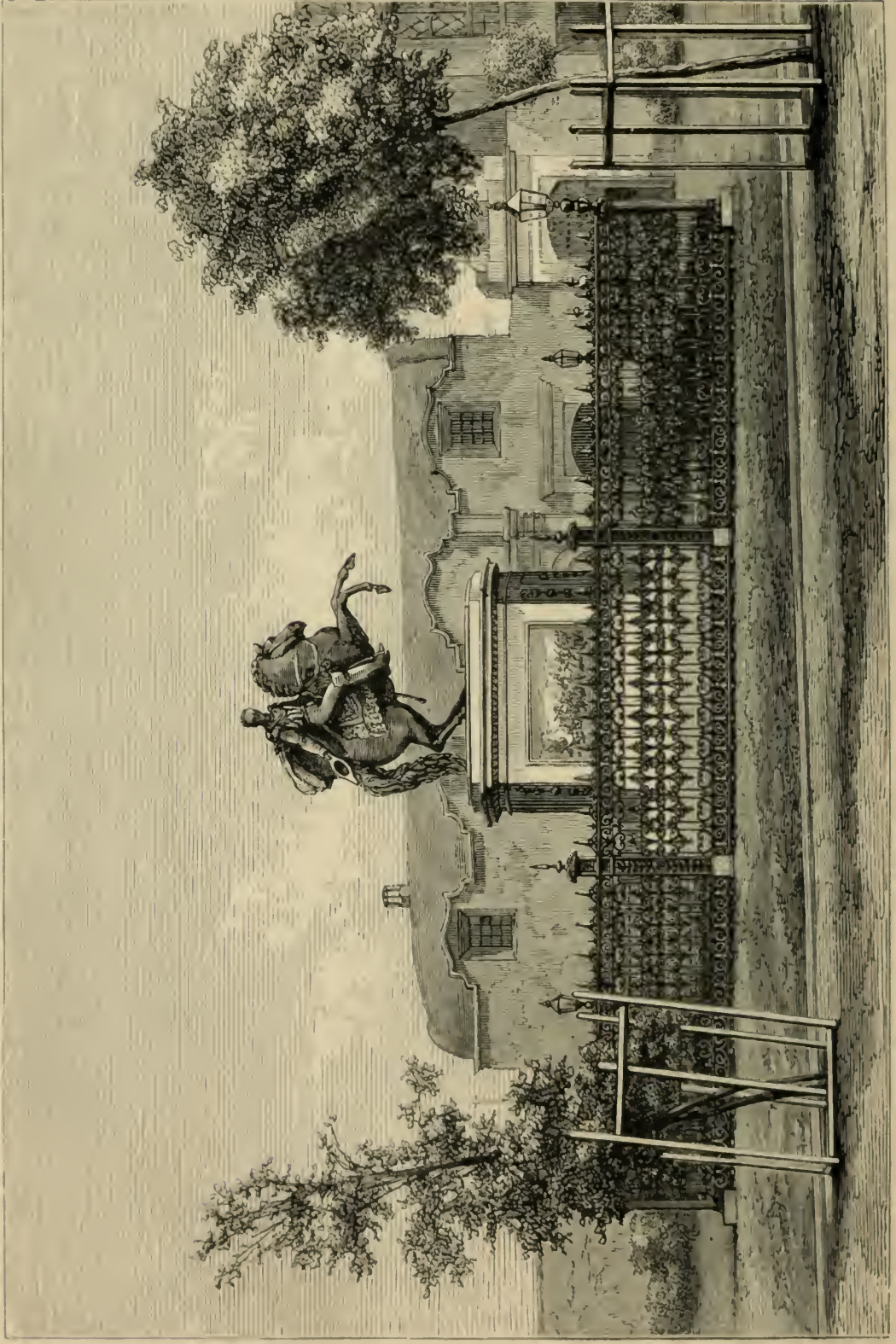
Laterally, at its base, are cut designs of the battles of Ayacucho and Junin. Both of these were fought by Bolivar in 1824, and were amongst the principal incidents conducing to the realization of throwing off the Spanish yoke.

In this square we find likewise the Royal and Pontifical University of San Marcos, founded by Royal Decree in A.D. 1551. As it was finished in 1576, it stands to-day—nearly three hundred years old,—with the exception of some repairs that had to be made after the destructive earthquake of 1746. In this building is the hall now used for sittings of the Chamber of Deputies, the walls of which constitute a mass of most elaborate carved wood-work. This hall was

formerly the chapel of the University. The building likewise contains, in present use, the secretary's offices and archives of the Congress—another large saloon given over to the Medical Society—and one for the University's proceedings, which last is used also as a place of meeting for the College of Advocates. "In this hall," says Doctor Fuente,⁷ "there are ninety-two low seats, and seventy-three higher, besides two galleries,—one of them for the canons, the other for the ladies. Its architecture, though old, is substantial and handsome; the upper part of the walls is entirely covered with portraits of former professors and rectors, amongst whom are some persons of distinguished literary merit."

There is, however, another building in this square, about which neither Mr. Paz Soldan nor Dr. Fuentes writes a word, and that is the house with the convex roof in front of the statue of Bolivar, seen in the sketch. Perhaps the memory of it ought to be let perish, or probably I would have said nothing about it if it had been, as it ought to be, at any sacrifice, levelled to the ground. This is the present Senate House, and was formerly the terrible Inquisition tribunal. I visited it one day, and was conducted through the greater portion by the care-taker—the members not being then sitting. The room, in which the terrible Inquisition business was carried on, is now where the representatives congregate. My guide

⁷ *Op. cit.*, p. 46.



PLAZA DE INDEPENDENCIA, WITH STATUE OF BOLIVAR AND CHAMBERS OF INQUISITION.

pointed out to me the spot in which the accused were to be put kneeling during their trials. The roof is of most exquisite carving, in the same style as is done in the former refectory of the Jesuits, behind the church of St. Peter, and interior to the National Library. The man could not show me the place where it was said there was machinery for moving the head of a crucified Christ, which was made to confront the accused, and to approve of the sentence by bowing. But I saw and felt enough, during my short visit there, to make me impressed with the conviction, that it was a great mistake of the National Government not to have demolished this building, when they changed the name of Plaza de la Inquisicion, into Plaza de la Independencia.

Besides that of Bolivar there was formerly in the Alameda, at the other side of the river, a statue to Christopher Columbus, which has, recently, been transferred to the open space between the Exhibition Palace and Meiggs' boulevards—in fact, the proper place for it to be, before the eyes of the world, instead of keeping it hidden up as it was before.

There is also a mint in Lima, chiefly under the direction of English engineers. By this we can pass out to the Botanical Gardens, which I am sorry to record are not well attended to.

Lima has from sixty to seventy chapels, to write a description of which would need some volumes,

and would, moreover, be a work of supererogation, as it has been often done before.

The chapel of San Pedro, formerly the Colegio Maximo of the Jesuits, was, at the time of Stevenson's visit to Lima, (in the first decade of the present century,) an Oratorio of San Felipe Neri. This is the only description he gives of it, although furnishing elaborate details of many of the other chapels, as of the Cathedral, Saint Lazaro, Santo Domingo, Santa Rosa, and La Merced.

San Pedro had for me many attractions during my twelve months' stay at the Hotel de Maury, only two squares off. These I cannot account for, but I found myself frequently wandering about its precincts. The railings, that are represented as facing it, in Senor Paz Soldan's Geographical Atlas, no longer exist. On a stone near the front of the main entrance door, and about ten feet high, is engraved A.D. 1656,—the date of its construction. The architecture inside at once shows, to the visitor, the beautiful style which characterizes Jesuit buildings all over South America. It occupies a whole square Cuadra^s of ground, and the gate entrance to what was formerly the cloisters from the Calle San Pedro brings you into a patio—silent as the catacombs, and deserted as the Sahara. In front is some attempt at remodelling the cloisters, but the brick and mortar seem to have been put up many years ago, although the decayed scaffolding still clings about. Turn to the right, and knock

^s Square Cuadra represents a square of 150 yards each way.

gently at the middle door. It will be opened by a venerable old gentleman, very thin, meagre, and feeble-looking, who salutes you courteously, taking off a little skull-cap he wears, and—if you have an introduction to him—who will invite you inside. Here you find yourself in the National Library of Peru, and asked to take a seat by the only occupant of the place with yourself. The old gentleman who let you in, is no other than the celebrated Doctor T. de Paula Gonzalez Vigil, once a Roman Catholic clergyman, till he was excommunicated by the Pope for some of his writings. He is, however, the librarian here; and if you come any time of the day from sun-dawn to sun-down, Dr. Vigil is never absent.

Between this library and the front street is a reading-room, where half a dozen to a dozen newspaper readers are seated. But the library itself consists only of a few thousand books—the greater part of them being religious vellum-bound volumes, and such as only an antiquarian of a theological turn of mind would think of consulting. In the small room here was exhibited, at the period of my first visit, the celebrated painting of the “Funeral of Atahualpa.” From this it was taken to the Exhibition Palace. At the opposite end of the library a small door leads into what was the refectory in the time the Jesuits held it, and where there is a ceiling of carved cedar-wood. This is a wonderful work—nearly sixty feet long (the whole length of the

room), and well worth the visit of all art-admirers. Returning from the library into the Patio, and walking across it, I see an entablature of copper in the wall, from which I transcribe the following inscription:—"Reynando la Mag. de Philippo iii. n.s. ano de 1617, El Exmo Senor D. Francisco Borja, Principe de Esquillache, Virrey des estos Reynos mando rredificar este Marmol,⁹ que es la memoria del castigo, que se dio a Francisco de Carabajal. Maes sede Campo de Gonçolo Pizarro en cuya compania fue aleve y traydoras Virrey y senoral national cuyas cassas se derryvaron y sembraron de Satano de 1548, y este es su solar despues Reynando la Mag. Philippo iii. n.s. El Exmo Senor D. Pedro Toledo y Leyva, Marques de Manchera, Virrey de estos Reynos, Gentilhombre de su Camara y de su consejo de Guerra, estando este Marmol otra ves perdido le mando renovar ano de 1645." The translation of this old Spanish amounts to a record, that during the reign of his Majesty Philip III., and in the year 1617, Prince Borja, at the time Viceroy out here, sent to renew this marble, which is in memory of the punishment that was given to Don Francisco Carabajal for something in which Satan was again a *particeps*

* "Este Marmol" is on the inscription, although the plate is of copper. It would appear to have been done by an illiterate person, but that we must remember the spelling of the Spanish is of the seventeenth century.

criminis in 1548. Once more it was replaced, when the Marquis de Mançhera was Viceroy, in 1645; and the tablet from which I copy is, I believe, the identical one last mentioned.

The punishment of Carabajal is thus related by Prescott:¹—“He was carried to execution on a hurdle, or rather in a basket, drawn by two mules. His arms were pinioned, and as they forced his bulky body into this miserable conveyance he exclaimed, ‘Cradles for infants, and a cradle for the old man too, it seems.’ Notwithstanding the disinclination he had manifested to a confessor, he was attended by several ecclesiastics on his way to the gallows; and one of them repeatedly urged him to give some token of penitence at this solemn hour, if it were only by repeating the *Pater Noster* and *Ave Maria*. Carabajal, to rid himself of the ghostly [why ghostly?] father’s importunity, replied by coolly repeating the words *Pater Noster* and *Ave Maria*. He then remained obstinately silent. He died as he had lived, with a jest, or rather a scoff on his lips.”

Turning to the left, beneath the same arcade, I come to a door that was once green, but is now an indescribable colour, from the must of ages. This tells, with a label on the outside, that it is “El Museo Nacional,” the National Museum. But there is a padlock on it as large, probably, as any in Newgate, and the porter at the *porte-cochère* does

¹ “History of the Conquest of Peru,” p. 418, book v. chap. iv.

not know anything about the key. I made a pilgrimage to the door of this museum scores of times during my residence in Lima, but the lock was always there. Even Dr. Vigil, at the opposite side of the Patio, knew nothing about it, for it was not in his department. After the creation of the Society of Fine Arts, referred to elsewhere, I was one of the committee asked to inspect it, with a view to the removal of its contents to the Exhibition Palace, for the formation of a new museum. But my imagination of these was sadly disappointed. On its walls are hanging portraits of all the Viceroy's who formerly governed in Lima. Outside of these the collection of other objects was confined to a few hundred birds, some animal monstrosities of double-headed calves, *et voila tout*. The dozen or two specimens of prehistoric crockery-ware, that it had contained, were already sent to the Exhibition Palace, and the whole was not worth the cost of being removed. I could not help reflecting on this as a cogent illustration of the absence of national taste, to say nothing of national pride, in the city of Lima,—where the large Exhibition Palace could be filled with archæological proofs of the ancient glories of Peru, without going farther than six to eight miles outside the city walls.

At the Museum of the Faculty of Medicine there are not more than from twenty-two to twenty-four skulls of Indians, most of them being abnormal, and the majority picked up by Senor Raimondy in



BRIDGE OF LIMA.

his travels. A few wooden idols complete the contents there. Senor Don Miceno Espantoso has the rarest specimens of pottery-ware that are to be found in Lima, as well as cloth, and ornamental art work, with gold and silver cups, and idols. These are valuable because the owner knows from whence they all came. It is not so, however, with a very large collection left by the late Senor Ferreyras, as the locale whence any of them was obtained is not known. Another lot is in the possession of Senor Cundamarin, formerly Postmaster-General in Lima. A doctor, whose name I forget, and who lives in the Plaza de Bolivar, has some few more. With these I believe I have exhausted the catalogue of holders of the ancient treasures of Peru.

The persistence of the Inca delusion is still carried out in Peru, after a fashion that may be said to border on caricature. Here at Lima, and not far from the principal plaza, I see outside of a photographer's establishment a large cardboard, about a yard square in size, framed and glazed. On it I observe a couple of dozen of figures, of *carte de visite* size, and these are marked underneath "The Incas of Peru." They have all a family likeness in the hats, the large-lobed ears, and the half-pike, half-halberd-looking symbol of authority clutched in the hand. I had passed them by many times, and, after several casual glances, was impressed with the idea, that I had, some time or another, seen them before I came

to Peru. When one day scrutinizing more minutely, I at once recognized the models of the vignettes of our ancient English kings—the Williams, Richards, Edwards, and Henrys—that were put at the headings of the chapters descriptive of their reigns in Goldsmith's "History of England." Take off the big ears—which, by the way, the coast tribes cultivated long before the Inca period—dock off a feather or two here and there, and you have the Anglo-Saxon monarchs of our school-boy days doing duty at the present time for the Incas of Peru—the first of whom dates only as far back as the time of William the Conqueror.

Of the hospitals in Lima I cannot speak too



PENITENTIARY OF LIMA.

highly; and without desiring to make any disparagement, feel bound to particularize those of San

Andres and the French hospital,—both cared for in all their excellent *régime* by Sisters of Charity.

The Lima Penitentiary, although unobtrusive in its general features, is one of these institutions which reflect credit, not only on its founder, but on the executive of its administration. The whole foundation and carrying out of this admirable prison is due to the great powers, as well as acute observation, of Senor Don Mariano Felipe Paz Soldan, who, in 1853, commissioned by the Peruvian Government, visited Europe and the United States to make observations on, and take notes of, similar establishments abroad. It would be a difficult matter to convey to any one who had not visited it, a correct idea of the perfect security of this place of confinement. In the centre of the building is a large circular watching-place, from whence radiate outwards, like a star-fish, the several corridors, in which the warders can always see that the prisoners are at their posts. These corridors are two stories high, and the building in its original plan was intended for a thousand cells. But this has been only two-thirds finished. The prisoners are all obliged to work in some useful trade, as carpenters, tailors, cabinet makers, tinkers, and so forth; while the sale of their manufactured work makes no unimportant item in the general daily expenses of the building. The wall enclosing it is thirty-five feet high, and the only entrance by the principal door abuts on the street,

facing the Chorillos Railway. Its southern wall is at the other side of the road, opposite to the grand entrance of the Exhibition Palace.

Besides these described, Lima has several other public buildings. Amongst them are eight National colleges; one for the study of jurisprudence; an ecclesiastical seminary; a college for the study of medicine and the accessory sciences; one for secondary instruction; a normal school; a naval and military institute; a college for obstetrics; a school of arts and trades; and an industrial municipal school—the last-mentioned inaugurated by his Excellency Senor Don Manuel Pardo, at the end of last year, before a brilliant assembly of the *élite* of Lima. Moreover, we find an orphan school, lunatic asylum, general cemetery, two theatres, in one of which, “Odeon,” the celebrated Italian tragic actor, Ernest Rossi, delighted the Limanese last year by his Shakespearian performances. Likewise a pit for cock-fights (private property), and a bull-fight circus, belonging to the board for relieving the poor,—said to be the largest bull-fight circus in the world. Such is fame!

I cannot help expressing an opinion about what I conceive the imperfect hygienic condition of Lima, although it is in many respects superior to that of Calláo. Formerly those abominable azequias, or aqueducts, running in the centre of the streets, were open, and furnished browsing grounds

for the turkey buzzards. Now much of the offensiveness is removed by their being covered over, and converted into sewer-pipes through the town. This is, however, not a system of drainage, in any sense of the word, adapted to such a climate as that of Lima. For at several corners of streets is to be found a kind of trap-door, opened every night at ten o'clock to have the excreta of the inhabitants put therein. No doubt such an arrangement would be comparatively unobjectionable, if there were a perpetual current of water running through, instead of as it is now, most irregularly intermittent. My readers will understand my objection when I remark, that the trap-doors are opened every night to receive the ejecta, whilst it sometimes happens that the water, which is always a puny stream, is not turned on once a week.

Much has been said, and with very good reason, of the beauty of the ladies of Lima. During my two years' residence out there I have seen many of them exceeding, in every grace of womanhood, even the angelic designs in Dr. Fuente's work. But as I know a good deal has been written condemnatory of their moral character,—for which depreciation I believe exists little foundation,—I consider it my duty to protest against such unmanliness.

The author of the latest work that I have seen published about Peru,² after a good deal of namby-

² "What I saw on the West Coast of South and North

pamby writing of an offensive character, as well as insulting to the religious ceremonies of the Catholic Church in Lima, talks of the beautifully graceful garb of the Lima ladies in olden times, the *Saya y Manta*, as a thing only invented for immorality. He describes the *tapada*, its successor, as a garb of equal, if not greater, foulness in design, and as



SAYA Y MANTA (ANCIENT COSTUME OF LIMA LADIES).

“a device of Paris civilization.” He quotes at some length from “*À travers l’Amérique du Sud, par F.*

America, and at the Hawaiean Islands.” By H. Willis Baxley, M.D. New York : D. Appleton and Co., 443 and 445, Broadway, 1865.

Dabadie, Paris, 1859—a Frenchman and reputed Roman Catholic—to prove that all the women are bad, but that their badness is inevitable, as of cause and effect from the viciousness of the men—priests and nuns alike included.³



TAPADA (LATER COSTUME OF LIMA LADIES).

What the opportunities of Monsieur Dabadie, or Dr. Baxley may have been, to learn the minutiae of this state of affairs I cannot say. From the text of Dr. Baxley's work, I should imagine he was not a sufficiently long time in this part of Peru to

“Chastity is more common, and infidelity more uncommon, amongst the Peruvians than in most countries of the old world.” (Stevenson, *Op. cit.*, vol. i. p. 390).

permit experience for such a sweeping generalization. I have often heard the changes rung upon the same topic, in reference to Paraguay, the Banda Oriental, and the Argentine Republic, with all of which I am acquainted for fifteen years. And I have no hesitation in saying, from my experience of South America, that not only regarding Peru, but elsewhere within my knowledge, they are perfectly foundationless, and equally untrue.

Without attempting the *tu quoque* style of argument, I am inclined to believe that any man coming from the United States or Great Britain, and who may know—as who does not?—the condition of the social evil in the large towns, ought not to forget the sublime reminder of Our Saviour, “He that is without sin amongst you, let him first cast a stone.” Such a sentiment as is conveyed in the words of Eliza Cook might be no harm for men like Dr. Baxley to study and reflect upon:—

“Great teaching from a greater Teacher—fit
 To breathe alike to infancy and age.
 No garbled mystery encircles it ;
 And noblest hearts have deepest read the page.
 Carve it upon the heart, and temple-arch :
 Let our fierce judges read it as they go :
 Make it the key-note of life’s pompous march,
 And trampling steps will be more soft and slow ;
 For God’s own voice says from the eternal throne,
 Let him that is without sin first cast the stone.”

The ladies of Lima, in addition to their unim-

peachable *morale*, can count amongst their numbers many of high literary celebrity. When Mr. Markham wrote about Peru, more than twelve years ago, he enumerated, with the press of its capital, the “*Revista de Lima*,”—“a bi-monthly periodical containing archæological, biographical, historical and financial articles and reviews, generally very ably written in an enlightened and liberal spirit, and by men who evidently take an earnest view of life.”⁴ This publication did not exist during the greater portion of my residence there, having been doubtless swept away by the vicissitudes of the several revolutions, which intervened between 1860 and 1872. But on the 1st of April, 1873, appeared again the first number of the “*Revista de Lima*” —not solely directed to literary, but including scientific, and historical, subjects. Amongst its contributors are two Peruvian ladies—the *Senoritas* Carolina Freire de James, and Juana Manuela Gorsiti. The first-named gives an article on “The Altar Fireside,” (“*El Hogar*,”) and a moral essay on charity, with the quotation of “*bis dat qui cito dat*,” rendered into Spanish;⁵ whilst the second is the authoress of an allegory under the title of “A Drama in Fifteen Minutes.”⁶

During the month of June last, there appeared in the *Nacional*, newspaper of Lima, a series of

⁴ *Op. cit.*, p. 310.

⁵ “*Quien da pronto, du dos veces.*”

⁶ “*Un Drama en quince minutos.*”

treatises, under the title of “*Conferencias Femeninas*,” or “Feminine Discourses,” from the pen of a lady, a native of Lima. They were published with the *nom de guerre* of Maria de la Luz, and although I have the pleasure of knowing who the lady is, and that she belongs to one of the first families in Peru, I regret that I do not feel authorized to give the name. The last article of hers that I saw, “On Ethics and Theology,” is characterized by lofty thought, eloquent teaching, and epigrammatic reasoning. It also possesses the charm of being peculiarly feminine, for it relates to the sound culture of the female mind in connexion with the domestic virtues, as opposed to the bigotry and intolerance of “feminine inclinations, marked by fits of frantic devotion, alternated with indifferentism and frivolity.” All honour should be given to such womanly teaching!

CHAPTER XVI.

Exhibition Palace at Lima.—Originated and inaugurated in President Balta's time of office.—Delays in opening.—Doctor Fuentes its presiding genius.—Situation of the Palace.—Description of contents and of adjacent grounds.—Lack of archaeological subjects exhibited.—Mummies at Exhibition.—Magnificent painting by Peruvian artist, Monteros, of the waking of Atahualpa.—Death of the artist of yellow fever in 1868.—Luis Medina's statues of Indian man and woman.—Excellence of execution.—Mosaic tables from Ecuador.—Wonderful clock by Major Don Pedro Ruiz.—Condors in the garden.—Huacas or burial-mounds outside the walls.—Obscure antiquity side by side with modern civilization.—View of Calláo from top of Palace.—Absence of President Balta from opening ceremony.—Political storms foreshadowed.

THE National Exhibition Palace at Lima, which was opened on Monday, 1st July, 1872, was sanctioned by vote of Congress in the month of September, 1869, and the building was commenced on the 1st of January, 1870. It was originally expected to have been finished, and the inauguration to take place, on the 1st of July, 1872. But in all South American countries, it may be scarcely necessary to observe, delays such as that just mentioned seem to be a *sine quâ non* of every undertaking.

The originator, as well as planner, of the design of this palace is Doctor Don Manuel a Fuentes, already well known in connexion with his elegantly illus-

trated "Guide to Lima." Its architect was Senor Don Antonio Leonardo, an Italian; and the total space allotted to the gardens, palace, machine show-rooms, theatre, coffee-houses, concert-room, animal cages, and *parterres* comprises an area of 192,000 metres, or about forty-eight square acres.



PRINCIPAL ENTRANCE TO LIMA EXHIBITION PALACE.

Situated in the suburbs at the southern side of the Penitentiary, the Exhibition Palace of Lima is one of the most stately and graceful buildings in the capital of Peru. It stands at the distance of about a mile from the principal square, or plaza, where we see the palace of Pizarro. In front of the Exhibition house, and within the enclosure, is a space of 225 metres long by 172½ metres wide. To

it there are three entrances—the principal one, opposite the Penitentiary wall, being used on State occasions. Next to the Chorillos railway are the two entrances for the public, and quite close to where tickets are issued in an adjacent small building. These gates are called the “Santa Maria” and the “Vivanco”—the first in honour of the Minister of the Interior of that name under President Balta, who held office at the time of opening, and the second after General Vivanco, who was President of the Executive Commission, or Board of Directors, entrusted with carrying out the work.

Entering the grand gate you pass by a theatre on the right, with a refreshment-room to the left of the avenue. Farther on is a conservatory for hot-house plants, with a little Turkish gloriotta, in which a cigar can be enjoyed. By a fountain built with the surrounding of large stones—forming a mound on which is a colossal figure, resembling Hercules slaying the Lernæan Hydra—between rows of gas-lamps, and, on the day of opening, amongst a forest of Peruvian banners, thicker than were “leaves in Vallambrosa,”—a walk of 130 metres from the main entrance brings the visitor to the vestibule of the palace. Each front door has a marble Cerberus on its side.

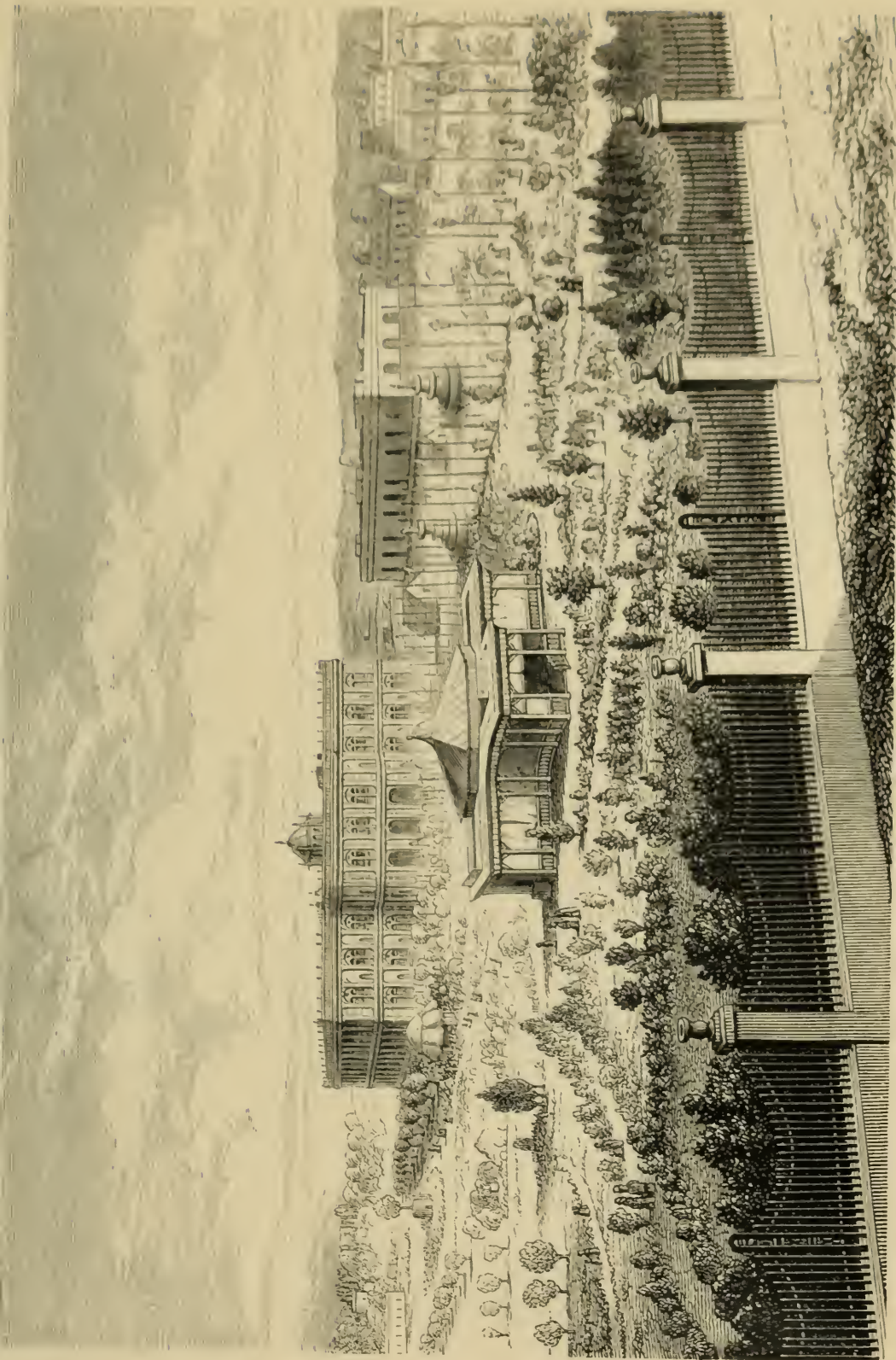
To the right, as you enter, is a room about four yards square, in which, on two tables and in a glass case, are arranged all that was

worth bringing from the National Museum of Peruvian antiquities. Mariano Felipe Paz Soldan¹ says the Museum had, when he published his book ten years ago, 5,330 objects of Zoology, antiquities, and so forth. Here we do not see half of the 330, leaving out the 5,000. They consist of mummies in a glass case, some of those which furnish illustrations to Dr. Tschude's and Senor Rivero's book,² and that were obtained at Cajatambo at the other side of the Andes. On one of the walls is painted a great oval face of a deep red colour, backed with yellow and fringed with blue, supposed to be the artist's idea of a presiding Sun. For all these things are credited to the Inca sun-worshippers—although probably many a time the real sun shone over them before ever there was an Inca in the land. One of these mummies is said to have been found at Ayacucho. They are all in the usual squatting posture, and one with a rope round its neck is said to have been executed. In two the hair and teeth are well preserved, the tresses of one—a lady—being as nicely plaited as when she went to her last dinner, route, or dancing party.

Amongst these things exhibited are several water-crofts of prehistoric crockery-ware—cloth of exquisite dye—feather hats, bows and arrows, stone hatchets, and canoe paddles. Here also we

¹ "Geografia del Peru," p. 308, published in 1862.

² "Antiquedades Peruanae," published at Vienna in 1851.



EXHIBITION PALACE AT LIMA.

find the terra-cotta mask, which I have already mentioned as found at Chancay.³

Before going up the grand staircase, by which one can mount either to the left or to the right, I am magnetically arrested to gaze on the magnificent large picture by the Peruvian artist, Monteros, representing the funeral rites, or obsequies, of Atahualpa, the last of the Incas. It is the scene which is thus described by Prescott:⁴—
“The body of the Inca remained on the place of execution through the night. On the following morning it was removed to the church of San Francisco, where his funeral obsequies were performed with great solemnity. Pizarro and the principal cavaliers went into mourning,⁵ and the troops listened, with devout attention, to the service of the dead from the lips of Father Valverde. The ceremony was interrupted by the sound of loud cries, and wailing as of many voices at the doors of the church. These were suddenly thrown open, and a number of Indian women, the wives and sisters of the deceased, rushing up to the great aisle, surrounded the corpse. This was not the way, they cried, to celebrate the rites of an Inca, and they declared their intention to sacrifice themselves on his

³ *Vide* chap. viii., p. 128.

⁴ “History of the Conquest of Peru,” p. 212.

⁵ Crocodile fashion may be supposed, for the man they had murdered.—T. J. H.

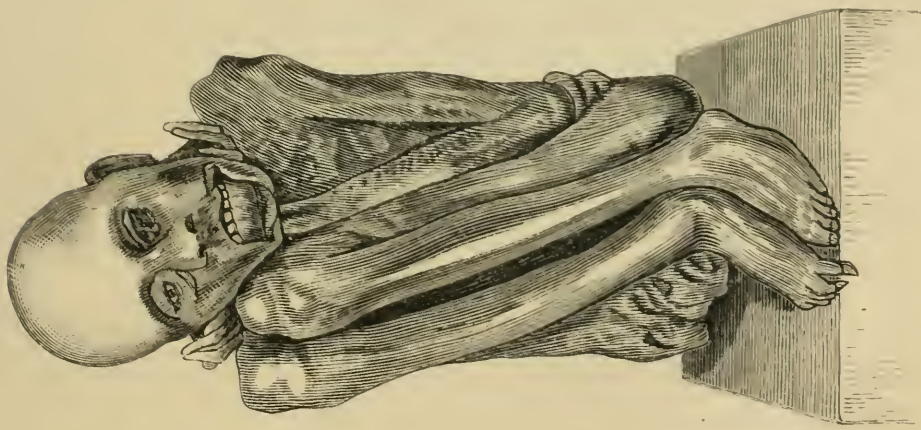
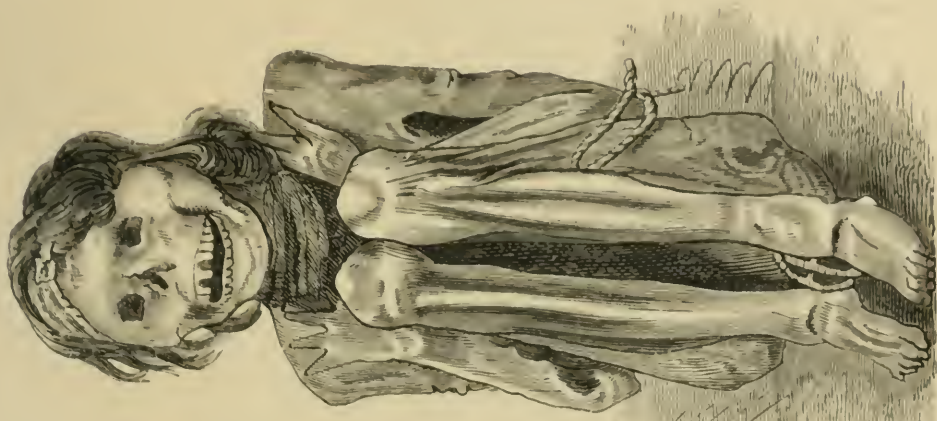
tomb, and bear him company to the land of spirits. The audience, outraged by this frantic behaviour, told the intruders that Atahualpa had died in the faith of a Christian, and that the God of the Christians abhorred such sacrifices. They then caused the women to be excluded from the church, and several, retiring to their own quarters, laid violent hands on themselves in the vain hope of accompanying their beloved lord to the bright mansions of the Sun.”

It is the incident of forcing the women out of the church by the soldiers that is depicted by the artist.⁶ There is only one painting that I have ever seen that has had the same absorbing enthral-ling effect upon me as this of Atahualpa, and that is the exquisite portrait of Kemble by Sir Joshua Reynolds, which I used to sit and admire, for hours upon hours, in the National Gallery more than twenty years ago.

This picture by Monteros was executed during his stay at Florence some years past; and the National Congress of Peru presented him with 20,000 soles, or about 4,000*l.* for it in the year 1867. He unfortunately died at Calláo during the yellow fever epidemic of 1868.

What pleased me most in this Exhibition was the number of works of art by native artists. Even the excellent carpentry of the prisoners

The frontispiece to second volume is taken from a photograph of this picture.



MUMMIES AT THE LIMA EXHIBITION.

in the Penitentiary was a thing of which, if I were a Peruvian, I should be proud.

Passing by the English exhibitions, the like of which can be seen any day in London, Liverpool, Sheffield, Birmingham, or Manchester, I come to a piece of Mosaic work, representing a large square of different classes of wood from Tumbez, by a native artist, Henry Ximenes. In one of the rooms here



GYPSUM STATUE OF INDIAN WOMAN.

we find some exquisitely chiselled figures by an Indian artist of Peru, self-educated, named Luis

Medina,⁷ a native of Huamanga in the valley of Ayacucho. They consist of the descent of our Saviour from the cross, in which the artistic arrangement of the grouping is impressive in the extreme. This is small, but it is done in marble from the valley of Medina's birth-place. Of the same material, and in this room, by the same hand is a holy-water pot. In another room we find more of Medina's work in a bust of Coronel Santa Maria, a sleeping Venus of life-size, and two statues,—one of an Indian woman, and the other of an Indian man. These last-named are of gypsum, or sulphate of lime, but for life-like expression, for natural pose—as even the very veins are represented on the leg of the man—these figures are unrivalled.

In one of the corners of the upper story was the model of a mountaineer in clothing made of coarse matting, which they say is the pattern of dress worn by the Indians of old times in crossing the Cordillera. It has a helmet of the same material as the under-dress, in which are holes for the eyes, and an aperture for the mouth to breathe through. Near to this, on the end wall, we pass by an allegorical painting of Peru, representing an Indian of bushy beard, with his hand on the globe, and a hatchet at his feet. He has one arm a-kimbo, and close by is a pillar, on which Liberty is seated. On this pillar are painted the names of

⁷ I am glad to mention that Medina got a silver medal and 500 soles, or about 100*l*.

Buenos Ayres, Chile, Colombia, Mexico, Bolivia, and Peru. Over the whole is a streamlet, on which are inscribed—in Spanish of course—the words, “Peru, sovereign and free, the friend of all nations, whilst independent of them !”



GYPSUM STATUE OF INDIAN MAN.

The machinery is too extensive to record here. Amongst it may, however, be noticed a die-stamping machine, from the School of Arts in Lima, done by a student of three years, Don Jacinto Marteiorena.

The neighbouring Republics of Chile to the south, and Ecuador to the north, have sent their contributions likewise. Amongst those of the former is a large collection of agricultural products, as well as a steam-engine made by the boys of the Escuela de Artes (School of Arts) in Santiago. From Guayaquil, the chief seaport of Ecuador, are two circular tables, one made of thirty-six different classes of wood, done in Mosaic pattern, to the number of 3,000 pieces. Another of the same kind has 5,000 bits in its composition. The name of the maker is Eurique Jergens, and he has occupied three years in the manufacture of each.

Passing out into the garden, one cannot help feeling puzzled, amongst such an *embarras des richesses*, to discriminate as to what had best be noticed. But Peruvian art claims the first place. Quite close to the refreshment-room is a house, having a convex roof, which is the locale of a clock. This timepiece is the work of a native Peruvian, Major Don Pedro Ruiz. He spent six years in its manufacture. Besides the dial for indicating the hours are six others to show the days of the week, the months, phases of the moon, historical data, equinoxes, years, and centuries. It likewise marks the leap-year. It presents historical pictures by its revolutions. There are thirteen bodies of wheels, requiring to be wound up at different intervals; those of the hours every twelve days; those of the years and centuries

need to be wound up only once in thirty-two years. Attached to the clock by its machinery is a barrel-organ, which, regulated by a spring, plays only two airs, the Peruvian National Hymn, and the more popular air, the "Dos de Mayo," or 2nd of May.

The tower, which contains this clock, is of an arched form at the top, being about sixty feet high at its loftiest point, with a breadth of fifty feet. There is a bell on each extern side; that on the right to strike the quarters; that on the left to chime the half-hours. On the front, near the top, are painted the Peruvian arms, under which are two dials. One of these has printed on it "The Congress of 1868," and "His Excellency Don Jose Balta protected this work." The other presents "Begun in 1866, and concluded in 1872, by Pedro Ruiz."

I have been particular in describing this work, because, for a man with such limited means at his disposal to cultivate the art of clockmaking, as must necessarily be in the way of a major in any South American army, it reflects the highest credit on his native genius.

Amongst the birds in the Exhibition gardens are a few Condors, which seem, in cages, to be out of their element, from what Mrs. Hemans describes,—

"Their high Peruvian solitudes among."

More anomalous still is what greets my eyes, as,

returning to the building, I see from the topmost roof the shipping in the Bay of Calláo, and, not more than a stone's throw from the outer wall, the ruins of some huacas, or burial-mounds. A writer in "Chambers' Journal"⁸ observes truly of such an anachronism as we have here, "There is more mystic solemnity attached to the absolutely obscure antiquity of these records of the past in the New World than to even the most venerable records of the Old. The latter have an unbroken sequence of traditions and history. They are links in the great process of time, and events. We understand, or think we understand them. But these New World mysteries puzzle us, existing, in their unfathomable antiquity, side by side with all that is modern and most full of change—evidences of extinct races, which lived unconscious of the existence of half the planet, as half the planet was of them."

Although we have all that here side by side, we can say to-day amidst the Palace grounds—*tout cela est changé*. Whilst the Peruvian nation is not only no longer unconscious of half the world, or half the world of it, but is rapidly shaking off the hereditary bondage of exclusiveness, and by its railways, its telegraphs, and its Exhibition Palace, is taking its proper place on the map of the world.

⁸ "Chambers' Edinburgh Journal," part xevi., December 30, 1871, p. 765.

Amongst any other people than one of the passive, unexcitable nations of South America, the absence of his Excellency President Balta would have given rise to a sad discouragement at the opening of the Exhibition. For he was known to be at his palace, only half a dozen squares off, and yet he sent Minister Santa Maria to represent him in the official programme of the inauguration. Many of these retrospective prophets, whom one meets every day, have since that time said, how *they* knew he was in fear of the moral thunder-cloud, that was gathering over his head, and which burst with such unexampled fury in less than a month after this event on the capital of Peru.

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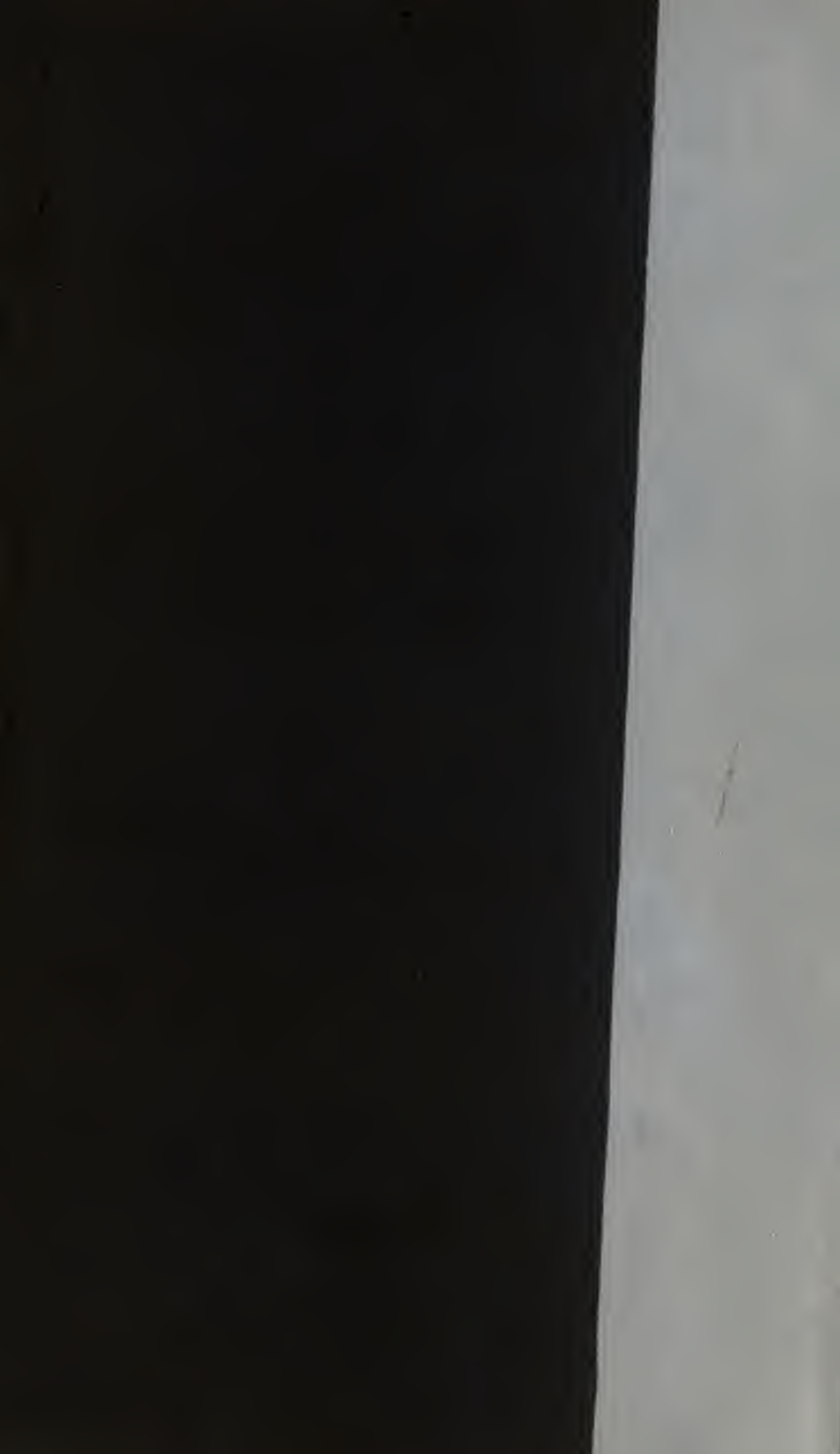


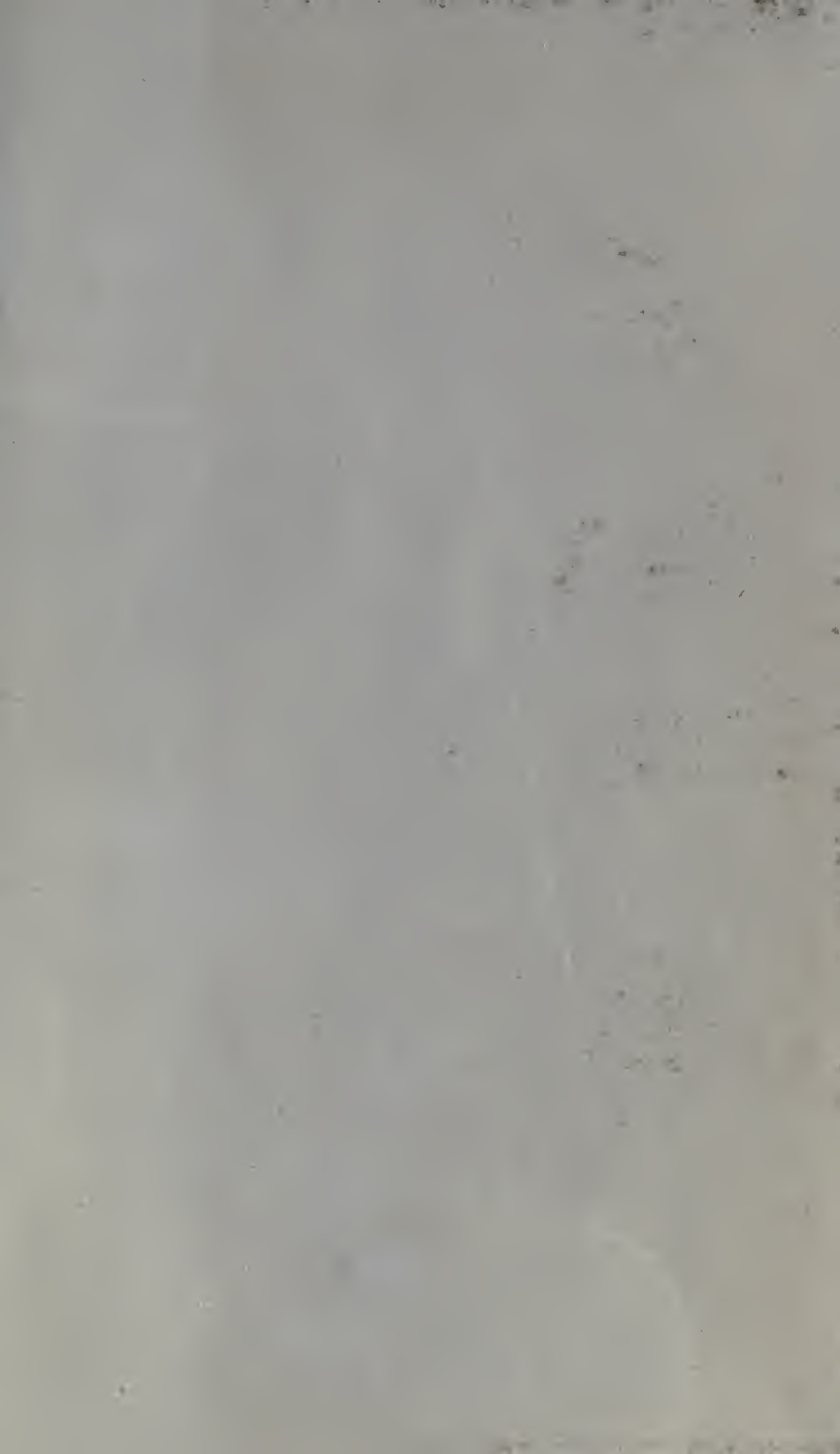
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OBSEQUIES OF ATAHU ALPA.

TWO YEARS IN PERU,

WITH

EXPLORATION OF ITS ANTIQUITIES.

BY
THOMAS J. HUTCHINSON, F.R.G.S., F.R.S.L., M.A.I.

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"THE PARANA AND SOUTH AMERICAN RECOLLECTIONS," &c., &c., &c.

WITH MAP BY DANIEL BARRERA, AND NUMEROUS ILLUSTRATIONS.

IN TWO VOLUMES.

VOL. II.

London :

SAMPSON LOW, MARSTON, LOW, & SEARLE,

CROWN BUILDINGS, 188, FLEET STREET.

1873.

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LONDON:
GILBERT AND RIVINGTON, PRINTERS.
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TWO YEARS IN PERU.

CHAPTER XVII.

Dreadful revolution of July, 1872.—Sending President Balta to prison.—Aspect of Lima on first day of revolution.—Pronunciamento of Dictator Don Thomas Gutierrez.—Miss Balta's intended marriage broken off.—Congress dispersed by the military.—Protest of Congress.—Departure of Peruvian fleet from Calláo.—Noble services of Commander Kennedy, and aid of H.M.S. "Reindeer."—Cold-blooded assassination of President Balta.—Shooting of Silvestre Gutierrez.—Firing at British and American Consulates in Calláo.—Dreadful state of Calláo.—Marcellino Gutierrez shot at the fort.—Tomas Gutierrez massacred in Lima.—How he was treated by the crowd.—Burning of the three brothers in front of Lima Cathedral.—End of military despotism in Peru.—Last *coup-de-grâce* of Dictator's secretary.—Fidelity of old Peruvian soldiers.

BEFORE the plaister on the south end of the Exhibition building was dry—for some of it at that part was unfinished on the day of opening—came the dreadful four days' Reign of Terror of July, 1872; exactly three weeks and one day after the temple of peace had been inaugurated.

On the evening of the 22nd July I was returning from my Consulate in Calláo to Lima,¹ when I heard it bruited about, that Senor Don Thomas Gutierrez, the Minister of War, had deposed President Balta, and constituted himself Dictator. At first I could scarcely credit it, for I met near the station, looking as cool and as unconcerned as if everything was entirely *en régle*, Don Pedro Balta, the President's brother—at the time Prefect of Calláo.

Arriving at Lima I found the sad news to be true, with the addition that President Balta had been sent to the police-barracks at San Francisco, whence he was transferred to the prison of Santa Catalina. As I walked up to the hotel from the railway station, I met a few companies of soldiers on their way down. All the shops were shut; the doors of private houses closed; business was suspended; and every one had a look of anxiety. What must have made the revolution, in a private point of view, doubly distressing to the family of President Balta, arose from the fact, that on the very same night, one of his daughters was to be married at the palace. The invitations were not only already issued, but the proprietor of the Hotel de Maury, who was to be caterer on the occasion, had sent his

¹ During the last twelve months of my stay in Peru, I stopped at Maury's Hotel in Lima, and recommend it to every one, travelling out here. I cannot speak too highly of its cleanliness, its good fare, and the civility as well as courtesy, of its executive.

plate, and covers for 300 guests, to the palace now in possession of an usurper.

It was about two o'clock in the day when one half of the Pichincha battalion went under command of its chief—the Minister of War, Don Thomas Gutierrez, into the palace rooms, to take President Balta prisoner. This being accomplished, they remained in possession, whilst the other half with the battalion Zepita No. 3, occupied the Plaza Principal, or principal square, which they at once furnished with a number of mitrailleuses.

Congress being at the time engaged in its sittings, as soon as the news of these incidents reached the hall at about half-past two o'clock, the Deputies requested the Senators to have a meeting of consultation with their body, so that the Legislature united might decide, as to what was best to be done under the circumstances.

After due deliberation a protest was drawn up, which was immediately written out and signed. It was now near five o'clock. The greater part of the members had put their names to the document, and the others were waiting to do the same, when an armed force, sent up by Gutierrez, ordered the Legislative Body to disperse—one honourable member being obliged to retire with such precipitation, as to have the pen in his hand, when he found himself outside the door. This protest, in a very dignified manner, declares that the National

Congress, in its preparatory meeting, having in consideration,—

“1st.—That when the Republic was in complete peace, preparing through the means of its legitimate representatives to proclaim the elected of the people, it was disturbed in its constitutional functions.

“2nd.—That such outrage against the law, sovereignty, and power of the National Representatives, in moments so solemn, imports the consummation of the crime of *lesa patria*.

“3rd.—That without making itself accomplice of such a grave attempt, the Congress cannot in meetings preliminary remain in silence, because it would be a treason to the high powers that it has undertaken for the Nation.

“4th.—That it ought to pass to posterity a document which, reflecting loyally the public sentiment, may cause to be execrated the memory of the authors of such an abominable crime.

“The National Congress therefore declares:—

“1st.—That they condemn the action taken in these moments by one part of the armed force of the National troops, and make responsible before the Nation its authors, instigators, and accomplices, considering them outside the pale of the law.

“2nd.—That they call upon the people, and that part of the Army which remains faithful to order, to oblige those who have disturbed the public peace to return to their duty.”

This was signed by the President of Congress, the Vice-Presidents, Secretaries, and as many of the Senators and Deputies as could do it, until they were ordered out by the troops.

Meanwhile the Dictator was issuing proclamations and *pronunçiamientos* of the most ridiculous style of falsehood, rant, and bombast. Unconsciously, in the second part of his first manifesto, he may have proved himself a true prophet, although not in the light intended by him when he said, "History will write in one of its cleanest pages the 22nd of July, 1872, as the date in which Peru was redeemed from servility." Every one, I should think, hopes so, as far as concerns the servility of military despotism, which Gutierrez wanted to engraft more firmly, but to which he was the unconscious means of giving a death-blow. How a man with a grain of common sense could write such bosh as to say, "I have been called, and I am at your front. The Army, the Navy, and sound society have constituted me Supreme Chief of the Republic," when no more of the Army was with him than the few under his command at the palace. To prove how little the Navy sympathized, I must add that, in an hour or two after the first piece of bunkum proclamation was issued, four of the steamers of the Peruvian Navy in Calláo harbour, namely, the "Independencia," the "Apurimac," the "Huascar," and the "Chalaco," left their moorings in the bay, and at daylight were seen off San Lorenzo Point, where

the "Independencia" was at anchor. Not long after they went to sea, and for the time no one knew of their destination. That this movement was made by the consent of the loyal authorities in Calláo may be assumed from the fact, that the sailors for the forementioned ships were drafted out of the monitors in the harbour, and that these in return were supplied with troops from the shore.

During the course of the day just mentioned, and not long after the Peruvian men-of-war had steamed off, a letter was sent by Commander Kennedy, R.N., who at the time was in command of H.M.S.S. "Reindeer" in the harbour, to the editor of the *South Pacific Times*. In this Commander Kennedy offered to all British residents in Calláo, Lima, or elsewhere, not only a refuge, with their families and properties, on board the "Reindeer," but added that "any lady wishing to come afloat will be provided with a suitable escort from her house to the ship." Such a noble offer on the part of Commander Kennedy was duly appreciated at this critical moment. Some ladies availed themselves of the proffered escort, and it was a great comfort to the English residents to see their glorious Union Jack, borne by a quartermaster of the "Reindeer,"—in the midst of revolutionary bullets flying around—defending the lives and property of British subjects. The inhabitants of Calláo presented Commander Kennedy with a

testimonial, to show their appreciation of his valorous protection of them, in time of difficulty and danger.

Events now succeeded each other in rapid succession, both in Lima and Calláo. As soon as it was possible to effect it, a portion of the rails, quite close to the market-place, were torn up by the people of Calláo. But finding this not sufficient to keep the troops from being sent down from Lima, they proceeded farther up, and had the track removed between Bella Vista and Lima, near a place called La Legua.

There was such a brave resistance made by the people of Calláo to the Military Dictatorship, and so many of the troops deserted from the principal fort, that Colonel Silvestre Gutierrez (brother to the usurper), and who was commanding at Calláo, repaired to Lima with the intention of bringing back a large force;—threatening that on his return to the latter place he would raze the city to the ground, and burn the ruins. At the Lima station he was fired upon and killed by the people. Whereupon Marcellino (another of the brothers Gutierrez) hurried off to the place where President Balta was a prisoner; and although the latter was in bed, on account of some slight indisposition, Marcellino ordered in a file of soldiers to shoot Balta, without even permitting him to rise from the bed. From the medical report given, of the examination of the President's

body, I find he received eleven wounds, of which four were revolver-shots—one on the left jaw, another in the mouth, a third near the right ear, and the fourth in the temple. In the breast were two rifle-shots, and a couple of sabre-cuts were on the arms and body. In fact, the man was literally massacred; for the revolvers and rifles were only a few feet distant from him when fired. This brave deed done, Marcellino hastened to Calláo, to take the place of his brother Silvestre, and with a force of military marched through the streets, firing at every citizen they could get a glimpse of, either outside or inside of the houses. All communication between Lima and Calláo, except by carriages and horses, having been intercepted, I could not, of course, go to the Consulate for three days. But during the time of Marcellino's lawless marauding through the town my office was fired at, and the Vice-Consul, Mr. Bracey R. Wilson, being near the window, had a very narrow escape, as two balls passed within a few inches of his head, leaving their tracks on the wooden wainscoating of the partition. The window towards the street is of a bow shape, and Mr. Wilson assured me, that he saw a man going down on one knee, at the end of the street, to take aim with a rifle at him inside of the window. This person he afterwards recognized as Marcellino Gutierrez, when the *carte de visite* of that warrior was shown to him. Into the

American Consulate likewise several bullets were fired, and the United States Consul, Major Williamson, had a very narrow escape.

All through the town, during the day of the 25th, Calláo was in a desperate condition. As evening approached, people dreaded the coming night; for the troops in the old castle, under the command of Marcellino, had turned their guns round to shoot upon the town. A nine-pounder shot had already been fired right through the house of Mr. Grace, which was nearest of the houses in Calle de Lima to the castle. This street was commanded by those who were on the castle bastions—whence it could be swept from one end to the other. Another shot was fired into the hotel where dwelt Mr. Lawton; whilst here and there, stray shots caused many lamentable accidents. Mr. Montaigne, the foreman printer of Mr. Lawton's establishment, had assisted to carry a wounded man down to the Guadalupe Hospital—for there were no police in the streets, as the town was under martial law—and, on his returning, met his death by a rifle-ball from the castle. Another man, while on the roof of his house in the Calle Colon, received a revolver-ball through one of his ancles, though unable to ascertain the direction whence it came. Terror and distress were everywhere, till the news flew round like wild-fire that Marcellino Gutierrez had been killed by a rifle-shot whilst on the castle top.

No person could tell if this were done by one of his own soldiers, or by some one from outside. It was, however, currently reported, as well as believed, that his death resulted, as a consequence of one of his own diabolical acts, in this wise. He was about giving orders, after taking observations, to have a general bombardment of the town, when one of his captains came up and advised him to draw into a place a little more retired, as the rifle-balls, fired from the streets and houses, were falling in a shower around him. The hero of the cold-blooded assassination of President Balta gave no answer to this, except to draw out his revolver and shoot his captain on the spot, whilst stigmatizing him as a coward. In a few minutes afterwards he had arranged the largest of the cannon, so as that, when discharged, it would sweep the houses in the line of the Calle de Lima, near to which it was supposed the principal people of the town were gathered for protection, and amongst them the new Prefect, Senor Columna, known to be a friend of Don Manuel Pardo. At this moment came the rifle-shot which struck him in the body, and laid him lifeless. Very little time sufficed for the people of Calláo to take possession of the fort, and the soldiers therein soon fraternized with them, in rejoicing at their great victory.

Unknown to the people of Callao, the fourth act of this dreadful tragedy was being enacted

at Lima on the same night that Marcellino Gutierrez was killed in the fort at the former place. Of the incidents that occurred on this night, the 26th, and terminated in the terrible death of the Dictator Thomas Gutierrez, I have two accounts before me. One is the relation of a Peruvian officer, of whose rank I am ignorant, Senor Don Domingo Ayarza, to whom Thomas Gutierrez gave himself up as a prisoner, when, wandering about the streets towards midnight, he was met by Ayarza, to whom he appealed to protect him from the fury of the populace, who were hunting for him everywhere. The other is the report written on the 10th of August by the Italian apothecary, Senor Don Francisco Estevan Valverde, at whose establishment Gutierrez tried to hide himself in a bath; whence he was dragged out into the streets, and literally ripped open by the infuriated crowd, almost underneath the sacred cross overtopping the Mercedes Church.

Senor Ayarza says that on this day of the 26th the people of Lima had been fusilading against the fort of Santa Catalina,—Ayarza, joined by from twenty to twenty-five friends, amongst the number. After an attack and sally out of the forces in the barracks, and whilst Senor Ayarza was manœuvring to find out some better mode of ingress, he was walking towards Santa Catalina, and in the middle of the Calle de Yanez he met two persons. This was about ten o'clock at night. He gave the

challenge, "Quien vive?" ("Who lives?" is the literal translation, although it means what our sentinels call out, "Who goes there?") The reply was, "Viva Pardo!" ("life to Pardo.") The voice was at once recognized as that of the Dictator Gutierrez; and Senor Ayarza, advancing, caught his arm, and told him to surrender. His reply was, "I am your prisoner; it is to you only I should give myself up. Save me, my friend, from the fury of the people!" "From this moment," continues Ayarza, "all my energies became determined to save the unfortunate man, and I conferred with my companions, the principal of whom were Don Francisco Silva Santistevan, and Don N. Aquilar. It was with the greatest difficulty I prevented them from falling on him and despatching him on the spot; but, by the force of persuasion, I induced them to let him come with us as a prisoner to the house of General Canseco, the second Vice-President of the Republic, in order to place him at the disposition of that official."

But although, in the humane intention, they proceeded by several round-about ways, so as to avoid meeting the crowds of people that were everywhere in the public thoroughfares, they soon met small groups, adding to one another as they proceeded. One of these, with Sergeant-Major Cornejo at its head, took the prisoner from Ayarza, and formed a guard before

and behind. They had thus reached the corners where Espaderos and Mercaderos streets join, at one side of which is the Church of the Merced, and on the other, at right angles, is Valverde's shop. Here they found a crowd of respectable people (*personas notables*), amongst whom were Don Lizardo Montero (Captain of the Navy), Don Ignacio Tavera (Deputy of Congress), Don Adolfo Montes, and many others. Gutierrez was now handed over to Don Lizardo Montero, on whose popularity and influence Ayarza depended to give him up to the proper authorities. Then Ayarza proceeded to the palace to report the matter to the first Vice-President, so as to have the fort of Catalina at once taken possession of, and order restored.

During the course of the walk to this point, some little conversation was held with Gutierrez, who on one occasion remarked to Ayarza, "I know that my brother Silvestre has been killed!"

To which the other replied, "Yes; but the President has been also assassinated!"

"How?" he exclaimed, apparently surprised; "has he been assassinated by the soldiers?"

"No," said Ayarza, "the man who assassinated him is your brother Marcellino."

"At once he bowed his head with a groan, and came on in silence till we separated."

From Valverde's report it appears that he, with a few others, was at the corner of his house at

about twenty minutes past ten o'clock, when he saw a crowd approaching the Plazuela (small square) in front of the Merced Church. Some of the persons were very excited, and cried out that this was the proper place to shoot Gutierrez. As soon as he had discovered who were in the gathering, he asked what it was about, and they showed him Gutierrez, whom they said they were bringing to the house of General Canseco. Then the unruly ones cried out, "No, he should go no farther," and screamed, to each other, to draw back, that they might shoot him. Several rifles and revolvers were seen in their hands. At once they began to shout for the head of Montero, who they said was about to betray them. Valverde, pushing through the crowd, told Gutierrez to make a run for his shop, which was only a few yards distant, and that his assistant would help him to escape by the back door. In the middle of the cries of the clamouring multitude, he managed to slip into the shop, followed by the crowd, who were partly kept back by the strenuous efforts of Valverde. Shivering and shaking in a convulsion of terror, and with a general coldness over his body, he was helped by the assistant inside, who advised him to run for his life to the back door. But all his physical energy was gone, and he crouched himself down into a large empty bath. Then, the fury of the people getting beyond control, guns and pistols were discharged; through

the front and back doors they rushed like the torrent of a mighty river—some crying out for the head of Valverde, if he would stand in their way. They broke down the counter,—smashed several bottles,—tore through a screen,—and, finding Gutierrez in the bath, fired off several shots of a revolver at him, killing him on the spot. From some of these shots two bystanders were wounded—one in the face, and another in the arm. Then they dragged their victim into the street, battering his face with several of the medicine bottles in the shop whilst he was in progress; fired more revolvers at him for five minutes after he was dead; ripped open his body with daggers; danced on that same lifeless carcase as it lay outside; and slapped it in the face with their hands.

The corpse was dragged through the street of Mercaderas up to the plaza, where it was suspended to a lamp-post, and watched all night. Next morning it was hoisted up in front of one of the cathedral towers, whilst that of his brother Silvestre was pulled up at the other.² Here they

² One of not the least remarkable incidents connected with this revolution was the publication at Paris, in little more than a month after they had occurred, of the circumstances just recorded under the title of "Revolucion de Lima," por Hector F. Varela. At p. 81 the brothers Gutierrez are represented as hanging together from the same tower of the cathedral, and the architectural accompaniments of that incident, as well as of the burning on the opposite page, are very incorrect. Others of the illustrations in this book are decided exaggerations.

remained suspended for several hours, viewed by the whole population of Lima,—by a crowd the best conducted before such a spectacle that I ever saw in my life. At about three o'clock, by the first train that came from Calláo after the trackway was repaired, several hundred persons brought up the body of Marcellino Gutierrez. It had been buried in the native cemetery there, out of which it was disinterred from beneath six persons who had been buried atop. Arrived at the station, it was hauled by a rope along the streets to the plaza, where the two other brothers were cut down from their hanging places in front of the cathedral. Then a fire was kindled opposite the principal entrance of the holy building, and the three brothers put in; nothing remained of them a few hours after but ashes. So every friend of Peru may hope has been consumed the last remnant of military despotism in this liberated Republic.

The provisional Secretary of the Dictatorship, Senor Don Ferando Casos, was said to be the composer of these blatant, bombastic proclamations of Gutierrez. At all events he made himself famous in one way; for in two or three days after quiet was restored, and whilst the Executive power was in the hands of the first Vice-President under Balta, Colonel Don Mariano H. Zeballos, the following document appeared in the *Official Gazette*, under the rubric of Senor Don J. de la

Riva Aguerro, the Minister for Foreign Affairs, addressed to the Minister for the Home Department:—

“ July 30th, 1872.

“ To the Minister of the State in the Government, &c.

“ SIR,—From data that have been furnished by the Government Treasury-box of this department, it appears that Don Fernando Casos has taken from the fiscal funds the quantity of 181,451 soles, and 86 centavos, from the 23rd to the 26th of the present month.³

“ In consequence, I have to request that your Excellency will issue the necessary orders, and as speedily as possible, to have the said Casos arrested, as well as placed at the disposition of the competent judge. God guard you.

“ I am, &c.,

“ J. DE LA RIVA AGUERRO.”

At the period of the soldiers being sent to the Congress to dissolve it on the first day of the revolution (and of which I have already written), the Plaza de Bolivar, or of Independence, where my readers know the Legislative bodies have their sittings, presented a most exciting spectacle.⁴ A battalion of soldiers was drawn up in line in front of the House of Congress, and masses of the people

³ This sum, not far from 16,000*l.*, was a pretty good haul for three days.

⁴ Graphically described in the *South Pacific Times* of July 30.

thronged in every quarter, anxious to see what new act of tyranny would be attempted against the representatives of the people. With the dispersion of the members, the crowd gradually disappeared, although not without giving some shouts of *Viva Pardo!* Shortly before this took place, Silvestre Gutierrez passed the square, accompanied by a few officers of police, and some cavalry soldiers with their carbines, taking the road to the city jail.

Dr. D. E. Sanchez, the President of the Supreme Court of Justice, had already gone to see the Governor of the prison last mentioned, and give him instructions to resist every attempt to free prisoners, as far as his means allowed him. The Doctor was on the point of departing, when Gutierrez arriving, desired him to order the release of a criminal named Palacios, with several others. This was answered as to its being impossible, for the last named was under sentence of the law. Dr. Sanchez then proceeded on his way, when Gutierrez entered the jail, and, with his own hands, liberated several of the prisoners.

The Dictator, after securing the person of President Balta, went to Fort Santa Catalina, and tried to induce Colonel Don Federico La Fuente, Commandant of the Artillery, Senor Vidal Garcia, one of the Chiefs of the Artillery Corps, and some other officers, to recognize him as head of the Executive. A proposal of this kind to such a man as Colonel

La Fuente—one of the bravest of Peruvian soldiers, and who has never swerved from his duty to the existing Constitutional Government—was treated, as became him, with an indignant refusal.

As soon as it was possible to do so, before the Lima and Calláo Railway had been repaired, Senor Don Ernesto Malinowski, the Engineer in Chief of Peruvian Railways, went down to Calláo by the Oroya line in a hand-truck, to ask Mr. Petrie about the charter of a steamer for the purpose of bringing back Don Manuel Pardo. At eleven o'clock of the same night, the "Limena" steamed out on the commission, and next morning returned with news of all the Peruvian Navy having been found at Cerro Azul,—of its intended immediate return,—and of Don Manuel Pardo being on board the "Huascar." At two o'clock of the same day, the chosen President of the people landed on the mole at Calláo, and by the first train proceeded to Lima.

Very rarely does the City of the Kings witness such an imposing spectacle as was seen on the day (30th July) when the late President Balta's body was borne in state from the Merced Church to the cathedral. He who only a week ago was Supreme Head of the Republic, and was preparing with *empressement* for the festivities of his daughter's marriage, was here felled by the hand of one, who can be stigmatized as no less

than an assassin. Gone to his last account in the prime of life, with all his sins and imperfections on his head, and yet, strange to say, outside the sphere of his own family, and one or two private friends, with few to mourn his loss.

CHAPTER XVIII.

Election of Senor Don Manuel Pardo to be President of Peru.

—His father's antecedents.—His own brilliant career up to this period.—Explorations of Jauja.—First projector of Oroya railway.—His action in the suspension of amicable relations with Spain in 1864.—What he did on the 2nd of May, 1866.—Was Alcalde of Lima in 1869.—Pardo organized the first Exhibition at Lima in that year.—Elected by the unanimous voice of the people.—His maiden speech as President before Congress.—Enthusiastic scene on the occasion.—Synopsis of the speech.—No pompous programme.—Opening of extraordinary session of Congress.—Increased taxation.—Message at closing of Congress.—Proof of practical work.

THE unanimous voice of the Peruvian nation had already proclaimed Don Manuel Pardo to be the President of their choice. But it was necessary to complete the formula of election, in which Congress was engaged at the time of its violation by Gutierrez. The public, therefore, saw it announced with very much pleasure, that Don Manuel Pardo had been elected, and would be received by Congress to take the oath of allegiance, as well as go through his instalment, on the 2nd of August.

Don Manuel Pardo did not come to the position of Chief Magistrate of the Republic as an untried citizen, or one of unknown antecedents. His father, Don Felipe Pardo, was a man recognized and

appreciated, not only in America, but in Europe. An essay upon the life of his father, in the different characters of poet, littérateur, orator, dramatist, magistrate, and diplomatist, is published at the end of Don Hector Varela's work just referred to, including a short biography by Senor Don Jose Antonio Barrenechea. Like his father, Don Manuel Pardo completed his education in Europe. He speaks English well, and French fluently. During his early education he manifested a taste for commercial life, and a very marked proclivity for financial studies. On his return from Europe he resisted all the temptations that were offered to him to adopt a military career, and devoted his attention to agriculture—taking charge of the farm of Villa, in the neighbourhood of Lima. His health having temporarily broken down there, he made a voyage to the interior, to the province of Jauja. In this rich part of Peru his stay was turned to good account by a pamphlet,¹ which he published, containing his observations on its wealth of minerals, and on the railways, that by this route might cross the Andes, as well as open up the interior resources of the Republic. In that *brochure* he discusses the subject of peopling the valleys of the Amazon, and argues against the error of supposing this ought to be done, as far as Peru is con-

¹ "Estudios sobre la Provincia de Jauja," por Don Manuel Pardo. Lima: imprenta de la Epoca, por Jose E. del Campo, Calle de la Rifa, Num. 58, 1862.

cerned, by medium of that part of the mighty river, which flows through much of Brazil. Because, he observes, all the Brazilian towns that exist from the frontier of Peru to the mouth of the Amazon can send to the European markets the same products as those of Peru; and it is not likely they would do otherwise than impede shipments from the latter. Moreover, he gives thanks to Providence for the failure of exertions on part of the Peruvian Government to found colonies there. Such immigrants should come by the railways from the western side. He puts the probable difficulty in a very strong light as regards the contingency of a lot of English, Yankees, and Germans,—say to the amount of five thousand,—having arrived within the last five years on Peruvian territory, at Nanta, on the banks of the Ucayali. These, in five years, would amount to twenty-five or thirty thousand adventurers, who would have become masters of our navigable rivers. So that with the impassable Andes between us, and without any railways, to make these people obey our laws would be out of the question.

The further purpose of the pamphlet is to advocate a railway from Lima to Jauja, which is considered the most salubrious province of Peru, and where magic cures of the aggravated form of *phthisis pulmonalis* (consumption) have been effected. It may be seen by the map, that the Oroya line, now in progress, is

the first step towards accomplishing this great work, originally suggested by Don Manuel Pardo.

In 1864, whilst General Pezet was President of Peru, not only were amicable relations suspended between that country and Spain, but a declaration of war had been made. During the period that the Spaniards held the Chincha Islands, of which they had taken possession, a loan was tried to be raised in Europe, and Manuel Pardo was one of those commissioned to negotiate it. Under the circumstances this was no easy job to do. But good fortune stepped in. The Spaniards abandoned the Chincha Islands, the guano of which was the only available resource of guarantee at the period; and the loan was effected.

From Pezet's time, during the Dictatorship of Colonel Prado, as President (which was inaugurated on the 28th December, 1865), we find Don Manuel Pardo, at the age of thirty-one, occupying the post of Minister of Hacienda² in the Government of Prado. Here Don Manuel's executive genius soon showed itself. He suppressed some unlawful pensions; put down pawning-houses (Montes de Piedad) that had been wrongly established; regulated salaries that were paid to persons who had no right to them; reformed all the Custom-houses of the Republic; and did away with a thousand other similar abuses. These were no easy tasks to accomplish in such an

² Finance Minister.

entourage as the Dictator Prado had in his Administration.

On the 2nd of May, 1866, when the Spaniards bombarded Calláo, amongst the defenders of his country at the batteries was the then Minister, Don Manuel Pardo; and, after the day's siege, he was to be found helping the wounded in their transit to Lima.

At the time of the yellow fever in Calláo, in 1868, Don Manuel Pardo was president of the Beneficencia, or Benevolent Society, in Lima; and nothing could exceed the exertions of his humanity, and philanthropy in trying to alleviate the scourge. The people of Lima presented him with a gold medal on the 1st of January, 1869, as a proof of their appreciation of his services, during the dreadful time of the previous year. In 1869 he accepted the post of Alcalde (or Mayor) of the Municipality of Lima; and whilst in this office, the sanatory condition of the city was very much improved. In that year, likewise, the first National Exhibition, which took place in the School of Arts and Sciences at Lima, was organized by Senor Pardo. Hence sprung the idea of the Grand Exhibition, already described, which was opened on the 1st of July, 1872.

The result of all these was the earnest conviction, that made the people believe, he was the best man to be a President. For in spite of the extensive

influence of the old spirit of Spanish Hidalgo-ism, that is engrafted with the military rule, the people of Peru are now opening their eyes to the fact of their having been for centuries suffering from such tyranny.

The circumstances, under which Don Manuel Pardo assumed the reins of Government, were of a condition involving no small series of difficulties. The ship of the State had just come out of a dreadful hurricane of the three days described in the last chapter; and the scattered elements of the two previous administrations were no small obstacles still in the way. In fact, Senor Pardo was in a position somewhat similar to that described by John Bright at a meeting in Birmingham last year, when he said, in excuse for mistakes that may have been made,—“The course of the wisest and best of men in the Government of a great country, which is so encumbered with the errors of the past, is one full of difficulty.” If such be the case in reference to England with its stable Government, how much more so is it as regards Peru, particularly whilst the Executive is still, with his vessel amongst rocks and breakers,—only visible through the dreadful elemental turmoil from which, by aid of Divine Providence, she has recently escaped.

On the morning of the 2nd of August, 1872, the Plaza Bolivar was again crowded. But the bearing of the people was very different from what it had

been on the last day of their presence here, when the Congress was driven out by the armed force of the Dictator Gutierrez. Now every man had a hopeful, joyous look, and the diminished sprinkling of military forces about showed what a change had taken place.

At about two o'clock the new Citizen President, Don Manuel Pardo, drove up in his private carriage, and was received with enthusiastic acclamations. The entrance way to the Congress Chambers, where Senators and Deputies were congregated, was crowded to an inconvenient extent. The boxes on either side were filled with the officials of the Government, as well as the Diplomatic representatives, Ministers, Chargés d'Affaires, and Consuls of foreign nations. As the President elect came up to the chair, to which he was introduced by the retiring Vice-President, Colonel Zeballos, he was greeted by a tremendous shout of applause from the outside, which was taken up by many of the citizens within. It was the first time I had the pleasure of seeing President Pardo; and this first sight gave me a very favourable impression of him. For whilst the soldier Zeballos read his own account of giving up the reins of Government, his hands trembled and shook like the leaves of a tree in a heavy wind; whereas, when President Pardo commenced his discourse to the National Congress, on receiving command of the Republic,

he delivered his address in a most manly, though gentle, tone,—sufficiently loud to be heard by every one in the Congress Hall,—and without the slightest symptom of excitement, or emotion.

This address touched merely on the subjects that, in his judgment, would require the attention of the Executive—congratulating the people on the result of the popular suffrage as evidenced in the recent elections, and pointing out how near the recent military rebellion had been to interrupt and extinguish the peaceful progress of the country. He then referred to the perfect conformity of opinion existing to-day between the people and their lawful representatives, which would be of itself a sufficient guarantee, that the public sentiment and ideas should find the most faithful interpretation in their wisdom. After that he went into a few specialities,—as of municipal reform, electoral organization, responsibility of public functionaries, insufficiency of penal legislation, reorganization of the reduced army, punishment of those who were engaged in the late rebellion, and an inquiry into the finances of the country, as soon as he could make himself master of sufficient data for such an investigation. This would be done with the object of reducing the national expenses as much as possible; and until the financial condition of the country was known, he recommended that no new works should be begun. From these he should except expenses referring to popular instruction;

for the education of the people would be the true source of the nation's greatness. He did not pretend to make out a "pompous programme," but to ask from the Congress their help in realizing a "practical Republic,"—a "Republic of Liberty." This was not *his* programme, he added, but that which he had received from the Nation.

The discourse, of which the foregoing is but an abstract, was read after his Excellency had taken the oath; and its practical points were frequently applauded by the spectators, who were outside the gangway bar.

Not very long afterwards, President Pardo addressed a special message to Congress, in which was shown the necessity of increased taxation; and although the Legislature was expected to have been closed at the end of November, I find an opening of the Extraordinary Session on the 9th of December. President Pardo, in his speech reopening the assembly, declares this to be forced on the Government by the exceptional circumstances, which had to be done at the inauguration of their sittings in August last. Here he gave an account of what had been accomplished by the Executive in the interim. Part of it was putting into practice two important laws passed by Congress—the one concerning military conscription, and the other organizing the National Guard. The most important portion of this message, however, referred to the financial state of the country, on which his

Excellency observed, "The situation, as the Congress is aware, may be stated in two propositions. The proceeds of the guano, which up to the present time have sufficed for the internal administration of the country, will be swallowed up in attending to the foreign debt, when the new loan for completion of the public works shall be realized; and the ordinary revenue of the State is barely sufficient to meet half the expenses. To permanently cover this deficit is, and always will be, the only serious mode of veritably and definitely solving the uncertainties of our economic situation,—of supporting our credit in foreign countries,—of promoting order and regularity in the public administration,—and finally of giving a methodic impulse to commerce and industry by freeing us from the disturbances, which the unforeseen economic operations of the Government have always produced. And although the revenue from the guano be not completely hypothecated by exterior obligations, it would always be one of the noblest of patriotic tasks to endeavour, that the State should draw its existence from natural sources. Not only to avoid unprofitably consuming transitory riches, but principally to prevent conflicts, which at unexpected moments give rise to ruinous complications. If this might occur under certain circumstances, it is hard to conceive, what objection there could be not to consider the subject when we find ourselves abandoned to our own

resources, and obliged to look for the means of existence amongst ourselves.”

I have made this long extract to show the practical mind of President Pardo, and how in all his labours his one controlling idea is to make his country independent.

Some person has answered, when asked for antecedents about the life of President Pardo, “Read his first message to Congress, and from that judge of the man.” Without expressing a fear that it might have turned out otherwise, I am very happy at having to record that the message given at the closing of the august body, on Monday the 12th of May, is one of the most important documents of which the history of Peru can give record. It was eloquent, impressive, chaste in style, and replete with sound sense, as well as exponent of the fact, that the first speech of President Pardo had not been “a bombastic programme.” It commenced with a tribute of respect, as a testimony of the gratitude of the country to the Congress of 1872, for the intelligence, elevated patriotism, and application which it gave to its labours. “In the political system,” he said, addressing the members, “in the moral system, in the religious system, in the economic system, in each sphere of social activity, you found a grave situation to consider, a great obstacle to avoid, or an imperious necessity to satisfy.” He then sketched how the previous Government, undermined by its own errors, and

sacrificed by its own children, had sunk, along with itself, constitutionalism in the Republic;—how the army was demoralized,—the administration relaxed by abuse,—and all the general confusion ensued, which existed at the period of the cataclasm, in July of last year. The President mentioned these “as the principal characteristics of the situation which we inherited; one of those situations in which Providence proves the virtues of a people; and it is for this that it bears in its bosom the lightnings of the tempest, and the future of the nations. Peru has given a new proof that He was able to save her, and she has been saved—thanks to the unequivocal protection of the All-Powerful, and the harmony of will and effort, with which the public authorities and the people have acted—the former interpreting the aspirations of the latter, and the latter helping the former with all their might.”

This is so unlike the rant of Gutierrez—so sound, so practical, so sensible, that I must ask my readers to accompany me in another extract:—

“Peru, in her administrative march, found herself involved in the complicated crisis which I have just described, and is now undergoing a salutary change, in which new ideas, new sentiments, and new aspirations are creating new political forces, and opening up new prospects. This transformation, which we can call the resurrection of the public spirit, has exhibited that in

all its fulness ; when the bonds which confined it disappeared, the public evil was distinguished from the public good by criticizing the wants of the country, which knows them because it feels them. It entered with warmth into the struggle in aid of this good, which is its own—increasing a hundred-fold the elements of intelligence and will, whose concurrence is necessary in the passing of great crises—teaching and strengthening with them the Constitutional authorities, who are the representatives,—and constituting, in a word, a new political system, to which the feeling of legality, whereon public liberty reposes to-day, will serve as an immovable base.”

I only purpose to make one more extract (although the whole is worthy of being recorded) to show how the Peruvian Congress, as well as the President, is not forgetful of its foreign liabilities :—“ You began by respecting the rights of our foreign creditors, and you have not considered for your internal necessities, the proceeds of the guano which is compromised abroad. By this act you have saved our credit, and you have found means to cover the deficit in the charge for railways, without adding to the public burden, but, on the contrary, obtaining concessions to the contracts already celebrated.”

His Excellency then reviewed many of the laws that had been passed in the Session, but these did not include the whole of a large list that were

submitted to the Extraordinary Meeting of Congress before alluded to, and proclaimed in the chief square of Lima on the 28th of November.

A sad picture, though unfortunately a true one, referring to the state of affairs at the period about which it was written, and equally applicable to many years afterwards, is that drawn by Mr. Markham:³—"But the great drag upon the public treasury is the enormous army of 15,000 men for a population under two millions, with 2,000 officers,—those who are unattached being still retained on full pay. This will give some idea of the number of families who are living in luxury and idleness on the public money, and of the distress which will follow the sudden stoppage of their incomes, which is inevitable when the guano comes to an end. It will be an embarrassing and difficult question for some future Government to decide upon the proper measures for the disposal of an unwieldy army, and a crowd of hungry, beggared officers."

The measures introduced by President Pardo seem to me to have a much more efficient tendency to accomplish the end in view, than those suggestions of General Miller, recorded by Mr Markham, to establish military colonies in the forests to the eastward of the Andes. The conversion of the military element, amongst South Americans, into an agricultural one, I look upon as nothing but an ex-

³ Op. cit. chap. xviii. p. 308. Published in 1862.

cessively forlorn hope. It was tried at Santiago del Estero, in the Argentine Republic, by General Don Antonino Taboada, and proved a miserable failure. The semi-civilized life of the soldier, serving under a military despotism, is about the worst school from which could be expected a Cincinnati style of reformation. But this despotism being, as it is now in Peru, deprived of its *materiel* source—in fact, knocked on the head, and paralyzed—the plans of President Pardo to introduce education and encourage emigration are most likely, not only to enrich the country by developing its inexhaustible resources, but to create a new order of things,—fostered and sustained by a fresh and intelligent population.

CHAPTER XIX.

The Oroya railroad.—Starting from Calláo.—Through some Indian ruins.—Writing twaddle about a country.—Exaggerated description of the river Rimac.—Prophetic eye of Pizarro.—Don Ambrosio Cerdan's account of the river Rimac.—Its sources and courses.—Monserrat station at Lima.—Difference in surroundings.—Principal bridge at Lima.—The Balta bridge.—Turkey-buzzard hunting-grounds.—Large ruins.—Stations of Quiroz and Santa Clara.—Beauty of Chosica.—Archæological explorations here.—Mr. Steer down amongst the dead men.—Results of his labours.—Bodies rolled up in cloth and tied with ropes.—Varieties of things discovered.—Ruins of Párará catacombs.—Peculiarities of architecture.—What we found here.—Quebrada of Yanácotá.—Cochá Huákra.—Brown lizards.—By the terraces of Moyabamba.

STARTING from the temporary station of the Oroya Railroad at Calláo, quite close to the Guadaloupe Hospital, we very soon skirt by the river Rimac, and enter into the valley of that name. Not far from the station is the first chacra (or small farm) passed,—that of Mirinaves, lately purchased by Mr. Henry Meiggs. This valley, we are told by Senor Don Manuel Pardo,¹ terminates when we get up to Coca-chacra, the fifth station on the line, a distance of $44\frac{3}{4}$ miles from Lima, and a height

¹ In his pamphlet of "Studies on the Province of Jauja," p. 23.

of 4,588 feet above the level of the sea. As we go along, the track passes right through the centre of one of the old castles of some Yunca chief, and continues alongside of the river the whole way to the station at Lima. A little farther on, and beyond the right side of the rails as we ascend, are several others of a like kind, being masses of broken *adobones*, or large mud bricks,—all the rooms of which are filled with clay. Around here, as between this road and that of the Lima and Calláo Railroad—which runs parallel at about a mile of distance,—the land is cultivated, but on the river-side the grass has the character of rushes. On the opposite bank of the Rimac, and where I see the train going down on the line to Ancon, there is another chacra, with a row of trees extending from it to Lima. But what tiny things they seem, when contrasted with the towering rock-masses above them—some of the mountains, no doubt, which Prescott tells us were “teeming with gold.”

I have always been of opinion, that the surest way to disparage anything, in a common-sense point of view—be it a nation, country, institution, or idea—is to write twaddle² about it. Bowling along this road, in sight of a splashy water-dribble, that trickles over some gravel, and which I am told is the river Rimac, my thoughts revert to

² Twaddle, in Webster's Dictionary, is defined “silly talk ; senseless verbiage ; gabble ; fustian :” either or all of which may appear equally applicable in this case.

what the illustrious historian Prescott has been made to sanction under his name—although in reality the early Spanish historians, whose works he consulted at Madrid, must be held accountable for it.³ After the execution of Atahualpa, and indeed at the time that Peru might be considered as perfectly reduced under Pizarro, the latter was at Pacha-Cámac, whereat he had been reconciling differences with Don Pedro Alvarado, the gallant officer who had served under Cortés with such renown in the war of Mexico, but who here in Peru had been recently a rival of Pizarro. He had explored for treasure in Quito, and, having failed, came into what Pizarro no doubt considered his own hunting-grounds of Peru. But everything being peaceably settled by Alvarado coming to visit Pizarro at Pacha-Cámac, the latter turned his attention to fixing the site of a new capital for this vast colonial empire. “Cuzco,” says Prescott, “withdrawn among the mountains, was almost too far removed from the sea-coast for a *commercial* people.” I have italicized the penultimate word of this sentence, because it is the first time that I have heard the Spanish marauders who invaded Peru designated a “commercial people.”

It was, nevertheless, desirable to settle somewhere near a port, and Pizarro's first thoughts turned to the place he was at—Pacha-Cámac. But on further examination he found, or rather the

³ “History of the Conquest of Peru,” p. 237.

officers, whom he sent to explore, discovered, in the neighbouring valley of Rimac, a place that was deemed more *à propos*. This Rimac has been already mentioned as the locale of the Delphic Oracle. The officers reported,⁴ "Through the valley flowed a *broad stream*, which, like a *great artery*, was made, as usual by the natives,⁵ to supply a thousand finer veins, that meandered through the beautiful meadows."

We are further told that "on this river Pizarro fixed the site of his new capital at somewhat less than two leagues distant from its mouth, which *expanded into a commodious haven for the commerce that the prophetic eye of the founder saw would one day float on its waters*." Other reasons were given, with which I have no desire to dispute. But this one only confirms my justification for repeating the word "twaddle." Such of my readers as have seen how much the Rimac expands into Calláo will appreciate the sentiment; and those who have not may do so from looking at the Rimac passing by Lima in its fullest state during the month of March, as well as knowing that a few hundred yards from its mouth it never reaches

⁴ Op. cit. p. 238.

⁵ This must mean the Yuncas, as we have no account of any of the Inca people being here at the time spoken of. Moreover, the reigning Inca, who temporarily succeeded Atahualpa, placed on the throne by Pizarro—i.e. Manco, the legitimate son of Huayna Capac—accompanied Pizarro on this last journey from Cuzco only as far as Jauja, or Xauxa. Hence appears to me strong circumstantial evidence that the Incas did not keep up their executive in the valleys after they had subdued them.

to the knees of a horse during nine months of the year. I pass over the fudge about the "prophetic eye of Pizarro" in a *commercial* point of view, so soon after the murder of Atahualpa, and merely add, referring to *the expansion* of the Rimac into the Bay of Callao, that, to use the words of Dr. Baxley, "it would be more just to regard the Gulf of Mexico as the expanded mouth of the Mississippi River, than the Bay of Callao as that of the Rimac."

"The natives" of whom Prescott speaks had already made aqueducts through all these valleys interior to that which bore the name of the river, namely, of Ati, Huachipa, Lurigancha, and Amancães. Yet he tells us nothing of them. The Rimac is said⁶ to take its origin from a well, situated about two leagues beyond the hacienda (sugar-cane farm) of Casapatea, near the foot of the Cordillera of Huaro-chiri, close to which it is joined by two other rivulets. A league farther on, another small stream flows in at the Quebrada (ravine) of Tingo; farther, another at Cacaray, and then a fifth at Roccha. Passing San Mateo de Dios, by Viso, Machucana, Puruchay, and Surco, it receives many affluents—one being renowned for its dreadful disease, "the Verrugas,"—and arriving at San Pedro de Mama, about a mile beyond Chosica, it forms a confluence with a larger river, which is also known as the Rimac, and which comes from the Cordillera of Acobamba. Hence to

⁶ According to Don Ambrosio Cerdau's pamphlet, already quoted.

Lima the number of aqueducts which it contributes to fertilize the land, increases as it reaches the capital, and nearly under the mountain of Cocayo, quite close and interior to Lima, it is put into contribution for the districts of Nasca, Carapongo, Pariache, Huan-chiqualas, and Huachipa. From this point, likewise, as well as below the city, it supplies water to the extensive valley of Huatica, at present divided into three districts—namely, Maranga, Magdalena, and La Legua. I have already described the valley of Huatica, with its old monumental accessories. Our business now is to go up the Oroya railway.

Before arriving at the Monserrat station, in Lima, we pass by the Camal, or public shambles, where, close to the track, one sees no more attractive sight than the blood of slaughtered animals, with pigs feeding upon it. Not much farther off is the station, at which you cannot fail to recognize in everything about a difference from what are the general attributes of a Peruvian institution. Here all is life and activity—some stationary engines doing their work—a locomotive roaring⁷ like a mammoth bull, enchained and goaded, as if it wanted to get off and tear its way without stop or hindrance through Cordilleras and over Andes;—passengers getting their tickets;—luggage and cargo arriving; and the general hubbub and fuss of a train about to start. For it is near to eight o'clock in the morning. The hour approaches;

⁷ The American locomotives do not whistle; they may be said to roar, like the continuous bellow of a lion or a bull.

the fuss increases, but subsides as the outer door shuts;—the conductor, Mr. H. O. Denning, cries out interrogatively, “All aboard?” and, looking up and down to see that everything is right, waves his hand to the engine-driver, and jumps up. The engine gives one great spasmodic roar, and—with the tolling of its bell—away we glide.

Past the river on our left side, as it flows downwards to the sea, its many little gravel-islets covered with turkey-buzzards, which have plenty to browse upon, and an uninterrupted line of black liquid cloacine matter, overtopped by houses, on the right. Wherever there is space between the rails and the river, as well as on dry spots in the middle of the stream, and on the opposite side, adjoining the Ancon railway station, we see heaps of garbage, on which the tutelary birds of Peru, just mentioned, are enjoying themselves. We pass under the first arch of the bridge, leading from the Principal Plaza, the Government Palace, and from the larger portion of Lima to the other side, where the chief features are the Alameda, or public walk, the bull-fight circus, and the Ancon railway station. Then beneath another bridge, just finished, looking very fresh as well as colossal in its development. This latter is the Balta bridge, so called from its having been got up during the time of the late President Balta. It was just finished at the time of his assassination. Cloacine on the right-hand side, still as we go along. Now we skirt what appears to have been either a half-swallowed-up building,

as of barracks, or an extensive catacomb trying to struggle to the upper air. Then, at some height over our track, shoot up crosses and monoliths over a long wall, indicating the cemetery. After these we are in the country.

A melancholy-looking mill is sighted, and an equally sad-appearing hacienda. On one of the small spurs to the right is a white house, surrounded by white walls. This is the national powder-magazine. A little farther on we stop at Quiroz—the first station out of, and nearly five miles from, Lima. The only thing to be noticed here is a quarry on the left-hand side, from which has been taken all the stone for the Monserrat station, as well as for the protecting wall on the river-side. From Quiroz we travel on a track parallel with the old road, leading to the Sierra passes. Through this part of the valley much cotton is cultivated. There are also, in several of the small ravines which we skirt, ruins of Indian towns, of huacas, and of what seem to me large fortresses. We pass likewise the remains of an old Spanish town, called Loma Larga, and a hacienda with numerous cattle—cows and horses—belonging to Senor Mariacho.

As we stop for a few minutes at the station of Santa Clara, distant $11\frac{1}{2}$ miles from Lima, we recognize an increase in the quantity of cotton cultivated at the hacienda of Mr. Bryce, with a most comfortable-looking house on the premises. From Santa Clara to La Chosica we have

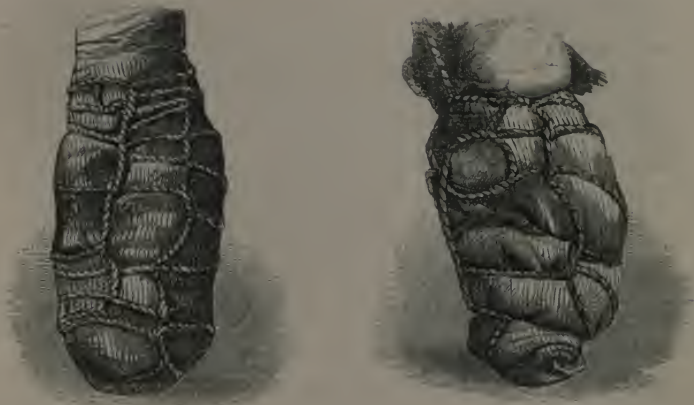
an hour's run. This part of the track brings us along the edge of the river, the tortuous course of which is followed by the rails. Here we are amongst the mountains, going—through ravines, with such short tracks, that the locomotive seems as if about rushing against a mighty mountain mass, till it turns a corner, and you are still gliding by the purling little Rimac. On either side as we progress can be discerned the rents in these Cordilleras, made by earthquakes, ancient as well as modern. Immense boulders of rock, some of them from fifty to sixty tons in weight, are lying scattered on the limited plateaux between the rails and the river,—no doubt the result of volcanic agency. Others, such as these, are hanging up on the sides of the hills, at heights varying from one to four thousand feet, and seeming as if they required only the slightest touch to send them crashing into the valleys below.

At Chosica, where there is an excellent hotel, passengers bound upwards stop for breakfast, and, in the time of my visit, it had excellent accommodation, under the management of Colonel Fisher. So as I had come up (for a few days of the pure air that was sure to be here), in company with my exploring friend, Mr. J. B. Steer, we leave the passengers to eat their breakfasts, and continue their route, whilst we proceed on a few archæological inquiries in the neighbourhood.

Not more than about six to eight hundred yards farther on than the station, and behind the house

of Senor Garcia, we came to a place about twenty feet high over the ordinary mule-road. A few feet higher up, and on the mountain-side is a large collection of boulder-stones, built up like walls to the height of four to six feet in some places,—a foot or two in others,—but all having the appearance of having suffered from an earthquake, or the rolling down of large stones from the mountain-top. Scrambling amongst these, we soon make out caves, or vaults, parts of which are exposed to the light, by having had taken off some of the flag-stones, which covered the tops. Removing a few more flags, Mr. Steer descends into one, and finds in it a skull, with arm and leg bones. Examination of others gives like results. Then, observing one or two flat spots, on which we stood, to be hollow, we sent for shovels and pick-axe. With both of these alternately Mr. Steer worked energetically during the succeeding three days. Our efforts to get help from the natives was perfectly useless. They won't work, as a general rule,—no matter what you pay them. In labour like this they have no sympathy, for they cannot understand its *rationale*.

The result of Mr. Steer's labours consisted in exhuming half a dozen bodies enwrapped with cloth, and tied round, as in the accompanying illustration. In some of the grave-vaults there were one, two, or three bodies—all in the squatting posture, with bent knees and hips, as is seen in the figure of the child. Whether children or not,



BODIES TAKEN OUT OF VAULTS AT CHOSICA.

they were all wrapped up with the same care. The graves were generally from six to seven feet long, four feet wide, and from four to five feet in height. They were built of stone, and some of them nicely plastered inside. Many of these communicated with each other by narrow passages. On unwrapping the swathes, they were found to have the heads carefully bound round with cotton flock—in some cases the hair retaining its plait, whilst there were folds of cloth rolled round over the cotton. Amongst other things turned out with these bodies were a few pairs of silver and copper nippers, such as the Indians are known to have used for pulling out the beard;—a small comb made of wood, containing twenty-five separate teeth, artistically put together with thread weaving;—small beads fashioned out of bones,

coloured with something like cinnabar, and having the appearance of red coral;—pieces of cotton cloth, light coloured, as well as dyed brown;—long copper pins, with heavy deposits of sulphates on them, that were used for pinning the cloth wrapping the bodies;—nuts;—a curious specimen of bivalve shell complete, and which Mr. Steer tells me is not now-a-days to be seen in Peru;—skulls of children, with the copper stain between the teeth, as if of the *Obolus*;—a ball of cotton thread; some feathers, evidently very old; between thirty and forty skulls. Amongst the last-named lot was the skull of a mouse; several nuts, with the kernels rattling inside; and one of these latter having about an inch in length of a small quill protruding from it. We remarked, that in every case the men had a sling bound round the head, and the women as invariably a small piece of cotton flock, with a spindle in the hand.

After accomplishing as much as we could at the Chosica burying-ground, we turned downwards on the railway track towards Lima, and at about the same distance from the hotel as that last described, we found a somewhat similar city of the dead. This is called *Parará*,^s and is in the *Quebrada*, or ravine of *Yanacotá*. It is on a small

^s The name was given to me by a native of the Chosica valley. In a paper on the Aymara Indians, by Professor Forbes, read before the Ethnological Society, on the 20th June, 1870, and at page 52, the word *Parará*, in the Aymara, is said to signify a pair of corn-grinding stones, such as we see numbers of in this place.

plateau, about fifty feet above the railway track, between which latter and the ruins run two of the sierra roads. Ascending, I look up and see, at a height of five hundred feet or more, the mountain side faced with bits of stone walls, that are relics of the ledges or terraces made for cultivation. The questions at once rise up into my mind as to whether these terraces are so old as to have necessitated their use before the valley had vegetable mould washed down into it?—or were the valleys themselves likewise cultivated at the same period? Because here beneath us we have fields of clover and of rice, although the lower ground is not more than a mile across.



PART RUINS OF GRAVES AT PARARA.

That the Spaniards were at this place is evident from the fact of our observing two square blocks

made of stone and adobe—each a foot high, and one over the other—the upper one being several inches narrower than the lower. This piece of architecture was for the purpose of supporting a cross. Their visits hither may be also assumed by the openings in many of the grave-vaults, which in some places are in three tiers, one over another. Amongst the ruins is one burial-place, twenty-four feet long and eighteen feet wide, divided into three compartments cross-wise, with walls of eighteen inches thick intervening. At the corner of each of these dividing walls, down at the base, there is a small aperture of about eight inches square—the object of which it is impossible to guess at, unless it were intended to allow the spirits of the dead to hold communion with one another. Each compartment has two small square niches in the wall,—most probably to hold their idols. Two of the vaults had been completely exposed, but the third only partially. Looking into it I found a space of fourteen feet long, four wide, and five deep, built of stone, and plastered with adobe mortar. Some fragments of bones inside showed that it had been once the resting-place of the dead. In its outside architecture it had an eave along the top wall—a style of building not now seen in Peru, but of which Mr. Steer tells me he has observed much, in the Moyabamba and Chachapoyo valleys, on the other side of the Andes.

Walking through this necropolis, or rather

climbing over the stones, I cannot help being struck with the absence of anything like a passage or street. The graves were built with very great care likewise. The chief features of the place, besides a few skulls which I took out of one of the vaults, together with a pair of sandals, were the number of grinding-stones, evidently for crushing corn, with a round boulder beside each, to be worked by the hand. One of these may be seen to the left of the grave-vault in the accompanying sketch, taken for me by Mr. John Schumaker. Some cotton flock was lying about, and bits of crockery-ware in many places. But no plan of a town could be traced—scramble wherever I would—no streets,—no doors to houses,—no apertures in the walls, save those that had been made by the searchers after treasure here—or by earthquakes, that must have sent down from the mountain the large boulders, of a mingled limestone and granite that abound everywhere in dreadful confusion. The grinding-stone, found here at Parará, is the same as that mentioned by Stevenson,⁹ for bruising corn with,—“a large stone, somewhat hollowed in the middle, called a *batan*. The bruiser or *mano* (handle) is curved on one side, and is moved by pressing the ends alternately.” He adds, “I have been the more particular in describing this rude mill, because it was undoubtedly used by the ancient Peruvians,—having

⁹ Op. cit. vol. i. p. 369.

been found buried with them in their huacas, and because it may serve some curious investigator in comparing the manners of these people with those of other nations. By the same implements they pulverized their ores for the extraction of gold and silver."

Looking from these ruins, across the valley and the intervening river, I see another place somewhat similar to Parará. So I get down to the track where my horse is waiting, and, taking a retrograde trip towards the hotel, cross one of the excellent swinging bridges that have been put up, wherever required on the Rimac, by Mr. Meiggs. From this there is a road leading downwards in the direction of Lima, as well as another upwards to Santa Eulalia. But the former is now my route. Questioning a native whom I met, after a few hundred yards' ride, he tells me the name of the Quebrada here is Cocha-Huakra—not Cochachacra, be it observed, which is the next station to Chosica, but eleven miles farther on. Of the ruins he knew nothing in reference to their name; I therefore give them the title of the Quebrada, i.e. Cocha-Huakra. The relics of walls, terraces, and enclosures, extend here over a considerable space. But what strikes me with wonder is the enormous size of the boulders—amongst which the place is literally honey-combed with burying-caves. As I had with me a negro boy, kindly furnished along with some

horses by Mr. Cilley, Superintendent of the Oroya line, I sent him "down amongst the dead men" in a few of those where I had discovered some skulls.

A large water rush from the western Cordillera, in 1869, had swept away a considerable portion of the walls. Nothing of life was visible in the place, except a few lizards,—miserable brown reptiles—seeming not only as if they had been generated out of the stone and gravel, but had nothing else to live upon.

As I was about returning, there came down, quite gently at first, but lasting for three hours after I reached the hotel, a regular autumn shower. Not at all like the misty, murky, drizzling atmospheric spasm, which it would be little short of profanity to designate rain, that we are accustomed to in Calláo and Lima, but soon becoming heavy, pattering wet, which obliged me to change my clothes on return to the hotel. Colonel Fisher tells me it rains like this only three to four times during the year at Chosica. Whilst this evening's shower was falling, a brilliant rainbow was visible over the eastern Cordillera, as I went along,—the atmosphere every moment becoming colder and more refreshing:—thus promising an agreeable morning for my projected ride of next day, by the long terraces of Moyabamba, and to the village of Santa Eulalia.

CHAPTER XX.

Still round and about Chosica.—Across the river.—Terraces of Moyabamba.—Not done by the Incas.—Ride to Santa Eulalia.—Meeting with mountaineers.—Mourning aprons worn by the women.—Delightful trip through teeming orchards.—Payi.—Lake of Huasca Coche.—Excellent sanitary position of Chosica.—Up the Oroya line.—Past Cocha-Chacra.—The Curpeche bridge.—San Bartolomé.—Birds in the valley.—Causes for their sadness.—Oroya fever.—Dr. Oldham on malaria.—Author's opinion of causes of great mortality.—Disease of Verrugas.—The Chinese labourers of Mr. Meiggs.—Their good condition and excellent treatment.—Highest railway-bridge in the world at Verrugas.—Messrs. Sweet and Magee's accounts of peculiarities of line.—Retrograde movements amongst the Condors.

APRIL 25th.—Up early,—as the rising sun is just glinting on the mountain-tops, and after my coffee, on horseback for the morning ride. This time I go across the bridge in front of the hotel, and, turning to the right behind the chacra of Senor Montana, pass along by the Moyabamba terraces on the road to Santa Eulalia. These are described to me by Mr. Steer, who ascended them, as similar to those mentioned by Prescott:¹ “Terraces were raised on the steep sides of the Cordilleras, and as the different elevations had the effect of difference of latitude, they exhibited in regular

¹ Op. cit. p. 3.

gradation every variety of vegetable form, from the stimulated growth of the tropics to the temperate products of a northern clime. An industrious population settled along the lofty regions of the plateaux; and towns and hamlets, clustering amidst orchards and wide-spreading gardens, seemed suspended in the air, far above the ordinary elevation of the clouds."

Although by a note to this Arcadian description Mr. Prescott observes that "the plains of Quito are at the height of nine to ten thousand feet



STONE HATCHET FROM MOYABAMBA.

above the level of the sea, whilst other valleys or plateaux in this vast group of mountains still reach a higher elevation," the system of terraces which I see at Moyabamba is the same as of those at Cuzco and Quito. But I do not believe these here were ever done by the Incas. On the contrary,

the old Peruvians, amongst whose graves we have been exploring, and of whose antiquity of centuries before the Incas' times we have so many proofs, were, I doubt not, the builders of them—that is, either the Yunca race, or their predecessors.

The terraces extend along the mountain-side for a length of beyond two miles, and rise one above the other to the height of more than a hundred feet, each plateau being not exceeding from two to three yards in width. From the basement upwards they are divided by transverse walls. One part of our road goes through a cutting in a stone wall, which, although not more than forty yards in length from the mountain bluff to the river, is, at the part through which we pass, from three to four yards in thickness. In this place Mr. Steer rooted out a few skulls and some bones, together with a stone hatchet, from a vault-grave, that had been built square, but which previous to our find was opened by some marauders.

Continuing on this road I pass some, and am met by others, of the mountaineers, with their wives; who travel generally in company with a troupe of horses, donkeys, or cattle. This morning I overtake a herd of nearly two hundred,—chiefly mules and horses—all in single file on account of the narrowness of the roadway. The mountain women are entirely different, in type and general dress, from the ordinary Cholo of the lower country, as if they belonged to a

different race. As brown as a berry in the face, yet having a little tinge of the roseate in the complexion—legs bronzed as the face, but failing the delicate tint. They are generally dressed in a coarse cotton skirt, which scarcely reaches down to the calf of the leg. A straw hat and a pair of sandals are included in the toilette, which is completed by an apron. This last is the most remarkable portion of the costume; for instead of being worn as aprons generally are, in front, to keep the gown from being soiled, this hangs on the left side. It is believed to be put in that position, as a symbol of mourning for some famous ancestor.

At the end of the Moyabamba road there is a gateway, passing through which the way to the right leads to San Pedro-de-Mama, and that to the left to Santa Eulalia. San Pedro was a Spanish town, for there are remains of an old chapel here. Wherever the Spaniards settled, they planted a cross, and built a chapel. But this one, as well as the houses all round, are in a state of as perfect wreck and ruin as the old Indian towns, although presenting the relics of a very different, and inferior kind of architecture. To get at it I must cross a bridge over the river, which at this point forms a confluence with the Rimac, and whereof I have already written as bearing the same name. But there is nothing worth looking at; so I return over the bridge, and, going up

the Santa Eulalia road, enjoy more than a mile and a half of one of the most charming of rides.

Through orchards of guavas, oranges, paltas, and chirimoyas—across little purling rivulets that are tributaries to the Rimac—with bright flowers gleaming in the sunshine, and birds singing everywhere. Much of this road is up and down a solid rock—no signs of Macadamization about. But as I am the whole way protected from the sun, by the trees forming an arch overhead, the effect is most delicious. It is rendered doubly so by the refreshing breeze that is blowing; indeed, it is more of half a gale than a breeze, as several times my coloured valet had to dismount his horse to pick up my hat, blown off by the wind.

The whole village of Santa Eulalia seems to be concentrated in the plaza or square. Here is a chapel—about as gloomy and semi-ruinous a specimen of a religious house as I have seen in any part of the world. At right angles with this, on the right corner of the plaza, is the residence of the Curé; and at each of the other three corners of the same is a little wooden house, resembling the upper half of a sentry-box. In the latter masses are said by coadjutor padres on days of great religious ceremonies. I went to visit the Curé, and, dismounting, walked into the house, for the door was wide open. No one was visible within; but I crossed a patio, or square, behind, and found him at breakfast. He was getting through an attack of that

dreadful disease, the verrugas, and appeared but the shadow of a man. We had our cigar, and a little chat after the meal was concluded. I learned that a league farther on was another village called Payi;—that in the intermediate space as well as on each side of the road, over which I had recently passed, was a considerable population;—and that Santa Eulalia, where I now am, is the head-quarters of the parish. Twelve leagues distant from this is the first of the large lakes that are found high up in the Andes. It is called Huas-Cacoche; and hence, it seems, “*esta en proyecto*”² to bring water to the Rimac, as the latter river is becoming every year more and more incompetent for a sufficient supply to the azequias of the chacras, devoted to cultivation.

We visited the chapel together, and I found the inside to be nothing better than was promised by the exterior. All of the altars—five in number—appear undergoing process of repair. Two small ladders and several planks of wood are stowed away in one corner. Whilst a few tawdrily-done-up statues of saints are thrown carelessly in a heap in the other.

The breeze grew stronger as I rode back to the hotel—better pleased with the most refreshing trip through luxuriant tropical vegetation, than I have been on any similar excursion, since I first

² “There is in project.”

quitted the shores of England nearly twenty-three years ago.

There is no place about Lima, that I could recommend the stranger to, a more agreeable change, than that of Chosica. If he have anything of a taste for archæology, he will have a splendid mine to work on and explore; and I regretted very much my time being so limited, that I could only do very little on the outskirts of the rich collection, which might be made at this neighbourhood, of the relics of Peru from the time of her ancient civilization.

From Chosica onwards the road becomes a regular up-hill work; "for here," observes Mr. Magee, "the four per cent. grades commence, although they do not make it necessary to leave the valley of the Rimac until San Bartolomé, thirteen miles farther, is reached." Some five or six miles beyond Chosica we pass over the first of the iron bridges, the Cupiche, before and after which is a series of curvatures along the river's bank. In this course the river at the present time of the year (February), in consequence of the heavy rains at night from San Bartolomé upwards, is a rushing current—falling, tumbling, jumping, foaming, gurgling over big boulders in its bed,—communicating a sensation of freshness, in the sight and sound of it. The mountains about on both sides present the appearance of having undergone a disintegration of their solidity, as they seem, for

the most part, to have been shaken by some subterranean convulsion. We are travelling along (as I learn from Mr. Sweet, the resident engineer, who is a fellow-passenger,) "on a grade of four per cent. or 211 feet per mile, and with a minimum radius of curvature of 300 feet."

From the first iron bridge at Cupiche, to the second at Coracona, (which is considerably larger), we are on the right side of the Rimac, or opposite to that on which we have journeyed hither from Lima. Our next stopping-place is Coca-Chacra, nearly forty-five miles from the City of Kings, and 4,588 feet above the level of the sea. This is an old—a very old—Spanish-built town, with a church that has no roof. Indeed, the sacred building, with its frowsy-looking little bell-tower, seems leaning over, as if it had at one time got an earthquake warning, or was appealing mutely against one of these convulsions doing anything to hurt such a trifling minnow amongst the mountain Tritons all around.

At the valley through which the Rimac passes beneath Coca-Chacra,—for the town is a considerable height over the river's bed,—I saw and heard some of the first birds I met with on this route.³ Doves, as well as small items of the feathered race here, and a few red-breasts; but all with a melancholy style of chirrup, as if out of their element. For

³ Except those mentioned on the road to Santa Eulalia, which is a few miles out of the railway track.

they have no broad plains to disport in, and little or nothing but a view of barren mountains on either side. The doves too ! Can any one fancy their being endowed with the sweet bliss of “ billing and cooing ” amongst these gloomy rock masses, as doves are accredited to do in more genial climes ?

From Coca-Chacra to San Bartolomé, only two miles farther on, we have still the same grade of four per cent. Now we are in the neighbourhood of where the appalling mortality happened on this road, and of which I have to say a few words.

The “ Oroya fever,” as it was called, from the simple circumstance of its having occurred on this line (although more than a hundred miles distant from the terminus at the little town of Oroya),⁴ caused a dreadful mortality here during the years of 1870 and 1871—amongst the Chilian labourers more especially. Its first ravages were experienced in the neighbourhood of where they were preparing for the iron bridges at Cupiche, and Carocona. The records of deaths in the Guadalupe Hospital at Calláo, from this fever, are almost incredible. It was of the Tertiana, or intermittent type, but nearly always accompanied with fatal liver derangement, from which scarcely one in a hundred recovered. That it could have nothing to do with marsh malaria may be assumed from the fact of the height of the position. Mr. Sweet, the resident engineer, places Coca-Chacra at 4,888 feet above the level of the

⁴ Situated at the junction of the Jauja and Yauli rivers.

sea. From this spot the worst cases came; yet, according to Carrière and Blake, we are told that malaria never ascends beyond—in Italy from 400 to 500 feet; America (Apalachia), 3,000 feet; West Indies, 1,400 to 2,200 feet; California, 1,000 feet; Western Africa, 1,500 to 2,000 feet.

Perhaps, in the absence of malaria, we may attribute the fever in no small degree to the principle laid down by Dr. Oldham in a recent work on malaria, namely, “to the rapid extraction of animal heat.” “Sudden change of temperature from heat to cold,” he says, “is mentioned in the history of nearly every epidemic of malarious disease.” And again, “It is, moreover, almost universally allowed that relapses of malarious fever are produced by exposure to chill.”

Dr. Oldham’s theory (after some years of careful observation, whilst serving in India) is this:—that malaria, as a specific poison, does not exist; but that the cause of the diseases attributed to it is chill, or, in other words, the absence of animal heat. Again he adds, that he found the extreme susceptibility to cold (which is caused by long exposure to great heat), intensifies the predisposition to the diseases referred to—thus causing their great prevalence in hot climates,—and that a further effect of great heat upon the system, more especially in the white races, is by lowering the vital powers to render the type of disease more grave.”

My reason for deeming this theory to be proved

by the Oroya fever, may be thus briefly explained. The greater number of persons afflicted up here were men who, after working at their navy work all day—sometimes beneath a roasting sun, but nearly always in a temperature of not less than 90° Fahrenheit,—then “intensified the predisposition” to the disease—such a predisposition being strengthened by the fact that they were all unacclimatized foreigners—and “lowered the vital powers” by swallowing indiscriminate quantities of Pisco, the intoxicating spirit made from sugarcane. This liquoring with the Chilians went on sometimes through the whole night, concurrent with their gambling. They cared nothing for sleep so long as the infatuation of cards could be indulged in, or until this state of things obliged them to be sent down to the Guadaloupe Hospital in Calláo, to add a few more items to the mortality.

Besides the fever, there is another dreadful disease in these neighbourhoods, called the Verrugas,⁵ which seems as much indigenous to the place as the *goître* is to the valleys of the Alps or Pyrenees. Whether it comes or not from the use of water containing earthy salts, is hardly decided amongst the medical men up here. It is, however, a very nasty disease, breaking out all over the body sometimes, not even excepting the face, in large warty excrescences. Until these come out, and sometimes after they appear, the system un-

⁵ Verrugas is the Spanish word for wart or excrescence.

dergoes a depressed state of all the functions, and its complication with the Oroya fever is very distressing.

We are told by Stevenson⁶ that "Verrugas warts of a peculiar kind are common in some of the valleys of the coast." During my residence in Peru I never heard of their being known anywhere except up the valley of the Rimac. There I saw it at Santa Eulalia, already mentioned in the case of the Curé, as well as at Surco, a little beyond the Verrugas river.

On my first visit to San Bartolomé⁷ I remained on the hill-top for one night as the guest of Captain Heath, who was in charge of the camp here, and with him I went to visit the hospital. This is called Esperanza. It is situated at the upper end of the valley, and, like all such establishments organized by Mr. Meiggs, is deficient in nothing that can conduce to the comfort of those cared within. It has 153 beds, but at the time of my visit there were only seventy-five patients in it. Amongst them were some very nasty cases of verrugas, as of pulmonary affections with the Chilians.

"The height of San Bartolomé," Mr. Magee says, "is 4,910 feet above sea level. I know of no other road," he continues, "that, starting from the sea, rises to this height in forty-six miles' distance."

⁶ Op. cit. vol. i. p. 347.

⁷ The Indian name of this place is Urabamba.



CUTTING OF RAILWAY TRACK AT SAN BARTOLOMÉ.

Here we find the first of these retrograde developments, of which there are several others required on the track to the summit of the Andes. The engine, when it stops opposite the station, is detached from the carriages. Then, advancing to a turn-table, it is brought round on to another track; now it comes back parallel to the line by which we came up, until, connected by switches with what on the ascent to this was the hindmost carriage of the train, it makes a *détour* through the hundred feet cutting in the limestone rock, and then progressing up the mountain-side, still on the incline of four per cent., goes on towards Surco.

Few things on my journey up here gave me so much pleasure as an inspection of the 480 to 500 Chinese that were working at this camp. They had got a large galpon, or wooden shed, to sleep in; it is, in fact, a wooden house, enclosed and excellently ventilated—their sleeping-places being arranged in the style of sailors' bunks on board a ship. It is not more than a few hundred yards from Captain Heath's house, on the top of the hill. The flooring is wooden, raised four feet above the ground; and to the capital arrangements of this residence is due no small amount of the contentment of the Chinamen, as well as their good condition. Some friends of mine, amongst the rest my fellow-explorer, Mr. Steer, had previously told me that San Bartolomé was the only place in which

they had seen fat Chinamen in Peru. This was not surprising, for during their dinner-time, I saw them regaling on rice, and beef in great plenty. Before starting in the morning for their work, they all get bread and tea, and the whole arrangements here plainly indicate, that John Chinaman would have little to complain of, if he were treated everywhere in Peru as he is on the Oroya railway line by the employés of Mr. Meiggs.

From San Bartolomé—although a distance of only six miles to Surco,—the railway cuttings have to be made in such a roundabout way, that the journey is more than doubled. I may here explain that from San Bartolomé to Lima the rate of fall in the river Rimac is generally three to five per cent., and the track of the railway line, alongside of it, varies its grade from two to two and a half per cent. as far as Chosica. From Chosica up to this place (San Bartolomé) the rail is generally four per cent. grade. But farther upwards, the fall of the river becoming from ten to twelve per cent.,—and I believe before getting to Surco as much as fifteen per cent.,—it may be inferred how impossible it would be to follow the river's track, without these retrograde movements of a zigzag character, so to speak, of which I have written in the previous page.

Our course from San Bartolomé, winding through the cutting, then skirting the little village of San Bartolomé, or Urabamba, with

its old grey church, and a considerable arborescence, is very pretty. Whilst coming round again we see the station in the valley underneath us. One cannot help feeling a sort of solemn awe at the steadiness with which the locomotive goes on here,—

“And break-neck pathway seeking
Along the mountain’s verge,
The Condor’s shriek outshrieking,
His course can surely urge.

“Alps, Andes, Himalaya,
Defiant seemed to stand,
Each range a giant slayer
Of steps ’twixt land and land.”

Rushing through a tunnel, and coming out on a declivity several hundred feet between us and the river Rimac which rolls below, we pull up at the station of the iron bridge which crosses the Verrugas streamlet.



RAILWAY BRIDGE OVER VERRUGAS RIVER.

This is a bridge of iron, according to the Fink plan (as I learn from Mr. Sweet), with piers of 252 feet high, and a total length of 525 feet. It is, in fact, the highest bridge in the world, being 260 feet from the base.

From Verrugas to Surco, the chief notable work on the line is a tunnel through a precipitous side of the mountain, about 575 feet above the bed of the river. In some of this we have a curve of 395 feet radius. Through the tunnel just mentioned the rock was very hard, and tough—scoring glass like a diamond. A considerable part of the cutting was worked by the diamond drill. Up to this the Rimac river has furnished, with its fall of from 200 to 400 feet per mile, excellent water power, alongside of all the tunnels, for compressing air. At the period of my last visit, in April, 1873, the road was in working order as far as Succuta bridge,—a little beyond Surco, or nearly sixty miles from Lima.

On the line from San Bartolomé to Surco, by the mule track over the mountains, you can pass near the locales of Songo and Pucushani, besides many other places with the Spanish names of Cuesta Blanca, Esperanza, and such like. All up this way there are excellent swinging suspension bridges over the rivers, with iron fastenings, put up by Mr. Meiggs. The scenery varies very little up here as you go along. Mountains on each side. The river still tumbling, rolling,

splashing, and rushing,—sometimes at a depth of from three to four hundred feet below the narrow ledge on which your horse or mule may be picking his steps, as you occasionally meet a troop of mules, or asses, laden with produce from the interior, and bound to Lima. In other places (although these are very few), you come to spots of beauty like that of the valley of Pongo, in which, on my first visit, there was an encampment.

Creeping up the mountain-side from this, we turn round the remains of one of these terrace arrangements, built of enormous stones, and puzzling us by their colossal size to guess by what mechanical appliances they were put here. This is above the road, and underneath, near the river-side are heaps of rubble—one of them in a horse-shoe form—that might be the relics of human habitations.

Near to Pucushani, and standing close to the bank, I am reminded by the thundering down of the river—for now it is at its fullest height—of what Hawk's Eye in one of Fenimore Cooper's novels said of Glen's Falls on the Hudson, when speaking of the perversity of the water:—"For it falls by no rule at all; sometimes it leaps; sometimes it tumbles; then it skips; here it shoots; in one place it is as white as snow, and in another it is as green as grass, or as brown as a berry. Hereabouts it pitches into deep hollows, that rumble and quake

the earth, and thereaway it ripples and sings like a brook—fashioning whirlpools and gullies in the old stone as if 'twere no harder than the trodden clay. The whole design of the river seems disconcerted. First it runs smoothly, as if meaning to go down the descent as things were ordered; then it angles about and faces the shores; nor are there places wanting where it looks backward, as if unwilling to leave the wilderness and mingle with the salt.”

Just such is the Rimac, in the months of December and January.

CHAPTER XXI.

The camp at Pucushani.—From Surco to Machucana.—Feast of the kings at Machucana.—Drunken fiddlers and harpists.—Screaming women.—Spangled ponchos.—Sublimely hideous.—Los Infiernillos (“the little hells”).—At the Andes’ summit.—Extension of Oroya line to Amazon.—Explorers of Amazon valley.—Its tributary rivers.—City of Jauja.—Malinowski’s explanation.—Number of horses and mules in Oroya Company’s employ.—Dr. Raimondi’s explorations in province of Loreto.—Mr. Steer’s crossing from the Amazon.—Raimondi’s account of the natives.—How the Combos effect distortion of the heads.—Specimens of abnormal skulls.—No account given of reason for distortion.—Combos *aliases* of Setebos, and Sipibos.

AFTER passing the camp at Pucushani, we go on through the same kind of scenery as that described in the last chapter, till we cross the river again near Aposungo. From this it is not far to Surco—a small town of one street. The houses being chiefly stone-built, and with sloping roofs of straw, whilst having in the *tout-ensemble* of walls, doors, windows and roofs, such an appearance of rustiness, as if, in some remote age, they had been pushed up out of the earth by volcanic agency. There is a chapel on the right-hand side of the street, which is of the same colour as the houses.

“At Surco,” observes Mr. Sweet, C.E., “there is another development, similar to the one already mentioned (that is, the retrograde track at San Bartolomé), which reaches the pampa of Machucana, at an altitude of 7,500 feet. On this portion there will be three bridges, the longest 240 feet, and about 2,500 lineal feet of tunnels.”

From Surco forwards, the first thing to attract me was the hospital of San Juan—very high above the road—which at this point runs through the valley. It is at an altitude of 350 feet, more or less, overtopping the river. In a sanitary point of view it appears in an excellent position; and this is verified by the fact, that there are no cases of Oroya fever nor Verrugas here, except what have been transplanted, or brought up by parties who absorbed the poison lower down, in its own locale. Being already somewhat tired with this my first journey amongst the Cordilleras, I did not care to go out of my road, as I would have to do to see this institution, much as I desired to have a look at the *ménage*. It was under the care of Doctor Kenny, Director of Hospitals, and Medical Inspector of the Oroya line. I have no doubt of its being, from the eyrie on which it is built, far superior in that most important matter of hygiene to any hospital of Lima or Calláo. So much so, indeed, that I cannot avoid considering what a desecration it would be to the purity of the mountain air, to

send any fever or other patient hence down to Calláo.

To Machucana from this we cross and recross the river again; and at much of this part of the route the thundering of the torrent causes quite a remarkable echo amongst the rocks. The track on which I am travelling is the same mountain pathway all along, till about one mile before reaching Machucana, I find myself in a little valley on a road with stone walls at each side, and being no more than four to five yards across. The stones in these walls, if not "hoary," are "rusty" with age; for they in many places show the outside mossy-looking rust, which is significant of the action of water on iron-stone, or pyrites.

The town, or village, of Machucana is very similar to Surco,—alike in its one street, its dreary volcanic aspect, its sombre chapel, and its Indian population. On the day of my arrival—it was the 6th of January, "La Fiesta de los Reyes," the Feast of the Kings—I was for a considerable time impressed with the almost "audible silence" of the place. I had been lying down on the sofa at the house of Mr. Bogue, Mr. Meiggs' principal engineer—when suddenly there arose a combination of yelling, screaming, and vociferating, accompanied with the tinkling of some stringed instrument. So discordant was the uproar that I went to the door to find out its sources. There were about half-a-dozen women near one

of the doors on the opposite side of the street. Besides these were three men,—one scraping a fiddle,—another blowing into a most untuneful pipe,—and the third with a bottle in his hand, to which he was paying unremitting devotion. All the women were engaged in the same pursuit—passing bottles round from hand to mouth—and the whole company may be described as emphatically drunk. Three of the men—to represent the kings I supposed—were decked up in the most outrageously common style of tinsel, and with spangled ponchos. The fiddler was so stupidly intoxicated as to be able only to scratch out such discordance as, I believe, never was elicited from catgut by horse-hair since the violin was invented, as traditionally reported, by Ravana, King of Ceylon, 5000 B.C. To complete the grotesqueness of the ceremony, there was a harper, who held his instrument upside down, and tinkled away with far more energy, than harmony. In fact, the whole dis-concert was sublimely hideous, and did not impress me much with the sanctity of their religious ceremonies at Machucana.

Here we are at a height of 8,000 feet above the level of the sea, and the Cordilleras at either side about 3,000 to 4,000 feet from the base to summit. Now we commence to see the snow in small quantities on the mountain-tops, indicative of our approaching the Andes : those



SAN MATEO VILLAGE ON OROYA RAILROAD.

“Palaces of nature, whose vast walls
Have pinnacled in clouds their snowy scalps,
And throned eternity in icy halls
Of vast sublimity.”

At Machucana we are only nine leagues from the highest point of that part of the Andes through which the railway line runs. The peak at the indicated part is 16,330 feet above the level of the sea; but at a depth of 680 feet from the top, there is a tunnel to run 3,850 feet in length, and at an altitude of 15,650 feet.

After Machucana, there is a line of retrograde development, where the Parac river falls into the Rimac. The wildness and savagery of scenery up here is indescribable; and how the people live in such an out-of-the-way town as San Mateo is a problem not easy to be solved. Here, no doubt, there is a sort of refreshment for the traveller coming over the Andes; but it must be a cheerless one. It is, however, very comfortable at the house of Mr. Meiggs' engineer, seen with its commodious verandahs in the centre of the view.

From Machucana, the plan of the road is thus sketched out by Mr. Sweet, C.E.:—To Chicla, a distance of twenty-five miles—where there is another development of the retrograde class. The valley of Chicla is at an altitude of 12,000 feet above the level of the sea.

Between San Mateo and Chicla, the line passes through a horrible gorge, to which the title of “Los

Infiernillos"¹ has been given by the Spaniards. "The river here," says Mr. Magee, "passes for some distance between two walls of rock that rise perpendicularly to heights variously estimated at 1,000 to 1,500 feet. For a considerable way it comes down a flight of stairs or falls, roaring like a small Niagara. The line leaves a tunnel, crosses the river on a bridge of 160 feet span, and at a height of 165 feet above the water, entering another tunnel."

From Casapalca across the summit, and to the Rio de Visca, a tributary of the Amazon, the track although between certain points, yet is made up generally of a succession of curves.

From the final station at the same place already mentioned, Oroya, 140 miles from Lima, it is considered a distance of 250 miles to the navigable waters of the Amazon. This, however, is a point not yet decided on. We have had so many of these rivers in the Amazon valley examined by Mr. Markham, Mr. Squier, Mr. Chandless, Senor Raimondi, Admiral Trotter, Senor Malinowski (the chief engineer of the Oroya line), and a host of others, that we may hope to know before long whether this line can be continued, so as to make the Uyacali, or other stream, connect it with the Amazon, and thus be solved the problem of junction between the Atlantic and Pacific. One thing, at all events, is very

¹ The little hells.



WATERFALL OF LOS INFIERNILLOS (LITTLE HELLS).

satisfactory—that by the Arequipa line to Cuzco, as well as this Oroya line to the other side of the Andes, the Peruvian Government is losing no time in assisting some of the greatest facts of the age. But the most important of these will be the bringing of passengers from Calláo on the Pacific, across the Andes, to the Amazon—great highway of the Atlantic,—even at fifteen miles an hour,—and doing the whole journey in the space of from twenty to thirty hours.

Whilst we are still up in the regions of the Condor, I may ask my readers to glance at the map. By which they can see, that from the Oroya, branch lines may be run to the Cerro del Pasco mines—the richest silver-mines in the world—in a northerly direction, or to the south to the city of Jauja, which boasts of an atmosphere that is infallible for the cure of consumption. This is the place about which such an excellent treatise has been written by the present President of the Republic, and to which I have recently alluded.²

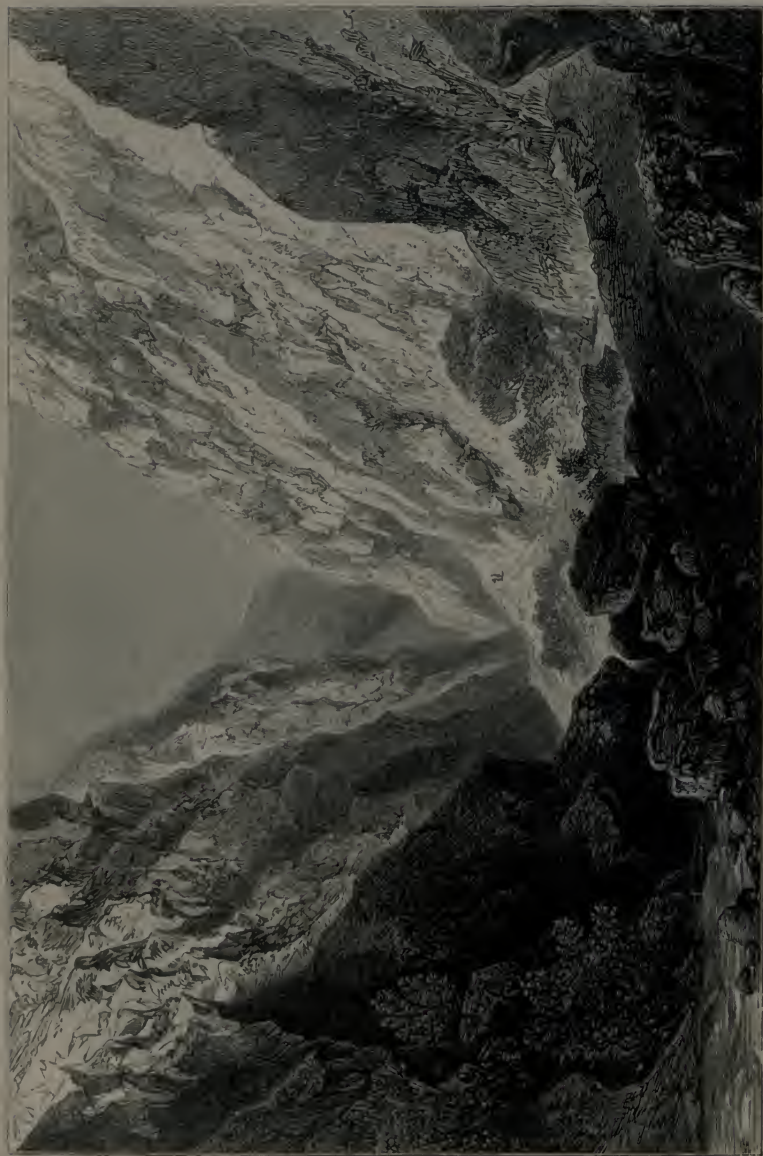
“On a simple inspection of the map,” says Senor Don Ernesto Malinowski, the engineer in chief, “we can notice the importance of the position called Oroya, to satisfy all the exigencies of a general head-quarters position at the other side of the Cordillera. From thence branches can be made in three principal directions, and evidently

² *Vide* chap. xix. p. 370.

the most direct way from Lima to Oroya—that by the valley of the Rimac—is the preferable one. A project departing from Lima, and passing by San Damian, would likewise have the advantage of terminating at Oroya. But it may be observed that such a route would necessitate a considerable roundabout, and a double expense of all transported material, not only with the distance from Lima to Lurin, but also with about eight leagues that it would be incumbent to pass on the very peak of the Cordillera, without gaining altitude.

“The road by the valley of the Chancay offers still greater inconveniences. It is certain that by this, the important mining district of Cerro de Pasco might be brought nearer the coast, and its distance from Lima the same, or a little less than by the Oroya. But then it would be necessary to sacrifice the wooded districts of Chanchamayo, and the valley of Jauja, whereof the products would have to be recharged, perhaps more than thirty leagues of additional transport, to arrive at Lima or Calláo. The impossibility of taking the line,” concludes Senor Malinowski, “by any other direction than one of these three, will therefore justify our selection, for the convenience of the most direct route from Lima to Oroya will be probably manifest.”

The engineering difficulties of this road are inconceivable to any one who has not been amongst them. Mr. Magee tells me there are parts where,



RAVINE ON OROYA RAILROAD TRACK.

“if it had not been for benches or shelves on the rocks, the places would be inaccessible to bipeds.” One part of embankment near the Verrugas bridge contains 90,000 cubic feet of material; whilst the quantity of cuttings, blastings, and tunnellings that had, and still have, to be made is prodigious. When I was leaving there last May, there were 850 mules and 150 horses in the employ of the company, making a transportation cost of 3,000 soles (45*d.* each sole) per day. All the plant for the building of the road, in advance of track, is necessarily obliged to be transported by mules.³

Looking over the excellent and exhaustive pamphlet of Dr Raimondi on the province of Loreto,³ I find that some of the rivers, as the Rio Mayo and the Huallaga, likely to be interested in the future continuation of the Oroya railroad, run through that province. The Huallaga river debouches into the Marañon, as the Amazon is styled to the west of Nanta. At the latter place comes out the Ucayali river, which, having its source from the combined streams of the Apurimac, the Uribamba, and the Tambo, flows in nearly its whole course through the Loreto province. The limit of navigation up the Huallaga is now to a place called Chenuci, beyond Yurimaguas, and not at all far distant from the fertile Peruvian

³ “Apuntes sobre la Provincia Litoral de Loreto.” Por Antonio Raimondi, Professor de Historia Natural de la Facultad Medicina. Lima, 1862.



CITY OF JAUJA (THE XAUJA OF PRESCOTT).

clining to yellow or golden. The tunic of the Campas reaches down to the ankle.”

Then follows a philological dissertation on the superior beauty of the Campas over the Piros idiom—which I confess, with what is supposed to be the skull of a Campas man before me, I am slow to appreciate. “The Campas who inhabit the mountains of Chanchamayo,” he tells us, “are very hostile, and no friendly relations can be entered into with them.” Those of the valley of St. Ann, in the department of Cuzco, are, however, tractable—Mr. Raimondi having been hospitably treated by them in 1858.



SKULL FROM CAMPAS.

I cannot say whether the skull, which is here illustrated, belongs to the Campas tribe, or whether it is of the trachycephalic, dolicho-

cephalic, scaphocephalic, or any other jaw-breaking cephalic type; for I claim no status in craniology, although having picked up nearly a thousand skulls during my two years in Peru; but the original of this is at Lima, in the possession of Mr. Bryant, of the mint, and from it Mr. Richardson, the photographer, took the sketch. That it comes from a height of 12,000 feet above the level of the sea I have no reason to doubt; for that is the given altitude of the place, named Campas, where it was picked up.



SKULL FROM NEAR SURCO.

In describing the Conibos, who live in different parts of the Uyacali valley, Senor Raimondi^o gives an account of the custom by which this

^o Op. cit. p. 119.

abnormal head-formation is caused:—"The Conibos have peculiar characteristics amongst them. With others, they have the barbarous fashion of flattening the heads of their children with two small pieces of thin board—one of which is applied to the forehead, and another behind—in such a manner that the front of the head is pushed



SKULL FROM HUANCANI.

down, and the head enlarged posteriorly, resembling the skulls that are sometimes turned out of the burial-grounds (huacas) in the sierras. In the mission of Sarayaco, I had the opportunity of seeing a child, which its mother had brought to be baptized, and which, besides having the head enlarged behind, had at the same time a rounded projection on the frontal bone; the latter being much depressed outside the prominence. Not understanding how a projection could be de-

veloped in a skull flattened by a board, I asked the mother if the board employed to flatten the head of this child was a smooth surface, and she answered me that there was a considerable-sized hole in it. Thus with facility could be explained the protuberance in question—the cranium having become developed in the part corresponding to the hole, from not finding itself compressed there by the flat board.”

I know not if Mr. Raimondi made any inquiries as to what was the *rationale*—if such a word can be used—of this barbaric deformity amongst them. For he gives us no account of it. These Combos, he further tells us, with the Setebos and Sipibos—all three being often confounded one with the other—make holes in the wings of their noses, to suspend little silver drops from them, which sometimes come down as far as the upper lip. They are, moreover, remarkable for the roughness and raspiness of their skins, which is in no small degree attributable to mosquitos and sand-flies, as well as to a sort of permanent eruption on the cuticle.

CHAPTER XXII.

Andean scenery.—Grand and picturesque, though uncomfortable.
—From Lima northwards.—By the sea-shore.—To Ancon, Pasamayo, Chancay, and Huacho.—Brighton of President Balta.—Forbidding aspect of the place.—Enormous extent of burying-ground at Ancon.—Three different forms of graves.—Modes of burial.—Skulls hence for Professor Agassiz.—Railway from Ancon to Chancay.—Immense Golgotha at Pasamayo.—Great antiquity of materials excavated.—Similarity to those at Pacha-Cámac.—Copper obolus in the mouth.—Whence were the thousands brought?—Chancay and its rustiness.—Dilapidated condition.—Sleepiness of people.—Chapels and hospital.—Antiquity limited to period of Conquest.—Profusion of ruins.—Ancon derived from Hong-Kong—Chancay from Shanghai.—Dr. Tschudi at Huacho.

RETURNED from my trip up the Oroya line, I made the following entry in my note-book :—

“ Amongst the Cordilleras of the Peruvian Andes—those vast upheavals of the old volcanic periods,—and whether seated on a pinnacle, wandering through a valley, or scrambling on mule-back up and down a precipitous gorge, I can see little of what is associated, in my mind’s eye, with Byron’s expression of

‘The wild pomp of mountain majesty.’

Call it grand, sublime, picturesque, romantic, or what you please, but outside of very few spots,

where one meets cordial hospitality (as I have had it invariably from the railway officials employed by Mr. Meiggs), the permanent impression, which these dark masses of Cyclopean mountain gave me, was of their being the most superlatively uncomfortable places to be obliged to pass a night in."

Between Lima and the port of Huacho, seventy to eighty miles distant by land, a railway was inaugurated in a short time after the late President Balta came to be at the head of affairs in Peru. It was undertaken from a contract given to Senor Don Modesto Busadre, a citizen of Lima, on the 19th of August, 1867. This, however, was transferred to Senor Don Waldo Grana, one of the directors of the Bank of Peru, in March, 1870, and on 19th of following month in same year it was opened to the public as far as Ancon, distant about eighteen miles from Lima, and already constituted the favourite bathing-place of the late President Balta.

Although Stevenson devotes several pages¹ to Ancon, Pasamayo, Chancay, and Huacho, strange to say he never mentions their crowded grave-yards. Hence I am led to infer that the excavations which are seen everywhere in these districts must have been made since he was there. From Paz Soldan's geographical map, I should guess Ancon to be in the Caraballyo district, although even its name

¹ *Op. cit.*, vol. i. chap. xv.

is not mentioned by him.² To reach it from Lima we have to go by the train from a station on the side of Rimac opposite to that of the Oroya line. Our first few miles, through the suburbs and past haciendas, or sugar-cane farms, bring us to the station called "Las Infantas;"—then across the little rivulet of Chillon,—past another stopping-place, Puento de las Piedras,—by some old ruins of adobe construction,—through a Golgotha of skulls and other bones,—and into the little wooden village of Ancon.

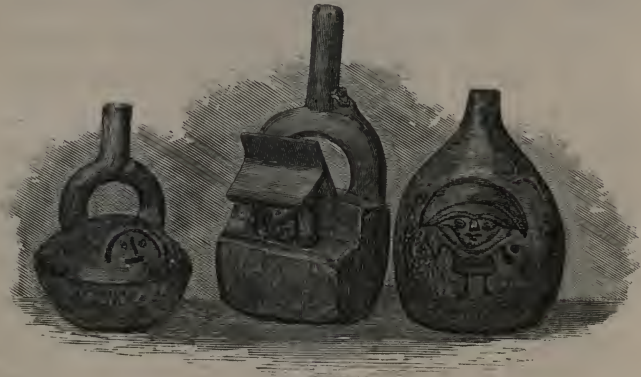
At present (I wrote of it in January, 1872) it is the head-quarters of President Balta, where he has four to five thousand troops in improvised barracks. It has a very spacious hotel, and the soil being of fine sand, in each street there is a wooden *trottoir* to the houses. One of the finest residences in the town is that of Senor Grana. There is a mole here, and now we find two Peruvian men-of-war in the harbour. It is an uncommonly pretty little cove—the waters literally crammed with fish; the air alive with pelicans, penguins, sea gulls, and other piscatorial birds, that seem to have all the game to themselves. Not a vestige of vegetation, save two stunted palm-trees in the upper street, and a few flowers in the hotel verandah. Smooth sand

² There is no mention of these places by Cieza de Leon, as he jumps from Huaman, or La Barranca, by saying, "One day's journey further on brings us to the valley of Huara, whence we pass to that of Lima." Op. cit. p. 248.

is in the bay, and a capitally-arranged bathing-house down at the end of the strand, which at this point is overtopped by a hillock of from seven to eight hundred feet in height, and declining gradually in its altitude, as it stretches out about a mile to the corner of the harbour's mouth. At this point excellent sport is to be had, as there are generally several seals and sea-lions basking on the rocks.

Turning my back to the hotel, and riding to the distance of half a mile (to begin with)—then going on two or three miles farther, and—finally making a circuit of six to eight miles, my journey is all through burial-ground. Skulls, legs, arms, and the whole anatomy of the human body are about. Legs attached to pelvis, and bent up, still with mummified skin on them; arms in the same state; relics of plaited straw, forming coffin-swathes; pieces of net, of cloth, of cotton-flock, and many other such accompaniments of the funeral accessories. Some water-crofts, of a very superior quality, have been obtained out of the graves at Ancon. Of those there are three different forms, in places separated at short distance from each other, but each style having its defined outline of locale. As to the shape of the graves, there are some of inverted cylinder form, like that of a limekiln, the insides of which are lined with masonry work. In those the body is placed in the upright position. There is also the ordinary

longitudinal grave, in which the corpse is put right in contact with the earth. Likewise the grave cut square to a depth of six to eight feet, at the top of which, or within one to two feet of the ground, is a roofing or covering over of mat-work, placed on wooden rafters. In one of these last-mentioned I saw three bodies, all wrapped up together, being man, woman, and child. In this case the faces were swathed with llama wool instead of cotton, as is usually seen in ordinary ones. Here too I turned out relics of fishing-nets, with some needles for manufacturing them, —varieties of cloth,—tapestry, and work-bags resembling ladies' reticules.



WATER-CROFTS EXCAVATED AT ANCON.

Not a vestige of vegetation being about, nor sign of relic of the terraces mentioned by Prescott, the first difficult problem to be solved is—whence came these hundreds, and thousands of people, who are

buried in Ancon, or how did they make out a living whilst on the earth? I sent a collection of skulls, with their accessories of cloth, fishing-nets, and so forth, from Ancon to the Anthropological Institute of London; and in less than two days between this and Pasamayo, only fourteen miles farther down the sea-shore, I had gathered 384 skulls, with specimens of pottery, for Professor Agassiz, which he took away in the United States exploring-ship "Hassler," brought by him down from Calláo for the purpose.³

The railway from Ancon to Chancay—all of this Huacho line that is yet accomplished—is certainly not very much to be commended to nervous people. Its track is on the side of a soft-sand hill—sand of the same quality and of a like material as the Médanos heaps bordering the Arequipa track,⁴ and therefore having no cohesive nature. Thus it is as far as the extensive burial-ground of Pasamayo—a place which has nothing to mark it as a necropolis, save the hundreds and thousands of skulls that have been turned up by the seekers after gold, and silver. The burial-ground here has more than half a mile of railway cutting passing through it. It extends up the face of the hill from the sea-shore to the height of about 800 feet, and, being from half to three-quarters of a mile in breadth, some idea may be formed of its extent. With the aid of

³ *Vide* Appendix B.

⁴ Chap. v. p. 81.

a few assistants I got several skulls from it, together with some specimens of a not very superior style of crockery-ware, in the shape of saucers. Amongst the peculiarities of these skulls were several with sutures in the frontal bones, like those



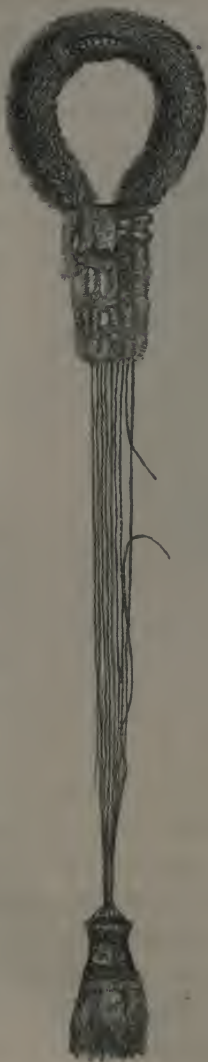
SKULL WITH SUTURE IN FRONTAL BONE, FROM PASAMAYO.

which I afterwards procured at Pacha-Cámac. In order to be sure that these were not remains of people killed in battle, or by any accidental casualty, I organized some extensive diggings, from which were taken out skeletons, accompanied with cloth and crockery-ware, much of the latter crumbling into dust the moment it was exposed to the external air. Another resemblance to those found at Pacha-Cámac consisted in the small pieces of copper between the teeth, as if for the Charon obolus, and one or two had plates of copper

on the head. I must confess myself puzzled more and more to guess whence these people were brought to be buried, and by what means, for, previous to the railway on this line, there was only a bridle pathway to and from Lima.

From the graveyard to the station of Pasamayo we have about a mile. Here there is a small valley, in which is a sugar-cane establishment, and through this runs the river of Pasamayo, generally a small stream—but, coming as it does from the Cordilleras, a rushing, roaring torrent when the wet season is in. There is an excellent trestle-bridge for the line across Pasamayo river, and five miles farther on, having gone through many ruins of old walls,—of bones lying about—and of a multitude of archæological relics, enough to occupy the most industrious of students for some months, we arrive at Chancay.

LLAKA WOOL ORNAMENT FROM PASAMAYO BURIAL-GROUND. FROM THE COLLECTION OF SENOR ESPANTOSO, AT LIMA.



I stayed for several days in this little village occupying the pretty house of Senor Grana; and



CHOLO INDIANS



CHOLO INDIANS SITTING DOWN.

from my note-book I take the following extract:—

November 1st, 1872.—Wandering through the streets of Chancay,—wading amongst the heavy sand of the principal square, or Plaza de Armas, is very fatiguing work in the relaxing atmosphere down here. Although it is not yet one o'clock, the Matriz, or parish chapel, is locked; for, strange to say, every place of worship in Peru is hermetically sealed to the outer world after mid-day. As I walk along, I cannot help being struck with the intense expression of indolence in the faces of the people, and the palpable signs of irreparable decay in the buildings. Perhaps they are cause and effect. Whether it is at shop doors, plying the needle at a tailor's, or the awl at a shoemaker's, they are all doing it with an air of lassitude, that signifies how little they care about this world or the next. The condition of the town, as regards heaps of garbage lying about, unfinished houses that seem to have been started into building half a century ago, with the unwashed faces everywhere, prove one part of the last-named proposition. The dilapidated condition of the chapels, of which there are three, with the number of bats and the mouldy smells inside, prove the second—for I managed, by hunting out the sacristans, to get into each.

Attached to the chapel of San Francisco, with its tower of a few rotten branches and bits of mud,

that never could have had strength to support the smallest bell, is a hospital—the very atmosphere, (if I may call it so,) inside of which is enough to qualify a man to be a patient for such an institution anywhere in the world. The portions allotted to male and female patients are divided by high walls; but as there is nothing in it now but dirt, and decay, we have to be satisfied with speculating as to what the town, the chapels, and the hospital might have been in times gone by. For we can get no data about them from any person. There is a market-place by which we pass, but the only tenants of it at two p.m., are a few turkey-buzzards, employed in their daily occupation of clearing decks. Close by is an immense large door at each side of a corner, by which entrance is to be had into a general store, and this door is about the size of the main passage to the General Post Office at St. Martin's-le-Grand, in London.

Here, as elsewhere, I have been presented with earthenware, so old—so very old, the donors say—in fact, as old as the conquest! In every town of Peru that I have visited I have rarely found the owners of prehistoric crockery-ware to be able to comprehend, that it could date farther back than the time of the Inca's subjugation.

The limit of Peruvian antiquity to the period of Pizarro's invasion is followed by Stevenson⁵ also, where he says he has drunk, at Patavilca and

⁵ Op. cit., vol. i. p. 373.

Cajamarca, chicha that had been found “interred in jars in the huacas, or burying-places, where it must have remained upwards of three centuries.” Again⁶:—“Owing to the nitrous quality of the sand, and to its almost perfect dryness, the bodies are quite entire, and not the least defaced, although many of them have been buried *at least three centuries.*”

Probably five to six times three centuries multiplied would be nearer the mark in “many of them.” The limit of three centuries may imply that all these things were done by some spiritual inspiration, just before the Spaniards came, that they might fall into the hands of their conquerors. I showed some of the proceeds of my excavations to Professor Agassiz, and he assured me of the impossibility of calculating, without better data than we have as yet, whether they were aged more thousands of years, than the owners credit them for centuries.

Crossing the brow of the first hill, entering Chancay town, and stretching towards the sea, I see the remains of a two-yards-thick wall, constructed of adobones. On the face of this hill, pointing to the line of railway from Ancon, are two stone ditches, perfectly parallel and symmetrical, about 100 yards apart, and running from bottom to top to a height of about 300 yards. Between these are other lines of stones displaced—perhaps the ruins of some of the old terraces. All about this

⁶ Op. cit., vol. i. p. 415.

place, at the base of the hill looking towards Chancay, as well as on the side in front of the sea, is full of graves;—some built up with stone walls, through which the railway cutting has gone;—others lined inside with mud-bricks of no formation more than that of a heap of clay and water moulded up in the hands and (as shapeless as an African yam) allowed to dry in the sun. Large quantities of broken crockery-ware, some of which was of excellent material, and beautiful design, lay scattered about.

Over the hills of Chancay we find a large quantity of small stones—such as might have made terraces or walls—of a different geological formation from the rock here, and therefore proving that they have been transported. These are covered over with lichen. On to the sand of the bay of Chancay fall several small streams of the purest water, coming out of the bank at a height of eighteen to twenty feet. I cannot doubt that this is infiltrated from the interior Cordilleras.

A few days previous to my coming down I received a letter from my friend, the Rev. Kenelm Vaughan, whom I had recommended to try the air of Chancay, as I had heard it highly spoken of in reference to such a delicate pulmonary condition as he was labouring under. Dated 30th of October, he writes:—"I am come to the conclusion that Chancay is a great city of the dead, or has been an immense ossuary of Peru; for, go where you

will, on mountain-top, on level plain, or by the seaside, you meet at every turn skulls and bones of all descriptions. Never was I in such a sepulchral spot in my life. Were it not for one thing, which is all to me (the blessed sacrament of which I am guardian here), I should soon be in my dying agonies, and my bones perhaps come to be knocking about like that poor Chinaman who was inhumed by the seaside a few nights ago."

During one day of my stoppage, I rode over a few leagues to a hacienda, formerly owned by the late President Balta, and now tenanted by his son Don Ricardo. Rearing of pigs seemed to be the chief feature of the farm. A few leagues farther on, and in valleys apparently shut in from communication with the world, are stone walls, adobe ruins, excavations, with skulls and all kinds of bones lying about.

Some of those people who attribute the first colonizing of Peru to Chinese, try to make out that Ancon is derived from Hong-Kong, and Chancay from Shanghae. I do not intend to argue on this subject.

The road hence to Huacho, although only sixteen leagues farther north, according to Paz Soldan, must be very difficult of accomplishment. So as the railroad goes no farther than Chancay, I deem it better to return *viâ* Lima to Calláo, and take one of the excellent steamers of the Pacific Company for our trip farther north. I do this on

board the steamship "Quito," with the most genial of Commanders, Captain Bird.

By referring to Dr. Tschudi's book,⁷ I find that he visited Huacho during his residence at Lima in the year 1841. His chief occupation there, during a six weeks' residence, was to augment his ichthyological collection, and to make himself "*well acquainted with the environs of Huacho.*" From several hundred specimens of fish he made a fine collection, of about a hundred and twenty different species. These were put into a cask with brandy, which was allowed to evaporate in the sun's heat on the mole at Calláo. A second collection shared no better fate, for on arrival in Europe it proved utterly useless.⁸

"Huacho," the Doctor tells us, "is a large village, which, since the War of Independence, has received the title of city. It has more than 5000 inhabitants, of whom four-fifths are Indians, and the rest Mestizos. Very few whites have settled here. Among them I met an old lame Spaniard, Don Simon, who, at the beginning of the present century, accompanied the celebrated Alexander Von Humboldt to the beds of salt, situated a few miles to the south. In relating, with enthusiastic

⁷ "Travels in Peru during the years 1838—1842, on the Coast, in the Sierras, &c." By Dr. J. T. Von Tschudi. Translated from the German by Thomasina Ross. London: David Bogue, Fleet Street, 1847.

⁸ Op. cit. p. 211.

pleasure, his recollections of the youthful and indefatigable traveller, he told me that some years ago he had read the book which Humboldt wrote on America, and he added, with great simplicity: '*Pero Señor, ahí hé perdido los estribos.*'"⁹

The rest of the Doctor's observations about this place refer to the Cholos' mode of bringing poultry to Lima—of the women plaiting straw hats and mats, which are also sold in Lima—of a Padre that had such a love for his hounds, that separation from them was his great grief when he was dying, and he called to his negro servant for a pair of buckskin hunting gloves, and desired to have them drawn on. Further, he tells us of the immorality of the clergymen here—and of the filth of the native burying-ground. At the end of his six weeks, he ascertains that "the environs of Huacho abound in fine fruit gardens and productive Indian farms." But not a word about its antiquities. Perhaps this should not be wondered at when we find, as may be seen hereafter, that his descriptions of many other places are nearly, word for word, from Garcilasso de la Vega, and the various romancers.

From Calláo to Huacho by sea is only sixty-five miles. Viewed from the harbour—for I had not

⁹ Literally—"But there, sir, I lost the stirrups." Meaning that he did not understand it. The Spanish phrase, "Perder los estribos," signifies to get confused or embarrassed.

time to go on shore, as the steamer stops only a short time here to land passengers and mails—the town appears, almost a mile off, to the left of the landing-place. Little of it can be seen except of a group of houses, having the steeples of three or four chapels sticking up—one of them with a dome nearly as large as St. Paul's in London. Around the landing-place is a considerable fringe of green vegetation—evidencing cultivation. A small mole here begins at the first cutting of the Sayan railway. Another railway is about to start from this to the salt-mines, sixteen miles distant. Senor Paz Soldan tells us little more about Huacho than that there is “a huaca, or burial-ground, near to this town, and about which the people relate a thousand fables.”

What a pity that some of these fables have not been investigated, to test their foundation of truth, or prove their falsehood!

CHAPTER XXIII.

From Huacho northwards.—In the Pacific Company's steamers. —Cholo element on the decks.—Met with on shore equally disagreeable.—Dr. Tschudi's visit to Huacho.—Spending six weeks in collecting fish.—Extraordinary art-work from Huacho.—Oral tradition of first Inca.—The town of Huaura.—Huaura and Pasamayo rivers.—Large mounds between Huacho and Supé.—Atahuanqui and the Beagle mountains.—Paramunca and Patavilca.—Commencement of the Chimoo territory.—Fortress at Paramunca.—Difference between Drs. Tschudi and Unanue.—Cerro de la Horca (hangman's rock).—Guarmey (or Huallmi).—Capt. Bird's clerks of the weather at Callejones.—The Bay of Casma.—Sumanco and its interior valley.—Mr. Swayne's hacienda up here.—The river Nepeña.

THE coast voyage from Calláo up to Huacho has the same monotonous feature as lower down—dark brown rock, occasionally set off by patches of white, that may be guano, soda, or possibly limestone. Now and then a little patch of green; but this is most perceptible as a kind of fringe near the burial-ground of Pasamayo, and there little farther than the extent which is marked by the necropolis boundaries.

Going north or south from Calláo, on board any of the Pacific Company's commodious steamers, I must confess that the Cholo element, invariably on decks, is not one of the most agreeable accompani-



Heliotype.

Front view of Ceremonial Court Dress of Cuys-Mancu, the last King of the Yuncas, in the Valley of Rimac, and lineal Descendant of the Cuys-Mancu mentioned by Garcillaso de la Vega (cap. xxxii. p. 212) as reigning at Pacha-Cámac when that place was taken possession of by the Inca Pachacutec. Taken out of a Royal Huaca, or burial-ground, at Huacno, sixty miles north of Lima, and now in possession of Professor Don Antonio Raimondi in that city.

ments. Here, this morning (the 20th of November, 1872), going along from my room to the Captain's, and so late as nine a.m., I have to pick my steps daintily, amongst many who are still bundled up in their coverlets on deck. Much care is needed, as the ship is rolling, not to come in contact with any of the chamber commodities which each family has with them, and, above all, to look sharp about the same state of affairs that Dickens describes of the Mississippi steamers, namely, "the deck paved with oysters." This last-mentioned custom is one of the most disagreeable accompaniments of Cholo society wherever you meet it. For it is not only confined to the decks, but penetrates to the cabin, and is remorselessly carried on during meal-times. In railway carriages, or in the chapels, you cannot escape it. It follows you not only in the streets, squares, and at the theatres, but sometimes intrudes into the drawing-rooms of the best society. At a hotel it is completely tyrannical, because there every one is supposed to have liberty to do as he pleases. Therefore it is not an unusual thing to see on the walls of the bedroom in the hotel where you sleep, sure evidence of the Cholo's previous occupation of your quarters. It is, in fact, simply disgusting.

I cannot feel at all satisfied at Dr. Tschudi's leaving Huacho, after his six weeks' residence, without being able to tell us something more of it than of his ichthyological collections—of its fruit-

gardens,—and of its productive Indian farms. That Huacho has still materials for further explorations—like nearly every inch of Peruvian territory on the sea-coast—is evident from the feather state-dress which was lent to me by Dr. Raimondi of Lima, to illustrate the antiquities of Peru. It was taken out of a burial mound here. The art that has been used in the manufacture of this is wonderful. The lappets hanging down from each shoulder, as well as the circle which embraces the forehead, are of one piece of fabric continuous with the broad flap that falls down the back. On this last-named is designed the figure of what is supposed to represent a fish, or reptile—the two eyes of which are made of red feathers—all the remaining part of the plumage being black, or white. But the most wonderful part of this work is, that the small feathers are so grafted, as it were, on a ground of cotton cloth, that the greatest force of my fingers could not pull one of them out.

The *Polayna*, or gaiter, which was intermingled with bright red and yellow colours, is turned upside down in the photograph. This is a cloth of nearly half an inch in thickness, and such as is worn to-day by the Indians who cross the Cordilleras. All of these were found in the same grave at Huacho.

It was at Huacho, Stevenson tells us,¹ he heard for the first time “the oral tradition” of the first

¹ *Op. cit.* vol. i. p. 395.

Inca, Manco Capac,—about a white man found on the coast by a Caçique, or head of a tribe, named Cocapac—as of this white man answering the question put to him by signs of “who are



GAITER, CLOTH, BAG, ETC., FOUND AT HUACHO.

you?” and his reply that he was an Englishman. This son of Albion, taken to Cocapac’s house, fell in love with his daughter, and married her, we may suppose. At all events, “the stranger lived with him (Cocapac) till the daughter of the caçique

(the same Cocapac) bore him a son and a daughter, and then died.”

To make the story short, Cocapac, who seems to have been considerably in advance of the age in which he lived, brought the boy, whom he had called Ingasman Cocapac—and how natural to the trusting mind seems the abbreviation to the pet name of Manco Capac?—together with the girl, Mama Ocee, across the Andes to Cuzco, a trifle of six hundred miles or so. Here a large tribe of Indians resided, whom Cocapac tried to persuade that their god, the Sun, had sent them two of his children to make them happy and to govern them. But the two new comers were not at once brought on the scene. They were crammed to play their part. The Indians had to go for them under the pilotage of Cocapac to a certain mountain, where they would be found at sunrise, with their hair like the rays of the Sun, and their faces of the colour of that orb. Yet the Indians, thinking probably that Cocapac was like the lady of Gengulphus² “coming it rather too strong,” arrived at the conclusion that the pair were a wizard and a witch, and sent them down to Rimac Malca, the plain on which Lima stands. Whence it may be seen how easy travelling over the Andes was in those days, even before the Incas had made their great highways, or Mr. Meiggs had commenced his railroads. The old man, however,

² *Vide* “Ingoldsby Legends.”

followed them, though probably not on a velocipede—for the distance is about 200 leagues from Cuzco to the Lima valley, and over Andes covered with perpetual snow, some of it being from 15,000 to 16,000 feet above the level of the sea.

He next took them to Lake Titicaca, to do which he had to recross the Andes again—over the like high mountains, and to a greater distance than Cuzco. Here Cocapac came to another tribe of Indians, on whom he tried the same game as at Cuzco. These were more amenable; for when they went to the lake, as they were told to do, at sunrise, they found the Viracochas (which I suppose was the fancy name for the brother and sister), and they immediately declared them to be children of their god, and their supreme governors. Then continuing the play—I don't know well whether to call it a farce or a pantomime—Cocapac told the people that the Viracocha Ingasman, Cocapac (which possibly may be translated as Cock-of-the-walk Englishman), had determined to search for the place where he was to reside. He requested they would take their arms and follow him, saying that, wherever he struck his golden rod, or sceptre into the ground, that was the spot where he chose to remain. The young man and woman directed their course to the plain of Cuzco, where, having arrived, the golden staff went into the earth. The first Indians, previously incredulous, surprised by the reappearance of the Viracochas, and over-

awed by the numbers that accompanied them, acknowledged them as their Lord, and the children of their God. "Thus, say the Indians,"—Mr. Stevenson concludes with the same gravity as he narrates the whole story,—“was the power of the Incas established, and many of them have said that, as I was an Englishman, I was of their family.” No doubt. Yet perhaps they might have added aside,—“but belonging to the Marines !”

From what I have seen of the Indians along the coast of Peru, I believe this oral tradition at Huacho was no more than a *crambe repetita* of the same fable put forward by Montesinos, Sarmiento,³ Garcilasso de la Vega, and a host of other Spanish fabulists.

In order to point out the discrepancies, as well as resemblances, between this oral tradition,

³ It will be a comfort to those who have doubts about much of the fabulous history of Peru, to read the following extract from the *Athenæum* of July 5th, 1873 :—“ Senor Gonzalez de la Rosa, a learned Peruvian, who is preparing editions of some important Spanish manuscripts for the press, has made an interesting discovery respecting one of Mr. Prescott’s principal authorities in his ‘Conquest of Peru.’ Hardly any author is more frequently quoted in that work than ‘Sarmiento,’ whom Mr. Prescott supposed to be a writer, who had himself been long in Peru, and an eye-witness of the scenes he described. Señor de la Rosa is able to prove that the manuscript in question is really the second part of the ‘Chronicle of Peru,’ by Cieza de Leon (hitherto supposed to be lost); that Sarmiento was a lawyer and President of the Council of the Indies, who was never in America in his life; and that the document is merely endorsed as having been sent to him.”

recorded by Stevenson, of what he heard about sixty years ago, and that published by Garcilasso de la Vega in A.D. 1609, or more than 200 years previous, I quote an extract from the latter, which is given in Rivero's work :⁴—"The Peruvians believed that the Sun, a tutelar divinity of their empire, had sent his own sons to reform and instruct them, of whom the descendants were their Incas or emperors. Previous to the arrival of these children of the Sun, Peru, like the other territories of the New World, was found, according to tradition, divided into several nations or independent tribes, wandering or fixed, rude and ferocious, whose unteachable and warlike disposition prompted them to battle continually among themselves. Ignorant of all industry and culture,⁵ knowing no law of morality [which, it might have been added, they were subsequently taught by the Incas, who all had their own sisters for wives] nor any social compact, wandering through the forests [this may be supposed to refer to the forests on the coast of Peru, that, according to Rivero, "present trees, which almost serve as props to the vault of heaven"]—more resembling the brutes than the human race,—subjected to the inclemency

⁴ Op. cit. p. 43.

⁵ Meant, no doubt, for the prehistoric Peruvians, who built the temple of Pacha-Cámac, the grand fortresses of Huatica, and the city of Chan-Chan, and whose works of art are chronicled in this volume.

of the elements and to the molestations and evils consequent upon this savage state,—none teaching them that they might better their condition. Such was their state when the merciful father, the Sun, placed two of his children on the lake of Titicaca [it may thus be seen that Garcilasso disdains to recognize the people of the coast having anything to do with the primary migration], and told them that they might go where they wished and wheresoever they pleased; they might stop to eat and to sleep. The Sun likewise commanded them to place in the ground a small wedge of gold which he gave them, informing them that where that wedge would sink at one blow, and go into the earth, there he wished them to stop and make their residence and court.

Arrived at the valley of Cuzco, after having vainly tried the prescribed operation through all the roads where they had travelled, they found themselves on the ridge of Huanaucauri, and there endeavoured anew to sink the wedge, which went in with so much facility at the first blow, that they saw it no more. Then said the man to his sister and wife, ‘In this valley our father the Sun commands us to stop and make it our seat and residence to accomplish his will. It is necessary that we take different ways, and that each should attempt to draw together and attract these people, to indoctrinate them, and accomplish the good which our father the Sun commands.’

From the ridge of Huanaucauri the man went to the north, and the woman to the south, and harangued the multitudes, exhorting them to unite and to receive, as gifts from heaven, the counsels and instructions which they condescended to give by order of their father the Sun. Fascinated by their appearance, and confirmed by the respect with which these extraordinary beings inspired them, the wandering tribes [no doubt some of the savages before described] followed them to the valley of Cuzco, where they laid the foundation of a city. This region was the central district of these tribes, and its name, according to Garcilasso, in the language of the Incas, signifies *Navel*. And it is certain, according to the traditions of the natives, that as the navel is the source whence the infant receives life and growth in the womb, the plane⁶ (plain?) of Cuzco was the nucleus of civilization, and the focus of light for the State, founded by Manco Capac and Mama Oello-Huaco, as the celestial couple were called."

We are further told that Manco Capac taught the men agriculture, industry, and the useful arts, with laws, as well as political and social perfection, whilst Mama Oello "taught the women the art of spinning, weaving, and dyeing,—and at the same time the domestic virtues becoming grace, chastity, and conjugal fidelity."

The arrival of Manco Capac from Lake Titicaca,

⁶ *Sic* in Senor Rivero's book.

Garcilasso tells us, took place in A.D. 1021, or little more than eight hundred years ago. From the few excavations I have been able to make, I am disposed to think that "agriculture, industry, and the arts," ornamental as well as useful, were known to the Peruvian races before that time, as well as that Mama Oello teaching the arts of "spinning, dyeing, and weaving," to the women, was a sort of bringing coals to Newcastle.

Garcilasso de la Vega gives account of only fourteen Incas between A.D. 1021, Manco Capac, and A.D. 1533, when Atahualpa, the last of them, was murdered by order of Pizarro in the public square of Cajamarca. Whereas Montesinos records a hundred and one (101) Incas—and although he begins them with Manco Capac's father, he traces the first appearance of that personage to an emigrant from some place abroad, who, after killing two of his brothers, proclaimed himself as a son of the Sun. The following is part of the rhapsody of Montesinos:—
"Peru was populated five hundred years after the deluge. Its first inhabitants flowed in abundantly" [what a pity we are not told how they flowed, what they flowed upon, or wherefrom they flowed at all!] towards the valley of Cuzco, conducted by four brothers named Ayar-Manco-Topa, Ayar-Cachi-Topa, Ayar-Anca-Topa, and Ayar-Ucha-Topa, who were accompanied by their sisters and

' Rivero's Work, op. cit. p. 52.

wives [wife and sister being one and the same person, I hope it is understood], named Mama Cora, Hipa Huacum, Mama Huacum, and Pilca Huacum. The eldest of the brothers mounted to the summit of a ridge and threw with his sling a stone to each of the four quarters of the world, thus taking possession of the soil for himself and his family. He afterwards gave a name to each one of the quarters which he had reached with his sling, calling that beyond the south Colla, beyond the north Tahua, beyond the east Antituyu, beyond the west Contisuyu, and for that reason the Indians called their kings Tahuantin Súyu Capac, i. e. lord of the four quarters of the globe. The youngest of the brothers, who, according to tradition, was at the same time the most skilful and hardy, wishing to enjoy alone the plentitude of power, rid himself of two of his brothers by enclosing one of them in a cave, and throwing the other into a deep hole, and then caused the third to fly to a distant province. The fratricide consoled his sisters [they must have been very amiable, these ladies, as well as susceptible of consolation, to have taken to it under the circumstances] and told them that they must consider him as the only child or son of the Sun, and obey him as such. He commanded his kinsmen to level the ground and make houses of stone. Such was the origin of the city of Cuzco.⁸ The neighbouring

⁸ Montesinos supposes that the name of Cuzco is derived

nations followed the example of the vassals or subjects of Ayar-Ucha-Topa, and founded populations in the vicinity of this city. For sixty years did this first king govern (whom Indian traditions also called Puhua Manco), leaving the throne to his eldest son, Manco Capac, the fruit of his union with his sister, Mama Cora."

Upon this I have only to observe, that Montesinos must have spent his fifteen years rather unprofitably in Peru not to be able to get up a better thing than such a clumsy story. He "studied antiquities with so much zeal," says Rivero, "that none equalled him in archæological knowledge." If his account of the foundation of the Inca empire be a specimen of his research, I for one should be much inclined to set him down as a concocter of myths. In spite of a somewhat similar opinion given by Rivero, although not so emphatic, the latter says that "the relations of Montesinos in a later period of Peruvian history present a degree of authenticity superior to that of Garcilasso de la Vega,"—from which I come to the conclusion that scarcely a single word said by either of them is to be believed.

The account given by Pedro de Cieza de Leon of the first origin of the Incas is simply that whilst the Devil was playing his pranks "with the people in

from Cosca, an Indian word which signifies "to level," or from these heaps of earth, called Coscos, which were found in the environs.

the provinces of the Collas, and in the valleys of the Yuncas," two brothers rose up [he does not say whether from the lake, the provinces, or the valleys], the name of one of whom was "Manco Coapac."⁹ The marvels and fables repeated by the Indians about these men were to have been published by Cieza de Leon. But the second, third, and fourth parts of his work, have not come to light—the third and fourth being in MSS. in the library at Madrid—and the second mislaid.¹⁰

Yet, devoid of its mythical tomfoolery; the tradition of Stevenson, about some white man wanderer having settled in Peru, is worthy of being discussed. Particularly when we find that a somewhat similar legend exists about white men in Brazil,¹ before its discovery by the Portuguese. Another white man, "a bearded white man,"² has been accredited by the Mexicans as a legislator called Quatzalcoati, the high-priest of Cholula, chief of a religious sect, as well as legislator. He preached peace to men and prohibited all sacrifices to the Deity, excepting the firstfruits. These three white men, together with another—bearded likewise,—and having a triplicate of aliases, Bochica, Nemquetheba, or Subé, recognized as a legislator by the Muysca Indians of the plains of Cundina-

⁹ Cieza de Leon's Op. cit. p. 136.

¹⁰ This is the book erroneously attributed to Sarmiento. Look back to note at page 108.

¹ Stevenson's Op. cit. vol. i. p. 397.

² Stephenson's Op. cit. p. 65.

marca, should not be passed over in the still unsettled question as to the origin of the early Peruvian race. It seems to me outside the point, the argument of Stevenson that the Inca laws did not "bear any resemblance to those of any of the northern governments, except setting aside lineal descent, the papal, where the spiritual authority is exercised by the King (query Pope?) of Rome."³ Because, in the times when such incidents may be supposed to have taken place, it was not at all probable that such adventurers, as those spoken of, should bring with them the laws or religion of the countries whence they came. We are more likely to approach to whatever truth may be in these traditions, by comparing the arts and manufactures to be discovered in the burial-mounds, than by any reasoning of analogy in "religion and legislature."

A few miles from Huacho stands the small town of Huaura, which is the capital of the province of Chancay. This place has got a considerable number of sugar-cane factories, and of course plantations in the neighbourhood to correspond. By the side of Huaura goes out into the sea a river of the same name, which has its origin so far up in the Andes as Cajatambo. This and the Pasamayo already mentioned are the only two rivers of the province. The Cajatambo source of the Huaura I give on the authority of Mariano Felipe Paz

³ Stevenson's *Op. cit.* vol. i. p. 399.

Soldan,⁴ whereas Dr. Tschudi says it is formed by the union of two rivers. The larger of the two rises in the Cordillera of Paria, and flows through the wild ravine of Chiu Chiu. The smaller river, called the Rio Chico de Sayan, rises from a lake of considerable size in the Altos de Hunquimarcu. Both unite below the village of Sayan.

The map which accompanies this book makes me incline to believe the correctness of Doctor Tschudi's account. For it will be seen there is a considerable difference in the relative positions of Cajatambo and Huaura;—the river Barranca, higher up the coast, being the one that rises near Cajatambo. Except for geographical accuracy, it is not, however, of much consequence.

Between Huacho and Supé we pass a point called Atahuanqui, close to which are two enormous mounds, resembling those of the Campana, and San Miguel in the Huatica valley. We are not near enough to make out by a glass whether they are burial (huacas) or fortress mounds.

Supé is about 120 miles north of Calláo, and is the northern boundary of the jurisdiction of that port. It is a very quiet spot as regards the condition of the sea, and therefore easy for landing. The chief exports hence are cotton, wool, and occasionally a little silver ore. From Lima, through Chancay and Huacho as far as this, a general feature of the farm places is the feeding of pigs.

⁴ "Geography of Peru," p. 321.

Before coming to Supé we pass by the island of San Martín, parallel and interior to which we get glimpses of the Beagle mountains, marked on the chart as 4000 feet high. In the neighbourhood of Supé are many mounds, of which nothing is known; and on the top of a small hill you can see the remnants of an old city. Ask a Peruvian about them, and he will tell you they are of the Inca period. Whereas the fact is they are of a prehistoric people, of whom all other possible traces were swept away by the Incas, except the grand old ruins that they could not destroy.

About two miles and a half beyond Supé we pass Barranca, where we see some bathing-boxes on the shore. This is the bathing-place for Patavilca, Paramunca, and Barrancas, all of which are most interesting for exploration. Here, according to Garcilasso de la Vega, we are coming on the territory of the great Chimoo, who offered more resistance to the Incas than any other of the coast rulers.⁵ Close to where we are now, I can see two streams pouring down from the bank into the sea—a very rare sight along the Peruvian coast. Up to this the last-named has the same forbidding aspect which it

⁵ Yet Salcamayhua says, "The Inca Pachacuti marched to the country of the Chimoo, where was Chimu Capac, the chief of the Yuncas, *who submitted, and did all that was required of him.*" Rites and Laws of the Incas, translated by Clements R. Markham, C.B. Page 94.

presents all along—cindery-looking islets, stretches of sand—now and then a patch of verdure, which one cannot help pitying, in its sickly appearance, knowing, as we do, that it never receives a drop of rain—ranges of mountains at different heights,—with intervening gaps, and conical tops. Behind these is a dense cloud, through which we occasionally get a view of an Andine peak,—at once asserting its supremacy. Still, with the “one step from the sublime to the ridiculous,” the Cholos on board paying their devotions to the deck, or to the oilcloth on the cabin-floor.

Four leagues to the north of Supé we pass what is styled the hacienda of Paramunca—a large sugar-cane establishment. This, no doubt, derives its name from Paramanca, or Paramunca, the place reputed by Garcilasso de la Vega, and believed in by Mr. Markham, Dr. Tschudi, and all previous writers about Peru, as the locale where the Incas erected a fortress to celebrate the conquest of the Chimoo monarch, and the subjugation of his territories. In Dr. Tschudi's work ⁶ is a note, which contra-

⁶ “According to some ancient authors, Paramanca was built by King Chimu (this ought to be the king of Chimoo, as his territory was called, the last great monarch being Chucha Machoon as a frontier fortress against the neighbouring nations.” The Doctor adds, “There is some foundation for this view of the subject, as Chima Caucha (Chucha Machoon), long before he was attacked by Capac Yupanqui, carried on war most fiercely with Cuys Mancu, King of Pacha-Cámac, and Chuquiz Mancu, King of Runahuanac (the present Limahuana.)” Op. cit. p. 219.

dicts this idea, and seems to me the proper view of the case. For an English gentleman who was on board, and who resides at Paramunca hacienda, told me he saw no difference from each other, in any of the buildings here, as regards their seeming antiquity, appearance, and style of structure. "They are," he added, "exactly like the mounds in the Huatica valley." Of these I had shown him the sketches.

The dispute between Dr. Unanue and Dr. Tschudi as to this fortress being built to commemorate the peace between the Inca, and the conquered, is scarcely worth discussing. The Spaniards, at all events, by giving the neighbourhood the title of Barranca, or the bank—by which name we are also directed to it in Garcilasso de la Vega—have managed to confound the whole of the surroundings. There is a small river of Patavilca running into the sea near the hacienda. The fortress is built on an isolated small hill, to which some writers have given the title of "Cerro de la Horca," or Gallows Hill. Because here, they say, was kept a prison by somebody at some time or another. The mode of punishment, for capital offences, was by flinging the condemned from the top, about 300 feet high, and with a precipitous face to the sea, down on some sharp rocks that are underneath. If this be correct, it must destroy any claim made for the Incas as to their having had it in their programme. For they surely came

to preach "benevolence and suavity," according to their historians. The word Paramanca, Tschudi tells us, means in the Quichua, "rain-pot"⁷—a title difficult to understand in a part of the coast, where rain is not known, except a few times during a century.

It is but fair to add that Senor Don Mariano Felipe Paz Soldan, in his "Geography of Peru,"⁸ speaks of these ruins as entirely belonging to the Chimoo period. He mentions the fortress, which is quadrangular,—its walls of large adobe (tapia), and measuring 300 yards in length by 200 in breadth. Within it are other squares, with bastions and passages of narrow ways—in fact, the same style of building as we saw at Huatica valley, and as we shall see in a few days at Chan-Chan, near Trujillo. These stone circles that we observe on the sharp rock, he speaks of as the prisons of the Chimoo king, from which criminals were thrown.

Of the fortress here, Stevenson remarks:⁹—"About five miles from Patavilca, and a hundred and twenty from Lima, is a place called Paramonga, or the Fortaleza [the latter being no doubt the Spanish title for it]. The ruins of a fortified palace of very great extent are here visible; the walls are of tempered clay, about six feet thick.

⁷ *Para* (rain), *manca* (pot).

⁸ *Op. cit.* p. 233.

⁹ *Op. cit.* vol. ii. p. 22.

The principal building stood on an eminence, but the walls were continued to the foot of it like regular circumvallations; the ascent winded round the hill like a labyrinth, having many angles, which probably served as outworks to defend the place. It is supposed to have belonged to the Chimú, or King of Mansichi, and was a frontier palace during the time of the Incas [or more probably during the period of the Inca invasion]. The oral traditions of the Indians say that at this place the Chimú did homage to Pachacutec, the tenth Inca."

Oral tradition is therefore antagonistic to Garcilasso de la Vega's history, which tells us that Pachacutec (who was the ninth, and not the tenth, Inca) never came here at all; for the war against the Chimú people was carried on by his son, Yunpanqui, who was the tenth Inca. In this neighbourhood much treasure has been also excavated—all of which must have been concealed by the prehistoric Indians, as we have no evidence of the Incas having ever occupied this part of Peru after they subdued it.

From Supé to the next stopping-place we have a trip of fifty-four miles. This is what we find on Fitzroy's Admiralty Chart marked down as "Guarmey,"—on the Pacific Steam Navigation Company's list "Huarmey," and which is spoken of by Garcilasso de la Vega (as repeated by Mr. Markham) as "Huallmi."

There is a very excellent bay here, and the ruins of an old fort on a mound in front of where our steamer is anchored ; but no other sign of human habitation. In the harbour is one small rocky islet. On our way up to this from Supé, we passed a place, thirty miles to the south, called Callejones (the blind alleys)—though whence the derivation of the word I am at a loss to conjecture,—and in which Captain Bird tells me he is never at a loss for a mark to tell him his exact position, be it clear or cloudy. For always in the same spot, between his steamer and the shore, there is a flock of birds on the water. This has been his experience for two years.

From Guarmey a captain of the port comes off, although it is difficult to guess what are the precise duties of such an official in the place. There are some few huts up in one corner of the harbour, seeming at first sight as if they had been chiselled out of the adjoining rock, from their similarity of colour. The chief produce hence is maize and a small quantity of potatoes. But the wonder to any one, who goes no nearer than the deck of the steamer, is where they grow the maize and potatoes in question ; as not a vestige of verdure is visible anywhere. I am told, that behind the hills is a real town of Guarmey, or Huallmi, with a population of about a thousand inhabitants ; and thereabouts possibly may be found the agricultural districts.

Fifty-four miles farther north, we find ourselves in the Bay of Casma, protected by very high precipitous rocks on the south side; and having a rough beach, with an angry sea to the north. The town here is built in the south-eastern corner of the bay. It owns an iron mole of considerable length, which has for some years past been rendered perfectly useless and unapproachable, from the silting up of sand at the mouth of the river by which it stands, and whereby boats cannot of course approach. The town, which is behind the mole, has a large church with a huge dome on it. This is at present the native outlet from the city of Huaraz, to which latter Mr. Henry Meiggs has a railway in progress from the Bay of Chimbote farther on.

Sumanco Bay, twenty-two miles north of Casma, presents the same desolate appearance of every place on this coast. It is, however, a very extensive harbour, the chief signs of life—besides the boisterous crying out of some boatmen that are coming to the steamer for cargo—being of a few pelicans, and penguins that are about. At the southern corner is a small excuse for a village, in which there is an exceedingly comfortable-looking house belonging to Mr. Henry Swayne, of Lima, who has a large sugar plantation some eight or ten leagues to the interior. Behind this house is visible the green of the Sumanco valley, apparently stretching to the

southward. Into this bay falls a small river, or rather a rivulet, called the Nepeña. The bay here is from six to eight miles across; and to the north side there is only a spit of sand—a few miles in width—separating it from Chimbote. Our steamer, however, is obliged to make a small *détour* past some of the bald, and hump-backed looking islets, such as we have been passing all the way up to this from Calláo.

Chimbote¹ is another large bay, with a very



CHIMBOTE MAN AT CHIMBOTE.

extensive sand plateau between it and the Cordilleras. The appearance of the mole, with the fresh-

¹ Paz Soldan's "Geography of Peru" does not mention Casma, Sumanco, or Chimbote.

ness and comfort of all the houses occupied by the staff, working for the railway here, gives it quite an attractive inducement to go ashore. At this bay there are soundings of five fathoms of water not more than 300 yards from the beach. Although, up to the time of occupation by the railway people, it was nothing but a deserted and barren spot, it has now extensive stores, dwelling-houses, workshops, and the inevitable consequence—a Peruvian Custom-house.



CHOLO WOMAN.

The first notion of a railway between the coast and Huaraz—from Santa or Chimbote—appears to have been a proposal of Mr. John Edmonson

in the year 1864. From this date till the final contract, confirmed to Mr. Henry Meiggs on the 31st of October, 1871, there were several other attempts made in the same direction. The names of Senor Don Eugenio Higuera, as of Senores Valdea, Vellano, and Derteano, appear amongst the number of those, whose proposals ended *in nubibus*. In like manner terminated a decree of the minister, Santa Maria (during the Balta Presidency), to have the Lima and Huacho railroad—as yet only done to Chancay—extended on to Huaraz.

It was on the report of the engineers on this line, given in to Government on the 16th of September, 1871, that the contract of Mr. Meiggs was founded. The road is being carried on, like all the other works of this great contractor, with energy and the best of execution.

The Cholo labouring classes here present the same features as they do all along the coast from Iquique to Payta. The illustrations in this chapter will give an idea of their physical type.

CHAPTER XXIV.

Santa.—The province of Ancachs or Huaylas.—Bravery of the people in the valley of Santa at the time of Inca invasion.—The Guanape Islands and their guano.—Evidence of their antiquity.—Huanchaco and its dreadful roadstead.—Reflections on the difficulties of communication here.—How the Lancheros manage it.—Miserable village of Huanchaco.—*En route* to ruins of Chan-Chan.—Extent of these ruins.—The Huaca del Toledo (Llomayoahan).—Other burial-mounds.—Colonel La Rosa not able to distinguish places.—Large square enclosures.—Stucco-work.—High walls of adobe.—Steps of adobe stairs up to the buildings.—Massive walls.—Burial-vaults.—Huacas (burial-mounds) of Yomayugari and Mansunillaga.—Desecration of tearing up silk and gold works of art.—Head of water-croft.—Face resembling Sphinx of Egypt.—Is it Grecian, Arian, or Phœnician?—General impressions of Chan-Chan.

TWENTY miles north of Chimbote, we come to Santa, another spacious bay, in its general features somewhat resembling the former as well as like to Sumanco. The houses of Santa have quite a homely look about them, and the green fringe of its spacious valley comes down to the water's edge in a thick cluster.

Santa is one of the provinces of the department of what was formerly called Ancachs, but which, since 1839, has been entitled Huaylas,—from the name of a place where was fought a battle that

destroyed the power of General Santa Cruz.¹ Whether it ever had another name than this I cannot say, for of its history I can trace no further back than Garcilasso de la Vega, and he says about it,²—"The inhabitants of Sancta [the real Spanish 'holy' name] showed themselves more warlike than those of Huallmi and Parmunca, by going to meet the enemy [the Inca Yupanqui] and defend their country. They fought with much spirit and strength on every time when they had opportunity to fight. For a considerable time they resisted successfully the efforts of their invaders. They gained even the respect of their enemies from their valour, and raised very considerably the hopes of their Curaça, the Grand Chimu."

The exports hence are chiefly maize, cotton, a little alfalfa, and a considerable amount of rice. The town has a population of about fifteen hundred, and the country all around is studded with ruins of burial-grounds, fortresses, palaces, castles, and every kind of building which comes under the generic title of Huaca. In the bay are two small islands—one of which is called the Corcobado, or crooked-backed—the other is only a trifle of something volcanic.

From Santa to the Guanape islands—one of the chief treasure-groups in the matter of guano—our

¹ Soldan's "Geography of Peru," p. 227.

² Op. cit. cap. xxxii. p. 113.

course was about west by north, and the distance thirty-two miles. As we did not arrive till eight p.m., and the steamers only call with passengers and mails, I could not see much of the islands. The moon was shining brightly, and the masts of forty to fifty vessels, being loaded with guano, were distinctly visible—part against the brown island, and part set off by the moonlit blue sky. There are 500 Chinamen occupied here, who are employed by the Guano Loading Company, that has a contract with Messrs. Dreyfus Brothers and Co., of Paris, the lessees of these islands from the Peruvian Government. Of the guano produce, Mr. Heaton, late British Vice-Consul at the Guanape islands, has furnished me with the following details :—

“The deposits in the Guanape islands were first worked in the early part of 1869, since which time till present date, 30th September, 1871, 838,853 tons (more or less) of guano have been shipped.

“The dimensions of the north island are—

	Metres.
Length	1,050
Breadth	700

“The quantity of guano left on this island at present date is very small, being about 12,000 to 15,000 tons.

“The dimensions of the south island are—

	Metres.
Length	690
Breadth	570
Height of top of guano above sea level	160
Height of base of guano in present working	120
Distance between north and south islands	2,800

“The quantity of guano still on this south island may be estimated at about 450,000 tons.”



PENGUIN FOUND UNDER GUANO AT GUANAPE.³

The Guanape islands, as well as the Chincha, give their evidence of the antiquity of life in Peru. At a depth of thirty-two feet under the guano here has been found the body of a flattened Penguin, with a piece of cloth underneath, given to me by Captain Bird. Several idols have been discovered here likewise, and the Chinese

³ This was put upright when the sketch was taken. In its flattened position it is only half an inch in thickness, from the enormous weight and length of time of the superincumbent pressure.

workmen have turned up gold ornaments, which, of course, were at once appropriated and partitioned, according to their ordinary usages in cases of treasure trove.

Fifty miles farther on, again bound north, we find ourselves in the awful roadstead of Huanchaco. This certainly cannot be the place about which some writer in "Household Words"⁴ chaunts of,—

"Where the smooth Pacific swells
Beneath an arch of blue,"—

for to-day, the 1st of December, 1872, the smooth Pacific is more like to the Bay of Biscay after a good south-western has been clawing it for some days, or to the harbour of Lagos, on the West Coast of Africa, during a tornado. The "arch of blue" must be somewhere behind the scenes, for the view from the steamer's deck is exactly like the view from the centre of London, or Westminster bridge during a November fog. However, as my time is limited, I must make the venture to get on shore. Captain Bird tells me the *lancheros* are very expert; although only a week had passed since such a boat as they use here was upset in the surf at Eten (farther up the coast), and five persons drowned. The sea at the last-mentioned place, I am told, is not half so bad as at Huanchaco; and this is very comforting to know. From my note-book of this period I make the following extract:—

"Trujillo, December, 1st.—Coming ashore this

⁴ Vol. v. p. 54.

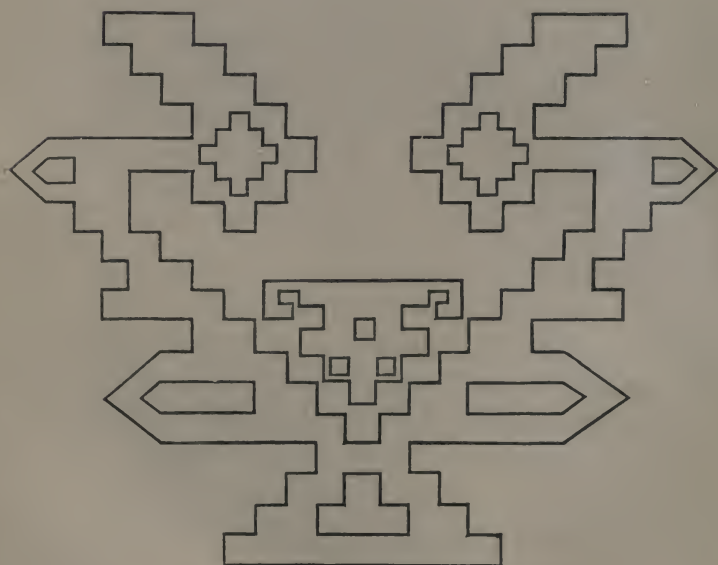
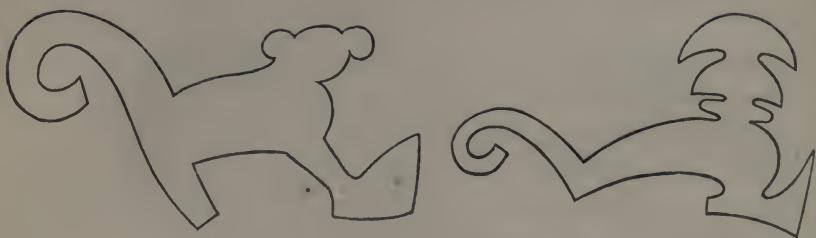
morning at Huanchaco, I was disposed for a reflection, such as I have more than once found myself employed in elsewhere—referring to places, disturbed like the waters of this port. The cogitation almost resolved itself into a conviction, that when such ports along the sea-coast of Peru were formed, they must have been fashioned by the Creator of the universe with the intention—that none of the residents inside should ever come out, or that any people from the outer world abroad should ever go in. But the boatmen did their work in excellent style, and I was put on shore without being sprinkled by a drop of water. In effecting the landing I must try to explain how it was done. From the moment that the boat shoved off from the ship, the men on board seemed to know every wave and roller around. They did not rush right through these, or the craft would have been swamped. But by means of clever steering, and what I cannot help calling scientific dodging of the tremendous breakers—now with the boat's side lying parallel to the surging wave—now with her head to the coming in of an immense mass, over which the launch was made to float like a duck—and after half-an-hour of this kind of thing, with a spurt, as we got inside the breakers, we were pulled on to the beach. A number of helping hands being ready, she was hauled up high and dry."

Huanchaco is a miserable, dirty rancheria (collection of ranchos or huts);—the front shore space having a large shed on it for temporary

Custom-house purposes, with the Pacific Navigation Company's offices on the right hand, and the captain of the port's office in front of where we are landed. There is a melancholy-looking church, with an empty bell-tower on a rising ground in front. But, walking up a street, large black letters, forming the word "Hotel," painted on a flaunting white calico flag, lured me at once to ask for my breakfast. I was told that no breakfast could be had at the hotel; the fonda being the place for that. I confess that I did not regret this information, for without any reference to the old story of sour grapes, the hotel was anything but attractive. The fonda, round the corner, did not show much more agreeable appearance, as far as cleanliness was concerned. The floor was damp—the chairs rickety,—on the tables in the dining-room were what might have been either slices from dirty sheets, or relics of towels from the Inca times—and out of either no kind of conviction could realize table-cloths. However, a good appetite makes one resolved to look on these matters as secondary, particularly as soon as a well-cooked Churasco⁵ was served up by the Chinaman attendant. This fonda is entirely under Chinese *ménage*, which may perhaps account for the combination of dirt and good cooking.

Huanchaco has only a few hundred houses—each one seeming more dilapidated than its neighbour—and all having that shaky condition of walls

⁵ South American beef-steak.



STUCCO WORK FROM RUIN-WALLS OF CHAN-CHAN.

so suggestive of impotency against earthquakes. Many of the houses here are empty, and on subsequently inquiring the cause at Trujillo, I was informed that these are owned by the gentry from that place, who come down in large numbers to bathe during summer.

In as short time as I could after breakfast, I was *en route* to Trujillo, in a carriage kindly sent down for me by Mr. Blackwood. I could not think, however, of going to visit Pizarro's city,⁶ without having a look at the ruins of Chan-Chan (the name of the Chimoo capital), more particularly as the high road, from Huan-chaco to Trujillo, passes right through the middle of them. All that I had learned about Chimu (or Chimoo, as it is pronounced) from Paz Soldan—after mentioning the name of the capital, Chan-Chan—is that the king of these parts held sway over the coast from Supé to Tumbes (nearly one-half of the coast territory of Peru) when he was come down upon by the Inca ;—that the ruins consist of two magnificent palaces, and many houses, over a space of five leagues square ;⁷—that it has remnants of splendid walls as well as of aqueducts and other engineering works for bringing waters to the artificial meadows ;—of cultivated grounds ;

⁶ Trujillo was founded by Francisco Pizarro in A.D. 1535, and was given this name as an honour to his native town of Trujillo in the province of Estramadura, Spain.

⁷ Mariano Eduardo Rivero says "*the ruins of Chimu (?) cover a space of three quarters of a league, exclusive of the great squares.*" Op. cit. p. 264.

of relics of their idolatrous worship,—with impregnable fortresses to sustain their sovereignty. In fact, such a description of generalization as I suppose to have been written by a man who never visited the place at all.

The road, from Huanchaco to Trujillo, is nearly ten miles in length, and at about seven miles from Huanchaco, we are inside of Chan-Chan. This road goes right through a causeway,⁸ about four feet above the ground, and leading from one great mass of ruins to another,—ruins of what have been either forts, castles, or palaces, although they get the title of Huacas. That to the right is the Huaca del Toledo (of which the original Indian name was Llomayoahan), and that to the left is entitled the Huaca del Obispo (or Huaca of the Bishop), its Indian nomenclature not known. I was met here by Mr. Blackwood, Colonel La Rosa, and Mr. Hugh Carrige, C.E., who accompanied me in my wanderings amongst the relics of this great old city. The whole distance from Huanchaco is marked by bits of walls, remnants of houses, and broken pottery, strewed along, so that it seems to me very difficult to distinguish the limits of the inhabited part of this valley.

Several hours' wandering amongst the lofty broken walls and ruins of houses in Chan-Chan—on horses kindly furnished by Mr. Blackwood—gave

⁸ Colonel La Rosa informed me that there is a tunnel beneath this causeway.

me only a confused idea of its extent. But Colonel La Rosa, although an old explorer here, could not point out what were palaces or what were not. Neither could any of our party distinguish them. Those large square enclosures, shut in by walls (wedge-shaped) of adobe, twenty to twenty-five feet high, have nothing of an entrance into them that could be defined to be a palace gate. There are no less than half a dozen of these amongst the ruins. Within some of them are large square mounds of burying-chambers, many of which have been opened and rifled of their contents. These are all plastered at the ceilings. Besides the two so-called huacas, already mentioned, there is another on the left side of the road, to which the Spaniards gave the title of "La Misa," or the Mass, but the Indian name whereof is Yomayugari.

On many of the walls, particularly on the left side of the road, is some excellent stucco-work. This may be considered chiefly so as regards the material of which it is made, more than any reference to its style of art. For there is not a single grain of disintegration in the parts that surround the walls of a chamber—although it is half an inch high above the ordinary plaster on which it is done,—nor the slightest item of impairment in its integrity during the many centuries it has stood exposed to the elements.

The highest enclosures—those of adobe brick up to thirty feet, and with a base of fifteen feet,

or five yards⁹—must have cost an immense amount of labour, and needed a large number of hands for their erection. These high walls are all on the right-hand side of the city as you advance to Trujillo, between that town and the Huaca of Llomayoahan.¹ Inside of some of them, besides the square mounds, are narrow passages not more than a yard in width. In others are squares, wherein are visible, though now filled with clay, the outlines of water tracks. But such things as Rivero speaks of,²—“adobes, often of twelve yards long and five or six broad in the lower part of the wall”—do not exist. On this side, too, appears the greater number of what we can recognize as burial-mounds. In some of these are stairs of adobe. One of such I counted with fifteen steps, each of about a yard from end to end. The greater number of these stairs are double—that is to say, like the steps on each side of many a hall door—but the walls and structures to which they mount are so much destroyed that it is difficult even to guess at what might have been their original intention.

Several of the burial-vaults having been ransacked, the stones and adobes constituting their

⁹ Mariano Eduardo Rivero (*op. cit.* p. 265) speaks of these walls as fifty yards (a hundred and fifty feet) high—a very great exaggeration.

¹ Alias Toledo.

² *Op. cit.* p. 265.

structure are lying about. In some of these the ceilings are not only plastered, but whitewashed. From them treasures of gold and silver as well as works of art have been taken. One of those little silver cylinders, exactly similar in shape and material to that I have already shown as found at



SILVER CYLINDER FROM A BURIAL-PLACE AT CHAN-CHAN.

Icæ,³ is now in my possession, and was given to me by Mr. Blackwood.⁴ In another of these burial-places, entitled the Huaca de la Concha (or Huaca of the Shell)—its Indian name is Mansuvillaga—several gold idols have been dug out, and amongst them were found mantles of silk interwoven with gold and silver thread. It almost gives me the primary symptoms of tertian fever to be told that the iconoclasts, who discovered these, tore them

³ *Vide* chap. vii. p. 122.

⁴ In this the figures are stamped, being convex on the front. It may be observed, the Lunar Zodiac is again represented here in the stars on the cross.

up for the sake of the precious metals which they contained, thus illustrating what Virgil apostrophized two thousand years ago :—

“Auri sacra fames!
Quid non mortalia pectora cogis?”

So far as the palaces are concerned (of which Mariano Rivero, Bollaert, Markham, and Paz



WATER-CROFT WITH SERPENT DESIGNS, FRONT VIEW.

Soldan write), I regret that I could find no traces of them, nor was Colonel La Rosa able to point them out. They might have been any of these big mounds inside the square enclosures, which in their present state bear as much resemblance to the ruins of a police-barrack as to those of a palace. From the excavations here several excellent specimens of pottery have been given to me by Mr.

Blackwood—amongst them two remarkable ones—of which the first shows the symbol of serpent worship, and the second is of a face having more



SAME WATER-CROFT, SIDE VIEW.

of the Aryan or Phœnician type than of the Indian. But the general impression left by the ruins of Chan-Chan can be only described as an agglomeration of walls—squares of mounds—gable ends of houses—lines of water channels—deep excavations⁵ (from 20 to 30 feet in profundity, and 70 to 100 feet square) lined with small stones, and a general crowding-up of adobe ruins everywhere.

⁵ These are supposed by Colonel La Rosa to have been granaries.

CHAPTER XXV.

To Trujillo.—Results of earthquakes and of inundations from the rivers into Trujillo.—Indian town of Mansiché.—Inscription over the gate of Trujillo.—The city in its colonial days.—Monks and nuns.—Indian town of Huaman.—Mr. Blackwood's cochineal establishment.—Its destruction by inundation.—Visit to reputed Temple of the Sun.—Similarity between it and ruins of Huatica valley.—Bastions, parapets, and terraces.—Made up of sun-dried bricks.—Built where the sun cannot shine on it at rising.—Exploration of a hole made into it.—Adjoining ruins.—Immense extent of all.—Chief building filled up with clay.—No evidence of its having been a Temple of the Sun.—Railway from Salaverry to Chicama valley.

IN his "Geography of Peru,"¹ Senor Paz Soldan says that this beautiful city of Trujillo, which is of an oval or elliptical form, and completely walled in, has been frequently damaged by earthquakes, as well as by water inundations from the mountains. The latter were especially strong in the years 1701, 1720, and 1728. So late as in 1816, and previously in 1725 and 1759, occurred dreadful earthquakes, the severest of these having destroyed the whole of the chapels in the town except one. They, however, are all right now. That which was preserved is Pizarro's chapel—the first after

¹ Page 214.

you enter the gate of the city from the Huanchaco road. The relics of the Indian town of Mansiché—by some writers confounded with Trujillo—are passed about half a mile to the westward of this gate, and near to where we observe a not very sprightly style of chapel. Over this entrance outside is painted on a white ground, in black letters, and set off by the brightest of bright blue walls adjoining, the following inscription, which I translate from the Spanish:—“Trujillo was the first capital that in Peru proclaimed emancipation, on the 29th of December, 1820.”

The wall enclosing Trujillo; with its several gates, and bastions, was built in A.D. 1686, and this is the only city in Peru, except Lima, that is inclosed by walls. But, like these of the capital, being in process of demolition (as I have already noticed, under the magic sway of the railway king, Mr. Henry Meiggs), those at Trujillo are also in progress of being pulled down for the railway that is to cross to the valley of Chicama, from the neighbouring port of Salaverry—an enterprise which is in the hands of Senor Larrañaga, of Lima, and under the engineering charge of Mr. Hugh Carrige, C.E.

There are nine chapels in Trujillo, including the cathedral,—a very spacious building in the principal plaza. Besides these, there is a theatre and a large market-place. Trujillo has likewise

its bank. The streets in general are wider than they are usually found in Peruvian towns, but they communicate the same *dolce far niente* sensation that is met almost everywhere in South America. Its present population does not exceed five to six thousand inhabitants. Indeed, it seems very much of a stationary city, without any change from century to century.

Trujillo has had, in its colonial days, five orders of monks—1st, of San Francisco; 2nd, San Domingo, founded in the time of Pizarro, or at the first erection of the city; 3rd, of Our Lady of Mercy; 4th, the monks of San Augustine, established on 25th October, 1558; and of Religious Hospitality, in 1680. All of these orders are now suppressed.

There are, however, still in Trujillo two communities of religious ladies—namely, that of Santa Clara and that of the Carmelites. The first was founded in A. D. 1587, and the second in A. D. 1724. Their large rents are said to have diminished very much of late years; and although each of their establishments (surrounded by walls of eighteen to twenty feet high) seems sufficiently extensive to hold some thousands of inmates, the Santa Clara has only nineteen *religieuses* inside its walls. Of the number of Carmelites I could obtain no information.

In the neighbourhood of Trujillo are two small towns of Indians—one that of Moché, with a

population of about 2000. It is a league and a half south of the city, and within half a mile of the sea. The inhabitants are the market-gardeners for Trujillo, as it is from their little farms that



TINTED SHROUD IN WHICH A FETUS WAS ENROLLED AND BURIED AT CHAN-CHAN.

the town is supplied with maize, melons, alfalfa, potatoes, and other vegetables. To the north-east of Moché is another small village—that of Huamán, with a population of from 200 to 250, horticulturists, like the Mochénos. The river of Moché,

which is the chief source of water supply to Trujillo, falls into the sea between Huamán and Moché. Besides this there are two other streams in the province of Trujillo—one of Chicama, which runs from the heights of Cajamarca, and the other that of Virú, Birú, or Pirú (from which, somehow or other, the Republic is said to derive its name). This last-mentioned rises from a Cordillera called Conchucos. Whilst at Trujillo I cannot avoid observing how active were the Spaniards at the period of the conquest. The butchery of Atahualpa occurred in 1533; Lima and Trujillo were founded in the same year of 1535, or two years after; and yet we find Pedro de Cieza de Leon not very long after, visiting this neighbourhood, and telling us of the Spaniards with their orchards, vines, figs, pomegranates, and many other fruits of Spain.—But he only devotes one page of his book to Trujillo, and in this only a single mention is made of the “Valley of Chimu.”²

The remnants of the Indian tribes here, of whom I have written as located at Mansiché, Moché, and Huamán, have exactly the same physical type of the Cholos that are seen all along the coast. You cannot, for any bribe or consideration of reward, induce these people to dig for huacas, or for such treasures as are buried with the dead, at any period except that of full moon. Because, they say, that at all other seasons

² Op. cit. p. 244.

the huacas, as well as gold and silver, sink beyond their reach. This is more particularly observed with reference to such of these, as whistle at the side on which the bird's head is designed, when water is poured into the opposite.

At a place called Conaché, about two leagues and a half to the north-east of Trujillo, Mr. Blackwood had an extensive cochineal plantation. For many years the farm produced above 125 bales, of a quintal and a half (or 150 lbs.) to each bale of the insect. In the year 1871, when the great floods did so much damage all along this part of the coast, there was an inundation from the mountains on the farm of Mr. Blackwood, which destroyed 17,000 dollars' worth of cochineal, with its cactus plant, in a few hours. The most curious feature of this deluge was of its being followed, before the water finally sank into the earth or evaporated, by millions of a small cricket-like reptile—locust, probably—which devoured everything green as fast as it sprang up. The destruction of these plagues was a very difficult matter.

A pair of fresh horses having been procured, I rode out with Mr. Blackwood to see the remains of the Temple of the Sun on the day after we had been at Chan-Chan. It is situated about a mile and a half to the eastward of Trujillo—placed right under the shadow of a hill, nearly a thousand feet high, and this hill to the eastward, so as to prevent the sun from having a gleam on it till the

day is well advanced. It is of exactly the same style of architecture as those fortress mounds described in the Huatica valley,³ of large adobones in some parts, and of small adobes in others; a mass of parapets and of declivities, built up with adobes, and filled with clay; being about ninety feet high, but more than a hundred yards in length, and from sixty to seventy in breadth. On the side facing the south, and at a height of about seventy feet, is the first plateau, which I guessed to be twenty yards in width. From this the elevation to the top is brought up in ledges or terraces—each one like the step of a flight of stairs—but separately high enough for a man of ordinary height to stand with his feet clear of the head beneath him. Whether this was a fortress or a castle, I cannot say. Neither can I believe that it was ever a Temple of the Sun. The base of it is not distant more than a few hundred yards from the hill, which shuts out the morning sunshine.

Making a tour of observation, after going up to the top and coming down again, we saw an opening made at the eastern side looking towards the mountain. This being near enough to the ground, Mr. Blackwood crept in, and I followed—for it was only three to four feet high. We penetrated to about four yards' distance on our hands and knees, when by groping we found that

³ *Vide* chaps. xiii. xiv.

we could stand up. We learnt nothing by our expedition, except, through the aid of a match, to see a few partial excavations made from an enlarged space in which we found ourselves,—and still the darkness proving that no opening had been made towards the light. Our matches roused the bats, whose fluttering soon drove us out of their territory.

Between this great building and the mountain adjoining—indeed, built into it—we see traces of a wall, which may perhaps be part of the four-yards-wide wall spoken of by Rivero. Hereabouts the ground is literally paved with bits of broken crockery-ware. In part of this, too, we see where these immense heaps of drifting sand⁴ have buried the portion of ruins which join the mountain. I cannot recognize any evidence of its having been a Temple of the Sun, or a convent of virgins. If it were held as such by the Incas, the question again arises, Who built up some rooms with adobes, and filled others with clay? That this was done by the Incas does not seem at all probable; that it was effected by the Spaniards, after the conquest, appears equally unlikely. I am also puzzled to know what the conquerors had to conquer here—for except in these grand old mounds, or fortresses, that might have been built ages before the coming of Pizarro, there is no evidence of his having had anything to subdue in the valley of the Chimoos,

⁴ Médanos.

near Chan-Chan, than there was in the valley of the Yuncas at Rimac.

Trujillo, though having much of the monotonous square-square-ism of Spanish-built towns, has an excellent road from its gate to Huanchaco. The first half-mile of that comprises a boulevard, or alameda, with trees on either side, and seats at different distances. Those terminate as we get near to Mansiché.

Returning to Huanchaco to proceed northward, I find the sea still very much agitated, but nothing like what it was the day that I entered. The port of Salaverry, two leagues south, and whence is to proceed the railroad to the valley of Chicama, is said to be quieter than this of Huanchaco. More rough, at all events, it would be impossible to find it. The whole of this voyage up to San José appears rather boisterous; but this can scarcely be wondered at, as it is all an open roadstead. The valley of Chicama extends thirty leagues interior to Trujillo, and the Cordilleras all around are rich in silver ore.

South of Trujillo, in the direction of the Piru river, is another large building, twice the size of that I saw with Mr. Blackwood, which is also reputed to have been a Temple of the Sun. It is called San Juan, but my faith being already shaken in the reputed Temples of the Sun on the Pacific Coast, I did not care to go and look at it.

It was quite a comforting piece of information

to be told that the city of Trujillo is very well conducted as regards its population—little or no crime being ever committed in it. Indeed, I am assured that, in the possibility of bad people (*malas gentes*) venturing in here, they are at once stamped out by the moral force of the popular indignation. Of what form this takes I am not cognizant.

It appears to me somewhat curious that no notice of these ruins of Chan-Chan is made in any of the six quarto volumes by the brothers Ulloa, although much space is dedicated in the second of these to a description of Trujillo, its ecclesiastical discipline, and its haciendas.

“Trujillo,” says Stevenson,⁵ “is noted for its Quixotic nobility; it is often said that the body of the celebrated Don was buried here. I have frequently,” he continues, “seen in the house of a Mulatto or a Zambo a full-length portrait of the individual, who by a kind of *faux-pas* caused them to emerge from the African race and sable colour, and of whom they speak with as much respect as the Montanese do of Don Pelayo, whose descendants they all pretend to be, or as any nobleman of England would do of Ptolemy or Alexander, if he fancied that he could trace his pedigree either to the Egyptian astronomer, or the Macedonian hero.”

Leaving aside the genealogical fancy in the last

⁵ Op. cit. vol. ii. p. 117.

sentence, I cannot avoid coming to the conclusion that to the belief of Don Quixote being buried in Trujillo may be traced no inconsiderable part of the romantic gasconading, written about this and many adjacent parts of Peru. Indeed, the life of the famous Knight of La Mancha has many episodes in it, not more absurd than much that is recorded about the Incas. Cervantes seems to have been the chief model of the majority of writers in the early times.

CHAPTER XXVI.

Treasure from the old Chimoo Capital of Chan-Chan.—Copy of document from the Municipality records of Trujillo.—The great and little Pejé.—Gold in effigies of animals.—From huaca of Toledo.—The big Pejé.—Chayhuac Caramucha, the caçique.—Long fight for the Inca.—Again bound North.—Maccabee Islands.—Quantity of guano.—To Malabrigo.—Appropriate title of “bad shelter.”—At Pacasmayo.—Spacious bay and fine houses.—Night made hideous.—Looking for Inca roads.—Hospital here.—Sand-mounds.—Railway to Magdalena.—Mr. Squier’s description of fortifications in Peru.—Fortifications on mountain-side.—“Lo, the poor Indian!”

DURING my stay at Trujillo, I obtained through Mr. Blackwood, from the municipal records of the city, copy of a document highly interesting to all persons who care about the archæology of Peru.

This is a “copy of the accounts that are found in the book of Fifths of the Treasury in the years 1577 and 1578 (nearly three hundred years ago), referring to the huaca of Toledo.” Of its authenticity Mr. Blackwood assures me there can be no doubt, as his own brother took it from the original in the archives of the Trujillo Municipality. Speaking of this, Don Mariano Edward Rivero¹ says “There is a tradition that in the huaca (of

¹ Op. cit. p. 269.

Toledo) there were two treasures, known as the great and little *peje*,² that the first is still buried, and the second has been found at Toledo.”

Here, then, is the inventory of the smaller of these that has turned up:—

“Copy of the entries that are found in the book of Fifths of the Treasury in the years 1577 and 1578, referring to the huaca of Toledo.”

FIRST.

“In Trujillo, Peru, on the 22nd of July, 1577, Don Garcia Gutierrez de Toledo presented himself at this royal treasury, to give in to the royal chest a fifth. He brought a bar of gold, 19 carats ley, and weighing 2,400 dollars, of which the fifth being 708 dollars, together with 1½ per cent. to the Chief Assayer, were deposited in the royal box.

“WEIGHT.

“2,400 dollars.	Fifths, 708 dollars.
FRANCISCO CAMU.	JUAN DE VERGARA.”

SECOND.

“In Trujillo, Peru, on the 12th of December, 1577, Don Garcia Gutierrez Toledo again presented himself with the fifths of other treasure, that he had got out of the huaca, which he held registered, and which is in the jurisdiction of this city. As follows:—

² *Peje* is Spanish for *fish*.

Bars of gold.	Ley in Carats.	Weight of bar in Spanish dollars.	Value of fifth and of percentage [$1\frac{1}{2}$] to Assayer.
1	19	1,200	354
1	19	900	190 4ts.
1	19	1,050	222 2ts.
1	19	2,400	708
1	19	1,800	481
1	15	1,568	332
Gold dollars		8,918	2,287 6ts.

“ So that the said bars being of the weight and value of 8,918 Spanish gold dollars, three belong to his Majesty for his royal fifth, and $1\frac{1}{2}$ per cent. to the Assayer, 2,287 dollars and six timinos,³ which are paid into the royal chest in equivalent money.

F. C. J. DE V.”

THIRD.

“ In Trujillo, Peru, on the 7th of January, 1578, came again Don Garcia Gutierrez de Toledo, with his fifths of large bars and plates of gold of the following different leys, out of the huaca, which he holds in the jurisdiction of this city:—

Numbers of bars.	Ley.	Weight in dollars.	Fifths.
16	16 carats	20,800	4,272 0
19	20 „	26,240	5,500 0
49	17 „	61,952	13,248 0
13	19 „	19,200	5,654 0
18	15 „	25,088	5,312 0
115		153,280	33,986 0

“ From which these 115 small bars being of the weight of 153,280 dollars of gold, the royal fifth

³ Eighth of a drachm.

belonging to his Majesty, with $1\frac{1}{2}$ per cent. to the Assayer, Don Garcia Gutierrez de Toledo has paid into the royal box, of the same value and the same ley.

“ F. C. J. DE V.”

FOURTH.

“ In Trujillo, Peru, on the 8th of March, 1578, Don Garcia Gutierrez de Toledo came to present the fifths of division of the following gold that he had taken out of his huaca, registered in the jurisdiction of this city :—

	Ley.	Weight in gold dollars.	Fifths.
1	16 carats	650	158 4ts.
1	20 „	820	171 7ts.
1	17 „	968	207 „
1	17 „	448	103 4ts.
1	20 „	1,640	343 $6\frac{1}{2}$ ts.
1	15 „	748	166 0
1	19 „	1,200	354 „
1	19 „	900	190 4ts.
1	14 „	1,568	334 „
1	18 „	1,920	407 „
2	21 „	3,840	815 0
2	20 „	3,280	687 4ts.
2	14 „	3,136	668 0
<hr/>		<hr/>	<hr/>
16		21,118	4,607 $1\frac{1}{2}$

“ Therefore these sixteen bars of gold, of different leys, amount in value to 21,118 gold dollars, and there belong to his Majesty, as the royal fifth, together with $1\frac{1}{2}$ per cent. for the Assayer, 4,607 dollars and one real of gold, which

the said Garcia Gutierrez de Toledo brought and paid into the royal box, in the same money and ley as represented the duties of every bar."

FIFTH.

"In Trujillo, on the 5th of April, 1573, Don Garcia Gutierrez de Toledo brought to the royal chest different ornaments of gold that he had taken out of the huaca, which he has registered in the jurisdiction of this city, some being little bells of gold, and patterns of corn-heads, and other things, all of which, being examined by the Master Assayer, were proved to be of gold of 14 carats, and to weigh 6,272 dollars in gold, which gave to the royal fifth of his Majesty, with the $1\frac{1}{2}$ per cent. commission to the Assayer, a sum of 1,336 gold dollars, which the said Garcia Gutierrez de Toledo paid into the treasury-box of his Majesty, being of the same gold as to ley and value of the original sum.

"J. C. J. DE V."

SIXTH.

"In Trujillo, on the 20th of April, 1578, Don Garcia Gutierrez de Toledo came with three small bars of 20 carat gold, which weighed 4,170 dollars, of which the royal fifth, with the Assayer's $1\frac{1}{2}$ per cent., amounted to 884 dollars of gold—the last-named sum being paid into his Majesty's royal box here by the said Garcia Gutierrez de Toledo.

J. C. J. DE V."

SEVENTH.

“In Trujillo, on the 12th of July, 1578, Don Garcia Gutierrez de Toledo came with the fifths of forty-seven bars of gold of different leys, which he had taken out of the huaca he holds registered in the jurisdiction of this city, as follows :—

Numbers of bars.	Ley.	Weight in dollars.	Fifths.
3	15 carats	6,272	1,328
5	20 „	8,320	1,768
5	18 „	7,680	1,630
4	14 „	6,272	1,336
3	19 „	4,800	1,416
9	17 „	15,488	3,312
10	20 „	13,120	2,750
8	21 „	15,306	3,262
<hr/> 47		<hr/> 77,312	<hr/> 16,802

“So that 77,312 dollars being the weight and value in gold of this parcel, the same coming as the royal fifth to his Majesty, with $1\frac{1}{2}$ per cent. to the Assayer, amounts to 16,802 dollars in gold, which sum has been paid to-day into the royal box by Garcia Gutierrez de Toledo as the fifth of a treasure that he had taken out of a huaca registered to him within the jurisdiction of this city—said fifth being of the same value and of a like ley in proportion to each bar.”

EIGHTH.

“On the same day, as aforesaid, Garcia Gutierrez de Toledo came back again with a fifth to the royal box of another portion of gold, and

ornaments of corn-heads, and pieces of effigies of animals, which were seen by the Master Assayer, who was present, and who said—that having proved and tested them, he found them to be gold of 14 carats—all these ornaments, and having weighed them, they amounted to 4,704 dollars' weight of gold, of which belonged to his Majesty the royal fifth, 1,002 dollars, with 1½ per cent. for the Assayer—said sum being put into the royal box by Garcia Gutierrez de Toledo as being of like nature and ley.

“ J. C. J. DE V.”

	Gold dollars of Fifths.	Gold dollars value of treasure found.
No. 1	708	2,400 00
„ 2	2,287 6 tims.	8,918 00
„ 3	33,996	153,280 00
„ 4	4,607 1 tim.	21,118 00
„ 5	1,336	6,272
„ 6	884	4,170
„ 7	16,802	77,312
„ 8	1,002	4,704
	<hr/>	<hr/>
	61,622	278,174
	16	16
	<hr/>	<hr/>
	369,732	1,669,044
	616,221 6	2,781,740
	<hr/>	<hr/>
	\$985,953 6	\$4,450,784
Royal Fifths deducted .		985,953 6
		<hr/>
Remain . .		3,464,830 2

The native name—Quichua, no doubt—of this huaca was, as I have previously noted, Llomayohuan; and we are told of it by Rivero, that the gold taken out here produced to the King, as a

fifth only, 135,547 Castellanos, or Spanish dollars.⁴ Whereas this document tells a different tale. He also mentions that, when Don Antonio Chayque pointed out the locale of the treasure, one portion of his agreement with Don Diego Piñeda, at the time Chief Magistrate, was to the effect that part of it should be allotted for the benefit of the Indians of Mansiché and Huamán. But it appears that, having robbed it of great wealth, the agreement was violated by the Spaniards. The Caçique then pretended (but why pretend, Senor Rivero, if the result be what you state?) that he knew of a still greater treasure that he could discover—to obtain which they gave him 42,187 dollars, raised by a tax charged on the inhabitants in favour of the Indians before named. Of this very little of the principal now remains, partly from the calamities of the times, and partly from the unfaithful administration of the protectors of the Indians, or the collectors of taxes. So says Feijoo de Sosa, and his statement is endorsed by Rivero. Therefore the Caçique's was no pretension, in spite of a previous violation on the side of the Christian contracting party.

That effigies of different animals of gold were found here from time to time, even after this great haul, I am assured by Colonel La Rosa. Mantles also adorned with square pieces of gold, as well as robes made with feathers of divers

⁴ Op. cit. p. 268.

colours, were also dug up; but there is not the slightest foundation to believe that a single one of these things was ever deposited here by the Incas, or by any of the Inca people. For the strongest supposition is that they were made by the predecessors of the Incas, the great Chimoo race that inhabited the valleys from Supé to Tumbez.

If, however, the little *peje*, or the small fish, amounted, as appears from this, to the value of 3,464,830 dollars in gold, and that the larger one is not yet found, I think my readers will be of opinion it is worth looking after. That an attempt was made to get it is evident from what is set forth in a quarto MSS. of about sixty-nine pages that I have before me.

Brown and moulded with age though it be, each leaf has the royal arms of Carolus III., and bears date 1774—1775 on the stamp, to which (seeming to have been subsequently printed) are added the dates 1781—1783,—more than 200 years, it may be scarcely necessary to add, after the labours of Toledo. This latter was at the time that Don José Antonio de Axeche, a Spanish nobleman of the distinguished order of Charles III., was sub-delegated for the royal rent of tobacco, and in other high official positions in the territories of Chile, Peru, and La Plata. The manuscript sets forth that Don Francisco Solano Chayhuac Caramucha, principal Cacique and Governor of the parishes and valley of Chimoo, the

towns of Mansiche and Guanchaco (Huanchaco is the modern spelling), near Trujillo, presented himself to the superior Government in the month of September, 1776, with ten of the principal Indian men of his jurisdiction, and some of other reductions, asking licence for the discovery of various treasures and mines, that were hidden from the times of the *Gentilidad* (Pagans), according to the traditions they had in their families. This petition extended over forty pages, and set forth that the chief benefit they intended by the discovery was only that which it would bring to the royal treasury of his Majesty, and, secondarily, to the Indians themselves.

I must here acknowledge that this statement (with my belief of the *morale* of "the poor Indian whose untutored mind," and the rest of it) shook my faith in the purpose set forth. A perusal of the whole document, however, leads me to the opinion, that the representation of the Caçique could hardly have been of his own originating. Because by it we find that seven of his countrymen died in prison, where they had been confined with him for eight years. Outside of this melancholy fact, the document gives us no details save rambling repetitions about the treasure, and the usual stereotyped technicalities of a document penned by a notary public. But that the MSS. in question refers to the *peje grande* not yet discovered I have no doubt.

Of this grand old place of Chan-Chan, subdued by the Inca Yupanqui (son of Pachacutec), we as yet know little more than what is recorded by Garcilasso de la Vega. Yet Cieza de Leon writes of these people having "submitted to the rule of the Incas,"⁵ whilst Salcumayhua's account gives us to understand the Chimoos submitted without any fight at all.⁶ The conquest of the territory governed over at the time by the great King of Chimoo—the Curaca, Chucha-Machoon—was, according to Garcilasso, a long fight for the Inca, although he was helped by several allies—the kings lower down—those of the Chincha, Canete, Pacha-Cámac, and Rimac. Unless in Rivero, little or no notice of this place is taken by any of the score of writers on Peru.

I regret that my stay at this interesting place was necessarily short; but I trust that the Peruvian Government is now wakened to the knowledge of how much hidden store of archæological wealth there is still to be brought to light, through the length and breadth of the Republic.

Again bound northward, we have to accompany the steamer in its trip to Maccabee islands—thirty-two miles seaward from Huanchaco—and whence the chief Peruvian guano product for the next few years is to be obtained. These islands are three in number. It may be seen from the sketch

⁵ Op. cit. p. 245.

⁶ "Rites and Laws of the Incas," p. 94.

accompanying, that two of them are joined together by a bridge put up by the Guano Loading Company. The chief residence of the working officials is on the island to the right—that to the left being



MACCABEE GUANO ISLANDS.

the principal guano deposit. A small quantity of shipping was here at the time of our visit, for I believe it is not the intention of the Government to have this worked, so long as the supply lasts in Guanape. These islands are included within the jurisdiction of Trujillo, although their name is not even noticed in Paz Soldan's "Geography of Peru."

As to the guano of Maccabee, I received for my first trade report the following information from Mr. F. Heaton, at the period British Vice-Consul

for the Guanapes and Maccabees. It was dated in September, 1871:—

“*Maccabee Islands*.—These islands were first opened in September, 1870, but the rate of shipment has been small in comparison with that of the Guanapes. These are situated about sixty miles to north of Guanape, and about eight miles from the mainland, off the port of Malabrigo. The rock at these islands is not so high as in the Guanapes, being only thirty metres, and the height of the top of the guano above sea-level seventy-two metres, consequently the work of shipment is much easier than at the Guanape islands.

“The quantity of guano still on these islands may be estimated at 400,000 tons.”

From Maccabee we turn again towards the Peruvian coast—to one of those wild, exposed roadsteads, called Malabrigo (bad shelter), and certainly well deserving the name. This is nine miles distant from the Maccabees. On the beach here is a large cluster of brown houses, of the same colour as the rock. Interior to this is the very extensive hacienda, or sugar-cane plantation, of Mr. Albrecht, a German gentleman of Lima, who was kind enough to invite me to see his works, which, I regretted, want of time prevented my doing. I believe the machinery on this establishment is some of the most efficient on the coast. The towns of Escape and Paysan are interior. Rum, sugar, cotton, and minerals are exported hence.

The next stopping-place, forty-two miles farther on, is Pacasmayo,—somewhat like the usual rough, open roadsteads that we have all along the coast, but sheltered considerably by a southern promontory that runs out some distance to the sea. It has a very spacious bay, the chief foreground of which shows the large rice and cotton-packing mill of Senor Fuentes, with a pretty dome on the top, and not far from it the spacious store premises of Senor Ferreyra. The offices and residence occupied by *employés* of Mr. Henry Meiggs' railway from Pacasmayo to Guadaloupe, and to Cajamarca, are in the first-named building, between the cotton-packing machinery and the rice mill. Here for some days I enjoyed the hospitality of Messrs. Maynadier and Ewing, whilst from this I was able to explore some portion of the interior country. The town of Pacasmayo has not more than from 1500 to 2000 inhabitants, and, excepting the two houses I have mentioned, the residences are of the same ramshackle description as those already mentioned of Huanchaco.

During my first night's stay at Pacasmayo, the braying of asses, crowing of cocks, and barking of dogs, from bedtime till sunrise, made the night hideous. I believe there is a donkey kept at every house in Pacasmayo, and three or four dogs to every donkey. Yet, judging of the canine tribe, whilst strolling through the little village in the daytime, one would scarcely think there could be a bark amongst the lot of them.

In the course of this ramble,—passing behind Senor Ferreyra's store to the back of the chapel, and along a narrow street, gradually ascending all the time,—I soon found myself in company with eight or ten turkey-buzzards on the top of a hill, overlooking the town and the harbour. Sandy desert to the east and south—a very great distance between me and the Cordilleras—some few ships out in the harbour—the railway station at the northern side of the town, and the hospital directly east. From this position the houses of Ferreyra and Fuentes have quite an imposing appearance. The chapel is small, and I regret to say not so clean in its interior, as it is tawdry in its ornamentation. Quite near to the summit I saw a heap of adobe masses of unshaped bricks similar in form to those I picked up at Chancay—some of the latter forming walls in a cutting of twelve feet deep on the Huacho railway line.

After vainly searching about some time for what Dr. Heath, the hospital surgeon, told me I should find on the top-cliff—namely, relics of the old Inca road that led hence to Ascope—and skirted along the cliff—I went down the hill to the hospital. This is an excellent institution, like all those built by Mr. Meiggs, with capacity of accommodating forty to fifty patients. A well-furnished pharmacy is attached. Dr. Heath showed me a roomful of prehistoric crockery-ware, that had been excavated from a burial-

ground in some places not twenty yards from the hospital door; and yet no signs of grave or grave-yard was about. In this neighbourhood, as all along the railroad track for forty miles, we see large mounds of the fine sand such as we saw on the Pisco and Ica, as well as the Mollenda and Arequipa, railroads. Mr. Maynadier tells me these Medanos accumulate at the rate of 100 (one hundred) cubic feet in the year.

My first trip up this line was made at the end of last year to the distance of thirty-six miles, the extreme of the trackway—namely, Monte Grande—being at the time between two bridges—one at Papai, then finished, and the other only done to its buttresses at Yonan—both to cross the Jejetepeque⁷ river.⁸ This is reputed to be formed by the junction of three minor streams—the Magdalena, the Payaguas, and the Puchito. Besides being crossed in the line to Magdalena, it is traversed—such a winding course has it got—again on the railway to Guadalupe, which diverges from the Magdalena track at a distance of five miles beyond San Pedro, where the junction is called the Calasniqui station.

Not very far from San Pedro, and before coming up to the junction, my attention was called

⁷ From the Quichua, *Jejete* (hidden) *peque* (water), in consequence of the quantity of arborescence that enshrouds its banks.

⁸ This, no doubt, is the fine river mentioned by Cieza de Leon, as flowing through the Pacasmayo valley, when he journeyed from San Miguel (Piura) to Trujillo. *Op. cit.* p. 238.

by Mr. Ewing to the remarkable hill of Chocofan, which was surrounded by high adobe walls in two ranges of height—one being a few hundred feet above the other. Of course I had no time or opportunity to examine it; but it was the first I had seen of those thus mentioned by Mr. Squier:⁹—“The usual mode of fortification in Peru consisted in throwing up a series of embankments around the summits of isolated hills—a practice which was common enough with the ancient Celts, and which is still preserved amongst the Australian and Polynesian islanders.”

Of these I have observed only two instances along the coast neighbourhood—namely, that which I now mention, and another subsequently, interior to Chiclayo—so that I cannot coincide with Ulloa in respect to their number that “one scarcely meets a mountain without them.” The two I speak of are in the same province—that of Chiclayo, of which Senor Paz Soldan¹ tells, that “this province is bounded on the north by Lambayeque, and on the south by Trujillos.” He does not at all mention the existence of such a locale as Pacasmayo; yet my readers, on looking at the map, will see the relative bearing of these parts.

About two miles past Calasniqui we skirt an

⁹ “Ancient Monuments of the Mississippi Valley.” By Squier and Davis, Smithsonian Institute, New York.

¹ “Geography of Peru,” p. 233.

immense extent of adobe relics—the ruins of an Indian town called Pitura—near to which, on both sides, and for an extent almost inconceivable, the ground is literally carpeted with bits of broken crockery-ware, such as the drinking-vases or pitchers were made of. Farther on the line continues the same, and for the distance of about five miles, till we get near to where a slit is visible high up in the mountain. To this the Spaniards gave the name of Ventanillas (or little window). Here the whole valley is thickly covered with remnants of walls, significant of ruined dwellings. Therefore the wonder suggests itself—this place, being so densely inhabited, could not have been cultivated for purposes of agriculture; and if this be granted, then how did the inhabitants live?

Progressing, we find a cutting through a large wall from three to four yards in thickness, running across the valley, from the base of a hill to the river's side. This may probably have been put up to resist Inca invasion, as it shuts out the road to Cajamarca,—or it may have been a division between two Indian tribes.

As we were crossing this valley, an incident, which our conductor tells me is not uncommon, happened to a few of our fellow-passengers. In fact, on this line, as it is not yet opened for traffic, there can scarcely be said to be passengers in the orthodox meaning of the word. For although the locomotive runs up and down every day, it

only brings open carts with rolling stock, as well as the workmen on the line, accompanied by their wives and families. Those who have not an order from the agent at Pacasmayo, as testifying to their belonging to the works, are always charged their passage. "Amongst our fellow-travellers to-day, November 27th" (I find in my note-book), "was the most miserable, ragged-looking specimen of Indian humanity I have ever seen—scowling face, seeming never to have been washed,—a pair of worn-out sandals, and a large bag well filled, the contents of which nobody knew. Two boys of the same type carried bags of the like fashion, and they climbed up on the truck where I had fixed a chair for myself, just as the train was about to start.

A considerable number of persons being on each of the trucks, no notice was taken of any person till the time for collecting the tickets came. The passengers consisted of navvies going to work, of women bringing up food to their husbands, of others selling chicha, and of some of the artisans and engineers of the line. We had got into one of those horribly desolate, barren stretches of desert in the valley, when the ticket-collecting time arrived, and our "poor Indian," was asked for his ticket. He had none, he said, with a whine in Spanish. "Money, then," said the ticket collector. None of that either. No time was lost in the driver's attending to

a whistle from the guard, and the engine was stopped. Then he was told that, as he was trying to deceive the company, he and his two boys with their three bags should at once get off the cars, when he might find his way either to Pacasmayo—whence he came—fifteen miles back, or forward to wherever he was going. He tried to plead—even began to whimper about his poverty; and I myself was judging that the guard was too harsh in pushing him, with his luggage, down on the ground. But he had scarcely lighted, and before there was time for his two boys and the three bags to be sent after him, when he took out of his pocket a small bag, as dirty-looking as himself, and full of silver. So paying the money, he was allowed to get up and continue his journey. I must confess that my sentiments of commiseration towards him were at once changed, and for the moment, I could scarcely see any harm in leaving this shabby fellow to muse for a short time amongst the Condors. Like all the other valleys from Piura to this, as well as hence down the coast to Pisco, Cieza de Leon tells us that “here there were great buildings for the Inca’s use, and where the Temple of the Sun was erected,”² of which I regret to say there is not the slightest evidence in the part of the valley through which I travelled.

² Op. cit. p. 241.

CHAPTER XXVII.

The Pacasmayo Railway.—Jequetepeque valley.—Evidences of habitations everywhere.—Papai bridge.—Ruins of Chingallo.—Yonan Pass.—Rock carving here.—Druidical altar at Chuquimango.—To Cajamarca.—Disease of Utah.—To the fair at Guadaloupe.—Stay at Talambo.—Pilgrimage to the fair.—Ruins of fortress at Talambo.—Resembling those on the Huatica valley.—Large walls.—Azequias or water-courses.—the Talambo cause of war with Spain in 1864-66.—La Cuestion Talambo.—Bringing agriculturists from Spain.—Revolt of the immigrants.—Number of Chinese here.

At the end of the first valley we come to a sharp curve, near a place called the Rio Seco; and on the side of the hill facing west, I observe that excavations have been extensively made in a burial-mound, which at first sight resembled a portion of the adjacent rock, so like were they in colour. Mr. Ewing tells me some excellent specimens of pottery were got out of here, and—he was informed by several of the explorers, who were workmen on the railway—not a few specimens of silver and gold likewise. There is a large *débris* of trees all through the way we have come, and a hacienda here, named Tolon, was swept away, as well as much property destroyed, by a mountain inundation in 1826.

A little over twenty miles from Pacasmayo, we

cross the Papai iron bridge; and only about a mile farther on I saw a large stone boulder, almost square, with hieroglyphic figures carved thereon. The locomotive having been stopped for a few minutes to allow me to inspect it, I come to the conclusion that these figures are not chiselled in, but like what Senor Rivero¹ describes of the Dighton Rock at South Carolina, "to have been made by picking with the point of some fine iron implement."

Beyond Papai bridge, we pass through the ruins of Chingallo to Monte Grande, where there is a temporary station, and thence by horseback on through the valley of Tembleros,² to the Yonan Pass of the Jequetepeque.

The opposite side of the river—at what is called the Yonan Pass, is an accumulation of boulders, of various sizes, one over the other to the height of almost forty feet, and all carved over in every direction. Figures of cats, foxes, dogs, serpents, star-fish, centipedes, fowls, birds, fishes, and square-headed men—some of the last-named holding what seem to be battle-axes in their hands. Of this place nobody here knows anything, except that there is a locale near to it called San Juan, and another, not far away, styled Santa Clara. If the Spaniards did nothing more, they sedulously tried to wipe out all the old Indian names, and

¹ "Peruvian Antiquities," p. 21.

² So styled from some species of a sensitive plant that is here.



ENGRAVED ROCKS AT YONAN PASS OF RIVER JEJETEPEQUE.

substitute holy ones instead. This might have been praiseworthy, did not all South American history teach us that to erect a cross upon a hill,—to build a chapel where convenient,—and to give a place that had an Indian title the name of some saint, was generally the extent of their Christianity.

Here is a locale most interesting to any future archæological explorer. In one of these stones I observed three mortar-shaped holes, eleven inches in diameter, and two feet and a half in depth. Those had been evidently excavated here, and were well triturated by frequent use of something being pounded within. Dr. Heath, Mr. Ewing, and myself mounted as near to the top of them as we could get; and these stones, some of them calculated to be from forty to fifty tons in weight, seem to be all in separate blocks; but whether moved here artificially or not I cannot say.

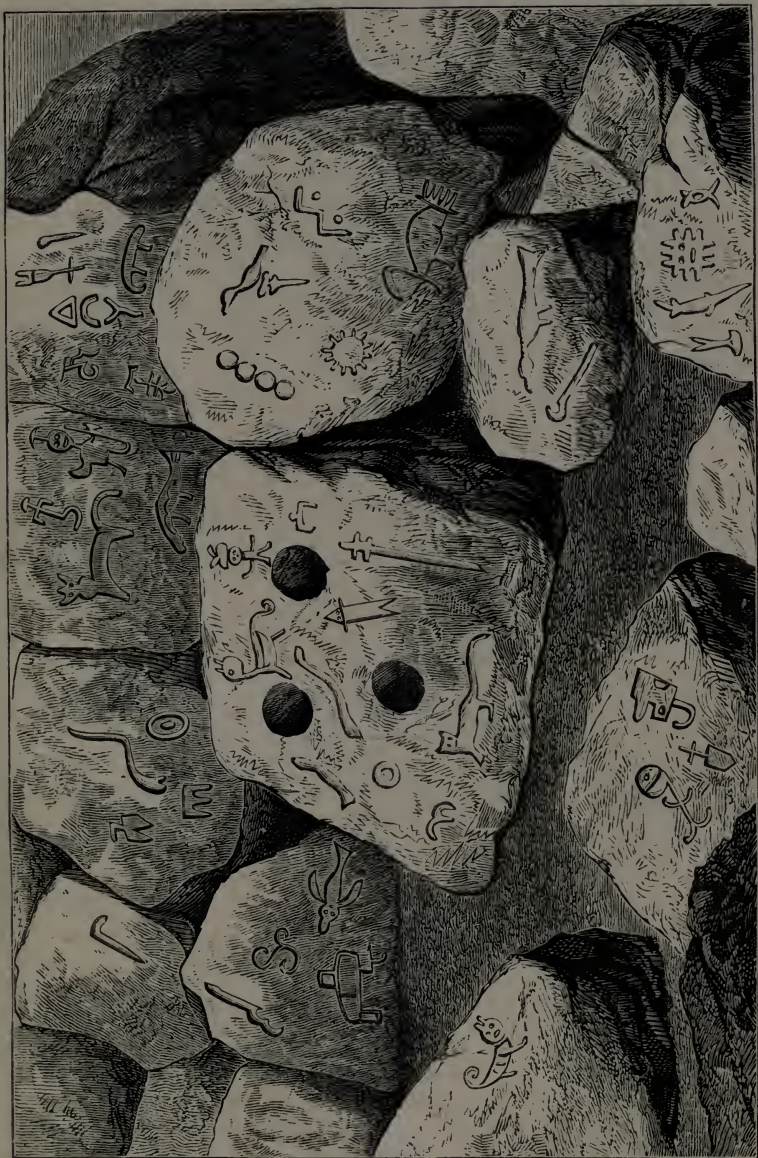
Not far from Santa Clara, on the hacienda of Chuquimango (I am told by Senor Casimiri Razuri, of San Pedro), there is one immense mass of flat rock, supported on three pillars or buttresses, that are believed to have been arranged by some Druidical giants of past ages.

From the side next to the river, of where lies this collection of carved stones, there is the remnant of a large four-yards-thick stone wall, across the little valley—indeed, the term “ravine” would be more appropriate to it. This wall stretches down

to the river's edge, and at the opposite side of the stream a precipitous rock fully a thousand feet high rises up.

During my stoppage here, a very pretty picture in the mountain passes was the defiling along of Natives—men and women—on horses, mules, or asses, on their way to Guadaloupe fair. They were dressed in various fantastic colours: those of them that were pleasure-bound being habited in all colours of the brightest style; whereas the business people, who conducted mules loaded with ponchos, potatoes, cheese, tobacco, and mountain products for sale, wore the sombre commercial garb. I got into conversation with some groups, but they seemed distrustful, knowing me to be an alien. Several groups of them, in sixes to twenties, succeeded. To my interrogations as to what part of the interior they came from, they all answered, “San Pablo,”—“Saint Paul;” and to my gentle inquiry as to what was in the packages, the almost invariable response was “*Causas para el puerto*”—“things for the harbour.” When I asked if they had anything for sale, “*No hay nada*,” was quickly answered. Yet both of these answers were positive untruths, as everything in the bundles was to be sold, and at Guadaloupe too, which is more than twenty miles from the harbour.

At Yonan Pass we are a little over forty miles from Pacasmayo; from Yonan to next station of Pongó are five miles; thence to Llallan twelve



ENGRAVED ROCKS AT YONAN PASS OF RIVER JEJETEPEQUE.

miles ; from which seven miles farther on will bring us to Chilite,³ one of the richest silver districts in Peru. From that to La Vina, nine miles ; and from there to Magdalena five. The railway concession of Mr. Meiggs only extends as far as Magdalena, whence exists a short distance, although it is a high Cordillera, between Magdalena and Cajamarca—the Cordillera, which I believe, limited the occupation of the Inca people in the sea-coast direction.

After reaching Magdalena it is hoped the line will be continued on to Cajamarca. There are few parts of Stevenson's or of any other work on Peru that I desired to study with so much interest as that which relates to the incidents of Pizarro's first *coup de grâce* at Cajamarca, in which we find details of the death of the Inca, Atahualpa.⁴ Prescott never was in South America ; his account is, therefore, derived only from the Spanish writers whose works he studied at Madrid. Stevenson spent a considerable time in Cajamarca, and the "historical sketch," of the events whereof I am

³ Latest news from Peru brings wonderful accounts of the richness of this mine.

⁴ Atahualpa is styled Atabaliba by Francisco Xeres (secretary to the Conqueror Francisco Pizarro), and he is entitled Atabaliva by Hernando Pizarro in his letter to the Royal Audience of Santo Domingo. *Vide* Mr. Markham's "Report on the Discovery of Peru." Printed for the Hakluyt Society, 1872.

writing, he thus premises:⁵—“The residence of Atahualpa at this place was accidental, as will appear from the following historical sketch, which I have endeavoured to make as correct as possible, with the assistance of the works of Garcilasso, Gomara, Zarate, and others, collated with the oral traditions of the Indians of this province, and particularly the Caçique Astopilco, as well as those of Quito.”

With this combination of literary research and “oral tradition,” one would expect, at all events, a resemblance to the probable in the so-called historical sketch; yet we find the whole story an incongruity of Munchausenisms, and impossibilities, as the reader, no doubt, will find if he accompany me in its analysis.

The accidental circumstance of Atahualpa being at Cajamarca—in these times a kind of Harrogate or Buxton of the Incas, on account of its famous mineral springs—was by reason of stopping here till a *ruse* of his planning had succeeded to depose his brother Huascar from the throne of Cuzco, to which he had been appointed by the father of both—Huayna Capac—the throne of Quito having been left to Atahualpa. The *casus belli* between the brothers was said to owe its origin to the fact that Huascar was the legitimate descendant of the Inca, and Atahualpa only the illegitimate. However, the latter succeeded in

⁵ Op. cit. vol. ii. p. 143.

the first move, and his brother Huascar was prisoner at Andamarca, about forty leagues from Pacha-Cámac, at the time that Pizarro came on to Cajamarca. It may be almost supposed that they ate and drank gold in these days, when we are told that at the baths where Atahualpa resided,⁶—and to which Pizarro sent his troops to loot as soon as operations had commenced—“the weight of gold at the baths, *and accounted for*, amounted to 15,000 ounces.” Doubtless some trifle may be considered as “*not accounted for*”—at the baths!

After his famous exploits at Tumbez, “Francisco Pizarro pushed forward to Cajamarca, where he arrived with 160 soldiers.”⁷ To omit the preliminaries of speeches,—the golden goblets,—the seats covered with gold to sit down on,—and the presents of gold with which Hernando Pizarro and Hernando de Soto, ambassadors for the conqueror, returned to the camp, we are told,⁸ “On the following day Pizarro placed his cavalry, composed of sixty men, on each side of the square of Caxamarca, behind some high walls; in the centre of the square he had built a small breastwork, behind which he placed his two field-pieces, and behind these 100 men, and they awaited the arrival of the Inca.”

⁶ Op. cit. vol. ii. p. 157.

⁷ Op. cit. vol. ii. p. 145.

⁸ Op. cit. vol. ii. p. 149.

“High walls on each side of the square” are most unusual things in Peru, and the carelessness of allowing a breastwork, to be run up in one night, shows lack of watchful organization amongst the Inca people.

But “Atahualpa made his appearance on a throne of gold, carried on the shoulders of his courtiers and favourites, with a guard of 8,000 of his soldiers in front, 8,000 on each side, and 8,000 more in the rear, besides an immense number of nobles and attendants.” Let us put down the number, though “immense,” of the last-named as 1,000, and here we have 25,000 warriors coming out to hold a parley with a soldier and a few priests, who had only 160 soldiers with them. The friar Vicente Valverde delivered a long speech—what Stevenson calls a “most extraordinary harangue”—very few words of which, even when translated, were intelligible to Atahualpa. The latter, however, tried to answer, and asked who had informed Valverde of what he had heard from the interpreter. Whereupon Valverde gave his breviary to Atahualpa, and told him, through Felipe, that that book informed him of all that he wanted to know respecting the true God. The Inca folded over the leaves, examined the book, placed it against his ear, and listened. Then he said, “It is false, it cannot and does not speak;” when he let it fall. At this Valverde cried out, “To arms, Christians! these infidel

dogs have insulted the minister of your Redeemer. The word of God is thrown under foot. Revenge! Revenge!"⁹

Then "the soldiers rushed on their unsuspecting victims" [fancy a rush of 160 men on 25,000, or one man surrounding 160 of the Incaites]; "Pizarro flew to Atahualpa, well aware that the preservation of his life was of the utmost importance. But upwards of 20,000 Indians fell" [so that each of Pizarro's 160 men killed for his own share 125 of the Indians, who surely must have been unarmed, or such shamle's work as this could never have occurred. And if it did come off as related, the incredulous may ask, is it possible for the most active of men to get through slaughtering 125 antagonists in one *mêlée*? Additional particulars of the incident are given to us by Francisco Xeres, Secretary to the Conqueror Pizarro, who, we may imagine, was not distant from the slaughter. He says:¹—

"The battle only lasted about half an hour, for the sun had already set when it commenced."

In this case the term slaughter would seem more appropriate than battle, or such a result

⁹ Op. cit. vol. ii. p. 157.

¹ "Reports on the Discoveries of Peru." Papers translated and edited by Clements R. Markham, C.B. London: printed for the Hakluyt Society, 1872. Page 58.

could not have taken place. Let us consider another calculation:—

Given—20,000 Indians killed by 160 Spaniards in about half an hour: we find that each of Pizarro's soldiers, massacring 125 of the natives, must have knocked them off at the rate of four men and one-sixth per minute. That even such work was a trifle to the mind of Senor Xeres, may appear from his reflections in the same page, where he observes, "If the night had not come on, few out of the 30,000 men that came would be left. It is the opinion of some who have seen armies in the field, that there were more than 40,000 men."

Not the least wonderful thing in this great feat of Pizarro's appears, that the only casualty to his forces was that one horse got a slight wound.

This is the romance which we are expected to take as "an historical sketch" of the first great blow of Pizarro in the conquest of Peru.

On the return journey I had an addition to my fellow-travellers, in the Bishop of Chachapayo, together with the Prefect of Cajamarca and his wife. Amongst the suite of the latter were a parrot and a tiger-cat. The whole valley of Jeje-tepeque abounds in deer.

I saw, whilst at Yonan, a case of that horrible disease called *Utah* (a kind of lupus, cancer, or phagœdenic ulcer). It is believed, Dr. Heath

tells me, to result from the bite of a venomous fly.

Returning to Pacasmayo, I proceeded on the next morning to see the fair of Guadalupe. This commences on the 28th of November and ends on the 8th of December—the festival (in



AGRICULTURAL IMPLEMENTS FROM HUABAL.

the Roman Catholic Church) of the Immaculate Conception.

Our route to Guadalupe is by branching off in a northerly direction, where I have indicated the railway junction at Calisnique, whence we proceed and pass by a miserable little town, called Cultambo, quite close to an iron bridge of 630 feet in length that crosses the river Jejetepeque.

But I do not reach Guadalupe on the day of starting, for I stop at Talambo, where I am to be the guest of Senor Don B. Salcedo y Ruiz for the night, at one of the most extensive haciendas in Peru.

The house, stores, cotton-pressing machinery and sugar-cane apparatus are situated to the left of a road, on the opposite side of which is the dwelling. In fact, the residence stands between the railway track—for as yet there is no station here—and the roadway leading down from the mountains to the fair of Guadalupe, which is about three miles farther on. Down they come—the visitors to the fair—in troops of dozens and scores from Cajamarca, Chachapoya, Chota, Jaen, Seladin—bringing such a variety of things for sale—ropes made of grass, potatoes, cheeses, biscuits (the last-named from Cajamarca and very celebrated), saddle-bags, hats, horse-covers, shawls, tobacco, ponchos, gaiters, medicinal herbs, and a lot of other matters to exchange for foreign goods. From so far north as Sechura and Piura—and even north-west from Quito, the capital of Ecuador—they come to the fair of Guadalupe. Troops of horses, mules, and asses—the two last chiefly carrying the cargo. These, from Cajamarca direction at least, are generally hired at two reals (about 7*d.*) per day for a horse, and one real for an ass,—with the obligation not only to feed and care for the animal on the route, but to return him unimpaired to his owner.

Before proceeding to Guadaloupe, Senor Salcedo kindly presented me with some result of the archæological collections of the neighbourhood, from a place about three leagues distant, named Huabal. But the whole country around here is full of such relics, requiring only to be sought for. Mounted on magnificent horses, Senor Salcedo and



PREHISTORIC POTTERY FROM HUACAS AT HUABAL.

I made a visit to the ruins of what I conceive to be a fortress, resembling those at Canete, Huatica, and behind Trujillo. This is about six miles distant to the south of his establishment. All the road thereto was like that up the other railway, literally covered with ruins and bits of walls. The fort had three squares inside of a larger square, and about half a dozen burying-mounds, or huacas,

were around. At this fort was a deep dyke, protected by a yard-thick wall of stones that led from the ramparts to about fifty yards distant, to where an azequia still exists—a water-course that Senor Salcedo tells me has its origin in the Jequetepeque river, and extends in a bed of twenty-one miles' length, falling again of course into the river when it has served the purpose for which it was made—namely, of watering the lands. Of this place I could not ascertain the name. Portion of the wall—of adobones' material—in front of this old fort is still there, twenty feet high, and having a foundation of stones, whilst above the earth it is fifteen feet across. We pass alongside the cutting of an old azequia—not used now—fifteen to twenty feet deep in parts, and nine to twelve feet across.

On our way back by another route, we rode through a cutting in one of these long straight walls such as I have described near Ventanillas, on the Magdalena railroad. The whole of the district through which we travelled this morning for several hours, as well as over miles and miles around, is covered with relics of stone-built houses—of adobe buildings—of neglected azequias—of burial-mounds where the bodies were put in with the huacas or pottery-ware. In several of these mounds excavations have been made,—evidenced from skulls and bones lying about. The illustration of the copper utensils accompanying this chapter shows likewise

that all these implements, when buried, were wrapped up in cotton cloth, for they all have still some of its fibre sticking to them.

In none of these things—or, in fact, nowhere, as far as regards my exploration—can I recognize anything of Incaite prestige as it is trumpeted by its advocates. Every yard of my journeyings proves that these districts must have been densely



PREHISTORIC POTTERY FROM HUACA AT HUABAL.

populated. But, then, how did these people subsist? By commerce, or otherwise? If the topographical condition of affairs were the same in their days as it is now, certainly not by agricultural or horticultural pursuits, for one-tenth of the population, proved by the ruins to have existed, could not be subsisted by land cultivation.

From this hacienda of Senor Salcedo y Ruiz, at Talambo reputedly arose the germs, in 1860, of the Spanish war against the Pacific Republics in 1866, which was commenced by bombardment of the Spanish fleet against Valparaiso in March of the same year. This was followed by a similar course of action, although with very dissimilar results, in the attack on Calláo of the succeeding 2nd of May in the same year. The question² ostensibly proceeded out of some disagreeable occurrences, that took place on this hacienda, in a matter of 300 Spanish immigrants, who had been brought out from the Basque country by the father of the present occupier. Through an invitation, whereof a copy is before me, the Guipuzcoa³ agriculturists (of which province in Spain Senor Salcedo was a native) were offered something of an Elysium in Talambo. They were told that, once out there, land and means of cultivating cotton, sugar-cane, rice, cochineal, wheat, coffee—in fact, every luxury—would be given to them;—that a priest to be their comfort in religion, and a doctor to help their bodily ailments, would be always in attendance;—that, in fact, Talambo was to be a Paradise. Influenced, perhaps, by the enthusiasm which this bright picture painted, they did not observe that the same paper obliged them to a

² "La Cuestion Talambo, ante La America." Lima: Imprenta del Comercio, 1864.

³ Province in Vascongudas. Lat. 43° 6' N., 2° 10' W.

term of service of eight years with the owner of the Talambo estate; and that, on the second year of their coming out, the products of their labour in the matter of cotton would have to be divided—one half for themselves, and the other half for “their partner, Senor Salcedo.” The agricultural matters of wheat, maize, and potatoes would go to their support, with the provision that out of these, after the third year, a contribution of 4 per cent. should be levied for expenses of the chaplain, doctor, and major-domo.

Possibly some of these 300 immigrants knew that, at the time of their contract, cotton was very much enhanced in value, on account of the existence at the period of the civil war in the United States. But, at all events, it appears that as soon as they came out they broke their agreement—although free passage was given at Senor Salcedo’s expense—a very common occurrence, as I happen to know to my cost, in South America. Then the Peruvian authorities were appealed to, after the chief Spanish mutineer took hold of Senor Salcedo’s horse, with its master on its back, whilst the others threw stones at him as he went along the high road. A row ensued in the patio (or yard) of Talambo House; several Spaniards and one Peruvian being killed in the *mêlée*. To this succeeded the disbanding of the whole colony—diplomatic expostulations in Lima and Madrid,—

and the final result of the bombardments already alluded to.

There is a considerable number of Chinese at the hacienda now ; but the establishment does not present any features of prosperity.



WHISTLING WATER-CROFT.

I may add, as explanation of the foregoing title, that when water is poured into the tube at the left-hand side of this water-croft, the whistling sound comes from the head of the bird on the right.

CHAPTER XXVIII.

To Guadalupe fair.—Its characteristics.—Road through Chepen.—Hacienda of Surifico.—Rum distillery with cross over it.—Appearance of Guadalupe in its fair time.—Legend of origin of the pilgrimage.—Statue of the Virgin quitting the chapel.—How the mule lost himself.—Miserable aspect of the town.—Daubs of whitewash a failure.—Big advertisement for theatre.—Colonel Goyburn's coffee, silkworms, and gold medals.—Return to Pacasmayo.—“Litter of rose-leaves and noise of nightingales.”—From Pacasmayo northward overland.—Through a slice of Peruvian Sahara.—Ruins of another fortress.—Hump-backed mountains.

As soon as our horses could be saddled, on the morning succeeding my visit to Talambo, Senor Salcedo and I set out for a visit to Guadalupe fair. The crowds were still pouring down by the road from Cajamarca, and on our way we met some groups returning with cases of brandy, and bundles of other civilizing influences, which they had exchanged for their products, strapped on to the backs of their mules. This, too, although it was only the 29th of November, and the fair could be scarcely said to have been initiated.

The road here is a very excellent one; through the village of Chepen, with a considerable population, and past the hacienda of Surifico. Although the houses in Chepen are now only a very

miserable collection of huts, it must have been a place of no small note in prehistoric times. For only a few weeks previous to my final departure from Lima, I saw exhibited for sale there, in the Calle Ayacucho, a collection amounting to eighty of some of the most highly-finished specimens of pottery, that had been exhumed from burial-mounds at Chepen.¹

The hacienda of Surifico outside of Chepen had a short time previous been purchased by President Balta; but it was again bought from his Excellency by Mr. Henry Meiggs. It is therefore now in proper order, having large crops of sugar-cane, with excellent gates and fences.

Between Surifico and Guadaloupe we pass by an establishment, comprising a manufactory for sugar and distillery for rum, over the principal gate of which was such a large wooden cross as one seldom sees, except at a more holy kind of building. In a quarter of a mile after, we were in the streets of Guadaloupe. Although it was very considerably crowded, as I might have expected from the numbers I saw coming in during the two days previous and the morning of my visit, I was assured this was nothing to what it would present in a few days after—the ensuing Saturday and Sunday more particularly. We rode up to the Plaza Principal, or principal square of the

¹ Yet no mention of this *locale* is made either by Ondegardo, Cieza de Leon, Garcilasso de la Vega, or any writer previous.

town, where tents were being fitted up with sides and roofs of mats, attached to poles stuck in the ground. In many of these gambling with roulette tables was already commenced. Round and about were listless groups,—some selling and others drinking chicha. At the stands already constructed were offered for sale alforjas (saddle-bags), shawls and ponchos, brought down from the Cordilleras. These last named are of a quality very inferior to those we find on the eastern side of the Andes in the Argentine Republic.

The band of one of the Peruvian regiments was playing in the plaza, opposite to the chapel. I was anxious to see the inside of this church, because, from the religious date (8th of December), on which is the principal bearing of the fair, I inferred it must have some holy origin. The interior does not differ from the general aspect of South American chapels, outside of Lima, being damp and chilly. The altar seems unfinished, though on the top of it is the identical statue of the Virgin, on account of which this fair had been established. In fact, it was intended by the Spanish clergy, who founded it, more in the light of a pilgrimage than a trade meeting; but, in the degeneracy of the age, its sacred character has merged into the commercial.

The tradition about it is as follows:—Many years ago—no one here, not even the oldest chronicler, can tell how many—the Curé of the

district had to speak to his congregation about the neglect to which the statue of the Virgin was subjected in the matter of offerings. Neither ornaments nor clothing were given, and the old ones seemed wearing away. Repeatedly they were warned and threatened of what the consequences might be; but they heeded not, till one morning the statue was missing from its accustomed niche. Contributions were, therefore, soon poured in by the simple congregation to appease the divine wrath, that had manifested itself in the supernatural disappearance of the statue. A searching investigation was made, but nothing discovered for some days, although every hour the Curé still impressed the indispensability of increasing the offerings. On the third day, and after a solemn procession had been made, the statue was discovered on an isolated rock about 300 feet high, and to which previously there had been no ascent known to be attempted. The succeeding Sunday found it again in its place, on the altar, although nobody had seen it removed. And from time to time, till its fame spread far and near, it came to make disappearances, and returns without any visible aid—these being generally suspected, by the sceptical mind, to depend on the Curé's sensations about the lack or abundance of contributions.

Another account of this miraculous statue tells, that it was originally brought to this place by

the early Spanish missionaries, and transported on the back of a mule. Somehow or other, the mule strayed away, losing the case in which the statue was contained, and subsequently losing itself, for the animal never turned up afterwards. But the case with the statue in it was picked up on the identical spot where the chapel is built in this square. In the neighbourhood the town of Guadaloupe was founded.

And such a town as it is, to be sure! Surrounded by clumps of hills—on tops of several of which are relics of old times—pieces of walls, and masses of ruins. Its component parts, of the general run of streets, present a collection of dirty people, rolled up in filthy clothes, and peering out of tottering houses into abominable by-ways. On one or two of the houses you see a daub of whitewash, as if a spasmodic idea of cleanliness came like a flash of lightning to somebody. But all the surroundings seem so strongly to protest against such a thing, that it is a palpable failure. At the corner of the plaza, adjoining one of these streets, was a large advertisement-sheet, like that at Mollendo, big enough for Covent Garden, or the Italian Opera House, announcing a theatrical performance to-night, the 29th of November, that had been performed with great success on the previous Thursday. The idea of a theatre in such a place startled me for a moment, and after again contemplating the surroundings, I could not help a

suspicion that the "Dead March in Saul" would most probably be the opening overture of the performance.

There is one redeeming quality in Guadalupe—that is, the house and store of Colonel Don José Bernardo Goyburu, at the right-hand angle of the plaza from the chapel. Here I saw, in the proprietor, a man of business, who has on his farm cultivated coffee, for which he got a premium in the Lima Exhibition of 1869, and a gold medal in the London Exhibition of 1871. He is likewise introducing the silkworm cultivation, as the mulberry grows in abundance through the Jequetepeque valley; and he showed me some very healthy cocoons, upon which he was experimenting.²

The only features of what on the continent of Europe are recognized as fairs consisted of a few asses and pigs, that were tethered not far from the railway station as I returned to Pacasmayo.

From my note-book on the day of departure from Pacasmayo, I extract,—“Dec. 1st. Although I feel very grateful for the kind, affable, and agreeable hospitality of Messrs. Maynadier and Ewing, I am afraid that I must speak the truth about the village behind their residence. ‘The

² I regret having heard, on the day after I left Guadalupe, of one of the gallant old colonel's legs being broken, by the kick of a horse, in his patio.

litter of the rose-leaves and the noise of the nightingales' were once mentioned by George Robins as the only drawbacks to a splendid property he had put up for auction. The litter here in the streets, and the nightly noises of which I have already written, must bring to my mind this story of the world-famed auctioneer, on the principle of '*Les extrêmes se touchent.*'"

Before starting, I again examined the two roads pointed out to me by Dr. Heath as of Inca making, and found them only simple trackings in the sand from Pacasmayo hill-top southward towards Malabrigo. In one place there is a cutting through a four-feet-deep heap of rubble, but the sand, (accumulation of Médanos) has obliterated all other pathways in the surroundings.

Again searching through the works of Paz Soldan for some mention of this place, and finding nothing in the index, I am glad to discover that he does notice it, under the slice of statistics which he gives about the province of Chiclayo,³ in the following words:—"In the district of San Pedro stands the port of Pacasmayo, in which is made some maritime commerce."

A few days after my first visit to Pacasmayo, one of the *lancheros*, who fell asleep in his boat whilst alongside a ship, let his head fall over the boat's side, and in a lurch of the vessel against the launch, his skull was broken. Never after could

³ "Geography of Peru," vol. i. p. 224.

any one be got to make a voyage or pull an oar in *that* craft; it was consequently hauled up on the beach, and condemned as derelict.

Cotton and rice were formerly the chief exports from Pacasmayo, as indeed from nearly all the northern ports of Peru; but the sugar-cane cultivation is found to be more profitable, and is therefore coming to be generally adopted.

From Pacasmayo, still going northward, I must ask my reader to make this journey with me overland to the port of Eten, beyond thirty-five miles distance. My passage between these two places was in reality made from Eten to Pacasmayo on horseback, kindly procured for me by our worthy Vice-Consul at San José, Mr. Wm. Fry. But the whole district is most uninteresting and uninviting. Except at a distance of about two leagues north of Pacasmayo, where I find ruins of exactly the same kind as those in the Huatica valley, and behind Trujillo. Close to a precipitous bank of nearly 300 feet high, overlooking a large extent of the Jejetepeque valley, are the ruins of a very large city, with two huge fortresses. In their style of architecture they are exactly the same as the so-called huaca of Toledo at Chanchan, the buildings in Huatica and Cañete valleys. I had no spirit to examine them, for it was nearly ten o'clock in the day, with a roasting sun, and I had been riding all night from Eten. Through a country of arid sand, pebbles, and

rocks—of the bleached bones of cows and horses marking the roadway—of nothing to comfort or alleviate one's thirst or hunger, if likely to perish,—and of everything suggestive of the African desert. When crossing the mouth of the river Jequetepeque, and for a mile or two on either side, the whole beach is covered with *débris* of tree stems and branches swept down from the valleys. After the water here, none is to be met with for nearly ten leagues, till we arrive at Lagunas, where there is a pretty considerable-sized village, with a Governor in it. There is a little port, called Cheropee, one league to the south of Lagunas.

The latter village is reported to have about 600 inhabitants, and around the lakes we find some scanty vegetation, but little or none of cultivation, except a few fields of Indian corn, and some pumpkins. Farther on we pass a place called Mocupe, having only a few houses in it. The valley behind Lagunas has still its old Indian name of Rafang. Near to this is a district entitled Calanacoche, and we pass the Rio de Lobos (or river of seals). Several points of mountains here are designated "Corcovado," or hump-backed.

CHAPTER XXIX.

Eten port and railway.—Railway to Pimentel.—Opposition business.—Eten to be made a Custom-house port.—Decree enacting this, done by President Balta.—Mole at the Eten railway.—Visit to Eten village.—Peculiarity of its people.—Said by some to be of Chinese descent.—Believed by Author descended from the Chimoos.—Reasons for same, as being always in mourning dress.—Intermarrying with sisters.—Monsefu and its copper foundry.—Alforjas.—Chiclayo and its battered church.—Description of copper implements disinterred from burial-mound at Chiclayo.—Tuman and Patapu.—Lambayeque and inundations.—Ferrañafe and rice products.—Richness of district.

DURING the year before last (1871) there was published at Lima a "Collection of Laws, Decrees, Contracts, and other Documents relative to the Railways of Peru."¹ From this I find that in April, 1867, a presentation was made to the Government by Senor Don Juan Cossio, of Lima, repeating a proposal that had been made in the previous February of 1866, asking permission to make a railway between the small bay of Pimentel and the town of Chiclayo, with a ramification to Lambayeque. To this, in the next month of May, 1867, succeeded a despatch

¹ For a copy of which—three volumes bound in one—I am indebted to the courtesy of Mr. John H. Meiggs. The work was compiled by directions and at cost of his brother, Mr. Henry Meiggs.

to President Balta from Senor Don Jose Antonio Garcia y Garcia, in which it is suggested that neither the more spacious port of San José nor the smaller bay of Pimentel is fit for introducing the railway system into the rich valleys of Lambayeque, and Chiclayo, but that the port of Eten is the proper place for such an initiative. Moreover, Senor Garcia guaranteed that the necessary capital was ready to be invested for the building of a railway as well as for the construction of a mole at Eten, if his Excellency would decree the suppression of San José as a "puerto mayor," or Custom-house port, and have it transferred to Eten.

In compliance with this, on the 25th of August, 1871, was issued the decree for transferring the Custom-house from San José to Eten, and ordaining that it should take effect from 1st of March, 1872. A company was formed in October, 1867, for constructing the Eten line. This, in its first concession, was only provided to go through the towns of Eten, Monsefu, Chiclayo, and Lambayeque, until, by decree of June 7th, 1868, it was prolonged ten miles farther north to Ferrañafe, one of the most important rice-producing districts of the province of Lambayeque. At the end of 1871 it was opened to Chiclayo, and rapid progress had been made with the mole.

At the time of my visit about to be described, I found an excellently-arranged station, works, manager's residence, and goods stores at the port

of Eten, the whole line being under the management of Mr. John Daly, from whom I received every courtesy during my short stay. The mole, which is being erected on screw piles, and is to be of a length of 2500 feet, was put down to the length of 1927 feet in November last, and is no doubt completed before this time. The station here is very well adapted to the needs of traffic, being 1200 feet by 600.

On the day of my arrival Mr. Daly kindly brought me on a special engine, in company with Mr. Hindle, C.E., Government Engineer, and Mr. Cole, C.E., of the Pimentel line, along the whole of the railroad from Eten to Ferrañafe. Our first visit was to the town of Eten, of which Senor Paz Soldan says,² "Eten is distant from the sea seven leagues. Its people are a pure race, who take much care to have no intermixture. They allow no idle persons in their community. Eten signifies in their language '*the place where the sun rises.*' It is said that in Lima a Chinese and a native of Eten understand each other perfectly." Equally misleading is the account of its position by Mr. Spruce, who says, "The town stands on a steep hill (*morro*) close to the sea."³

If either of these were at any time correct, the town of Eten must have undergone some remark-

² "Geography of Peru," vol. i. p. 223.

³ See note in Mr. Markham's translation of the "Travels of Pedro de Cieza de Leon," p. 44.

able transitions, since Senor Soldan or Mr. Spruce knew it; for on the morning of my visit there it was about a mile to a mile and a half distant from the sea, and nearly three miles north of the station wherefrom we started.

I saw as many idle people in Eten as in other Peruvian towns, and no one could confirm the Chinese affinity. The story of the primitive settlers here is, that they were wandering from some place of which the chroniclers give no record, and that, being wearied out, they came to a resolution to stop and make their location in the next place where they would find themselves, on the rising of the sun. It was a very wise resolve this, for, supposing them to have come from the East, as some persons think probable, less than two miles farther would have brought them into the Pacific Ocean. So here they stopped, and called the place Eten,⁴ which signifies, as we are told, "where the sun rises."

A walk through the town of Eten impressed me with an indescribable *je ne sais quoi* to know more of the people, than I could pick up from my short visit. I entered several of the houses—saw their occupants working at mats, hats, shawls, quilts, and cigar-cases, and was impressed with a greater dignity of physique, as of manner, than I have met elsewhere

⁴ It might not be an uninteresting point of philological inquiry to ascertain the difference, or similarity, of the *Unde Derivatium* of this place, and the college of Eton, near her Majesty's palace of Windsor.

in Peru. Instead of believing them to be in any way connected with the Chinese, I confess myself at first impressed with the idea of their being descended from the last remnants of the Inca people, and to have immigrated hither from Cajamarca.

Of these people Stevenson says,⁵ "The town of Eten stands on a sandy plain [it is not a sandy plain,—for the country round is dotted with fields of clover and sugar-cane], and is entirely inhabited by Indians. Those are the only people who speak the Chimu dialect, which is the original language of the coast of Peru, and so different from the Quichua, that I could not understand a single word, nor trace any analogy between them, and beyond the limits of their own town their language is unintelligible. They do not allow any persons but Indians to reside amongst them,⁶ and a traveller is only suffered to remain three days in the town; but the Alcaldes always take care that he be provided with whatever he may require." The difference in the dress from that of other Indians, as described by Mr. Stevenson, I did not recognize, except in the matter of the mourning. This is mentioned by him as "a kind of long black or blue tunic without sleeves, girt round the waist."

⁵ Op. cit. vol. ii. p. 187.

⁶ This is not correct; as there was a German or Swiss, I forget which, and whose name has escaped my memory, who had a store there, for three years previous, within half a square of the chapel in the Plaza when I visited Eten in November, 1872.

The mourning may, as is said by some, be for Atahualpa, but I think it is far more likely to be for the original great man of the Chimoo valley, the King Chucha Machoon.

If it be correct that they do not speak the language of the Incas, of course my first reasoning on the subject falls to the ground, because I had suspected their Inca descent for the following causes :—

1st.—Their physical type. It might be an accident ;—but, if so, it is a very curious coincidence, —that I saw women in the streets of Eten, with form and figure, exactly resembling those painted in Montero's great picture of the funeral of Atahualpa. Mayhap the models of Montero are only imaginary, or artistic ; possibly it can be proved so ; but that does not alter the fact. As they are in the painting, so they exist at Eten—with their Roman noses, swarthy complexions, long black hair, and robust figures.

2nd.—The women at Eten all wear mourning outside of doors, and have worn it during all the time that is known of their history. This consists of a black garment of petticoat, gown, or skirt, whichever it may be called, with a white shawl thrown over. Therefore, probably in mourning for Atahualpa, or possibly for the last Chimoo king.

3rd.—I have been informed by a resident for three years (the European before-mentioned), that brothers and sisters live in marital connexion, as

we are told all the Incas did from the first down to the last.

4th.—An indistinct remembrance is in my recollection of one of the Inca kings (although I fail to call to mind which it was) having devoted much of his time to making straw hats, in the periods of his recreation. The Etenites manufacture straw hats, mats, cigar-cases from straw, and quilts from cotton. This is their chief business here. The quilts are worked in raised patterns of flowers, although in a very inferior style, to that in which the same kind of thing is executed in what are called *colchas*, by the women of Santiago del Estero, in the Argentine Republic.

5th.—The implied devotion to the Sun in the idea of their halting at his rising, and the mystery about their speaking a different language from the other Indians, are matters of problematical speculation, well worthy of an archæologist to investigate.

They cultivate the ground very partially, and chiefly for sugar-cane growth. Their cane mills are of the most ordinary kind, called *trapiches*, worked by bullocks, or horses. They have the same style of one shaft, low sloping car, with solid wooden wheels, that may be seen in many parts of the south of Ireland to draw turf upon. In fact, there is little attractive about the Etenites, except the mystery of their origin.

Not more than two miles from the town of Eten, and along the line to the north of it, is

another large village, at which we stop to have a look around. This is called Monsefu, and I am told the inhabitants of Eten hold no communion with them, nor they with the Etenites. Perhaps in some matters this holds good, but in commercial and social points I know it does not; for I saw, during the period of one of the ordinary trains passing by, that they were going in no inconsiderable numbers, from one town to another. Monsefu is like the usual run of old settlements of Spanish foundation all along this coast, that seem to have been built for the chief purpose of falling into wreck and ruin. It has its principal plaza or square, Matriz or parish church, and the remnants of some old triumphal arches built centuries ago. Its chief trade is the manufacture of *alforjas*, or saddle-bags; and these of Monsefu are famous over all Peru. At some time in the year there is a fair here, like that of Guadaloupe, but of the period I am not certain.

A few hundred yards outside of the town I visited a copper-foundry, whereat they manufacture sugar-pans, used at the haciendas down the coast. These are made out of old bells, and bits of copper picked up everywhere. The sugar-boiling pots are sold at the rate of five reals (about two shillings) per pound weight; and as the material from which they are fabricated is bought cheaply, it ought to be a profitable business. But the place lacks the stir of life seen in our

English manufacturing places. In fact, a woman with a baby—three men, one of whom was making a cigareta, and two were smoking, constituted all of the executive of the establishment whom we saw, and the foundry itself was in a state of repose.

Monsefu must have undergone a great transformation since Stevenson visited it, as he describes⁷ “the village of Monsefu a remarkably handsome place; the houses are very neatly built, with wide corridors in front, and whitewashed; several streams of water cross the principal street.”

Neither corridors, whitewash, nor streams of water put in appearance during my visit to the town,—the chief features of which were a broken-down church in one corner of the principal plaza, and two half-ruined triumphal arches, entering from the western side, in two different cuadras.

From this station we go north six miles to Chiclayo, the capital of the province, and a city of considerable population. Its church,—in the principal plaza of course,—seems to have suffered much in the war of the late President Balta against Prado during 1868. There is some story about Balta, or perhaps one of his warriors, having ensconced himself up in the bell-tower, from which cause the edifice was submitted to a peppering from without. An excellent hotel is at Chiclayo—the Hotel de Globo—kept by a

⁷ *Op. cit.* vol. ii. p. 180.

German, and at which we had a capital breakfast. The station is about a quarter of a mile distant from the principal plaza, and to get there we have to go under a triumphal arch, in better repair, or perhaps, more properly speaking, in considerably less decay, than those at Monsefu.



ANCIENT AGRICULTURAL IMPLEMENTS FROM POMALCA.

From Chiclayo (still with our special engine), we make almost a semicircular *détour* of the city, to go out on a branch line which is being laid down to Patapu—the hacienda or sugar-cane plantation of a German gentleman, Mr. Solf. This brings us through a country rich in Indian remains. Mr. Daly, having an eye to the profit of the railway, points out to me how there are three branches off this line to three different sugar-cane farms before

we are a league outside the city. I am afraid to confess that I paid more attention to Mr. Hindle's description of some relics that he stopped at a small farm-house to obtain for me, and which were taken out of a burying-mound quite close to a place called Pomalca. These consisted of what appear to have been, for the most part, agricultural implements. They were all covered over with a thick, bright green crust, as of sulphate of copper, and with this were mixed up the remnants of cotton threads of the cloth, in which they had been rolled. That which counts fourth from the left side struck me as somewhat resembling the Roman *scrinium*. It was of telescopic arrangement,—of two parts,—one fitting into the other, and reversed, was the shape of a horse's hoof. Cloth fragments, with needles and buttons, as well as a pair of small tweezers, were inside. This last-named is such as we know to have been used for plucking out hair of eyebrows, whiskers, and moustaches.

On our way a little farther we passed the large hill of Pomalca,—having the same style of defences of high walls as those described at Chocofan, interior to Pacasmayo. The country around here is full of burial-mounds. This subsidiary line turns to the left by a station called Cambo, and crosses the Lambayeque river, through Tuman (a hacienda recently purchased by President Pardo), proceeding on to Patapa. At the time of my

visit they were only in progress with the bridge as far as the southern side of the river. Coming back, I observe that the northern aspect of the large hill, on which I saw the fortifications this morning, is considerably covered over with ruins of walls and houses.

From Chiclayo, again northward, we pass a pantheon, or burying-ground, about half a mile outside of the town, and then through a broad and well-cultivated country. I have seen in no part of South America, alfalfa (South American clover) to equal, in the rich green fatness of its stalks and leaves, the alfalfa which I saw growing here. Along this part of the road the valley is so extensive, that in much of it one can see no Cordillera,—the view inland being bounded by horizon.

From Chiclayo to Lambayeque, the distance is only seven miles, and here we come to another town of the stereotyped model—plaza principal, with church and a market-place,—the last-named being an open shed with a matting roof. This place of Lambayeque is a wonderful locale to think of any person making his permanent residence in, when we come to consider a few features of its history. In 1791 it was nearly all swept away by a torrent of water from the mountains. The same thing occurred in 1828, when Lambayeque, from a town, was declared a city. In the year 1870, or three years before the period of my visit, a similar

catastrophe occurred, and it was believed this last was the most destructive of all. Houses were swept down by the current, which went over the sides of the Lambayeque river, and several persons drowned, independent of the furniture destroyed. Cattle were carried away, and rice-fields rendered useless. Such of the people as saved their lives, did so by escaping to a neighbouring sand-hill of about 300 feet high; and there they had to bivouac in the open air for several weeks till the water subsided. In one place the river cut right through one of these *Médnas*, which was about sixty feet high, and that extended for a mile or so across the valley, in front of the river's outlet. At the time of my visit the marks of water, on the outside of the large chapel, were from six to eight feet in height; and through the streets are still remnants of walls leaning down,—evidences of roofs washed away,—broken doors hanging on their hinges,—and much appearance of ruin, that seems to be as recent as if the inundation had only taken place yesterday.

There is a geographical error in Mr. Stevenson's work referring to this locale which I must correct. He says:^a—"Lambayeque is the capital of the province. It is situated about two leagues from the sea and four from its seaport, called Pacasmayo,—where the river of this name enters the Pacific, partly by which river, and partly by the river Lambayeque, the town and surrounding

^a Op. cit. vol. ii. p. 181.

country are watered." In rectification of this I have to observe that San José is the present seaport of Lambayeque, distant only two leagues from the last-named. But if Pacasmayo ever were the seaport of Lambayeque, it could not have changed its position, which at the period of my visit by nearest route was thirty leagues by land, and nearly fifty miles from Lambayeque by sea. There is no river of Pacasmayo except a very tiny stream; for that which waters the valley between the two districts just mentioned is the Jejetepeque.

From Lambayeque the train goes north to Ferrañafe, where there are four large rice-preparing establishments, and which stands in the centre of a well-cultivated district. This is ten miles from the former town. All the country through the last-mentioned route is laid out in small farms of mango as well as orange-trees, plantations of Guayaquil bamboo, and rice-fields. The population of Ferrañafe is calculated at from three to four thousand. I am told the average annual export of rice from Lambayeque is fifty-five to sixty-five thousand fanegas (each fanega being 150 lbs.).

Farther north than this it is difficult to travel, unless we go on horseback—a thing which I recommend every one, who consults his comfort, to avoid as much as he can in the country parts of Peru. In the neighbourhood of San José and Lambayeque, there is a large quan-

tity of deer. Indeed, some years ago Senor Delgado, of Lima, who owns a small kingdom of territory to the north of this, sent out a pack of deerhounds from England; but from neglect, or perhaps from the climate, they soon died. Senor Delgado's property up here is represented to me to be 180 square leagues in extent.

Farther still to the north, including no small stretch westward towards the ocean, is the district of Sechura, with its desert of thirty-two square leagues, on which wild horses, mules, and asses are said to exist in multitudes. Up in this direction, too, is the city of Piura—the first founded in Peru by Don Francisco Pizarro, in 1531, or nearly two years before the butchering at Cujamarea.⁹ I believe it is not in exactly the same spot as stood the original San Miguel de Piura. But it does not matter much, from being of little importance to the equilibrium of affairs in the world. Moreover, its churches, and chief public buildings were almost annihilated by an earthquake in 1855.

My observations in Peru being principally confined to the coast, I have still two places to look at. So, returning as far as Lambayeque by train from Ferrañafe, I take horse, sent over to me by our worthy Vice-Consul, Mr. Fry, and go to visit San José, the seaport of Lambayeque. This ride is over a pampas of sand for two leagues, with the

⁹ *Vide* chap. xxvii. p. 517.

same profusion of burial-mounds that I note everywhere. For a mile outside of the last-named city, and after crossing the river, the road is through a pretty grove of algarroba trees; and then we get into a heavy sand, which seems to assert its supremacy. Inasmuch as, after passing the river neighbourhood, there is not a vestige of anything in the shape of vegetation on the road to San José. Barrenness of sand, rock, and clay all through! Several donkeys, laden with loads of alfalfa, form part of our travelling *cortége*, some of these loads weighing 500 lbs. In fact, the poor animal is so smothered up with his cargo, that nothing is visible except the pair of ears and the face. Many of the burial-grounds along here have been dug into. These can scarcely be called mounds, for they are not more than an elevation, and without any form, of about a yard higher than the circumjacent road, precisely as they are all over the coast from Arica, nearly eleven hundred miles away.

At San José, I find the following in my notebook—November 20th, 1872:—

“A single glance at the tumble-down appearance of this as well as nearly all the towns, I have visited along the coast, makes me think these places must have undergone a very material change since Mr. Stevenson wrote, ‘The villages along the coast have a very neat appearance; the houses are but one story high, with a capacious

corridor in front. Some of them are supported by pillars, made of sun-dried bricks, whilst others are composed of bundles of canes, lashed together, and covered with clay, with arches made of the same material. The whole front is whitewashed, and a comfortable promenade is produced under the grotesque piazzas; a range of seats sometimes extending the length of ten or twelve houses; and here, in the cool of summer evening, the villagers sit, or lay their mats on the ground and sleep.’”¹

I have copied this out for the purpose of saying that I have seen nothing of such an Arcadian neatness on the whole coast of more than eleven hundred miles over which I have been. The houses at San José, with the exception of one or two, are the most miserable and uncomfortable of residences. They are the same at Etén, Lambayeque, Pacasmáyo, Huancháco, Chancáy—everywhere along the coast down to Arica (excepting, of course, Calláo and Chorillos). No whitewash, and no arches, no comfortable promenade, excepting what is built by the foreigners who are residents of the coast districts, or by the Peruvians of the higher classes. “Lo, the poor Indian” is still the same as he has been from the beginning; and, however good or humane he may be, he does not seem at all to take to soap or whitewash.

¹ *Op. cit.* vol. ii. p. 18.

CHAPTER XXX.

San José.—“The Balsa.”—Old Peruvian craft.—Cholo sailors here.—The “Painter” at San José.—Transfer of port-privileges to Etén.—Helpless houses.—Dumpy women.—Fortress of Chatuna.—Resemblance to those of Huatica and Trujillo.—Extensive view from top.—Garcilasso on polytheism.—Surprise at obstinacy of Indians.—Northwards to Lobos and to Payta.—Desert of Sechura.—Ecuador and its fossil horses.—Revolution at Panama.—Hereditary buccaneers.—Inter-Oceanic Canal.—Protocol between Peru and Colombia.—Survey of United States’ commission.—Exploration of Peruvians into the Isthmus.—Their report.—Farewell to the Pacific.

“To compare little things with great” (“*parvula componere magnis*”), the town of San José bears a somewhat similar relation to Lambayeque in topographical position, as Calláo does to Lima.

The distances, by steamer, of the ports from Pacasmáyo northwards are—from the last-named to Etén, thirty-two miles; from Etén to Pimentel, seven; and from Pimentel to San José, five.

To land at San José, the safest mode, be it from steamer or sailing-ship, is in a *balsa*—the same kind of craft that Prescott tells us the Indians of the coast of Peru navigated with at the time of Pizarro’s first coming out here. Although I had seen *balsas* on the beach down at Chimboté, as well as at Huancháco and Pacasmáyo, I first

witnessed them afloat at San José. They are great cumbersome-looking things, quite quadrangular,¹ and without the least appearance of anything in the shape of sailing qualities—composed of eight to ten trunks of cabbage or cork-tree (which grows in Guayaquil), lashed side to side. These form a floating mass of thirty to thirty-five feet in length, and from twelve to fifteen feet across. The *balsa* is propelled by a large square lugger sail, and steered by three or four men at different parts of the craft, using large paddle-shaped pieces of wood for helm power. The Cholo sailors, who manage these, seem to be a rough set, as I am taking observations alongside our steamer. Mr. Fry tells me they come from Sechura district, not far from Payta. Whilst we are talking about them, one jumps into the sea from a *balsa* to fish up the stomach and entrails of a cow, that had just been thrown overboard by our butcher, who is preparing the daily meat for the ship. Others of them, while waiting for the cargo and passengers to go ashore, are fishing in the bay with hook and bait,—hauling up quantities of a small fish resembling bream, to which they give the title of *Mojarilla* in Spanish. But the

¹ These are a different form from the balsas described by Zarate as “the shape of a hand stretched out, with the length of the fingers diminishing from the centre.” *Vide* “Reports on the Discovery of Peru,” by Clement R. Markham, Esq. Printed for the Hakluyt Society, 1872. Note to page 14.

Indians call it *Guajolitas*. The cook turned out a delicious dish of it for breakfast.

Undoubted signs of the "Painter" this morning, in the roadstead of San José, show that it is not confined to Calláo. Mr. Fry tells me that, even on shore during the "Painter" time here, silver, as well as white paint, is turned black by the fumes, and the people are afflicted with headaches. No doubt the same sulphuretted hydrogen gas, from submarine volcanic action, although in a modified form, that we have at Calláo. At San José we are more than 400 miles farther north than, as well as the same distance from, Calláo.

After breakfast I go on shore with Mr. Fry, on one of his *balsas*. As soon as the craft is under weigh, a number of planks, of an inch thick each, are passed down in the spaces to the depth of four to five feet, between the trunks of the cabbage-wood; and these are so regulated as to influence the steering qualities in reference to the point from which the wind is blowing. The motion is very pleasant, neither rolling nor pitching; but rising gently over the comparatively calm water this morning. Topping the breakers, and keeping full sail on, the balsa brings us right up to the shore, and as soon as it touches *terra firma*, we are secured by aid on shore from being drawn back through backward action of the wave force. One of these balsas is estimated, Mr. Fry

tells me, as worth 700 Peruvian soles, or about 140*l*.

As soon as the cargo is discharged, the ropes, that bind together the different stems of which the balsa is composed, are unlashd, and these trees are rolled up high and dry upon the beach, where they remain till next wanted. This is indispensable as regards their efficiency, for if they were allowed to remain in the water, the light, absorbent structure, of which they are composed, would become saturated with the liquid, and hence their floating powers be lost.

Before the port privileges connected with the Custom-house were transferred hence to Etén, San José had 1200 inhabitants. Now (in December, 1872) it has not more than six to seven hundred. It is difficult to be described. Every house in the town, save two, seems to be leaning against its neighbouring house to keep it up. These two are side by side, but sturdy—the houses of Mr. Fry and of Mr. Solf, of Patapa. The majority of the population belong to the soft—I can scarcely call it “fair”—sex, and generally partake of the dumpy order. From the verandah of Mr. Fry’s house I note several of them going through the streets, all barefooted, and in the very superlative of *degagée* as regards their dress—the long black hair flowing down to their hips.

The Lambayeque river debouches into the sea by three small mouths, at distances of from a

mile and a half to three miles above San José. Rice, sugar, cotton, tobacco, coffee, orchilla (which comes from Piura), and cascarilla bark from some place more to the interior are the chief exports from San José. Through the streets in many places I see groups of donkeys, that appear to be enjoying, to the greatest intensity, the satisfaction of doing nothing.

Before dinner, on the day of my going ashore at San José, Mr. Fry had ordered two horses, one of which was for the use of Mr. Feeley, a resident Irish gentleman here, who kindly volunteered to be my *chaperon* on a short ride. This was to about five miles, directly north of San José, to what is called the Huaca of Chatuna. Our way was through a large flat of land with rushy and shrubby vegetation, having breaks (*quebradas*) here and there—evidences of where the water had left its mark during the last great inundation from Lambayeque in 1870. On our road we passed three or four large mounds, and after about an hour and a half of journey reached the ruins—not of a huaca or burial-mound, but of an enormous square fortress. The main building I tracked 180 yards across, or in the direction facing the sea, whilst between the latter and the building ran a long wall at a distance as nearly as I could calculate of 200 yards. Behind these are three enclosures at spaces of forty to fifty yards between each intervening wall. These walls are

from three to four yards in thickness. Terraces and bastions to it, exactly like those at Cañete, Huatica, and behind Trujillo. Mounting up to the top in this, as well as the others already mentioned down the coast, presents no difficulty. For the broken walls and the filling up with clay permit an ascent even on horseback to be made with facility. On the top, and standing on a yard-thick wall; I saw that one of the large rooms had been emptied of its clay; and there stood out revealed a chamber of twenty yards square, and plastered in excellent style.

Behind the fortress, at a distance of about a mile, were the ruins of a large town, which I suppose we may likewise call Chatuna; and the view from the top of this great building embraced the country far and away beyond Lambayeque, even to the valleys extending northwards to Ferriñafe, and southwards to Chiclayo.

The sketch of San Miguel, or any part of the Huatica valley,—of the so-called Temple of the Sun behind Trujillo,—and of several others that I could enumerate, would serve for this of Chatuna. So that we have evidence not only of “persistence of type in the skulls of the pure races of Indians,” as Professor Busk expresses it,² but we have persistence of type in the architecture of those people. For the burial-mounds, as well as the forts and fortresses, are of the same style along the coast from Arica to this—be the founders of

² *Vide* Appendix A.

them Chinchas, Yuncas, or Chimoos. In art, too, can be recognized a similarity of fashion, as we see little or no difference between the pottery-ware that comes from Arica, and that which is obtained here at San José, though a thousand miles apart. The silver cylinder from Ica also resembles that from Chan-Chan, places nearly as remote from each other as San José and Arica.

I cannot leave this great old monument of pre-historic times in Peru without asking—though with little hope of an answer—if the world be still expected to believe of the people, who worked these arts, and consummated this architecture, the stories that are told of them by the early Spanish historians. The tale related by Garcilasso de la Vega, of the polytheism of the ancient Indians, is written so as to persuade us into the belief, that few of the primitive races were tame, whilst the greater number might be compared to wild beasts. Everything animate and inanimate was worshipped by them—from the whales in the sea to the bats on the shore—from the emeralds in the mountain mines to the shells on the whitened beach—from the tiger in the forest to the frog in the marshes. In one of his chapters he gives us details about their human sacrifices, that seem to me a little *de trop* of the disgusting, as well as the improbable, to be more than casually noticed. Worse than beasts they are described in their houses, their morals, their

customs, and general modes of living. They were cannibals according to Cieza de Leon. In the preface to his book, Garcilasso says that he "writes only about the Empires of the Incas, without entering into other monarchies, as he knows nothing about them." Of course this could not refer to the old monarchies of the pre-Incaite people, for of them he seems to know a great deal, as he tells us about their bestialities, in his ninth to fourteenth chapters. We must cease to wonder that they went perfectly naked except in regions where the cold obliged them to use covering, and that they cohabited indiscriminately with mothers, sisters, and daughters—in fact, played the very deuce with everything till the Incas came, specially sent by Divine Providence, to convert them from their idolatry to the worship of the Sun. Garcilasso laments, as a proof of the savagery of the Indians, that they remained seventy-one years, after their conquest by the Incas, without being converted to the new faith, or being convinced that they were conquered for their good. I may add this is not a rare occurrence in the history of mankind, as such a lesson has seldom been kindly taken to by humanity in any part of the world.

The reader who has accompanied me to this will see that, from my explorations along the coast of Peru, I cannot believe that a single item of Inca civilization is manifested in the archæo-

logical remains that exist in such profusion there. I confine my observations simply to the coast district, which shows only what the Incas have undone—not what they did.

Not more than forty-five miles from San José, in a north-westerly direction, is the more southern of the two guano islands of Lobos—not yet worked on by the Peruvian Government. These islands are reported to me to contain from one to two million tons of guano. It is considered to be of a superior quality.

Still on the track towards north, from San José to Payta is a voyage of 150 miles. The coast being along the sandy desert of Sechura, it is better to make the journey in the mail-steamer from Calláo.

Accordingly, on the 14th of May last, I started on my return to England on board the Pacific Company's steam-ship "Santiago," with the attentive and courteous Captain W. J. Barber. From Calláo to Payta there is nothing to be noticed, as we are out of sight of land nearly the whole of this two days' trip. We have our usual contingent of pleasant cabin passengers, with a deck-load of Cholós—men, women, and children—whose strongly-smelling beds and dirty blankets on the main deck do not add much to the comfort of the passage. But they all left us at Payta.

Like many other places on the coast, the neigh-

bourhood of this port is as barren as barren can be. Not a vestige of verdure is visible anywhere. The only Englishman resident here is the much-respected British Vice-Consul, Mr. Blacker, whose courteous hospitality does away with much of the grating influence of the place. Payta is chiefly important from its being the basis of telegraphic communication in Peru. Hence to Lima telegraphic despatches can be sent to connect with the mail-steamers, and the Government of President Pardo is about to continue it on to Panama, so as thereby to secure, *via* Colon and Jamaica, communication with Europe and the United States. In this, as in her railways, Peru again proves how she is progressing.

Payta has not more than 4000 inhabitants. It owns, however, one of the smoothest and most secure bays on the Pacific Coast. From here to Piura is a distance of forty miles. The river Chiva empties itself into the sea about fifteen miles north of Payta, and thence has to be brought all the water used by the inhabitants of the town. To places like Payta, of which there are numbers on the Peruvian coast, the invention of Mr. Wilson to obtain fresh water from salt will be an incalculable advantage.

“ *May 17.*—Last night we passed Tumbez, where Pizarro first landed with his handful of Spanish adventurers, and this morning we are skirting by Saint Helena Point, and Puerto Viejo, whence the



SEA-SHORE VIEW OF PAYTA.

Heliotype

giants are reported to have come down to Pacha-Cámac.”

In the reign of the twelfth Inca, Ayatarco Capac, we are told by Mariano Edward Rivero, “Giants having entered Peru, they populated Huaytara, Quinoa, Punto de Santa Elena, and Puerto Viejo, and built a sumptuous palace in Pacha-Cámac, using instruments of iron. As they were given up to unnatural crimes, divine wrath annihilated them with a rain of fire, although a part of them were enabled to escape by Cuzco. Ayatarco Capac went out to meet them, and dispersed them about Limatambo.”

If this were not such an awkwardly constructed piece of fee-faw-fum, I might ask, How is it that Senor Rivero is able to give us such a minute item of detail as that about the instruments of iron, and yet does not say a word as to the old names of Santa Helena and Puerto Viejo, which, as a point of geographical curiosity, if nothing more, would prove interesting to the inquiring part of the world?

Straining my vision to get a glimpse of the shore, I cannot help wondering if there were any Pacific *balsa* Navigating Company in those days. Or if the Gogs and Magogs were of the seven-leagued-booted tribe, they might, by the aid of walking-sticks of cabbage palm, have footed it over the Sechura desert and down along the coast to Pacha Cámac. More wonderful things than

such a feat are recorded by many of the ancient chroniclers of Peru.

As we approach the bay of Guayaquil, and come near the territory of the Republic of Ecuador, I am reminded that, according to a report made by the Reverend Father Woolf to the Government of Ecuador, there are extensive fossil remains of the Tertiary and Quaternary epochs on the coast of Manabi, and near to Punin. Besides the mastodon, the fossil horse is found, proving that in prehistoric times such animals existed there, although they became extinct, and the present race was introduced by the Spaniards.

The only part of Ecuadorian coast which is approached by the steamer, that does not go into Guayaquil, is Cape San Lorenzo, in lat. $1^{\circ} 3' S.$, long. $80^{\circ} 56' W.$ At this place is a small village, where they make the so-called Panama hats. Not far hence, or about twelve miles as the crow flies, is the town of Manta. Indeed, at San Lorenzo and Monte Christo, not far distant, the chief manufacture of hats from Ecuador is found; and these are exported from Manta. It was quite a refreshing sight to us, who had so long been accustomed to the barren coast of Peru, to see the bright green arborescence at San Lorenzo down to the water's edge.

On the 20th we are entering the Bay of Panama, —which might be called a bay of islands—the old city of buccaneers still keeping up its prestige for

bloodshed. Only the day previous to our landing there had been a constitutional fight for the Presidency, and sixty men of one regiment were shot down by another regiment of the army in the public streets. Of course it was done with the object that the Republic should live.³ The number of persons killed in this revolution amounted nearly to two hundred. Several marines from the United States' war-steamer "Pensacola," then in the harbour, were on shore to protect the railway station and the Custom-house, whilst the town seemed anything at all but comforting. I made a short visit to the Grand Hotel—called so, I believe, more from its great dimensions than its comforts—had a few minutes' chat with Dr. Long, the United States' Consul, and Mr. Boyd, of the *Star* and *Herald*. Then drove in the same omnibus that brought us up from the wharf back to the railway station. When seated in the carriage, and as the train moved to cross the isthmus to Colon, I began to feel rather tranquillized at hoping that I was bidding farewell to the shores of the Pacific.

Before starting for the other side I tried to obtain some information about the progress of the idea to be worked out in the Inter-oceanic Canal, which I have no doubt will one day join the Pacific and Atlantic here. The part which Peru has already taken in this matter reflects the highest credit on the administration of President Pardo; for I find,

³ "Viva la Republica!"

by the Lima official newspaper of January last, the following Protocol on this subject, entered into between the Minister for Foreign Affairs of the Government of Peru and the Minister resident at Lima of the United States of Colombia :—

PROTOCOL of a Conference held between the Peruvian Minister for Foreign Affairs and the resident Ambassador of Colombia relative to an Inter-oceanic Canal.

JOSE DE LA RIVA AGUERO, Peruvian Minister for Foreign Affairs, and TEODORO VALENZUELA, resident Minister of Colombia, having met in the Foreign Office, with the object of taking into consideration the projected work of an Inter-oceanic Canal, the first said :—

The Government of Peru has regarded with interest the plan of an inter-oceanic canal across the isthmus, which divides the two continents of America, and believes that such a work will affect not only civilization and the commerce of the world in general, but in a special manner the political and commercial interests of Peru. Inspired by this idea, in the treaties which were celebrated with the Republics of Costa Rica and Nicaragua in 1857, certain stipulations were inserted, tending to the establishment of an inter-oceanic highway, but unfortunately this agreement was not ratified, and the grand work remained a mere project. But that now, knowing that this question is being debated

afresh, he should wish Senor Valenzuela to be good enough to tell him, if the Colombian Government had celebrated any treaty with any other Government or any private company whatever, for the carrying out of the work, and if in case such an agreement had not been entered into, they were disposed to enter into a negotiation with Peru, either to undertake the work jointly, or with the help of all the Spanish American Republics which are interested in its completion, or at least with the participation of Peru, giving her the share in the profits and advantages to which her help might entitle her.

The Colombian Minister replied :—

That it was very satisfactory to him to see that the Peruvian Government understood so well the importance of an inter-oceanic canal, the results of which would doubtless be favourable to Peru, taking into consideration the daily increasing importance of its principal port, Calláo, and the rapid progress of Peruvian commerce in the last few years.

That the Colombian Government was not at present bound by any treaty in the affair, although a few years ago two understandings were come to with the United States of America for the excavation of the canal; and the last was even approved of by the Congress of Colombia with certain modifications. The Congress of the United States had no opportunity of discussing it, and in the mean-

time the period for the exchange of ratifications had passed.

Therefore Colombia has entire liberty of action in the matter, with regard to which there is at present no other practical fact worthy of mention than the permission granted to the American Government to send exploring parties into the territories of the States of Cauca and Panama—explorations which are about to be repeated, as has been announced by the press.

Colombia is therefore disposed to treat with Peru, and would see with the greatest pleasure this great undertaking, which would be the most important work of our age, carried out with the intervention of that Republic and the remainder of America; but if such a thing were not possible she would be inclined to give to Peru whatever intervention the latter might take in the work—giving her of course a share of the profits and advantages to which her participation might entitle her.

Colombia perfectly understands that the community of interests which a canal would establish between her and the Republics that might take part in the undertaking, would be a powerful and durable link in the chain of close union with which she desires to be bound to her sisters.

The Foreign Minister of Peru then said:—

That in view of the frank and friendly disposition which animates the Colombian Government, and taking into consideration the fact set forth by

Senor Valenzuela, that an American exploring expedition was about to visit the isthmus, his Government would like to add some competent persons to it, in order that they might be informed of the practicability and cost of the work, if such an addition to this Commission could be possibly made, and meanwhile—that is to say, until such intelligence had been obtained, which would be duly communicated to the Colombian Government—the preliminary negotiations relative to the work could go on.

The Colombian Minister observed that he accepted, in the name of his Government, the idea of sending a party of engineers to join the American exploring party, and whose admission the Colombian Government would be glad to recommend. They would, besides, furnish every assistance in their power in order to further the ends of the Commission, considering it as sent by themselves, hoping that the Minister would be good enough to let him know in time the names of the parties who might be selected by his Government.

The interview being at an end, it was resolved to draw up the present Protocol, which has been signed in duplicate.

J. DE LA RIVA AGUERO.

TEODORO VALENZUELA.

Not very long before I left Peru, a Commission, consisting of Port-Captain Don Camillo Carillo,

and Engineer Don Francisco Paz Soldan, was appointed by President Pardo to make the exploring survey in connexion with this inter-oceanic canal, as proposed in the last part of the Protocol. They were, unfortunately, too late to join the United States' party under Captain Selfridge, and were obliged to return without making the survey across, owing to the rainy season having come down upon them with unusual severity. But their report⁴ is such an excellent one, and reflects so much credit on its authors, that I must give a synopsis. Whether the Lesseps of the Colombian Canal, to unite the Pacific and Atlantic, may accomplish the inter-communication in our day or not it is difficult to guess; but I coincide in the general belief that the thing is only a work of time—to sever the small ligature of the Panama isthmus or neighbourhood, and separate the northern from the southern continent of America.

The Bay of Cupica, in 6° 43" N. Lat., and 77° 38" W. Long., was the base of operations, on the Pacific side, of both the United States and the Peruvian explorers. Messrs. Carrillo and Paz Soldan's report says:—

The Bay of Cupica is an immense roadstead, limited on the north by the Punta de Cruces, and on the south by the Cabo Solano, and is distant about 180 miles from Panama. It contains several

⁴ For which I am indebted to the Supplement to the *South Pacific Times*, Calláo, July 10th, 1873.

small inlets, the most northerly of which takes its name from the bay itself, the others being called respectively Chicocora, Limon, Tebada, Nabuga, and Jella, which is the most southerly. Half a dozen huts, built of palm-posts and with a roof made of the leaves of the same tree, compose the village of Cupica, which contains, between negroes and Indians, some twenty or thirty inhabitants.

Finding, when they arrived here, that Captain Selfridge had returned in consequence of the rains having already begun—in fact, they passed him in the steamer “Tuscarora” between Panama and Cupica—they very courageously determined not to go back without doing something; and so they attempted an exploration of the isthmus by the river Napipi, which was the first route selected by the American Commission of 1871. Of this last-mentioned survey, a memoir of its practicability was presented by Commander Selfridge to the United States’ Secretary of the Navy, and was published by him with his report to Congress in December of same year. The Peruvian explorers went from the inlet of Cupica to that of Limon, where the path begins, that leads from the Pacific to the river Napipi. From Cupica to Limon the distance is six miles, and had to be done in canoes. They described Limon as well sheltered from all winds, with a good anchorage, and plenty of water. Some of the difficulties of tropical explo-

ration may be understood, by those who have not been amongst them, from the following extract out of the report:—

“Thirty-five minutes after leaving the Bay of Limon, the highest part of the track (190 metres) is reached, and from this point it descends to the head-waters of the Limon, distant about five minutes’ walk. The path lies along the right-hand side of the Limon gorge; and while going over it, you never see the river for a single moment, although the noise of the waters is clearly heard at different points. The road is not more than 200 metres above the river; but, nevertheless, from the thickness of the wood one is unable to distinguish it, nor could we make out the ravine through which the river runs. Vegetation had obstructed the path in many places; and the axe-men had to march a-head in order to clear the ground before we could run the levels.”

Although forty minutes are necessary after leaving the sea to reach the source of the Limon river, the horizontal distance between these points is only 1,730 metres,—the source being at the height of 173 metres above the level of the sea.

But the road which has to be got over is so broken and fatiguing, that the traveller has got to look where he is going to step before putting his foot down, as the ground is made up of an infinity of roots crossing each other in all directions and at different heights,—the undulations containing

the red argillaceous clay which covers all the road, forming with the help of this regular steps, which must be mounted with caution in order to avoid falls.

The description of the Napipi and its fords I pass over. The time of survey appears to have been very infelicitously chosen, as in one part of the river, the Vado del Yucal, "the natives of the country assured us that during dry weather the Vado was nearly dry, though the expedition had to swim across it the day they broke up the Yucal camp."

They only succeeded in getting as far as Antado—a height of eighty-one metres above the level of the Pacific, and a horizontal distance of 12,417 metres from Limon Bay. The difficulty of obtaining canoes, however, prevented their going as far as the Atrato, although such a communication by canoes is only possible in the rainy season. But I can easily understand how impracticable and impossible it is to make observations or fix instruments on the banks of a tropical river during the rainy season, when I recall to mind how we had to turn back from Hamarua in the steamship "Pleiad," during exploration of the Niger-Tshadda-Binne in 1854-55.⁵

After returning to Panama, they learned that Captain Selfridge had done his recent explorations

⁵ *Vide* Author's account of this exploration, Longman's "Travellers' Library," 1855.

from the little bay of Chiri-Chiri, one of the many inlets which the great bay of Cupica contains. This was attempted for the following reasons:—

It would appear that there is in that part a spur of the mountain which begins to pass the Cordillera. It is 700 feet high, and consequently of a greater altitude than the heights of Limon. When this summit is passed, the direction of the Dogado river, which is an affluent of the Napipi, was followed to the confluence of both rivers. The course of the canal then descends to the Atrato, on the right bank of the Napipi—that is to say, the same side on which the Dogado flows into the Napipi.

The river Bojaya, as well as the Napipi, is a tributary of the Atrato, and its waters may perhaps serve to feed the canal. The tunnel which has been suggested by way of the Dogado will be at least two miles shorter than the one proposed in 1871 by Captain Selfridge on the Napipi and Limon route: that is to say, that the tunnel in the new plan will be three miles long, the whole canal being twenty-eight miles, or three miles shorter than that projected to start from Limon Bay. The probable cost of the work may be set down at 75,000,000 of dollars. The new plan for the canal contains eighteen locks, the descent to the Pacific being much easier than by the Limon Bay route.

To an un-engineering mind, like mine, the idea of a tunnel, five miles long, and of a canal with

eighteen locks for inter-oceanic communications, seems to partake of the impossible. The following was Captain Selfridge's first report in 1871 :—

To take advantage of navigation on the Atrato river, and of the waters of the Napipi, one of its affluents, and then to perforate the isthmus of Napipi, descending to the Pacific by the valley of the Limon river. The canal, exclusive of these rivers, would be thirty-one miles long. There was supposed to be enough water to allow ten ships daily to pass through the canal.

Its proposed dimensions are :—Depth of water, 26 feet ; width, 129 feet. The bottom of the canal at the summit would be 130 feet above the level of the sea, and as the starting-point at the confluence of the Napipi with the Atrato is at an elevation of forty, it would be necessary to ascend ninety feet. This would be done by means of nine locks, each ten feet above the other.

In order to pass the Cordillera, a tunnel is proposed 9010 yards long—more than five miles—and to descend from this tunnel to the Pacific there would be thirteen locks, each of ten feet fall, and 436 feet in length ; but as the horizontal distance is only 4000 feet, these thirteen locks would be in three parallel lines, and the ships would pass these thirteen locks, which would seem like a ladder with so many rungs. The width of each proposed

lock would be sixty feet, and the dimensions of the tunnel seventy feet wide, and 120 feet high. The transverse section of the roof would be elliptic, so that no more material might be taken out than would be necessary to allow a ship to pass through. This would be an economy in the construction of the tunnel, though on the other hand it would diminish the solidity of the work, as elliptical roofs are not calculated to bear heavy weights, above all on the sides, and a circular section would be much safer.

Besides these, with pumping apparatus to raise the water from the lower to the upper locks, “the estimated cost of the works, excavation of the canal, locks, tunnel, improvements in the Atrato, a mole, a lighthouse, warehouses, dredges, pumps, &c., including twenty-five per cent. for unforeseen expenses, is \$123,000,000. The American Captain sees the following advantage in this route over all others which have been surveyed:—

“1st. That the canal would be excavated almost wholly in solid rock; and that when the work was concluded, there would be no necessity of embankments to strengthen its sides, nor of dredges to be constantly scooping out the mud.

“2nd. That it is thus easier to form a closer estimate of the cost of the work.

“3rd. The healthiness of the region as compared with other parts which have been surveyed.

“4th. That the most difficult part of the canal

—that is to say, the tunnel on the Pacific side—is almost on its shore, thus rendering the introduction of workmen, machinery, &c., very easy.

“5th. The relatively low price of the work, and, finally, the safety and size of the ports in which the canal terminates, in the bays of Limon or Cupica in the Pacific, and the gulf of Darien in the Atlantic.”

The Peruvian explorers commence their objections to Captain Selfridge’s plan as follows:—

In the first place, it appears to us that the dimensions he proposes for the canal do not and will still less suffice, later on, the growing requirements of the maritime commerce of the world, as the size of the tunnel and locks are barely sufficient to allow passage to the steamers which at present come to the Pacific from Europe,—taking the “Aconcagua” as a sample, of which the dimensions are:—length, 437 feet; beam, 41; drawing 26 feet of water. The dimensions of an inter-oceanic canal should, in our opinion, be greater than those which are adapted to satisfy the actual needs of navigation, for it is well known that the size of ships built is continually on the increase, and this should be taken into account when fixing the dimensions of the canal, which should be sufficient for the present and the future. The water drawn by large steamers varies from 25 to 30 feet—and the depth of 26 feet which Captain Selfridge gives to his canal, if sufficient for the present, may

not be so for the future. Our opinion is that the canal should be constructed of greater dimensions than that required by the largest merchant steamer afloat, excluding of course the "Great Eastern," which is a phenomenon. The canal should also be sufficiently broad to allow two vessels to pass in opposite directions, so that neither should have to wait till the other had passed. It is true that the estimate of Captain Selfridge is relatively low; but we must find, not the cheapest route, but that which best meets the wants of commerce.

We should prefer the estimate to be two or three times greater, for a rational and practical solution, without a tunnel five miles long, nor three parallel lines of locks, which would cause great delay in the passage of ships through the canal.

There is a great deal of sound sense in the foregoing, as well as in the succeeding observations referring to the difficulties in travelling here—not taken into account by Captain Selfridge. For tunnelling in this part of the world must be very different from what it has been in Mont Cenis, and the Hoosac in the United States. Further, the Peruvian Commissioners state:—

“Any plan which comprises tunnels and a large number of locks cannot be considered as the best, as analogous results have been obtained by other explorers, such as Garella, Capt. Kelly, &c.

The first proposed a canal through the isthmus of Panama by means of a tunnel of 5350 metres and thirty-five locks—and the second a canal without locks, and a tunnel of 4827 metres through the isthmus of Darien, taking advantage of the waters of the Truando which flow into the Atrato. Its dimensions were to be—breadth, 200 feet; depth, thirty feet—and its estimated cost 781½ millions of francs. Consequently, the result obtained by the isthmus of Napipi is not an improvement—this route presenting natural difficulties, which cannot be overcome save by the tunnel and locks proposed by Capt. Selfridge. We are of opinion that other routes should be surveyed before choosing that of Napipi, which really presents no more acceptable solution of the problem than those chosen by other explorers.”

On the subject of other routes, and of that one suggested, nearly parallel with the Panama line of railway, they observe :—

“Considering that the highest point of the Panama railroad is only eighty-five metres above the level of the sea, and that the distance from sea to sea is only sixty kilometres, we can do no less than recommend a serious survey of that part of the isthmus before accepting a plan which contains tunnels and a large number of locks. The difficulties in this route are swampiness, and the great difference in the tides in the Pacific and the Atlantic. The high equinoctial tides in Panama

rise six metres, whilst in Colon they only rise forty centimetres; and, finally, the insecurity of the port of Colon during a hurricane, and the small depth of water in the bay of Panama.”

Of that by the isthmus of Nicaragua, they say:—

The route by the isthmus of Nicaragua also offers great advantages, for although the isthmus is here 150 kilometres wide, it has the immense lake of Nicaragua in its centre; this is 476 kilometres long by fifty-five wide, having an average depth of fifty-five metres; while its height above the level of the sea is only forty metres. Many plans have been proposed to utilize this as well as the waters of the San Juan river and Lake Mangua, but it would appear that the descents from these lakes to the Pacific present difficulties which have not yet been solved.

For any future Commission to explore the isthmus, it is recommended they should leave Calláo in the month of December, so as to arrive in that month, or early in January, as it appears the only dry months here are from December to April. After speaking of difficulties caused by the rainy season, and appending the plan of the 12½ kilometres which they levelled, they thus conclude:—

Amongst the recent explorations which have been made on the isthmus of Darien from the

gulf of San Miguel in the Pacific to the mouth of the Atrato, we find those of Messrs. Lacharme and Puydt; the first made a survey of the inland in 1866, and found the highest elevation that would have to be passed was fifty-five metres.

Mr. Puydt found, on his expedition in 1865, that the summit was at forty-five metres, following a route very near that of Lacharme; both took advantage of the lower part of the river Tuyra, which flows into the gulf of San Miguel. None of these observations were made with the level, but with barometers, and consequently can only be looked upon as simple explorations. Captain Selfridge caused these routes to be surveyed in 1871, and from barometrical observations practised under his direction, it seems that the highest point in the ground gone over by Lacharme is at an elevation of 125 metres, and that of Puydt more than 200 metres; the country lying between the Tuyra, and the summit being intercepted by a number of hills of different heights. At the termination of this report, this Commission can only express their regret that they have not been able to practise a more extensive survey, on account of the limited time at their disposal; but they think, nevertheless, that the description they have made of the work done by them will give an exact idea of the nature of the ground explored, and of the difficulties which the isthmus of Napipi

presents to the opening of a great international canal.

CAMILO N. CARRILLO.

FRANCISCO PAZ SOLDAN.

Lima, 18th June, 1873.

As I desire the present chapter may be of some information to future explorers of this great work, I deem this an appropriate place for inserting news of a passage about which no notice seems to have been taken. This I cut out of an issue of Mr. Boyd's paper, the *Panama Star and Herald*, during some time last year:—

Senor Jose Maria Hernandez, long a resident of the small village of Terable, on the banks of the Bayano river, and well known in Panama for his intelligence and respectability, having on his arrival here heard talk of a canal across Darien, asserts that the Indians had shown him a pass over the Cordilleras, which is not so high as the Ancon hill near Panama. He makes the journey to the shores of the Atlantic in two days, and offers to conduct any individual or party who wishes to survey the route. The distance on the map in a straight line is about fifteen miles.⁶

The present railroad between Panama and Colon is said to have cost the life of a negro for every sleeper on the tracks. The line is laid down

⁶ The latest work I am aware of about Panama was written by Mr. Bidwell, who was Vice-Consul out here, and which was published, I believe, in 1868, by Messrs. Chapman and Hall.

with as many curves as if it had been traced by a Brobdignagian serpent. I did not care to take any observations of the passage across it—for all its luxuriance of tropical vegetation was a matter with which I had been surfeited for the last twenty-three years. And to me, I confess, the pleasantest thing on the Panama railroad was the sniff of the Atlantic Ocean, as we glided by the Chagres river, and came into the bustling life and activity of the station at Colon. Next to this was the joy of getting on board the royal mail-steamer "Tagus," bound for Plymouth, Cherbourg, and Southampton.

CHAPTER XXXI.

Professor Tyndall on practical results.—Errors and mistakes of Peruvian, as well as other authors, on Peru.—Senor Don Mariano Edward Rivero.—Devotion to Incaite chronology.—Exaggerated and intensified descriptions.—The Devil again on the scene.—Garcilasso de la Vega, Prescott, and Montesinos.—Dr. J. J. Von Tschudi, and his golden descriptions.—The luxury of gold and silver cement on walls.—“Chambers’s Cyclopædia.”—Bollaert’s antiquities.—Errors about Chimú (Chinoo).—Mr. Markham’s writings about Peru.—Vigour of style.—Statements based on personal observation.

IN all that I have written of observations during my two years’ residence in Peru, I have had before my mind the principles enunciated by Professor Tyndall in his addresses during his recent lecturing tour through the United States. In one of his “Lectures on Light,” he says to his audience:—“Keep your sympathetic eye on the originator of knowledge. Give him the freedom necessary for his researches, not overloading him either with the duties of tuition or of administration—not demanding from him *so-called practical results*—above all things avoiding the question which ignorance so often addresses—‘*What is the use of your work?*’ Let him *make truth his object, however impracticable for the time being that truth*

may appear. If you cast your bread thus upon the waters, then be assured it will return to you, though it may be after many days."

Declaring my faith in the excellence of this doctrine, I regret having to affirm as no more than a matter of truth—even without "a so-called practical result"—that since I began to study Peruvian History nearly three years back, nine-tenths of the works which I have read contain more of "the Bounderby balderdash and bluster" than of "the Gradgrind facts, sir!"¹ And yet, whatever history is written, it ought to contain facts rather than balderdash and bluster. The more I read, the more the muddle increases. I have already pointed out much of the anachronisms put forth by Garcilasso de la Vega. Senor Mariano Paz Soldan, in the preface to his "Geographical Atlas of Peru," commenting on the works of Barth, Speke, and Livingstone, in Africa, as of other travellers elsewhere, asks, "What are the serious works we have on Peru? Apart from a few like those of Mr. Pentland, and two or three others, all the rest *are full of errors*—fruits of the levity with which they discuss everything without looking at causes attentively, or taking good reports, or for want of indispensable knowledge. It is necessary, then, that our youth should convince themselves how it is only by using efforts they can arrive at a knowledge of their

¹ "Hard Times." By Charles Dickens.

country, and that the era has arrived when they should commence national scientific studies, that, as we have said, are the only ones by which can be attained a knowledge of Peru.”

This morsel of special pleading might be more intelligible on the part of Senor Soldan, if he himself in his works—more especially in the “Geography of Peru”—did not follow the path which he cautions future workers to avoid; for he has put down the wildest utterances of the erroneous statements made by the old Spanish writers, and printed them as facts, when a little inquiry must have proved their error, and falsehood.

Senor Don Mariano Edward Rivero, too, at the time his work was compiled, as well as published, held the post of Director of the National Museum at Lima. From thence we may imagine he set off with Dr. John James Von Tschudi to carry out a great design. In the preface to their united book on Peruvian antiquities² the reader is entertained with the following apologies for not having sooner done their contemplated work:—“There were many obstacles opposed to the successful accomplishment of our enterprise,” says Senor Rivero. This was “to examine the archæological monuments of the Incas [for Senor Rivero goes no further back than to the period

² Translated into English from the original Spanish by Francis L. Hawks, D.D., LL.D. New York: Putnam and Co., 1853.

of what he styles the “code which governed the ancient Peruvian nation, dictated by its founder, Manco Capac”], to obtain an exact knowledge of their idiom, religion, laws, sciences, and customs, as well as all that relates to the empire of the Andes.”

The Director of the National Museum at Lima—doubtless knowing nothing of the grand old monuments of the prehistoric Yuncas within walking distance of him in the Huatica valley—makes up his courage to overcome the obstacles previously alluded to, which are thus heroically set forth:—

“1st.—The political dissensions which have succeeded each other, keeping the country in constant alarm.

“2nd.—The diversities of the climate, the bad and, indeed, impassable roads of the coast, and the Cordilleras, the dangers to be overcome in visiting long-abandoned sites, the close thick forests, in which Nature with such prodigality shows her profusion and fertilizing power.” In what way does the reader think this power is manifested in Peru? Simply, Senor Rivero tells us, by “presenting trees which almost serve as props to the vault of heaven.”

After this, the third obstacle being complained of as a total want of itinerary, is such a piece of bathos that, looking at the part of Peru, so full of monuments, through which I wandered,

and with scarcely a shrub in it, I must pause for a moment.

I confess that the discomforts as well as inconveniences of Peruvian travel and exploration cannot be exaggerated. But, in a common-sense point of view, I may ask, Why need Senor Rivero jump from Lima into those mythological forests "supporting the vault of heaven," which (though perhaps not quite so intensified) may be supposed to exist at the other side of the Andes, contiguous to the Amazonian valley, or northwards towards Ecuador? Or why not some equally patriotic Peruvian examine the hundreds of graveyards, huacas, fortresses, ruined towns, castles and temples throughout the valleys from Arica up to San José—a coast distance of nearly eleven hundred miles? I regret that the only answer that seems to me could be given to such a question is, that Senor Rivero's ideas could not stretch, or probably did not care to do so, beyond what he styles "the code which governed the ancient Peruvian nation, dictated by its founder, Manco Capac." So ancient, forsooth, that he tells us,³ "Manco Capac began to reign in the year 1021 and died in 1062, after reigning forty years."

"The authority of the Peruvian monarchs exceeded," again observes Rivero,⁴ "as we have already hinted in our preceding chapter, that of the most powerful kings of the earth. 'The very

³ *Op. cit.* p. 49.

⁴ *Op. cit.* p. 174.

birds will suspend their flight in the air if I command it,' said Atahualpa to the Spaniards in his hyperbolical language." In the succeeding page we are told, by an extract from Sarmiento,⁵ of some episodes in the regal journeys of the Incas in the following stuff:—"From all parts the multitude hastened to contemplate their monarch, and when he raised the curtains of the litter or palanquin, in which he travelled, to allow them to see him, the vociferations with which the multitude congratulated him and besought heaven's favour in his behalf were so great that we are told [and of course expected to believe it, I should say] the motion of the air caused these birds which were flying over to fall to the ground." This extract from Sarmiento is given by Senor Rivero as a rehash from Prescott, and "its claim to probability is founded on the assurance by Plutarch, that a similar occurrence took place in Greece when the Roman herald proclaimed the liberty of the Greeks."

On which I have merely to observe, it would be better we had no account of the Incas at all, than that such nonsense as this should be foisted on us as historical. Narrative loses all its value when bedaubed with anachronisms of this kind. I have already commented on what Prescott copies from one of the Spanish historians about the victory

⁵ Believing the recent discovery of Senor Gonzalez de la Rosa, mentioned previously, this must be attributed to Don Pedro Cieza de Leon.

achieved at Puno by "Saint Michael and his legions, seen high in the air above the combatants, contending with the arch-enemy of man, and cheering on the Christians by their example." The devil is again brought into play at Pacha-Cámac by Senor Inca Garcilasso de la Vega. All through the work of Cieza de Leon we have doings, not of one devil, but of multitudes. And with these and like illustrations of the great glory of the Inca period, I find the old writer Montesinos, whilst gasconading about the pure worship of the Sun, and the extension of edifices for the priestesses or virgins of the Solar God, still confessing that, during the reign of the ninetieth monarch (Inti-Capac, Maita Pachacutec VII.), and "when was completed the fourth millenary cycle since the deluge, customs were so corrupted, vices so abominable, the links of society so decayed, so little were the law and the royal power respected, that the country bid fair to be destroyed little by little." Here I may be told that this is one of the stories for which Montesinos got the title of "liar of the first magnitude." Perhaps so.

It was after this Augustus that the first title of Inca was given. Montesinos tells us of the giants already mentioned as coming from Santa Helena to build Pacha-Cámac, and speaks of many of the Incas sending down from Cuzco to have the temple of Pacha-Cámac repaired. But he never mentions the name of Pachacutec, the conqueror

of the coast valleys ; and nearly all his statements are at variance with those of Garcilasso de la Vega.

Such romance as the foregoing is all recopied by Rivero, the Director of the National Museum of Lima, and I cannot help thinking it a great loss of time to publish it instead of carrying on the explorations of which I have written, for I have no doubt they would throw an immense amount of light on the little we know of prehistoric Peru. I believe the mounds, huacas, cemeteries, and fortresses already mentioned by me are of an age, hundreds if not thousands of years, anterior to the period of the Incas—of whose connexion with the valley of the Rimac we have no reliable historical proof whatever. I am, moreover, disposed to the faith, that when proper investigations are made, it will be ascertained that the builders of those things, of which we have now only the relics, will be proved, by the treasures of art found entombed with their people, to have been very far removed from the barbarism which is attributed to them by all the Inca worshippers.

Turning for awhile to another work of Dr. Tschudi's,⁶ separate from that which he published in connexion with Senor Rivero, we are told in the

⁶ "Travels in Peru during the Years 1838—1842; on the Coast, in the Sierra, across the Cordilleras and the Andes, into the Primeval Forests." By Dr. J. J. Von Tschudi. Translated from the German by Thomasina Ross. London: David Bogue, Fleet Street, 1847.

preface that, "disclaiming any intention of making one of those travelling romances with which the tourist literature of the day is overstocked, the author has confined himself to a plain description of facts and things as they came within the sphere of his observation." And yet the Doctor tells us, amongst other things, of a reputed incident connected with the fate of Atahualpa, not on the authority of any one, I should suppose, but of "his own observation," in the following words: ⁷—"A quantity of gold, which the Inca ordered to be collected in Caxamarca and its vicinity, when piled up on the floor of the cell, did not reach above halfway to the given mark. The Inca then despatched messengers to Cuzco, to obtain from the royal treasury the gold required to make up the deficiency; and, accordingly, eleven thousand llamas were despatched from Cuzco to Caxamarca, each laden with a hundred pounds of gold." We have heard of this before, although never within the sphere of any author's observation.

Speaking of the lands of the Incas, and their aqueducts for agricultural purposes, he says, ⁸ "The Spaniards having destroyed the conduits, the reservoirs dried up, and the soil became barren. Many of these conduits were subterraneous, and it is now no longer possible to find them. In some places they were constructed with pipes of gold, which the Spaniards eagerly seized as

⁷ Op. cit. p. 325.

⁸ Op. cit. p. 495.

valuable booty." And again:⁹—"In the royal palace of Cuzco, and in the Temple of the Sun, a fusion of gold and silver was used for cement between the stones. This was, however, employed only as a luxury—" But enough of such—what shall I say?—in the mildest of phrases, "trash"—that idea of gold and silver fused together, and put for mortar between stones in a building *as a luxury!*

It is useless to search for truth amongst the old Spanish chroniclers; for in many things, observes Rivero, "the commentaries of Garcilasso de la Vega are in direct contradiction to the statements of several of his predecessors and contemporaries,—amongst them Acosta, Fray Marcos de Niza, Pedro Cieza de Leon, Montesinos, Francesco Lopez de Gomara Balboa, Zarate, and others. The same may be said of several of his successors—it being easy to convince one's self by a comparison of the text, that the dates and allegations are erroneous not through ignorance or scantiness of information, but through the partiality of the author, who omits or falsifies all which tends to oppose his views."

This scathing criticism would be very refreshing to an impartial searcher after the truth, if he could avoid feeling that its author, Senor Manuel Edward Rivero, seems to have been born before the period when was introduced the old adage of "those who live in glass houses should not throw stones."

⁹ Op. cit. p. 496.

It is therefore a pitiful thing to reflect that the latest account of Peru which the English reading public can be said to possess is that contained in the last edition of "Chambers' Cyclopædia."¹ This gives the old history about the Incas, almost literally from Prescott, with a geographical and statistical sketch down as far as 1864. In it we are referred for information regarding Pre-Incarial times to Mr. Bollaert's "Antiquities, Ethnology, &c., of South America."²

It is a very unpleasant thing for me to feel obliged to state that my friend, the gentleman just named, has fallen into more than one error in this work, which I deem it incumbent *pro bono publico* to set right. This I do only because I feel he will appreciate the doctrine of Professor Tyndall, enunciated at the beginning of this chapter—"truth being my object"—and feeling that, with such a distinguished author on South American affairs as is Mr. Bollaert, "the truth can never be impracticable."

In the frontispiece of his book is a head with large ear-lobes, entitled "Chimu, King of Manse-riche, or Trujillo, Peru." Here we have three errors to begin with.

1. Chimu (or Chimoo, as a good authority in Peru spells the word for me) was the name of the tribe of people over whom the king reigned, and

¹ Vol. vii. p. 435.

² Trübner and Co., London, 1860.

not the name of the king himself. The last monarch of this country conquered by Yupanqui was Chucha Machoon. His name is preserved in the archives of the Municipality of Trujillo.

2. There is no such place in the neighbourhood as Manseriche. But there is a Mansiche, part of the suburbs of Chan-Chan, between the latter and Trujillo, though it has no appearance of ever having been large enough to be entitled to a king.

3. Or Trujillo? I may ask how could an old Indian locale have an *alias* of a new town—particularly when they are built on separate locations. Trujillo, as I have already mentioned, was founded by Pizarro, and never had another name.

In the same book we are told³ of the “conquest of the coast territory belonging to the Chimu, or Chincu, whose capital was at Trujillo.” No such place as Trujillo existed at the time the Chimo people were conquered. The capital then was Chan-Chan, between the port of Huanchaco and where Trujillo now stands. This is the geographical truth.

Again Mr. Bollaert says:⁴—“The Incas’ army entered the country of an old enemy, that of the powerful Chincu, or Chimu, who possessed the valleys of Pamunca, Huallim, and Huarapa (Trujillo), 8° 10" S. near Quambacho, the Incas defeated the last Chimu of Trujillo.” So that here we are puzzled to know how in the days of “the last

³ P. 138.

⁴ P. 131.

Chimu of Trujillo"—the last, in fact, of a place that did not exist—there could have been a double *alias*, i. e. of Manseriche, and of Huarapa. It seems to me rather difficult to learn the archæology, or history of the place from this confusion.

What Mr. Markham has written about Peru is done in a vigorous and manly style, showing much perspicuity, save in the one thing of bringing the Inca dominions too near to the coast. That the Incas conquered the seaboard valleys I admit; that we have any reliable historical proof of their ever having occupied these valleys, I emphatically deny. And I do so from having rigidly followed out the canons of criticism laid down in Mr. Markham's paper read before the Royal Geographical Society⁵ about the "Geographical positions of the tribes which formed the Empire of the Yucas." In this he states that as regards most modern travellers, amongst whom he enumerates Rivero, Von Tschudi, Paz Soldan, Squier, Bollaert, Wilson, Forbes, and many others, "he never relies on them for any statement not based on personal observation."

⁵ *Vide* vol. xli., "Journal of the Royal Geographical Society," p. 281.

CHAPTER XXXII.

Search after origin of primitive Peruvians.—Mythological stories.—Limited to the Inca period.—Reputed Chinese origin. — Incompatibilities. — Wallace Wood on changes effected by climate.—Doctor Lopez about the Keshua (Quichua).—Investigations into Homer's Troy by Dr. Henry Schliemann.—Similarity of house-architecture, of pottery, of copper implements, of mill-stones, to those found in Peru.—Ruins of old temples in the Sandwich Islands. — Resemblance to Peruvian architecture. — Mr. Baldwin's opinions about antiquity of South American people.—Mr. Squier on exploration of mounds.

IN searching after the origin of the primitive Peruvian people, it may be imagined from my ideas, already expressed, of their great antiquity, I do not care to dwell even for a moment on the fabulous story of the first pair having been sent by the father of the universe—the Sun—out of Lake Titicaca with a small wedge of gold, and orders to stop where it would sink into the ground. Every one knows it is reputed to have sunk at Cuzco.

Mr. G. Smith, the famous decipherer of Assyrian manuscripts,¹ observes:—"The histories of almost all ancient peoples show at their commencement a number of mythological stories,

¹ In one of his letters to the *Daily Telegraph*.

which are of great interest with regard to any inquiries into their origin and history." This, no doubt, is true; but in Peru the idea has been limited to the Inca period, anterior to which we are ignorant of anything that does not chime in with the changes rung on the Incaite monarchy.

The theory of the original immigration (referring to the coast provinces at least) from the Celestial Empire by way of Behring's Straits finds more advocates than De Guignes, Paraney, or Senor Newmann de Monaco. It is supported and advocated by Senor Mariano Rivero,—admitted as possible by Senor Mariano Felipe Paz Soldan,—and even "suggested as probable" by the illustrious Baron von Humboldt.

I find it, however, difficult to reconcile the great differences of physique in the Cholo of Peru, whom we have to-day, and the Chinaman such as I see him coming out of the ship at Calláo, as bearing on one and the same source. Unless, indeed, we can attribute these discrepancies to the influence of climate, expressed by Mr. Wallace Wood,² who institutes what might be considered something of a like parallel. "If you plant a certain seed," he says, "in the valley of the Thames, you have a fine drum-head cabbage; but plant the same seed in the valley of the Mississippi, and in a few years it grows to a tall weed, like a mullein stalk. And the men who have in these regions grown up from

² In "Mother Earth's Biography."

the same human seed—the Saxon race—are not less different in their natures than the cabbage and the colewort. The beginning of European history shows us a number of human beings alike in their disposition, habits, and culture, wafted by nature like seeds up from the Indus, and the plateau of Frau, and across the Caucasus mountains, spreading in divergent streams out over the great Asiatic peninsula upon the shores of the North Sea, and upon that of the Atlantic, and down upon the three sides of the Mediterranean. Here on these coasts the seed took root. It is the waters which have made these lands what they are; and it is the continued influence of these waters, and of the soil and of the air, which has shaped the character of these people, who in the commencement were so homogeneous.”

During my residence at Rosario, in 1867, I read in the *Revista* of Buenos Ayres a series of articles by Dr. Lopez, of Monte Video, intended to prove that the Quichua language (which he styles the Keshua) was not only of Pelasgic origin, but that the Incas of Peru were of Greek descent. This has been contradicted by Mr. Bollaert, in my last work about the Argentine Republic.³ But my investigations since that period, trifling though they be, amongst Peruvian antiquities make me inclined to have this matter a little more discussed

³ “The Parana,” &c., chap. ix. p. 71. Published by Stanford, Charing Cross, London, 1868.

before coming to any dogmatic opinion on the subject, chiefly on account of what has recently come to light of the researches amongst the ruins of Homer's Troy.

From the labour of Dr. Henry Schliemann,⁴ on his excavations of the ancient cities of Ilium, it appears he has found traces of the prehistoric peoples in regular strata. In one part of his explorations of the Acropolis—a portion of which had been partially searched into by Mr. Calvert, of the Dardanelles—he found the ruins of different ages in strata of comparative regularity, and his account of this finding is so interesting as having, to a certain extent, a similitude to Peruvian excavations, that I am induced to copy it. “I found the ruins of historic times,” he says, “reaching generally only to a depth of one and a half metres,⁵ and nowhere deeper than two metres. In a depth of from two to four metres there were no stones, and the calcined ruins left no doubt, that for ages immediately preceding prehistoric times there had been only wooden houses here. Presently I shall speak of the objects found in these different layers of ruins, and particularly of the religious symbols, which prove that the inhabitants had been of Arian race. At a depth of four to seven metres there was an entire absence of metal, and I found

⁴ Vide *New York Herald*, Dec. 21st, 1873.

⁵ Dr. Schliemann advises the general reader to count the metre at forty inches English.

a very great quantity of stone implements of all kinds, finer pottery, all the houses built of small stones united with earth, and evidence that the inhabitants were Arians."

In the Peruvian burial-grounds the finer pottery is always found at the greater depth, and the houses built of small stones intermixed with earth constituted a feature in part of my excavations at Chancay, forty miles north of Lima.

"At a depth of from seven to ten metres," continues the Doctor, "I found all the houses built of unburned brick; inhabitants of Arian race; very many copper weapons and instruments, although implements are for the most part of black stone (diorit). At a depth of ten metres we came upon immense masses of large stones, and I at once believed that I had reached the ruins of Troy."

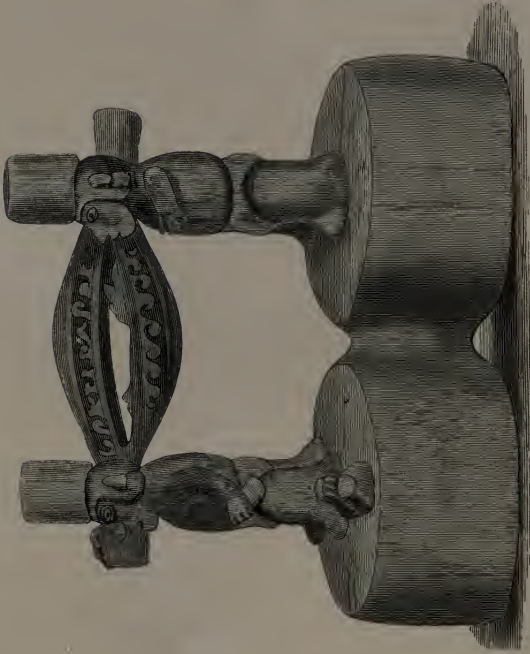
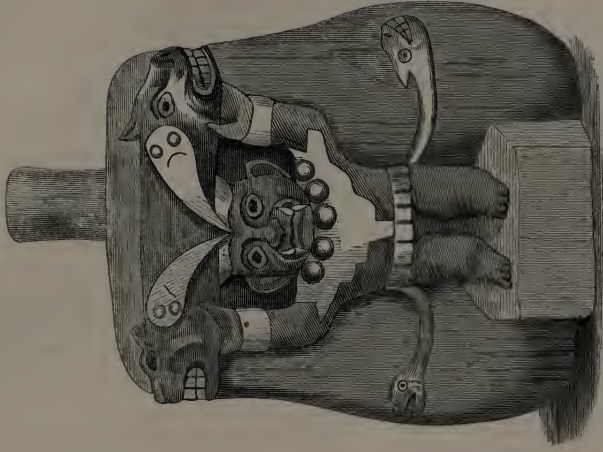
The "houses built of unburned brick" and the "copper implements" at once suggest speculation, in which, however, I am as yet cautious to indulge.

But the Doctor goes on with what he styles "cutting in earnest," and certainly the description of it shows with what wonderful energy it was carried out. At one metre below the surface, whilst searching for the Temple of Minerva, he came upon a relic of Greek art—a fine sculptured marble of the time of Lysimachus, representing Phœbus Apollo in female attire, with the disc of the sun on his head, and supported on four horses

of beautiful workmanship. He also brought to light a Greek inscription on a slab, weighing upwards of a ton, that stood probably in a temple, which, to judge from the sculptured figure, was that of Apollo. Then he finds a wall, built of huge stones joined with clay, two metres in thickness and three in height, which, as the layers of rubbish below it distinctly show, had been built on the slope. These approximate to the general dimensions in height and thickness of the walls we meet in Peru.

“Below and above this wall,” he continues, “I find masses of that splendid black pottery, which resembles so much the Etruscan terracottas, and which I find here exclusively in the two inches immediately above the virgin soil, and at a depth of from fourteen to sixteen inches below the surface.” No inconsiderable quantity, I may add, of excellent pottery, resembling Etruscan ware, forms part of the magnificent collection of Peruvian antiquities owned by Senor Don Miceno Espantoso, of Lima.

Then through what he supposes part of the city wall and Priam's tower, he brings us to traces of the people, and of their utensils, of which the Doctor says, “In common with all their successors at this place, until the beginning of our era, and perhaps later, they (i. e. the Trojans, who built on the primitive soil their houses of stones joined with clay) have found objects of terra-



PERUVIAN PRE-HISTORIC EARTHENWARE, FROM SENOR ESPANTOSOS' COLLECTION.

cotta in the form of volcanoes, and carousels, with and without ornaments. Some similar terra-cottas without ornaments are in the museum at Athens, and two ornamented ones which are found in the terra wares of Italy are in the museum of Parma; but these are the only examples I have ever seen in any museum. Here I find them by thousands, and about half are ornamented. These terra-cottas, found at a height of two metres above the virgin soil, represent the sun with his rays; sometimes stars are intermingled with the rays—or the sun in the centre of a cross. Copper nails, seventeen centimetres long, were found on the virgin soil. There was no trace of metal weapons or implements; but the nails are a sufficient evidence that these people knew and worked the metal copper, and of course weapons existed.”

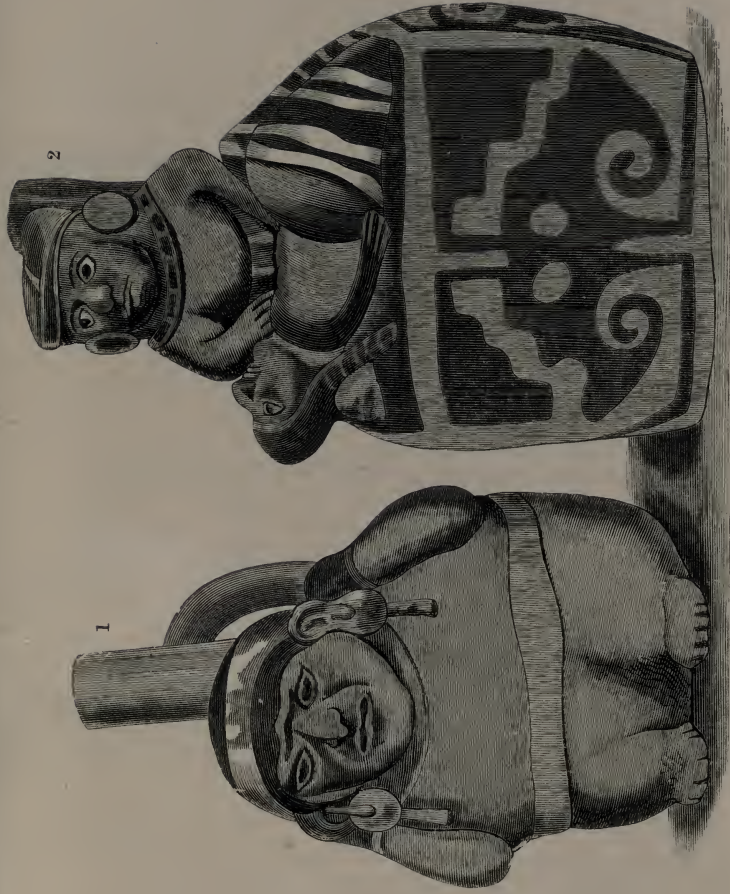
In what follows one might imagine Doctor Schliemann was describing much of what I have illustrated in this work about Peru, more particularly of the mill-stones found at Chosica—of the double red goblets from Chan-Chan—and of the bowls with tubes on each side from Canete. He writes, “I found many small saws of flint stone, four and a half to five centimetres in length, and hand mill-stones of lava thirty-three centimetres long by seventeen broad, *in the form of an egg cut in its length into two halves.*”⁶ With little exception,

⁶ The very shape of the mill-stone found at Parara. See chap. xix. p. 50.

all the terra-cotta vessels I found in the layers of rubbish of the Trojans are broken, and but few can be put together. Everything in the nature of pottery was destroyed by the huge stones that fell into the ruin ; but I possess all the pieces of some black vessels, and of one double red goblet. Of a dozen more of these I have only the central part, though sufficient to show what they were. Without exception, all the terra-cottas of the Trojans of which I have found pieces, and particularly the black urns with Assyrian ornamentation—the shining black bowls with a tube on each side—the very small round black pots which represent the human face (and of which I have one nearly perfect), as well as the larger vessels and bowls with tubes on each side for suspension—and sometimes with three feet—all attest the opulence, the fine taste, and the art of their possessors.”

This description, I again repeat, would be applicable to exactly the same class of objects that, by one casualty or another, are daily being turned out of Peruvian mounds, and that I regret to say are likewise daily being destroyed by the iconoclasts into whose hands they come.

Besides a similarity in works of art, there is a like relation as regards the palaces and dwellings. This is more particularly evident in the size of the walls—“built of stones joined with clay”—and of four to six metres in thickness. The ancient symbol of the cross with a crotchet at the end of

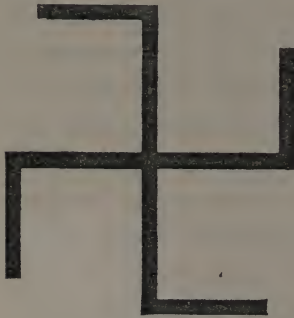


PERUVIAN PRE-HISTORIC EARTHENWARE, FROM SENOR ESPANTOSOS' COLLECTION.

The figure No. 2 represents "El Desempañador" ("the Destroyer of Pain"). This official's business was to hammer the breath out of a man or woman who might have been given over by the doctors as incurable.

each limb enables the Doctor to say that the Trojans were Arians. Take the crotchets away, and what can be said of the cross on the silver cylinder found at Chan-Chan?⁷ “It appears to me certain,” adds the Doctor, “that both the simple cross and the other (the one with crotchets at the end) were symbols of the highest religious importance with the Arian race, at a time when the people now known as Celts, Germans, Persians, Pelasgians, Hindoos, Helluces, Slavonians,

FROM ILIUM.



FROM CHAN-CHAN.



CROSSES WITH AND WITHOUT CROTCHETS.

were still one nation and spoke one common language—and both of those symbols I have found in their most definite form on large numbers of the small terra-cottas taken by me from the lowest stratum of rubbish on the site of Troy.”

Prehistoric times terminated, the Doctor observes, “when the accumulation of rubbish had reached about two metres below the surface of

⁷ *Vide* chap. xxiv. p. 139.

the mound; for at that depth I came upon Hellenic masonry of large hewn stones, joined without any binding material, and above them house-walls of brickwork or stone joined with cement or lime." The hewn stones joined without cement may be said to have their corresponding state in the Inca period in Peru.

I think that I have shown sufficient similarity between the results of explorations in Ilium and in Peru, to justify archæologists in not coming to any conclusion on the original source of the Peruvian races until a more minute examination is made into the unbounded stores for research, so profusely spread over all Peruvian territory.

These excavations done by Dr. Schliemann may be hoped to have some bearings on the following point from Mr. Bollaert's "Peruvian Antiquities":⁸—"It is observed by the authors of the indigenous races, that the rock caves with their fantastic relief are of Buddhist origin, more chaste in style than the idols of the present worshippers of Shiva, and belong to a period of Indian history, classical for art and poetry, from 500 B.C. to about 300 A.D. By a strange coincidence it is the same period in which Phidias, Praxiteles, Lysippus, and the Roman artists of Augustus and Trojan flourished in Europe. If we follow Montesinos, this was about the period of Peruvian history."

The coincidence of the same period of Roman

⁸ Op. cit. p. 125.

history, or rather the same epoch of its fame in art and poetry, being synchronous with a like condition of affairs in Peru, according to Montesinos, makes the resemblance between the copper implements and pottery-ware now being dug out of Ilium to those I got from the Peruvian huacas still more remarkable, and therefore more worthy of further inquiry.⁹

Some few years ago a writer in a Buenos Ayres paper (*El Orden*, February, 1868) came out with the statement that "the Incas of Peru had for many years made paper for the Romans; and it is said of them (meaning of course the Incas) as it is said of the lords of the world (the Romans, no doubt), that they adopted the manners and customs of such people as were submitted to their dominions." This may appear not an unusual episode of riding the Inca idea to death by such a

⁹ A journal of Bogota, New Granada, the *America*, announces a discovery so strange that confirmation is required before giving credence to it. Don Joaquim de Costa is reported to have found, on one of his estates, a monumental stone, erected by a small colony of Phœnicians from Sidonia, in the year IX. or X. of the reign of Hiram, contemporary of Solomon, about ten centuries before the Christian era. The block has an inscription of eight lines, written in fine characters, but without separation of words or punctuation. The translation is said to be that those men of the land of Canaan embarked from the port of Azion-gaber (Boy-Akubal), and having sailed for twelve months from the country of Egypt (Africa), carried away by currents, had landed at Guayaquil, in Peru. The stone is said to bear the name of the voyagers.

wild statement of paper-making in Peru for transmission to the Roman empire in Italy.

Before concluding this chapter, I desire to refer to a recent discovery in the Sandwich Islands, which may involve still more the yet undecided question as to the extent of ancient civilization, and the unknown relations of different lands to each other. An American writer¹ tells us that the island of Hawaii has in it the remains of a City of Refuge, wherein, once that criminals had fled there, they had a perfect sanctuary. "This was a vast enclosure, of which the stone walls were twenty feet thick at the base, and fifteen feet high; an oblong square, a thousand and forty feet one way, and a fraction under seven hundred feet the other. Within this enclosure in early times has been three rude temples, each two hundred and ten feet long by one hundred wide, and thirteen feet high."

After visiting Pacha-Cámac, Chan-Chan, and Chatuna, one feels on reflecting over this almost as if amongst Peruvian architecture. And the idea is increased on turning over the next page,² when we read,—“The walls of the temple are a study. The same food for speculation that is offered the visitor to the Pyramids of Egypt he will find here—the mystery of how they were

¹ "Roughing it," p. 526. By Mark Twain. Hartford County, American Publishing Company, 1872.

² Page 528.

constructed by a people unacquainted with science and mechanics.”

The mystery of which the author speaks here I cannot help regarding as an inference without foundation. It is met everywhere amongst the ruins of Peru. Therefore it appears little better than scholastic cant to write of buildings, done by people who knew nothing of science and mechanics, when the very works themselves proclaim, that, without such a knowledge, they never could have been erected.

“The natives *have*,” he continues, “no invention of their own for hoisting heavy weights; they *had* no beasts of burden, and they *have* never shown any knowledge of the properties of the lever. Yet some of the lava blocks, quarried out, brought over rough, broken ground, and built into this wall, six or seven feet from the ground, are of prodigious size, and would weigh tons. How did they transport, and how raise them?”

The *have* and *had*, which I here put into italics out of the foregoing extract, will show that Mr. Clemens writes of these works done by parties whom he calls by the generalizing term of “natives;” and his inductions are based upon the very doubtful supposition that the works in question were accomplished by the ancestors, speaking ethnologically,—of the present natives. Because, forsooth, those now residing in the Sandwich Islands know nothing of the properties

of the lever, the builders' of the old temples could not know them. No Peruvian in the present day would be able to tell, even by what power, or from what source were brought the millions of tons of clay that fill up the large rooms in the fortresses of Campana, and San Miguel, at a distance of four miles outside of Lima. So that, before asking how they did these works, let us try and find out who they were that did them.



SEGMENT OF ONE OF THE WALLS IN RUINS OF CHAN-CHAN.

Description of the architecture of these relics of walls at Hawaii possesses another phase of interest: ³—“Both the inner and outer surfaces of the walls present a smooth front, and are very creditable specimens of masonry. The blocks are of all manner of shapes and sizes, but yet are fixed

³ Op. cit. p. 528.

together with the neatest exactness. The gradual narrowing wall from the base upwards is accurately preserved. No cement was used, but the edifice is firm and compact, and is capable of resisting storm and decay for centuries. Who built this temple? and how was it built? and when? are mysteries that may never be unravelled."

Such a fashion of architecture as the gradual narrowing from the base upwards is exactly what we find in the wall buildings of the Huatica valley, as well as in those of the Chan-Chan relics near Trujillo.

Investigations shall, I hope, be still pursued in this interesting subject, of which I regret having been able to do no more than touch on the outskirts. But I trust to live to see proved—the opinion of Mr. Baldwin, before alluded to,⁴ in addition to which he states,—“The civilized life of the ancient Mexicans and Central Americans may have had its original beginning somewhere in South America (perhaps in Peru?), for they seem more closely related to the ancient South Americans than to the wild Indians north of the Mexican border. But the peculiar development of it represented by the ruins must have begun in the region where they are found. I find myself more and more inclined,” he continues, “to the opinion that the aboriginal South Americans are the oldest people on this continent.” And the explorations

⁴ Chap. vii. p. 105.

made by me—chiefly those in the Huatica valley, as well as Chosica—predispose me very strongly to concur with the faith of Mr. Baldwin.

The surest way to confirm this, as well as to educe proofs of the Peruvian races and their early civilization, is to examine the mounds, huacas, burial-grounds, and such buildings, for treasures to illustrate the anthropology of the old inhabitants. If I did not feel that a good thing cannot be said too often, I should dread being accused of tautology in again repeating⁵ the opinion of one of the most experienced archæological explorers of South America, Mr. Squier:—"The mounds and their contents, as disclosed by the mattock and the spade, serve to reflect light more particularly upon their customs and the conditions of the arts amongst the nations who built them. Within these mounds we must look for the *only authentic* remains of their builders. They are the principal depositories of ancient art." To which I may add, whilst omitting the sentiment about "hiding from the profane gaze of invading races the altars of the ancient people," that the researches of such men as the recent explorers of Homer's Ilium (Dr. Schliemann), and of the Assyrian ruins (Mr. Smith), can throw more light on the old races of Peru, than millions of volumes with such gasconade and romance as we are treated to in the works written about that part of South America.

⁵ *Vide* chap. viii. p. 131.

CHAPTER XXXIII.

Primary duty of Peruvians to rectify errors of their history.—Augean stable of error and falsehood.—Ethnology yet to be written.—Archæology of Peru.—Beginning made by *La Republica* of Lima.—Still ringing the changes on the Incas.—Dr. Tschudi's romances about gold and silver.—“Inca civilization and Imperial dynasty.”—Foreigners exploring Peruvian territory.—Markham, Squier, and Professor Agassiz.—Organization of public museum.—Helping explorers of huacas, and promoting archæological *réunions*.—Author's suggestion of huaca exploring.—Field Club.—President Pardo's Society of Fine Arts.—Its statutes.

To consider on whom should devolve the primary duty to rectify the lack of exertion in exploration, as well as to go deeper into further investigations, I feel that the general public will agree with me, we should expect a beginning from the Peruvian Government and the Peruvian people.

Quite as applicable to the people and Government of Peru, as if addressed to themselves, are the sentiments of Mr. Gladstone to the meeting of Welshmen at Mold in August of this year, when he said “there is no greater folly circulating upon the earth, either at this moment or at any other time, than the disposition to undervalue the past, and to break those links which unite the human

beings of the present day with the generations that have passed away and been called to their account. If we wish really to promote the progress of civilization, never let us neglect, never let us undervalue, never let us cease to reverence the past. Rely upon it the man who does not worthily estimate his own dead forefathers, will himself do very little to add credit or honour to his country."

No persons ought to be more interested in the history of their own country than the natives themselves. It may be seen not only what an Augean stable of error and falsehood must be cleaned out, but the history of Peru,—of her early races,—their arts,—civilization,—and general ethnology, has yet to be written.

I am very glad, however, at having it in my power to recognize a new spirit rising up in Peru, amongst private individuals as well as in the Government, to do something in this matter. Once created, the idea requires to be fostered with energy to make it a progressive fact, and to give it the help of the authorities. The light of scientific knowledge is needed for its manipulation, and its pursuit should be carried on in the same spirit, that has actuated the Smithsonian Institute of the United States with Mr. Squier, and that has guided the London *Daily Telegraph* with Mr. Smith.

In the middle of last year there appeared in one

of the Lima newspapers¹ an interesting article on Antiquities, in which public attention was called to the important matter of studying the archæology of Peru. "The most glorious part of our history," it said, "is doubtless that anterior to the colonial epoch. And about the period referred to, we possess very few data, on account of the paucity of interest inspired through bibliographic and archæological details, as well amongst native writers, as with the Government. From such a carelessness it results that there are not a few foreigners who know more of our ancient history than we ourselves know. The huacas of the Incas (?), within which are hidden precious treasures for the studious man, are being gradually crumbled away, without any person taking an interest by making inquiry into their contents. Only the searchers urged by a desire to seek gold explore, whilst they reject with disdain the multitude of art-treasures and objects of curiosity to be found."

Knowing, as I do personally, the writer of this article, although not having asked for permission to give his name, and cognizant as I am of his being amongst the first rank of *literati* in Peru, I trust that he, being yet a young man, will follow up in this good cause. Not, however, as regards the huacas of the Incas (!), not

¹ *La Republica*, 17th June, 1872.

one of which can be proved to be on the coast of Peru, but the mounds of the prehistoric races, of whose relics I have given some slight account in this book. I believe that such stories as those of Dr. Tschudi about "the gold and silver mortar," and the gold conduit-pipes, have had no small amount to do with "the searchers urged by a desire to seek gold,"—on which the Inca delusion has been fostered, to an amount of exaggerated extravagance which is almost childish.

*La Republica*² goes on :—" Similar carelessness is exercised with reference to documents that treat of times before the Independence days : without understanding their merit, they are sold at a low price to the costermongers' shops, or allowed to rot under the action of time and moths. We have palpable examples of what we talk about in all our libraries—from the Government book-stores as well as those of the convents, and many private ones besides.

" Meantime we want a history, let it be of however medium a performance, for lack of elements to compile it, *without crude errors, or scandalous omissions*. To gather all these materials that up to the present day are dispersed, and publish them as bases of a great work—this is what ought to be done, and what actually belongs to the mission

² The author of this paper was, at the time of its having been written, Editor of *La Republica*.

of the present generation. History exacts, before all other things, the aid of archæology and bibliography, particularly in countries like Peru, where the darkness of early ages is joined to the disorder of the Colonial epoch.

“It would be advisable that the Supreme Government, in imitation of countries a little more advanced, should foster and protect the taste for studies of this class. The expenses, that would be required, are insignificant compared to the results. There is not a road, city, nor town in Peru in which there does not exist monumental ruins that excite the interest of the traveller. *We are ignorant of the Inca civilization, when the remains of the old Imperial dynasty are presented to us in the past.*”

I may add, there appears to me no more characteristic incident of the “disorder of the Colonial spirit” than its having still continued harping on the “Inca civilization” and the “old Imperial dynasty” without inquiry as to whether these were delusions, or realities.

The article continues:—“Our indolence or laziness makes a notable contrast with the observing spirit of the foreigner, who comes from long distances to explore our territory. His endeavours are duly recompensed. The work of Markham, ‘Cuzco and Lima,’ enjoys an almost universal reputation through its erudite observations. A clever North American writer, Mr. Squier, has

published in the United States and in Europe a series of articles about the ancient Peruvian monuments, which have brought him very high compliments from many literary and scientific societies. Only a few days back the celebrated Professor Agassiz, in passing by Peru, has collected with extraordinary activity a large quantity of *Incarial works of art*, to show them to the European public as treasures of inestimable value.

“Why continue? Have we not seen a distinguished personage from the North, surrounded with some labourers, and in company with his wife, in the ruins of Pacha-Cámac, during some days, removing carcasses and accumulating objects, that, if not worth anything in a material point of view, serve as so many lights to guide us in the study of a glorious epoch? Well, then, more and more honourable will it be for Peru to unite such things as these in a national museum.

“In the midst of ignorance and preoccupations that still dominate in certain classes of the people, there will be found some to find fault with us because we dedicate our second editorial to this subject instead of to a political one. But we are confident that the enlightened class will not be of that opinion.

“We live in an age of progress, in which it is necessary to correct our errors, and offer stimulents to the study of serious things. With this object we suggest to the Government,—

“1st. That, in every future railway contract, shall be imposed on the contractors the obligation to bring to certain persons appointed by Government works of art, manufactures, and all curious objects of antiquity in general that will be found during the progress of the works.

“2nd. The organization of a public museum, appointing intelligent *employés* that will be obliged to write a memoir on each of the subjects entrusted to them.

“3rd. To help whatever persons may desire to remove huacas under certain conditions, that will obviate the complete ruin of such monuments, giving them premiums in proportion to the objects they may collect, and appointing qualified persons for this examination.

“4th. To promote *réunions* between those who possess antiquities and historical documents of Peru, or who desire to write on their importance. The premium which the Government will give to the best writers and explorers will serve to stimulate many to the cultivation of a branch utterly neglected up to the present time.”

I at once availed myself of the opportunity which this excellent paper afforded to translate it for the *South Pacific Times*³ of Calláo, and sent it, with a letter of comment, for publication. In part of the latter I committed an error, from being under the

³ Vide *South Pacific Times*, vol. i. No. 5, June 22nd, 1872.

impression that "the distinguished personage from the North" was intended for Professor Agassiz and his wife, who, I knew, had not been at Pacha-Cámac; and I mentioned that I had obtained for that gentleman 384 skulls, with other curiosities, from the burial-grounds at Ancon, Pasamayo, and Chancay, and that this collection was given by me to the Professor, with the object of being presented to various museums in the United States, more especially that of Cambridge, Massachusetts, which had been endowed with a large sum by the late Mr. Peabody, principally for the preservation of Indian curiosities.

To this I added, "At some future time I hope to have the opportunity of explaining the reason of my belief, that these belong to prehistoric times—in fact, to a period long antecedent to that of the Incas.

"To preserve such relics in the country, no doubt a national museum would be indispensable. There is not much time to be lost on the subject, for, as you truly remark, 'the huacas are being destroyed, little by little, without any person taking the trouble to examine them.'

"An Archæological Society, established on the four bases which you propose, would be the best means to preserve your antiquities; but such a thing must be initiated either by the Government or by some scientific corporation in Lima; and although it may seem presumptuous in a stranger

to make the first step, I offer, in the cosmopolitan spirit of our nineteenth century brotherhood, to give my small services as a fellow-labourer.

“With such an intention I take the liberty to offer two suggestions in addition to your four,—

“1st.—That an appropriate site for such a museum would be the little town of Magdalena, only a few miles from the capital, and now being connected with it by means of a railway. According to Don Mariano Rivero, in his work on ‘Peruvian Antiquities,’ it appears ‘Tradition relates that the celebrated temple of the Idol Rimac, in the valley of Huatica, was contiguous to Limatamba, and that the destroyed town has passed into that of Magdalena. There exists a large number of huacas, of different sizes—some being more than fifty yards in length and fifteen yards in height—from Limatamba to Marenga.’

“2nd.—To begin the work by the establishment of a society, somewhat similar to that which exists in Liverpool, under the title of the Naturalists’ Field Club, in connexion with the Literary and Philosophical Society of that city. The Naturalists’ Field Club, as its name indicates, does all its operations in the country. The members, consisting of ladies and gentlemen, meet together at each other’s houses on appointed days, and proceed to study botany, geology, and natural history—to make their scientific studies a thing of re-

creation—to instruct one another, and whilst finding, in the words of Shakspeare, ‘Sermons in stones, books in the running brooks, and good in everything,’ to enjoy the amenities of social intercourse, as well as invigorate their constitutions by the fresh country air.”

I must explain here that, at the time I suggested the site of Magdalena for a museum, I was as ignorant, as I believe the majority of Peruvians are to the present moment, of the large monuments in its neighbourhood and all around the valley of Huatica⁴ (whereof Magdalena forms the centre)—believing them to be no more than Rivero described them (although I now cannot imagine that he ever visited there), “some being more than fifty yards in length and fifteen yards in height from Limatamba to Marengo.”

In the same paper of *La Republica*, June 17th, in which my letter was published, appeared the following:—

“To SENOR DR. THOMAS J. HUTCHINSON.

“SIR,—The foregoing letter, which you have addressed to us to-day, obliges us to occupy ourselves anew with a matter so important as the archæology of Peru.

“You will believe that we do it with true pleasure, since you, Senor Hutchinson, to whom the

⁴ *Vide* chaps. xiii. and xiv.

country already owes some services, are the first to hasten in response to the call made in favour of our country, and of science.

“ ‘ In the midst of ignorance and of preoccupations that still rule amongst certain classes of the people,’ says the article to which you refer, ‘ there shall not be wanting some persons who will judge us dispassionately, because in our second editorial we do not give place to a political point, and we are certain that educated persons will not be of this opinion.’

“ The letter before us shows that we have not been mistaken. The idea of exploring the huacas in aid of knowledge and civilization, as of establishing a national museum, has found echo, and can claim distinguished supporters.

“ You know it. In all the extent of America there is no country which has materials to excite the curiosity of the archæologist and the studious man as that of Peru, with its monuments of antiquity spread all over the extent of its territory, attesting the former existence of a powerful and civilized Empire.

“ By an anomaly which can scarcely be credited, hardly any one takes an interest in examining these ruins, *wherein is written the true history of old times in this Continent*. Has not the period arrived to put the work in hand? Will it not be easy to organize a society with this object? Will not the Government lend its aid to this new association for

whatever means it requires to advance the work? Undoubtedly, yes.

“The idea is launched. You offer your useful co-operation. It is necessary, then, to commence the work. If we have not associations such as that of Liverpool, and others which you cite, the University body, the School of Medicine, the Literary Club, and all intelligent persons will, for their own pleasure as well as for duty, give a helping hand to the work. In the confession that you are a stranger, you merit more honour, and it places us more under the obligation of gratitude to you.

“Before finishing, we have to say that, in mentioning a distinguished personage from the North, surrounded by some labourers, and accompanied by his wife, in the ruins of Pacha-Cámac during many days, removing carcases and accumulating objects of curiosity, we referred to Mr. Squier, whose studies of the ancient monuments of Peru, published in *Frank Leslie's Illustrated Paper* at New York, made such a brilliant exit in Europe and New York.

“Always attentive, as *La Republica* will be, to accept writings of this class, which have a noble and elevated end, we hope you will continue to send us your important observations.

“Remaining, dear sir, your obedient humble servant,

“THE EDITOR.”

But neither the School of Medicine, nor the

Literary Club, took any initiative in the matter. In fact, no step was made on the subject, as the political caldron of Peruvian politics was, at the period, about getting into a seething state for the dreadful catastrophe of the last week of July already described.⁵

As soon, however, as President Pardo was called to the position of First Magistrate of the Republic, he took in hand the complete reorganization of the whole system. The military and municipal discipline being once arranged, and the most important of all—the financial condition of the State—having been set to rights, as much as it was in his power to do, he then turned his attention to the matters expressed in a Decree of which the following is a translation:—

“ SOCIETY OF FINE ARTS.

“ MANUEL PARDO, Constitutional President of the Republic,—

“ Considering: That it is necessary to provide for the preservation of the Exhibition Palace, which is not only one of the most splendid monuments of the capital, but a point of *réunion* and recreation for a large section of our society, and an excellent practical school for the nation:

“ That it is convenient to give to its spacious saloons a profitable application, in harmony with its structure, and with the object of its creation:

⁵ *Vide* chap. xvii. pp. 1 to 20.

“ Be it decreed :

“ 1st. The formation of a society, to be denominated that of the ‘ Fine Arts,’ to charge of which will be handed over the preservation, and administration of the palace, and its dependencies, as well as the direction of a museum, of a school of painting and sculpture, and of a conservatory of music, to be established therein.

“ 2nd. This society shall consist of twenty-five members.

“ The following are named to form part of it :— Senores Don Ignacio Osma, Don José Antonio Barrenechea, Don José Bresani, Don Miceno Espantoso, Don Manuel Atanacio Fuentes, Don Antonio Raymondi, Don Ernesto Malinouski, Dr. T. J. Hutchinson, Don Gaspar de la Puente, and Don Pedro Correa, authorizing them to select the thirteen other members, and to form and present to the Government the statutes of the society.

“ 3rd. The saloons of the Exhibition Palace will be destined to the establishment of a general museum, to a school of painting, and sculpture, and to a conservatory of music.

“ 4th. The funds of the Society of Fine Arts shall be the products of the Exhibition Palace, and the sums that may be voted in the budget for its preservation, and for the establishment and support of the museum of the school of painting and sculpture, and of the conservatory of music.

“ To be communicated, registered, and published.

“ Given in the Government House, at Lima, this 17th day of December, 1872.

“ M. PARDO.

“ F. ROSAS.”

The statutes accompanying the rules and regulations of the Society of Fine Arts are too long to quote here. But they explain its objects in the second section as follows :—

“ Article 6th. The society will occupy itself—

“ 1st. With the care and protection of the Exhibition Palace, its parks, and other dependencies ; procuring for the public, in exchange for moderate prices of admission, recreations and diversions in harmony with the nature of its institution ; and organizing periodical exhibitions of flowers, fruits, animals, machines, and industrial matters, whether native or foreign.

“ 2nd. To organize, enrich, and preserve a museum of objects of utility as well as interest, whether native or foreign, and before all of Peruvian antiquities,—procuring collections of historical objects, native to the country, of instruments, utensils, machines, and so forth.

“ 3rd. To create and support an academy of drawing, of painting, and of sculpture, promoting the teaching of these arts, as well as procuring paintings and original statues, or copies, of celebrated masters, to form special museums of such objects.

“ 5th. For the establishment of a conservatory of music that will encourage the teaching of this art, applied principally to composition and to singing, procuring collections of foreign classical compositions, as well as those that are in Peru, although they may not merit such a character; to promote philharmonic *réunions*, concerts, festivals, and everything that can tend to popularize and refine the taste for music.”

Such a society has a noble field for its operations in Peru; and although, as the president, Senor Don J. A. Barrenechea, in his despatch to the minister accompanying the statutes for approbation, observed, “ it does not flatter itself that it can be organized in a day, still it hopes eventually to be founded on solid bases, such as in other countries are only proved to be the result of great labours, rich elements, and the slow course of time.”

“ Rich elements ” in Peru existing to a degree that may be characterized as inexhaustible; let us hope that labour and time will do the rest.

CHAPTER XXXIV.

First year of Senor Pardo's presidency.—Excellent measures proposed by him.—Sanctioned by Congress.—Initiative of immigration.—Text of law to encourage immigration.—Difficulties about licence papers to mechanics.—Case of William How.—Representations of Hon. Wm. Stafford Jerningham.—Opinions of the Fiscal, Senor Paz Soldan.—Payment for licence papers abolished.—Vote of Congress for schoolmasters from Europe.—Vote of same for new lighthouses.—Purchase of telegraph lines by the State.—Concession for Payta and Panama telegraph.—Society for irrigation of lands.—Mr. C. Wilson's discovery of obtaining fresh from salt water.—Eugenio Plazalle's Lecture on it.—Granting of Letters Patent.

THE first year of President Pardo's accession to political power was marked by some excellent measures—chiefly those proposed to Congress—of which I am about to make brief notice.

In the month of October were published the bases of an Immigration Society, to be divided into six sections, each of which was to take special charge of the immigration from the following countries—viz., France, Italy, Spain, Portugal, Austria, Germany, and Great Britain. This was organized, and nothing more; as it only professed to establish agencies in the countries specified, for paying the passages of immigrants, and providing the means of their establishment in the

territories of the Republic, be it by contract or otherwise. Immigration to Peru, or to any South American Republics, is a matter requiring more serious thought, as well as more advantages than are usually offered to the immigrant, before it can be put in competition amongst the northern races of Europe, with immigration to the British colonies, or to the United States.

The following is the text of the law of immigration which was passed by Congress a few weeks before my departure from Peru :—

“MANUEL PARDO,

“ CONSTITUTIONAL PRESIDENT OF THE REPUBLIC.

“ *Inasmuch as*

“ THE CONGRESS OF THE PERUVIAN REPUBLIC,

“ *Considering :*

“ It being unquestionable that immigration contributes to the prosperity of nations,

“ Has passed the following law :—

“ The Executive Power is hereby authorized,

“ 1st. To expend the sum of one hundred thousand soles a year for the encouragement of European immigration, on the basis which may be most suitable to each nation, and to each labouring class.

“ 2nd. To distribute to the immigrants irrigated lands belonging to the nation.

“ 3rd. The colonists will be obliged to reimburse the Treasury for the expenses, save those of trans-

port, which they may occasion, according to the conditions the Government may fix.

“Let it be communicated to the Executive Power, so that the necessary measures for carrying it out may be taken.

“Given in the Hall of the Sessions of Congress in Lima, on the 29th of April, 1873.

“Manuel F. Benavides, President of the Senate, Felix Manzanares, Secretary; Jose S. Tejada, President of the Chamber of Deputies, José M. Gonzalez, Secretary.

“Be it therefore printed, published, and circulated, and let it be duly complied with.

“Given in the Government House in Lima on the 28th of April, 1873. “M. PARDO.”

As far as immigration of the agricultural classes is concerned, I cannot speak in favour of Peru, for the simple reason that the fiscal lands available for cultivation are nearly all in the Amazon valley, and therefore out of reach of the ordinary emigrant. If carpenters, or other mechanics, wish to go to Peru, where they never need be a moment idle, and where they will get excellent wages,¹ they will find, amongst the reforms introduced by President Pardo, one that will be of greater benefit to them, as well as to the country, than a dozen Acts of Parliament. This refers to the doing away with what is called the matriculation paper, which

¹ I must add, too, the cost of living is very high in Peru.

every mechanic hitherto was obliged to take out. It was payment for licence to work at his trade, granted to him so as that he should consider himself subject to the laws of the Peruvian Constitution, with, of course, the advantages ceded by any treaty between his own Government and Peru. A mechanic working without a licence, or matricula, was considered a sort of poacher.

In this latter light, was held William How, an English ship carpenter, who came to my Consulate one day to complain that he had been taken prisoner and put on board a Peruvian man-of-war, with orders to work, and of his being badly treated on account of refusal to comply. I sent him at once to our Minister at Lima, the Hon. William Stafford Jerningham, who took the matter up very strenuously, as the case of ill-treatment of a British subject. After some time the particulars of the affair, which it is not necessary to reprint, appeared in the official newspaper, joined to an opinion of the Fiscal (chief law officer), Senor Paz Soldan. This was addressed to the President of the Republic, and amongst other matters pointed out:—

Foreigners, as well as citizens, are free to follow in the Republic every kind of commerce, industry, or work, on paying the respective licence, which assures and protects them in this right. In order to exercise any of the learned professions, one is required to present a university diploma,

and prove besides the possession of the necessary skill and practice which is required.

Individuals, not natives of Peru, who desire to navigate Peruvian ships, must undergo the examination decreed on the 4th of August, 1840.

Another of the same year, dated 20th September, declares the individuals who compose the *matricula* to be exempt from the payment of *contribucion personal* (a poll-tax). But this tax was abolished by a law of Congress.

The regulations of the *matricula* allow entire liberty to those who wish to inscribe their names, without being able to compel any, but only those, who put their names on the marine register, had the right to navigate, and exercise any other industry connected with the sea. Each department is allowed to have its roll of ship carpenters and caulkers, to the number which may be thought convenient. The non-matriculated artisans may freely exercise their calling in the towns where they reside, but not in Government work, except in the absence of matriculated tradesmen. It is, therefore, clear that the regulations require no matriculation on the part of any person, nor is there the slightest excuse for obliging any one to do so. Fishery and navigation are the only industries which cannot be freely followed, and those who are not matriculated can exercise these occupations in the ports in which they reside.

I consider it is very useful to foreigners coming

to Peru to know the actual status of affairs in points of this kind; and I therefore continue the opinion of Senor Paz Soldan:—

The State must pay the passage of such carpenters, and blacksmiths, as matriculate in the ports of Arica, Calláo, or Paita. Those who matriculate are exempt from all kinds of personal tax, as long as they serve in the mercantile marine, or are embarked aboard of the Custom-House cutters or other ships belonging to the navy (see the 6th and 13th clauses of the law, dated 18th January, 1848).

This law, which was passed for the protection of the Merchant Marine, does not recognize the exclusive right of fishing, which formerly belonged to those who matriculated, and which had been abolished by subsequent acts of Congress. The 483rd article of the Civil Code declares “that the right to fish is common to the natives of the country,” and the community of right destroys every privilege.

Citizenship in Peru is obligatory on no one; nor is it denied without a just cause. To effect it there is first required, the desire and request of the foreigner; the wish to be naturalized as a Peruvian must be first expressed; he must be twenty-one years of age, and possess some profession or trade, besides which he must be inscribed on the Civil List in the form prescribed by law. (35th Article of the Constitution.)

The 19th Article of the Civil Register regula-

tions sets forth the formalities, which are excessively easy and liberal, wherewith such an inscription is to be made.

There have been established, and are in operation at the present time, many mercantile companies; many industrial, farming, manufacturing saltpetre, mining, navigation, irrigation, and railway undertakings, whose promoters, owners, and agents are not citizens of Peru.

Many other persons, belonging to different countries, have entered into contracts with the Government, concerning various works, and have solicited and obtained the concessions of privileges, in whose quiet possession they still are. It may be said that the greater part of the riches of Peru, and the most lucrative enterprises are in the hands of foreigners, without their having been called on to take out their papers as citizens.

Foreign capital which has been spent in taking advantages of the various kinds of riches that the country possesses, can reckon on every assurance of legal guarantees; regarding many of these the nation has assured them interest, which is a favour that has seldom been granted to the natives of the country. The advantages and protection which foreigners find in Peru have led some of them to believe, that they were in a better position, and even more privileged, than our own people. On this account some have pretended that political disturbances should not affect them, or that the

State should indemnify them for the losses which are the result of civil conflicts ; in short, that there should be for them a special legislation, which in their own country they cannot find, and which they would look for in vain.

These are facts which are patent and known to all ; they are more decisive and conclusive than any reasons that could be brought forward, to prove that foreigners possess in Peru every guarantee, that can be desired in the following of their trade, and the employment of their capital. Contracts entered into with them are scrupulously carried out, and justice is done when a proper claim is presented ; they are, on this account, content with Peru and with her Government.

If they even suffer in person or interests, it is not from the fault of the administration, but because passions, vices, and crimes are common to men and peoples ; it is a fatal leprosy, which affects the human race, spread over the face of the globe.

Between the Government of Peru and that of her Britannic Majesty there exists a treaty of friendship, commerce, and navigation, in which the rights, guarantees, and protection, which the subjects and citizens of both countries are to enjoy when residing in either territory, are declared. But the ordinary laws of Peru concede to British subjects greater and more extensive rights than are set down in that treaty. They can freely enter Peru, reside where they like,

leave it, get married, make a will, and dispose of their property as they wish, or, dying intestate, their heirs are protected. They can inherit real or personal property, obtain exclusive privileges, carry on manufactories, or establish any kind of industry, but subject to the same laws.

England, so justly praised for liberty, and the good sense of her people, who offer admirable examples in all walks of life, has not been so generous with foreigners, who, according to a recent writer, are barely tolerated.² There foreigners could neither possess real estate, nor inherit gifts, legacies, or any kind of personal property until they were authorized to do so by a statute of the 4th of August, 1844, which still kept in force the old prohibition of not being able to possess real estate. The Fiscal has gone into the foregoing explanations to satisfy the desires of the Honourable Chargé d'Affaires of her Britannic Majesty on the one hand; they are favourable to his industrious countrymen who come to live in this country, bringing with them as capital, their trades, economy, and work under the protection of our laws. On the other hand, they are for the benefit of the country itself, and principally because at the time, when a law affecting foreign emigration has been passed, emigrants may be aware of the guarantees, rights, liberties, and pro-

² If Mr. Soldan resided much in England, he would be disabused of this error.

tection which they may hope for on arriving in Peruvian territory.”

The most cogent part of this important document is, however, in the final recommendation, which I am informed has, since its suggestion, been passed into a law by Congress:—

“In conformity with what is declared in the Constitution, and according to the laws of the Republic, your Excellency may declare:—

“1st. That all the blacksmiths, carpenters, caulkers, and other workmen, either native or foreign, who may come to reside, or who actually reside in the ports, greater and less, of the Republic, to carry on their trade, either afloat or on shore, cannot be obliged to serve on board the national ships, nor yet on works undertaken by the State; nor shall they be required to inscribe their names in the guilds, whatever may be their character.

“2nd. That the inscriptions and matriculations should be voluntary, and whatever work should be required for the foregoing shall be paid for according to contract, to the artisans who may be called upon to execute it.

“3rd. That all decrees, rules, orders, and regulations to the contrary be abolished, and that only the published laws and the decrees dictated in conformity with them shall be strictly observed.

“4th. That the Honourable Chargé d’Affaires of her Britannic Majesty be replied to, enclosing

him an authorized copy of what your Excellency may decree, as well as the reasons which led to its promulgation. Always excepting that your Excellency should consider the contrary to be in accordance with justice, and in conformity with the national interest."

Besides these, in the month of April this year, 1873, and after some opposition from Congress, the sum of 40,000 soles, or about 8,000*l.*, was voted to bring some schoolmasters for Peru from Europe. In the same month was likewise decreed a similar sum for the increasing of lighthouses on the coast of this Republic, as well as the putting into better discipline, of those that already existed.

In the month of March, the Minister of the Interior, Senor Rosas, sent to Congress a suggestion for the handing over of all the telegraph lines to the Government, as well as for the granting of a subsidy for the Payta and Panama telegraph line. Referring to these matters the Minister thus concluded:—

With the desire of favouring commerce, which is daily assuming greater proportions among us, and of satisfying the wishes and wants, which at present characterize every civilized people, the Government has decided to ask for authorization to guarantee five per cent. on the probable cost of a submarine cable between Payta and Panama. This guarantee will encourage the promoters, and will cause, before long, a cable to

be laid, which will render communication possible with Europe in a few hours. The Government have the greatest hope, that it will in no way affect the public revenue; for if some present sacrifices were required, they would be amply compensated by the activity which the submarine cable would impart to our telegraphic lines, and the increase of commerce and industry which would result.

In order to carry out the foregoing objects, the Government has drawn up the following project, which I have the honour to include to you, and which you will be good enough to make known to the Honourable House of Representatives.

FRANCISCO ROSAS.

“ ‘ PROJECT.

“ ‘ *The Congress of the Republic considering :*

“ ‘ That it would be better for the Public, and the Administrative service, if the Telegraph lines belonged to the Nation :

“ ‘ *Hereby decrees :*

“ ‘ 1st. The Government are hereby authorized to assume the direction of the Telegraphic lines which exist in the Republic, paying in bonds of the internal debt, bearing six per cent. interest, the difference which may be found to exist between the calculated value of the said lines, and the amount which the actual company owe to the nation. This difference not to exceed S. 350,000.

“ ‘ 2nd. The Government will then proceed to extend the line from Pisco to the port of Iquique, and are hereby authorized to make the necessary disbursements.

“ ‘ 3rd. The Government are authorized to guarantee five per cent. on the capital which may be employed in laying a submarine cable between Panama and Payta, the said capital not exceeding 1,500,000 soles.’ ”

On the subsequent 19th of June was published in the official gazette of Lima, under the rubrics of his Excellency President Pardo, and Minister Rosas, the plan of bases for the construction and laying of the last-mentioned cable between Payta and Panama, with a guarantee of five per cent. This guarantee was to be for the term of ten years, not on the whole capital that may be employed, but on the sum of 1,500,000 soles. The proposals were to be published, through the legations of the Republic in France, England, and the United States; and amongst the provisions was one to the effect:—

“ 16. If the contractor be a foreign citizen, he must renounce all diplomatic intervention in the questions, which may arise about the carrying out the contract. These must be judged and decided according to the laws of this country, and before its own tribunals.”

To this is tacked on another plan of bases for the construction, and laying of the cable, without the guarantee of five per cent.

Another project of President Pardo's was the formation of an Irrigation Society—a thing so much needed, in fact so indispensable, in the arid, sandy coast valleys of Peru.

This last-mentioned was sent in April last to the Tribunal of Commerce, after being favourably reported on by the Committee of Accounts, and Credit, and a company was recommended to be formed on the following statutes:—

“1st. The object of the Society will be the irrigation of lands in the territory of the Republic, either buying lands to irrigate, or undertaking works on their own account, to sell or rent the water which they may be the means of furnishing to the owners of lands which need it; or contracting these works on account of the owners, to be paid annually by them, or on Government account, if the occasion should offer.

“1. The capital of the company will be two millions of Soles (S. 2,000,000), to which the Government will add 400,000*l.* sterling in bonds of 1872.

“3. The company are empowered to issue bonds at interest not exceeding eight per cent., for double the sum, which may be realized from Government capital, or of the company's with a mortgage of the lands, which the Society may acquire, or of the works which they may conduct.

“4. The company will pay the sum corre-

sponding to the interest and sinking fund of the Government bonds, after giving the preference to the interest and sinking fund of the mortgage bonds which it may emit.

“5. The company may augment its capital, as far as it may think convenient, the Government reserving the right to increase or not, proportionally, the sum it may lend in bonds.

“The Tribunal of Commerce will name a commission of competent persons, to draw up and propose, for the approbation of the Government, the definite statutes of the company.

“M. PARDO.

“JARA.”

Amongst other incidents of progress in Peru during the past year is an invention by Mr. C. Wilson for procuring fresh water from sea water through direct action of the sun's rays. Every one who has travelled, or resided, in that country will acknowledge the advantage of having this principle carried out, as extensively as possible, on a coast where water is so scarce, and in many parts impossible of being obtained. At Iquique, Pisagua, and all the ports in that neighbourhood, fresh water is procurable only from distillation by steam machinery. At the Literary Club of Lima, in the month of March last, its manipulation was expounded by Mr. Eugenio Plazolles, Engineer, as follows:—

“The apparatus consists of a box of pine wood

one inch thick, and which is about fourteen feet long, two feet wide, and has an average depth of six inches. The upper part of this box is closed with ordinary glass, which has an inclination of an inch and a half.

At the lower edge of the glass there is a semi-circular canal, destined to receive the fresh water which is condensed on the interior surface of the glass. The salt water is let into the box to about an inch in depth. It is then exposed to the rays of the sun, the heat of which is sufficient to raise it to sixty-five or seventy degrees centigrade. A very active evaporation then begins, and it is proved that a square metre of glass will condense daily two gallons of pure water."

I witnessed the apparatus in operation at Messrs. Dockendorf's stores near the works of the Pacific Steam Navigation Company, and am gratified at considering it a complete success. The Central Board of Government Engineers recommended Mr. Wilson's right for Letters Patent, in regard to this invention, after its utility and perfect adaptability to the climate had been recognized by the Prefecture, the Honourable Municipality of Lima, and the Attorney General of the Supreme Court of Justice.

APPENDIX A.

ANTHROPOLOGICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

APRIL 1ST, 1873.

Professor BUSK, F.R.S., *President, in the Chair.*

THE minutes of the previous meeting were read and confirmed.

The following new members were announced :—Sir THOMAS GORE BROWNE, K.C.M., Athenæum Club; RICHARD WORSELY, Esq., Reform Club; THOMAS H. GAY, Esq., 103, Victoria Street.

The President having vacated the chair in favour of Sir JOHN LUBBOCK, Bart., read a paper as follows :—

Remarks on a Collection of 150 Ancient Peruvian Skulls, presented to the Anthropological Institute, by T. J. HUTCHINSON, H.M. Consul at Calláo (with Plates VII. and VIII.). By Professor BUSK, F.R.S.

THIS important and interesting collection of ancient Peruvian crania was forwarded during the year 1872 by Consul Hutchinson, who has devoted much time, and labour, in the exploration of the ancient burial-places in the country around Calláo.

The first instalment consisted of eight skulls from a "huaca," or ancient burying-ground near Ancon, to the north of Calláo. They are considered by Mr. Hutchinson to be those most likely

of the tribe of Chinchas, or Huancas, or, perhaps—as he surmises—of Quichuas, or Aymaras; all of which tribes, he states, are now probably absorbed into the Cholos, a *mestizo*, or mixed race. At a place called Ica, Mr. Hutchinson had exhumed an earthenware round jar, or jug, containing all the bones of a full-grown man, and side by side with it were several smaller urns, containing the bones of children. On exposure to the air these bones fell to powder, but the urn has been sent. Besides the eight skulls from the locality above referred to, Mr. Hutchinson sent twelve more to Dr. J. Barnard Davis, who has forwarded them for exhibition on the present occasion, and it is much to be regretted that he has not himself been able to attend, to give us his views concerning them.

The next despatch from Mr. Hutchinson, accompanied with a letter, dated 26th April, 1872, comprised twelve skulls, with the lower jaws, which he says were picked up in the same place of interment, near Ancon, from which the mummified bodies had been turned up by the Spaniards at the time of the conquest, or by Peruvians at later dates, when searching for treasure. However this may be, it is curious to find that among these bones, and other relics from the same place, is the entire hoof of a mule, which could only have been introduced by the Spaniards, at or since the invasion of Peru by Pizarro and his followers. These crania were accompanied by some leg and thigh bones, with the dried flesh still upon them, showing that the bodies had been buried in the usual sitting posture. Together with them, also, were some fragments of fishing nets, and a wooden club and sword. The site is about twenty miles north of Calláo, and about a mile only from the sea-shore.

In another communication, dated August 20th, Mr. Hutchinson announced, that he had sent off another collection of from thirty-six to forty skulls, with the lower jaws, and states that he had collected the great number of three hundred and sixty-eight skulls for Professor Agassiz; and noticing that amongst those here collected, was one with the frontal suture open.

Another letter of September 12th, 1872, announced the sending of five cases of Indo-Peruvian skulls. Of these (cases 1, 2), fifty-eight were procured from Pasamayo, five miles south of Chançay, and thirty miles north of Calláo. At this place it is

stated that there are two burial-grounds, close to the sea-shore, and that the surface of the ground for nearly a mile square from the beach, up a sand-hill, is white with skulls and bones derived from bodies which were dug up, no doubt, by the early Spaniards. He remarks, also, that some of the lower jaws from this place are stained with copper on the inside, from a coin which had been placed in the mouth, and one of them, he states, has had a copper plate or skull-cap on the head. A very curious circumstance, when taken in connexion with what we know, was the practice among some Asiatic, and in remote times, even among some Western European peoples, of encasing the skulls of friends or enemies in metal; a subject upon which I offered some remarks on a former occasion, when describing an engraved calvaria from China.¹

Mr. Hutchinson remarks that among this collection there were also two in which the frontal suture was not closed.

Another case contained twenty-three skulls from Ancon, and Mr. Hutchinson remarks that in that neighbourhood there are three different styles of graves at places situated some distance apart; but, strange to say, here, as at Pasamayo, there are no vestiges of houses.

The burial-places are:—

1. Cylindrical or funnel-shaped graves, lined on the inside with stones, in some of which the bodies appear to have been placed upright.

2. An ordinary longitudinal grave, of the same style as those in our churchyards.

3. A large square excavation, which is roofed with rafters covered over with bamboo matting. In some of these latter Mr. Hutchinson found five or six bodies, including men, women, and children, swathed in clothes, and with the faces covered, some with cotton, others with llama wool.

At Ancon all the graves contain either pottery, or cloth, or pieces of fish-nets, or needles for manufacturing nets, or lace-work, or bags that resemble reticules for ladies.

Another case contained thirty-three skulls from the Cerro del Oro, in the Canéte valley, interior to Cerro Azul, about a

¹ "Ethnological Journal," vol. ii. p. 73, 1869.

hundred miles south of Calláo ; and in another were thirteen skulls from the same place, together with two from Pasamayo, and a few ordinary specimens of prehistoric Peruvian crockery-ware.

Those from Cerro del Oro are from the brow of a hill, which shows evidence of having been densely populated in former times, from the quantity of *adobe* ruins in the neighbourhood. "To the best of my recollection," he says, "it was here that Pizarro and Almagro had their first meeting. And the old road from the Canéte valley to Lima passes by the ruins of the celebrated temple of *Pachacamac*."

"The whole of the Canéte Valley, now covered with sugar plantations, is full of *Huacas*, or mounds of interment described by Prescott. So also in the valley of the Rimac, as well as that of Huatica, in the districts between Chorillos and Lima, converging seaward to Callao and Ancon. These mounds are for the most part still unexplored. Of some such Prescott writes, 'Vast mounds of an irregular or more frequently oblong shape, penetrated by galleries running at right angles to each other, were raised over the dead, whose dried bodies or mummies have been found in considerable numbers, sometimes erect, but more often in the sitting posture common to the Indian tribes of both Continents. Treasures of great value have also been occasionally drawn from these monumental deposits, and have also stimulated speculators to repeated excavations, with the hopes of similar good fortune.'

"But the skulls which I send," Mr. Hutchinson goes on to say, "are not from *huacas*, but from places of interment such as are described in 'Peruvian Antiquities,' by Don Mariano Eduardo Rivero."²

Having thus, for the most part in Mr. Hutchinson's words, described the localities from which the present collection of crania was procured, I will proceed to offer a few remarks upon them regarded craniologically. But since the matter has come more particularly under my attention, I have found that so much has been already written on the subject by others, that very little remains for me to remark without repeating what has been

² Chap. viii. p. 200 *et seq.* G. Putnam and Co., New York, 1858.

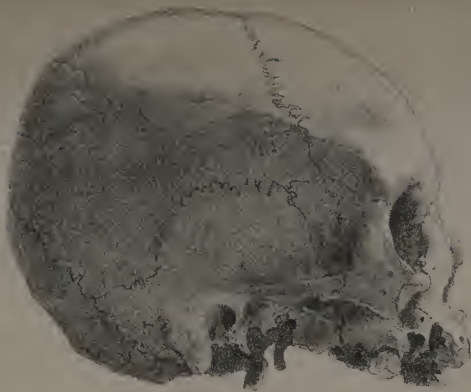


FIG. 1.

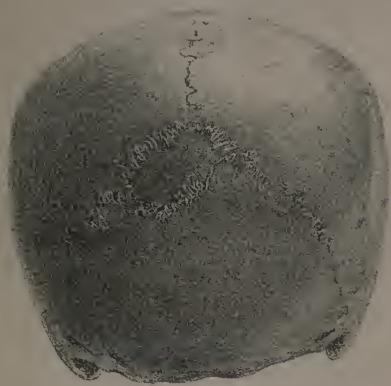


FIG. 2.

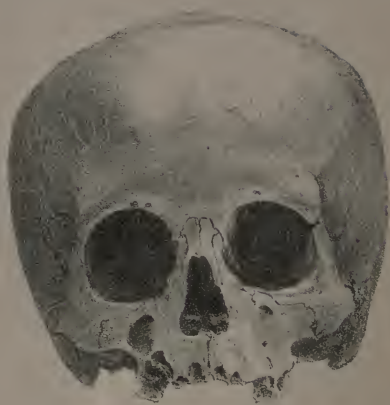


FIG. 3.

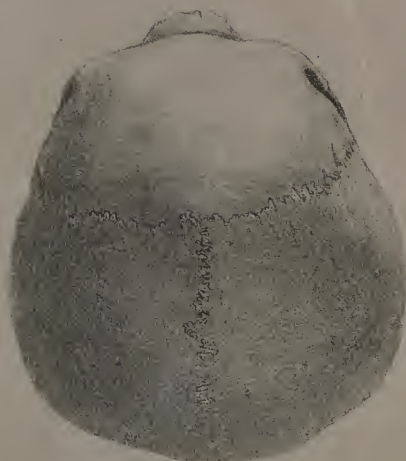


FIG. 4.



SCALE

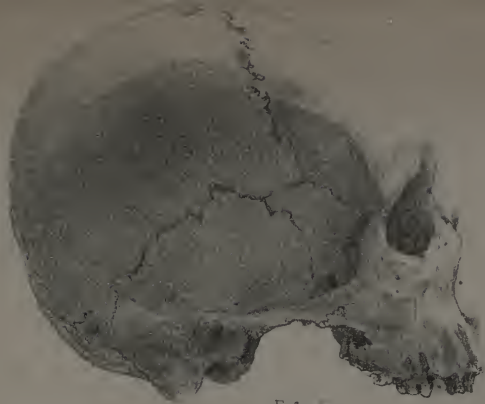


Fig. 5.

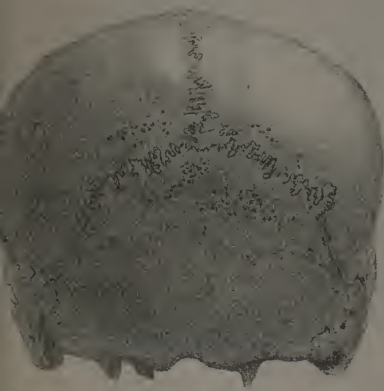


Fig. 6.

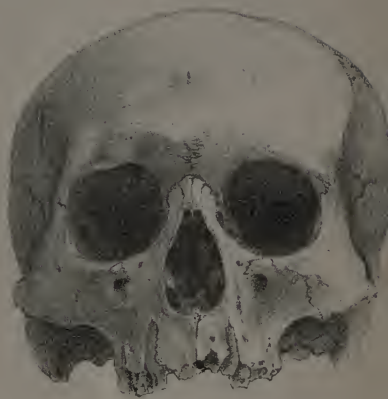


Fig. 7.



Fig. 8.



already published, a general *résumé* of which will be found in Professor Daniel Wilson's "Prehistoric Man," and "On the Cranial Characters of the Peruvian Races of Men," a paper by Mr. C. C. Blake in the second volume of the Transactions of the Ethnological Society for the year 1861-2; a paper which is especially valuable for the copious references to the previous literature on the subject.

Perhaps, however, the most complete view, within a small compass of the subject, as regards these ancient Peruvian races, will be found in Professor D. Wilson's work above cited (p. 225), where he gives an account of his observations, made upon the collection of mummied bodies and crania in the possession of J. H. Blake, Esq., of Boston, and which was brought by him from ancient Peruvian cemeteries on the shore of the Bay of Chacota, near Arica, in latitude $18^{\circ} 30'$ S., which burial-places appear to be of exactly the same kind as those from which Mr. Hutchinson's collections were procured. As Dr. Wilson's work is in our library and readily accessible, there is no occasion for my making any lengthy extracts from it on the present occasion. It may be mentioned, however, that Mr. Blake remarks that "there is no record or tradition, concerning this and similar cemeteries, of the period when they were made use of; and it is by no means certain that they contain the remains of the ancestry of the Indians who now occupy the country."

He remarks also that the colour and texture of the hair are facts of great importance to the ethnologist, as indicating essential differences from the modern Indians in one important respect; and therefore confirming the probability of equally important ethnic differences suggested by other evidence.

With respect to this point Professor Wilson (p. 235) states, that he has repeatedly obtained specimens of hair from Huron graves near Lake Simcoe, the most modern of which cannot be later than the middle of the seventeenth century, yet in all of which the hair retains its black colour and coarse texture, unchanged alike by time and inhumation; and in this respect corresponding with that of the modern Indians of South America, and also of the Chinese and other true Mongols of Asia.

The hair which is so abundant upon many of the crania on the table is, as will be observed, by no means coarse, but rather

fine and silky—nor is it truly black, but rather of an auburn tint, whilst on one the hue is reduced to a dirty stone colour. But there is no reason, perhaps, on this account to assume that the hair in both cases was not originally black, exposure in a hot, arid, sandy soil, and in the latter case probably to the weather, being sufficient to account for the change of colour from black to the present tint. But the comparative fineness and coarseness are another and more important matter, and if, upon proper microscopic examination and comparison, the differences stated to exist between the ancient and modern Indian hair should be found really to exist, a strong argument would arise in favour of those, who suppose that the ancient cemeteries may not really contain the remains of the ancestors of the Indian tribes of the present day.

As will at once be perceived, the present collection, taken as a whole, presents a remarkable uniformity of cranial conformation. This is of a strongly brachycephalic type.³ I have not measured the entire collection, but having selected what appear to be the fairest examples of the various forms, their mean length appears to be about 6.25 ins., and width 5.6 ins., giving a cephalic or latitudinal index of .905, only two falling below .800. In this estimation, however, were included both artificially-compressed and, so far as I can perceive, normally-shaped skulls. Separating these two from each other, the cephalic index of the supposed normally-shaped crania is about .873, the greatest being .935, and the least .812, and of the clearly artificially deformed or flattened ones about .979, the least being .861, and the greatest 1.32.

These figures show how very much the latitudinal index is exalted by fore and aft compression of the skull, and the almost equally great effect in increasing the vertical height will be seen in the fact, that the altitudinal index of the normal skulls is about .843, the greatest being .919, and the least .806, whilst in the compressed ones the altitudinal index rises in the mean to .878, the greatest being .919, and the least .824.

³ Linnaeus's term "plagiocephalic" is emphatically descriptive of the more common form of American skull, and may be conveniently used to distinguish the broad head with flattened forehead, so characteristic of the greater part of the American races, as, in fact, it was used by him.

As regards the comparative cubic capacity of the two kinds of skull, I am not able to speak positively, as, in order to determine this with any accuracy, it will be necessary to separate, so far as is possible, the male and female skulls; for the reason, first, that the latter are, of course, much less capacious; and, secondly, that in the case of artificially-deformed skulls, if it be true—as most writers state—that it is only the males who are subjected to treatment, no comparison can be instituted unless the latter are eliminated. But so far as my experiments have gone they would have served to confirm the general opinion, that the compression has no effect in diminishing or enlarging the cranial capacity—nor is it likely that it should. The mean capacity of the larger skulls—which may be regarded as males—appears, so far as I have gone, to be about eighty cubic inches, equivalent to a brain of about forty-five ounces, roughly estimated. This capacity, and the measurements above cited, show that the crania generally are of small size.⁴

It will also be seen, when comparing the numbers I have given with those afforded by Professor Wilson (p. 222), taken from a series of ancient crania from North American mounds and caves, that they very nearly correspond. In the mound skulls the mean length is given as 6·54 inches, and width 5·67, the cephalic index being ·861, and in those from sepulchral caves, as 6·62 × 5·78, with a cephalic index of ·873; figures that show clearly enough that even at that distant period there must have been a great similarity between the inhabitants of the western part, at any rate, of North America, and of the seaboard regions of South America, and, it may be added, with the modern inhabitants of the same regions.

Besides these brachycephalic crania, which form the bulk of the present collection, there are a few of a more elongated form; but these, however few in number, are of especial interest, opening up, as they do, the interesting question as to whether there is really more than one type of skull to be found among the ancient Peruvians, and also the still wider one whether there is more than one type peculiar to the American Continent.

As is well known, Dr. Morton was of opinion—and no man's

⁴ This is in accord with the statements of all observers.

opinion can be more weighty—that there was but one American type of skull—exclusive, of course, of the Esquimaux—and that of strongly brachycephalic form. According to Morton, the Indian skull “is of a decidedly rounded form. The occipital portion is flattened in the upward direction, and the transverse diameter, as measured between the parietal bones, is remarkably wide, and often exceeds the longitudinal line.” The forehead is low and receding, and rarely arched,—a feature that is regarded by Humboldt, Lund, and other naturalists, as characteristic of the American race, and serving to distinguish it from the Mongolian. The general question whether a diversity of type exists among the native races of America down to the present day, need not here be discussed ; but I would simply remark that, so far as my own observation of collections goes, there is every reason to believe that the brachycephalic type exemplified in the present collection and shown on a somewhat larger scale, but with precisely the same essential features in the Chinook Indians and in the natives of Vancouver’s Island, prevails amongst all the native tribes—at any rate, in the seaboard regions of North and South America—from Nootka Sound round the coast of Patagonia and up the east coast, within the historical period, to the Caribbee Islands ; whether it extended further north on the Atlantic shores in earlier times I do not know.

With regard to the dolichocephalic type of American skull, and the tribes amongst which it exists in North America, I need merely refer you to Professor Wilson’s copious data, at the same time expressing my belief that it will be found to prevail—or to have prevailed—throughout the greater part of the central or east central parts of America, both North and South, from Canada to Tierra del Fuego. The whole question is ably stated and argued by Professor D. Wilson, who, with Mr. J. H. Blake and others, is of opinion that, not only are two distinct forms of skull to be found in the ancient cemeteries,—one rounded or globular, and the other elongated,—but also that two distinct types of skull are at the present day to be observed amongst the existing American populations. The evidence to this effect, both as regards the ancient skulls, cited by Professor Wilson, is amply sufficient to decide the point.

The evidence of the existence of a dolichocephalic type

afforded in the present collection is not very abundant, but is, nevertheless, decisive. And if it be true—as is extremely likely—that the practice of artificial deformation of the skull has, in most cases, originated in a desire simply to increase or to add to the natural features, we cannot fail to perceive, in the elongated skulls from Titicaca, that that peculiar kind of deformation has arisen from a desire to add to the attractive features of the peculiarly elongated form of skull, of which several instances are presented in the present collection.

The Director read the following paper:—

On Ancient Peruvian Skulls (with Plate IX.). By J. BARNARD DAVIS, M.D., F.R.S., V.P. Anthropological Institute.

PROFESSOR AGASSIZ during his late travels went to Calláo, in Peru, and when there he received great attention from her Britannic Majesty's Consul, Mr. Thomas J. Hutchinson. Mr. Hutchinson made a fine collection of skulls of the ancient Peruvians, and other antiquities from the Peruvian cemeteries during the stay of Professor Agassiz, and presented the whole collection of three hundred and eighty-four skulls, and other articles of pottery, &c., to him for the museum at Cambridge, in the United States. I send a copy of the letter of Professor Agassiz, who states the great value of the collection, and expresses his warm thanks for it.

Another fine collection of Peruvian skulls has been sent to the Anthropological Institute by Consul Hutchinson, which I am informed is being exhibited. I have no doubt it will attract much attention, and will receive considerable elucidation from the observations of craniologists present, particularly from the President. At the request of Consul Hutchinson, I have forwarded a number of articles of Peruvian pottery obtained from the cemeteries, to be exhibited at the same time.

It will not be necessary for me to say anything of consequence respecting the skulls, as this will be done more accurately and more copiously by very competent gentlemen, I have no doubt. I will merely refer to one point—i. e. the so-called *long* skulls of the ancient Peruvians, which was treated more at length in the

"Thesaurus Craniorum," p. 246. It is there stated that Professor Morton, the distinguished American craniologist, in the early period of his researches, considered that there were both natural dolichocephalic and brachycephalic crania among those obtained from the Peruvian cemeteries. He subsequently saw his mistake, and perceived that the longer examples had obtained this character merely from the interference of art. A more recent investigator—Dr. Daniel Wilson, of Toronto, who has acquired a deservedly high reputation in various pursuits, both scientific and literary—has also devoted much attention to craniology. Having the opportunity of examining many collections of Peruvian skulls, particularly that made by Mr. J. H. Blake, now at Boston, in Massachusetts, he has revived the former opinion of Morton.

Dr. Wilson expresses his conclusion upon the subject emphatically in these words: "It is not at all necessary for the confirmation of the opinion reasserted here, that there are two essentially different types of Peruvian crania, to affirm that the form of the elongated skull never owes any of its peculiarities to artificial compression."⁵

The view thus taken by Dr. Wilson, which is that the dolichocephalic Peruvian skulls are of natural form, was combated in the "Thesaurus Craniorum." Since that book was printed I have received ample and perfectly satisfactory evidence as to the truth of the proposition that the longer skulls owe this quality to artificial means. By the politeness of Dr. J. Aitken Meigs, of Philadelphia, I have obtained two Peruvian skulls, which at one period belonged to Dr. Morton's collection, as a specimen of each kind. One of these is brachycephalic, the other is dolichocephalic; but they both present distinct traces of artificial distortion. This fact is conclusive, but, besides, by the politeness of another eminent American man of science, Dr. Jeffrys Wymann, professor of anatomy at Harvard University, this conclusion has been again and still more distinctly established, by an examination of Mr. Blake's collection itself, whence chiefly Dr. Wilson obtained materials for the foundation of his opinion. Dr. Wymann has been so good as to examine

⁵ "Prehistoric Man," 2nd edition, p. 440.

Mr. Blake's collection with its present owner, Dr. Warren, of Boston, and wrote me the result on the very day of his visit. I may here introduce an extract from Professor Wymann's letter:—

“The upshot of the whole is, the crania do not confirm Dr. Wilson's statement. One of Dr. Wilson's points, in fact it is his chief point, is that the skulls are natural because they are symmetrical, and that it is next to impossible that a distorted skull should be other than unsymmetrical. I have carefully examined eight elongated Peruvian crania with reference to this point, and find that they are quite as symmetrical as any ordinary crania; in fact, neither Dr. Warren nor myself could detect any asymmetry in the general outlines. The mode of employing pressure by bandages would indeed be likely to produce symmetry. Curiously enough, it so happens that the skull represented in Fig. 59 of Dr. Wilson's work is the only one in which asymmetry was detected, and in this the most prominent part of the occiput projects farther on the left than on the right side.”

This Fig. 59 is given in Dr. Wilson's book as a *natural dolichocephalic skull*; but I informed him, on the publication of the work, that it had obviously been distorted by art. Dr. Wymann goes on to say, “Both Dr. Warren and myself were agreed on this point. In addition, this cranium as well as that of the child (Figs. 60 and 61) in Dr. Wilson's book, presented the usual appearances seen in artificially distorted crania, particularly in the contraction of the circumference of the cranium between the middle and hinder portions. It seems to me, therefore, that the criticisms of Dr. Wilson's statements in the ‘*Thesaurus Craniorum*,’ p. 246, are quite correct. I cannot conceive his having arrived at the views he sets forth, and it is rather odd that the skull he has chosen to exemplify his views should be the one, out of the whole, showing (from his own stand-point) the incorrectness of them.”

I do not doubt that the extensive collection of skulls sent by my friend Consul Hutchinson will afford ample and conclusive evidence upon the questions here discussed.

I may then at once revert to the Peruvian pottery which I have sent for exhibition on the present occasion. Upon this

I shall say very little, scarcely more than give a catalogue of the specimens exhibited. It will be understood that this pottery is derived from the same tombs, or *huacas*, in which the skulls were met with. It was the practice of the ancient Peruvians to inter with the dead a great variety of objects. Some were of gold and silver, various implements, some of them of other metals, some of textile materials, and a vast diversity of pottery. From this fact, of the interment of such numbers of articles with the dead, it may be inferred with much probability that the Peruvians were not without some hope of a life beyond the tomb. The pottery indicates considerable skill and ingenuity in its execution, for they did not possess the famous and ancient "potter's wheel," a simple machine above their powers of invention. It is all made by hand, and there is no doubt that, like the pottery of the ancient Britons, it was by the labour of the women's delicate fingers that it was produced. It may be noted that none of the Peruvian pottery is thoroughly baked, so as to fuse the body and to render it very hard. On the contrary, it is more like *terra-cotta* than anything else, yet it is baked somewhat more thoroughly than *terra-cotta* usually is. A large number of the specimens, indeed the majority, exhibit imitations, more or less successful, of animal forms, sometimes of vegetable forms; the large majority typify the human form. It also occasionally occurs that the forms of the vessels have a grotesque character, and at times give expression to the humour of the people who made them. Skill and taste have been abundantly displayed in the modelling of the almost endless designs of these vessels. Much of the pottery is of a black colour, from a metallic oxide introduced into the clay; other vessels are made of lighter-coloured clays, and all are ornamented in many peculiar styles. Some ornaments, which have been regarded as of classical origin, may at times be found upon Peruvian pottery, such as the *fret* and *scroll*, which were not unknown to the Greeks. These and other accidental coincidences have been employed by some as arguments to support the delusive notion that the Peruvians were of European origin. This kind of erroneous deduction from coincidences has been widely employed in the philosophy of anthropologists, who explain things upon hypothesis. Sometimes it has betrayed even eminent men. I remember being astonished

some years ago, to find the very distinguished and accomplished Councillor Thomsen, the founder of the grand Ethnological Museum at Copenhagen, to take this view. Looking at some of the beautiful feather helmets with crests in the museum, made in the Sandwich Islands, he told me that these very helmets proved that the Greeks had had communication with these islands, for here we saw the Greek crested helmet. A common decoration in Peruvian pottery is produced by placing small grotesque animals in different positions on the vessels. The chief use of most of these curiously-formed vessels is considered to have been for holding and for carrying water. As they have handles, they are *water vessels*, articles of vast importance in a climate like that of Peru. From their porous nature they would keep the water cool. A hint has been thrown out that some of them may also have been employed for sipping an infusion of that great exhilarator, the coca (*Erythroxylon coca*), through a silver tube. This is the mode of sipping the *Maté*, or Paraguay tea, but whether the coca be taken in the same way is rather uncertain.

The specimens sent for exhibition are—

Vessels in *Black Ware*.

No. 1. An amphora, with two ears or handles. This closely resembles the amphoræ of the Greeks and Romans. It has been elaborated with great care. The marks of the tool are seen all over its surface.

No. 2. A curious water vessel modelled in the exact form of a gourd, with all its natural prominences. Upon one side is modelled the bust of a woman to form the orifice, with her arms and pendant breasts. Her face, with the ears, eyes, nose, lips, and teeth, are all expressed. In the ears are large ear-rings. The head has been modelled as a separate piece, and been attached to the vase afterwards. The potter's finger marks are seen in this attachment. I believe the gourd is a cast from a clay mould taken from a natural specimen, as there is an appearance of a seam along the middle of the bottom. The woman's head is broad, and brachycephalic according to nature. The nose is depressed, like that of a negro, and the hair is represented in tufts; neither of which is correct to nature, but more for the convenience of the potter. This vase is an admirable

FIG. 1



FIG. 2



piece of pottery. The marks of the modelling tool are very obvious on the neck, but totally absent from the gourd, or cast part, which, in fact, supports the view that the gourd is made from a mould.

No. 3. Water vessel, which has a double tube rising up from the belly to join in a single one for the mouth. This combination of the tubes forms a handle. It is neatly decorated on the sides of the upper part with four grotesque birds, having long bills. The depressed field upon which the birds are placed appears to have been formed by an impression.

No. 4. Another handsome water vessel with the double tube for a handle, resulting in the single mouth. This vase is neatly ornamented with three oval prominences, like olives, conjoined by a cord on each side, each of the series of three being equally conjoined by the cord. On the outer sides at the angles at which the tubes rise a small bird is attached, and a minute monkey at the angle at which the single tube rises. From the marks of seams at the sides, it is probable that the body of this vessel has been made in two halves.

No. 5. Another water vessel, in the form of a depressed globe, which has a prominent spout like that of some teapots. On the opposite side is a grotesque seated figure, having a square head, a prominent nose of a *natural American form*, and a large beard, holding a cup upon his knees. A flat handle is formed conjoining the back of the figure with the spout. [See Plate IX., Fig. 1.]

No. 6. A small *whistling vase*, formed of the body of a bird, with long beak. There is a small hole above the bird's head to produce the sound. Wings and feathers are modelled on the sides of the vase.

No. 7. A small cylindrical vase, or urn, with a row of indented ornamentation near the top. This vessel closely resembles some of the ancient British urns. The marks of the tool upon it fully indicate the patient labour by which this pottery has been produced.

No. 8. A vase formed of three conjoined almost cylindrical bodies, which are surmounted by a tube on each side, running into the terminal spout. There is a very minute bird perched at one of the angles of the tubing.

Red Pottery.

No. 9. A semi-conical water vessel, with a double tubular handle on one side, ending in a tubular mouth. The flat side of the vessel is elaborately decorated with the squat figure of a man standing, holding two long objects in his outstretched arms. This man is a grotesque, has long canine teeth like the tusks of a bear, a singular helmet on his head, on the front of which is an animal's face, a cravat round his neck with bands falling down before. This may be intended for a Peruvian deity. The whole is coloured black and white in contrasts. There is a dog-tooth border to this sculpture, which terminates in a grinning head at each extremity.

No. 10. Another depressed cylindrical vase, with a teapot spout. A bird has balanced the spout at the opposite end of the handle. This vase is decorated with red lines, having scroll ornaments between them.

No. 11. A vessel much like a bag. Has two ears, and the neck is ornamented with an animal having four feet and a tail. This vessel is decorated by lines running lengthwise, between which are placed wavy lines. It has been coloured white, the decoration being dark red, almost black.

No. 12. Another bag-like vessel, or jug, ornamented at the neck with portions of a man's head. The ears, eyes, nose, and mouth stand out, and the two hands project from the side of the jug. The nose is *natural*, or truly American.

No. 13. A small neat vessel, in shape resembling the body of a squat man with his hands on his knees. He is dressed in a tunic, which is fastened by two strings upon his breast. The wide spout is placed at the back of the head. The head is modelled with great accuracy, and exactly presents the American nose. The vessel may be regarded as exhibiting the model of an ancient Peruvian. [See Plate IX. Fig. 2.]

No. 14. Two minute vases, forming almost a pair, ornamented with black upon white ground, and having ears at the necks.

No. 15. A neat shallow vessel, which is ornamented outside with black in diamonds upon the red ware, and then white lines between. It has a row of three lines, two black and a white line between, inside the neck. Ornamented outside the rim also. This vessel is remarkable from being made of a red

pottery, which has numerous minute particles of gold interspersed in it.

No. 16. Another small discoidal vessel, ornamented in a very similar diapered manner. It has, besides, the fret pattern on the extreme circumference. These two vessels are decorated with much elegance.

No. 17. A painted water vessel with handle much fractured. It is a red body painted white at the upper part, and birds drawn upon it in a brown colour.

No. 18. A hemispherical cup.

Anthropologically considered, this exhibition of specimens of ceramic art proves incontestably that the Peruvian potters worked from nature from the Peruvian people themselves, a people who possessed brachycephalic, broad heads, well exemplified in No. 13, and had a nose which occurs only in its pure form as a race characteristic in America, but upon that continent ranges from a high north latitude down to Peru, if not farther south. Since I first observed this peculiar nose, I have long been accustomed to regard it as the true *aboriginal American nose*, which may require a word of explanation. It is an aquiline nose, which distinctly differs from the Roman nose, as well as from that of the Jew. It is at once appreciated by the eye, but perhaps is not so easy to describe in words. No one has depicted it so well as Catlin, who spent so many years of his life in delineating the Indians of America. I possess a large work executed in pencil by his own hand, in which he has drawn facsimiles of all his paintings, and this peculiar nose is represented in the men and the women also of all the tribes. It is, as it were, a crescentic nose, beginning to curve at the upper part, and curved uniformly, or nearly so, to the tip. It is a decidedly handsome feature, of which the native races of America have reason to be proud.

This exhibition also throws much light upon the state of civilization of the ancient Peruvians. It shows that although they were highly advanced in many arts, as weaving, dyeing, metallurgy and the ceramic, in which they had acquired a knowledge of moulding, casting, and producing a very permanent pottery, ornamented with taste in numerous ways, yet they knew nothing of one of the simplest and earliest inventions of man, the potter's wheel. This fact proves conclusively, as far as any

negative can do, that they were an aboriginal people, whose industry was not derived from any people of the old world, but was strictly native and indigenous. Nevertheless their skill and their taste were unquestionably highly cultivated. We have likewise obtained evidence of a sufficiently satisfactory character, that their aspirations were not bounded by the horizon of this sublunary world, but extended beyond the tomb. This evidence assuredly is most interesting to us as fellow mortals, and engages our sympathies infinitely more than all besides.

The following paper was read by the author :—

On the Peruvian Pottery sent by Consul HUTCHINSON. By JOHN E. PRICE, F.S.A.

WITHIN the last few days I have had the opportunity of inspecting the interesting collection of human skulls, pottery, and other relics, sent over from Peru by Consul Hutchinson to the Museum of the Institute. It is fortunate for us, that the description of this marvellous series has fallen to the able hands of our esteemed President and Dr. Barnard Davis, whose collective labours will probably embrace all points of interest, and leave but little else to be said concerning the collection. There are, however, one or two minor points for reflection which have occurred to me, especially with regard to the pottery discovered in the graves at Ancon, to which I would briefly direct your attention.

From the information furnished by Consul Hutchinson, there is but little to assist us in determining any date as to these remains. He mentions, however, that some of the skulls were taken from a place of interment, which after the conquest by Pizarro had been rifled by the Spaniards in their search for treasure: it is to be assumed, therefore, that they belong to a period anterior even to the subjection of the country by the Incas, and represent, indeed, some of the numerous aboriginal tribes. From the Spanish conquest, in the early part of the sixteenth century, history leads us through some four or five centuries of an advanced and flourishing state of civilization to what is usually termed *Pre-Incarial* times—a period of unknown

duration, one of which no literature whatever exists, and which save by a careful investigation of the remnants of sculpture,, carvings, and architectural remains, can only be illustrated by such discoveries as the present. Among all such relics, pottery is one of the most useful for comparison ; for as illustrations of the requirements of domestic life among uncultivated tribes, there are few things more durable or lasting than those of earthenware. Fictile vessels must have been among the earliest manufactures of man—a necessity indeed of his existence—a want which must be supplied. Food must be prepared for consumption, and receptacles for water must be had, even in the most primitive condition which can be imagined ; accordingly, the clay usually to hand becomes employed, means are adopted to harden it for wear, and a way becomes opened for the active exercise of human ingenuity in ornamentation and design. A great similarity, though, exists in the simple forms as fabricated by most ancient nations. The specimens before us, primitive though they be, forcibly remind us of classic types, and yet they are such as required no especial training or education in the higher principles of art to fabricate. A vessel is wanted for suspension, to hold water or other liquid, and to allow of being carried from place to place ; the idea, therefore, of such globular vessels with rings on either side the neck, by which to sling or affix to the body, becomes a natural one, and it matters little whether this be represented by those upon the table, by a Roman or mediæval amphora, or the pilgrim's costrel of early English times. I enclose a sketch of two such vessels found some years ago in London, and of about the same dimensions as the largest of those from Ancon ; the similarity is apparent.

The pottery, therefore, may or may not date from a remote antiquity : there is nothing about it decisive in this respect ; it is roughly made, evidently from the native clays, and imperfectly baked. It has been remarked that there is no evidence of the use of the potter's wheel, and I believe it is pretty generally understood that the Indians of South America were unacquainted with this useful invention—a contrivance the origin of which, so far as regards the ancient nations in the East, is lost in obscurity. There seems to be but little attempt at decoration—a few lines in a yellow-tinted pigment appear on some of the

smaller cups, and on others there is a white substance somewhat analogous to a glaze. Some such attempt at decoration is usual with early tribes. In Nicaragua the natives glaze their pottery with a kind of varnish lightly rubbed over the vessels, and in Australia and New Zealand it is customary to smear them with melted Kauri gum. The specimens of black Peruvian pottery exhibited by Dr. Davis hardly come within these observations. They seem to belong to a different style of art, are many of them of grotesque form, marvellously light, and of a much finer kind of pottery than the specimens from Ancon. The colour of this blue-black slate-coloured ware may have been derived from some metallic oxide in the clay, but (what would be still more curious and interesting) why should not the Peruvian potters have been acquainted with the principle of suffocating the fire of their kiln at a certain degree of heat, and thus ensure this uniformity of colour? I refer to the smother kilns, as illustrated by the late Mr. Artis at the Roman potteries of Durobrivæ.

In the present collection there appears but a small proportion of pottery to the number of the graves which must have been examined in order to produce so large an array of skulls. This is accounted for by Consul Hutchinson from the fact of the difficulty he found in collecting, packing, and sending a large quantity; he mentions, however, that most of the sepulchres contained pottery. This is a clear illustration of the practice among the Peruvians of interring such objects with the deceased, and resembling in this respect the customs of many other nations. We need hardly refer to its almost universal existence among the Romans. In far-off China it has been observed. Nicolo di Coti mentions it as existing among many of the Indian tribes. The Moldavians also, the Caubees, and many others may be cited. The objects buried usually comprised articles prized by the deceased during life, receptacles for food or wine, clothing, implements of war, with many other things likely to be required on the last long journey. Of such interments, a series in New Granada, Ecuador, Peru, and Chili, with other places in South America, has been well described by Mr. Bollaert, F.R.G.S., with many curious details concerning the discoveries made by him among the huacas of that country.

Among the objects on the table are two pieces of netting;

these seem the most difficult to reconcile with a remote antiquity. The preservation is so good, they are so well made, and bear so striking a resemblance to such fabrics as used in the present day, that one can hardly imagine them as having been interred for centuries, yet it appears to have been usual for such pieces of network to be included among the objects selected for burial. It would be interesting to inquire how far this has been observed in other nations. With tribes like these, situated near the coast, it may have been thought probable by the survivors that such things would be required by the defunct. In Granada, however, and among the Chilchas of South America, the net seems to have been adopted at religious festivals as a symbol of death; one was cast over the principal musical performer as a reminder, even in times of rejoicing, of the proximity of the last enemy. A strange resemblance here to the custom of placing a skeleton among the guests at a banqueting-table in classic times. There are yet many other such matters which might be referred to; for instance, the metal found within the mouths, &c.

Colonel A. LANE FOX exhibited several specimens of ancient Peruvian pottery.

Dr. RICHARD KING exhibited flattened American skulls and drawings illustrative of the method of flattening employed by certain of the native tribes.

DISCUSSION.

Professor HUGHES pointed out that some of the pottery bore evident marks of the potter's wheel, though that may have been of the rudest description; and remarked that it was not safe to infer the non-existence of the potter's wheel from the absence of the usual concentric markings in a few specimens, as it was quite possible they might have been obliterated during subsequent ornamentation, affixing of handles, &c.

Mr. C. HARRISON, F.S.A., exhibited in illustration of these communications twenty-three photographs, being part of the series of photographs from collections from the British Museum,

published at his expense by Messrs. Mansell and Co. These photographs represented various antiquities from Peru, principally terra-cotta vases of quaint forms. Among them was a stone seat from the mountain of Hoja, Ecuador; a bronze buckler from Ipijapa, in the same country; a remarkable paddle and staff from a tomb at Yca; stone corbels from the city of Huamanchuco; and vases from Truxillo, Chocope, Cuzco, Lake Titicaca, and other localities.

APPENDIX B.

COPY.

PROFESSOR LS. AGASSIZ TO THE HON. H. M. BRENT,
United States Chargé d'Affaires in Lima.

CALLÁO, *June 1st*, 1872.

MY DEAR SIR.—Before leaving this port, I wish to express to you my most sincere thanks for the friendly reception you have given me, and the many attentions you have extended to me. Your kindness emboldens me to ask another favour of you. The day after my arrival, Dr. Hutchinson, H.B.M. Consul in Calláo, called upon me, and offered to go to Ancon, to have collected for our museum such specimens of Indian antiquities as he could bring together in the short time of our stay in these parts. I accepted the more readily his generous offer, as we possess nothing of the kind in Cambridge, and I am myself too little familiar with the subject, while Dr. Hutchinson has made a special study of it. Yesterday I received from Dr. H. the proceeds of his efforts in my behalf. He has been wonderfully successful, and I carry away, besides 384 skulls and several boxes of earthenware which he has presented to me, a number of other highly valuable articles—indeed, so many specimens that I shall be able to provide several of our institutions of learning in the United States with a very full series of these curious relics. Under the circumstances, I feel embarrassed how properly to acknowledge the services of Dr. Hutchinson, which, as you may perceive, are not only benefiting the institution with which I am connected, but science generally among us. It has therefore occurred to me that you might do a gracious thing by calling upon his Excellency the British

Minister in Lima, and thanking him for the kind offices a British Consul has rendered us, and the valuable collections with which he has enriched our scientific institutions. In so doing you would add one more to the many favours for which I am indebted to you.

With high regard,

Very truly yours,

LS. AGASSIZ.

APPENDIX C.

THE ISTHMUS CANAL.

THE following important communication appeared in the London *Shipping and Mercantile Gazette*, during the month of June last.

SIR,—In your issue of May 31 you give your readers a most interesting account of the proposed undertaking by an American company of joining the Atrato River, in the Gulf of Darien, on the Atlantic side, with the San Juan River, which falls into the sheltered little bay of Tupica, on the Pacific side, in about lat. 4.30 N. There is no doubt important and expensive work to be done to canal the intervening tributary streams, &c., especially the Napipi, but I believe it only wants money and the sacrifice of a thousand lives to complete this water-way in about five years' working time. It will be interesting to many of your readers to know that there has long been a Commercial Canal or water communication between the two oceans at this point. A monk of great activity, Padre of a village near Novita, employed his parishioners to dig a small canal on the Quebrada de la Raspadura, which is a branch of the San Juan, by means of which, when the rains are abundant, canoes laden with cacao passed from sea to sea. This interior communication has existed since 1788, almost unknown to Europe. This small canal of Raspadura, with, I believe, the aid of the Napipi (which flows into the Atrato just below the town of Citera), unites the two oceans. In 1850, Lieutenant Wood, R.N., went over the ground, starting from the Pacific side. He considers that the most elevated part was between 300 and 400 feet, the rapid ascent being from Tupica Bay. On this upper part is comparatively low land, through which a canal may be cut between the partly navigable portion

of the Napipi and the San Juan, on the Bay of Tupica, and that a road of any kind may readily be made there is shown by the fact that a boat has been dragged across in a few hours. Lieutenant Wood does not speak of the "Canal of Raspadura," which doubtless had been choked up and unused long before his visit. I was in those regions early in 1853; and although I took great interest in the matter, having read of that locality being one of the most feasible for a ship canal, I could not hear of the then existence of that most extraordinary canal communication. The success of the Suez Canal has intensified the interest in this American project. The first has diverted the European traffic to the East in a surprising degree. The Darien Canal will hope to do the same with the Pacific and Australian trades. The strait discovered by Magalhaens has only recently awoken from its sleep of solitude, and is now one of the most important and most used of our ocean by-ways. Will the new Darien Canal (when completed) send "Magellan" to sleep again, or will its deep-water channels and freedom from dues always command the West Coast and South Pacific trades? Before leaving this important subject of the Darien Canal, I should like to know what difficulties the delta of the Atrato presents to the navigation of large steamers from the gulf to the river. Many large rivers running to the sea through many mouths or outlets present the greatest obstacles to safe navigation in entering from sea. Doubtless the projectors have thought of this, and some one in their interest will kindly satisfy your many readers.

Yours, &c.

EDWIN S. ROBERTS.

38, Great St. Helen's, E.C., June 5, 1873.

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