LITTLE BOOKS ON ART

ENAMELS

MRS. NELSON DAWSON

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ENAMELS

BY

MRS. NELSON DAWSON

[Edith B. Dawson]

WITH THIRTY-THREE ILLUSTRATIONS

SECOND EDITION

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TO MY JEWELS

R. AND M.

'For where the treasure is, there will the heart be also.'

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ENAMELS

CHAPTER I

INTRODUCTION

'My imagination follows humanity through all the paths by which it has reached the present moment, and the more memorials I can gather of its devious footsteps the more enlarged my view becomes of what its trials, its struggles, and its virtues were. All things that ever delighted it were in themselves the good blessings of God—the painter's and the player's art—action, apparel, agility, music. Without these life would be a desert; and as it seems to me, these things softened manners so as to allow Religion to be heard, who otherwise would not have been listened to in a savage world, and among a brutal people destitute of civility. As I trace these things backward for centuries, I live far beyond my natural term, and my mind is delighted with the pleasures of nations who were dust ages before I was born.'—JOSEPH H. SHORTHOUSE.

THE worker in any branch of the arts, as well as in anything that man's hand or brain can be occupied with, is surely not the best person to write or talk on that particular subject. As

Benvenuto Cellini so truly put it, 'they of the craft are for the most part better at work than at talk'; that which comes to the craftsman as a well understood fact, an everyday occurrence, learned by many days of long, silent, but telling experience, things which happen in his work so often that he has grown to look upon them as commonplace and necessary incidents of the day, have become a second nature with him, he takes them as a matter of course. But as for giving them out to the world, he would as soon think of describing the food he eats, the clothes he wears, or any other such ordinary matter. He would never think of it, it would not be worth his while, nor does he think it would be worth any one else's while to listen to him. That, I take it, is the usual attitude of mind of a craftsman, possibly as much of the enameller as any other, seeing that he is taken up with so slow and tedious a process, and one which has as many, and perhaps more, technical difficulties than any other of the crafts.

To one who has spent during the last few years a considerable portion of the passing days of existence in a little workroom which looks over the river, seated at a table spread with the implements of the enameller's craft, or standing, tongs in hand, before the furnace, it seems as

unnecessary as it is to most other craftsmen to talk or write about the ins and outs of their own small branch of industry. One works in silent concentration as a rule, and if in an inopportune moment you raise your eyes from the furnace and watch the barges sailing slowly up and down, or the swans asleep by the island, or your thoughts wander down the quiet old road, a green oasis in a world of dusty unrest, and wonder if it looked so in the days when Doctor Johnson strolled by after a visit to Miss Pinkerton at her Academy for Young Ladies further on, you, returning to your work, may find it sadly overfired, perhaps the work of days utterly spoiled.

No, the work is with you to be done patiently, with the joy and the care that all serious work brings; and your enamel, when well completed, is to be treasured until the time comes for it to be sent out into the world, and loved, for the enameller, as the artist in any other craft, loves the fruits of his labours as his children, and not so much as mere subjects for talking over. That, I think, is generally how the artist feels, and he thereby falls into what Cellini calls 'the error of silence.'

So, when I have been requested to write a little book on enamels, an 'appreciation' this was to be,

it was with extreme diffidence and doubt that I took up the task. For, although in itself but a very small thing, the art of enamelling is so closely associated with the history of the whole civilised world, especially of its arts, and also with the knowledge of metallurgy and chemistry, that anything in the way of a complete dissertation on its history, development, and characteristics must be left to a more capable pen. Neither is this to be a technical handbook, giving full details of how to work in enamel—a task possibly for some future time. Such books have already been written, and are found useful to a greater or less degree by those who practise the art at this day; though, as a recent writer remarked, and I think truly, 'Few things are more difficult than to instruct others in an art for which experience is the only school.' But if in this little book or 'appreciation' I may succeed in conveying to others any of the truths regarding enamels, or in approaching them from any point of view other than that which has already been treated, I shall be satisfied.

It must be understood that working in enamel is a heart-searching process requiring infinite and prolonged patience, however interesting and fascinating the result may be, when that result happens to be a successful one, which is not always the

case even with years of experience to work on. Without the greatest care it is no doubt trying and even harmful to the eyes, and the heat and glare of the furnace are altogether troublesome, especially in summer weather. Enamelling by artificial light is much more difficult than is water-colour painting, as the glazed surface causes reflection; and firing by artificial light is all but impracticable.

True, enamelling is by no means all smooth sailing, but it must be a labour of enthusiasm, a lesson in patience; absorbing, strangely elusive, hoping for much and getting little, a sorrow, a joy, all this and much more besides. But when at last a successful enamel—after the many vicissitudes it has undergone during the various processes, passing through fire, water, acids—after repeated firings comes from the furnace for the last time, and you watch it cool down slowly from white or red heat to deep blues, solemn violets, juicy greens, subtle lilacs, glowing orange, with a pure unbroken glaze for the surface, then you know that your labour is not in vain, your work is beautiful, it will live and never fade, and will be a joy possibly to many long after the hands that worked in the making of it are at rest.

Enamel is a vitreous paste, opaque or trans-

lucent, coloured or quite plain, which is fused by heat on to a metal ground, and its proper place is in company with, and for the enrichment in colour of, the finer work in metal, chiefly in gold, silver, or copper.

Some enamel colours are able to stand great heat, insomuch that it may be said, speaking broadly, that up to a certain point the greater the heat the better and more perfect and durable the result will be, though we must remember to temper the fusible quality of our enamel to that of the metal. Enamel colours are capable of being successfully applied to glass, porcelain, or earthenware, though here I treat of enamelling on metals only.

The original foundation of enamel is a clear flux or frit, as it is sometimes called. This can be tinted into the various colours and shades required by the addition of various metallic oxides. Cellini, before he begins to describe the process of enamelling, says that the method of making enamels is of itself a great art, known to the ancients, and discovered by learned men.

Though the making of enamel colours alone would fill the working hours of a student's life, it is well for the enameller to become familiar at least with the composition of the material in which he works, though many do not do so.

The 'minakar' of Jeypore still sends for his enamel colours to Lahore, and some of the colours used in that part of the world are still obtained, we are told, from China. The mediæval writers left various recipes for the colours they used, and even Cellini goes into the subject somewhat, though not I think deeply into the actual composition; and the modern handbooks treat fully of this subject.

Many modern writers on this subject and modern colour-makers claim by their very complete scientific knowledge to be able to make any colour used by the ancients, and more perfectly too. Certainly they should be able to do so with all ingredients and accurate knowledge ready to hand, and so much easier of access than they were long ago; but they have by no means yet *proved* that they can excel the old colours. Indeed, we know too much, our modern colours are too lifeless, too well made; we want more humanity, less machinery; we want irregular, broken, and accidentally beautiful colour. We want the rich, strong blues of old times; modern blues are thin and weak by their side. We want the blacks, the whites, and, more than all, the opaque vermilion red which both the Celts of Britain and elsewhere, and the workers of the early Limoges school and others, possessed to their great advantage. Till this

colour is made again, we cannot readily acquiesce in the vaunted superiority of modern colours. Let this be once more produced, and enamels for heraldic purposes, if for nothing else, will again have the chance that they have not at present.

The word enamel was frequently used by poets of the Elizabethan school, and perhaps some learned philologist might explain to us the exact meaning of the word as used in those days. It seems as if they associated the word with bright and pure spots of colour such as we see in the fields in springtime. Herrick sings of the 'enamelled pansy,' and truly nothing can resemble the rich depth of colour of this lovely flower better than enamel. Milton describes the trees of Eden in the lines:

> 'Blossoms and fruit at once of golden hue
> Appeared, with gay enamell'd colours mixed.'

And Andrew Marvell in his song of the Emigrants in Bermuda:

> 'He gave us this eternal spring
> Which here enamels everything.'

And again Milton, in mourning for Lycidas, uses the word with the same meaning in the beautiful lines:

> 'Ye valleys low, where the mild whispers use
> Of shades, and wanton winds, and gushing brooks,
> On whose fresh lap the swart star sparely looks;

Throw hither all your quaint enamell'd eyes,
That on the green turf suck the honey'd showers,
And purple all the ground with vernal flowers.'

But it is remarkable how very few of the poets or writers of past days have used the word in relation to the actual enamels as we know them. A passage in a metrical romance by Warton speaks of a tomb enriched with 'golde and limaise.' But such references to the art of enamelling in our literature, it appears, are exceedingly few and far between.

Various sources are claimed for the original derivation of the word, and as they all appear to have some relation to each other, we might quote one of the learned writers on this subject. Albert Way, in his paper read before the Archæological Society of London, in 1846, says: 'Blue from cobalt, the use of this last mineral and the exquisite colour produced from it, seem to predominate to a remarkable extent in the earlier enamels, the field of which is almost invariably enriched with the brilliant hue of the substance called *smalt*, a word which appears to give the clue to the derivation of the term *enamel*.' The mediæval Latin words *smaltum*, *smaldum*, *esmalctum*, are often used in lists of rich benefactions of the Popes as early as the seventh and eighth centuries. In the lifetime of Anastasius, 847-855, we read that he,

being Pope, had the altar of St. Peter's at Rome decorated with enamels after the city had been all but destroyed by the Saracens. Dante used the word 'smalto,' and in the old chronicle of Casino is a curious account of a golden altar front set with 'smalta' and sacred ornaments of metal enriched with superficial colours and figures, described as productions of Greek art, procured from Constantinople, 1058 A.D. In Old French, says Way, 'it was *esmail*, in English *amell*, *emal*, *esmal*, or *enamel*. German *schmelze*, from *schmelzen*, to melt. Greek *maltha*, to melt.' Mention is also made of the Hebrew word *hasmal* or *hashmal*, which Jerome translated as electrum, a word of various meanings, generally supposed to be amber. The Greeks worked in an alloy of gold and silver called electron or electrum, and Theophilus, the monk, used the word in his treatise for the enamels of which he describes the making. Hendrie, his learned translator, in a note says that this electrum was a transparent 'glass' stone or gem set in filigree work. The Hebrew *hashmal* is used by the Prophet Ezekiel in describing his vision when he saw a 'great cloud and a fire unfolding itself, and a brightness was about it, and out of the midst thereof as the colour of amber or hashmal, out of the midst of the fire.' Some writers have suggested this may

mean resembling the brightness of an enamel drawn from the furnace, though it seems rather remote and improbable.

We may at any rate rest satisfied that our little word has many and respectable ancestors, enough even to justify us in using it in so many and various ways. The glassy lumps of different colours are called enamels before they are ground up to powder and prepared for laying on to the metal, a process of much consideration in itself. To apply this powder, and fuse it on to the prepared metal, is called 'to enamel' or 'enamelling,' and the finished work, prepared metal, vitrified paste, after passing through all the processes of cleaning, applying layer after layer of powder and repeated firings, is then called an 'enamel.' Indeed, at the present time any metal-work which is enriched by even slight applications of colour in enamel is sometimes referred to, though not quite correctly, as enamel. Speaking truly, the enamel is simply the vitreous paste itself after it has been fired on to any prepared metal and completed.

In the following chapters we frequently refer to one great charm in enamelling, that which lies in faithfully obeying its natural limitations. Especially is this shown to be the case in the old work, in the exquisite cloisonné enamel of the Byzantines of the early Christian Church, in the

champlevé work of the middle ages from Limoges and elsewhere, and also to a certain extent even in the painted enamels of a later time. In each case the technical laws were faithfully followed, the result being always beautiful in colour and in form simple and severe.

When we see any collection of modern work, more especially perhaps that done abroad, the impression given is of great technical cleverness, of casting tradition to the winds, so skilfully and so cunningly is the work executed. If the enamellers of the middle ages could rise up, with what blank surprise would they view the pranks and frolics in enamel of a certain school. But they would surely be wrong to envy the power which can produce these feats.

For it seems that in enamelling perhaps more than anything else, it is just in obedience to these technical limitations and traditions that the true excellence and beauty of the older work lies. This is infinitely more beautiful, more rich, because more reserved, than the wildest exuberances of any of the technically brilliant productions of certain schools of our times. Of course, the same may be said of painting and decorative work in general, it is one point of view: but to one who knows something of the working of this little craft which is technically

so tied and restrained, it seems as if the result gains thereby, and one can only be happy to abide by those laws.

Another reason why no modern work is as interesting as the old is owing to the conditions under which we live as compared with the craftsmen of old times.

This view of the subject has been often and well treated of already, and it is profitable to read what was written by the workers of the middle ages themselves when they described the processes then in vogue. How they, as monks shut out from the world for all their days, may well have put heart and soul into one beautiful work, spending hours, weeks, years even on a chalice or a missal cover; whilst we with our smatterings of knowledge of all sorts, want to or must of necessity work very quickly and turn out much that is never really good or satisfactory. These men spent days building up their furnaces with the most primitive materials, and also slowly, how slowly we may not know, gathered together materials and ingredients from all the ends of the earth.

Some may claim that all is in our favour in the present day, that materials are easier to come by, that knowledge has progressed, that 'modern improvements' ought to work wonders. But do they? Is good work more easily done now than

it used to be, are the tools and materials which can be purchased at any ordinary shop conducive to good work? It is undoubtedly better for every enameller to be chemist enough to make his own materials, but few can spare time to do it, even if they possess the requisite knowledge.

As will be seen, enamelling is but the handmaid of the more masculine art of working in metal. Partly on this account, and partly because of its precious quality and the slowness of its execution, enamelling will never be anything but limited in production. By this I mean enamelling in the grand manner, of serious effort, great work like the best of that produced in the middle ages. In a handbook for goldsmiths it is remarked that no good goldsmith ever made a good enameller, and no good enameller a satisfactory goldsmith.

Be that as it may, an enameller must be an artist, one who can draw and paint and design as well as imagine. He must have the gift of perceiving beauty in both colour and form, but more especially in colour, which is the chief quality of enamelling; he must *feel* his colours, their marvellous brilliance, purity, and beauty, and he must possess also the blessings of patience and endurance. With these to help him, he may produce in his working hours jewel-like beauties which may

even rival the great and beautiful work of earlier times.

Already much has been written about enamelling; many learned discussions have taken place, and surmises made on historical facts or otherwise, when any specimen of the ancient craft has been rediscovered or unearthed. And yet time does not seem to have brought forth the writer who can produce a full and satisfactory general history of the art of enamelling. Such a book will come some day, no doubt, for although on a subject comparatively small in itself, yet it is one which is intimately connected with the history and art of each special country wherever work has been carried out in the more precious metals, for valuable national and ecclesiastical purposes, as well as for the use and delight of Kings and Queens and other great people of the earth. For this dainty and beautiful art has been practised in almost every part of the world, and as precious things have throughout history been made by so-called barbaric nations, so has enamelling been carried on by nearly all peoples in the history of the world.

Much has been written and conjectured as to where the art of enamelling originated. Nearly all civilised nations have in their turn claimed it as their own, or it has been claimed for them.

Possibly it was one which burst into blossom and thrived in many different countries and times, and it is not improbably the natural outcome of the combined knowledge of working in glass and in metal, accidentally discovered when the barbarian forefathers of the nations were evolving by slow degrees familiarity with these materials.

The opportune discovery of enamel, even if made by people that were savage, was at any rate adapted and continued by their descendants to a certain stage of refinement and appreciation of grace at a later time. Nearly all the writers on this subject have come to the conclusion that the art originated in the dim ages long ago, somewhere in the East, and that the successive epoch-waves or oscillations of time brought it to the European nations again and again, and that the memory of it has been driven out by wars or struggles of different kinds carrying destruction in their wake, until at last it came and flourished in more peaceful times.

'Asiatics appear to have preserved to the present time various processes with which the mediæval enamellers in Western Europe were acquainted, and it is not improbable that the art has found its way even to our shores at a very early period, being transmitted from the East by the migratory tribes who penetrated into the

remotest part of Europe, and that after a lapse of several centuries, when scarcely a trace remained of the primitive tradition, this beautiful art was a second time introduced from the East into France and England.'[1]

Different opinions have been expressed as to the genuineness of what are sometimes called enamels in Egyptian work. Many examples of what at first sight might be considered as such are to be seen both in this country and on the Continent.

It is difficult in any very ancient work to distinguish between inlays of lapis, turquoise, and other stones, and a vitreous paste which has been originally fused on to the metal. Either would probably appear worn on the surface and at the sides, the edges of the enamel, which is usually cloisonné, wearing away sooner than the other parts, owing to oxidisation against its metal wall, giving the same effect as cut stones worn at the edges. Albert Way instances early Egyptian enamels in Paris and Berlin. Sir A. W. Franks contended that these apparent enamels were inlays of hard stones or glass set in metal cloisons, and that those in museums in this country and elsewhere were not of a remote antiquity, and were influenced by classical taste. As we know, the early Egyptians possessed wonderful skill in

[1] Albert Way, Archæological Institute, 1846.

making beads, and also the little figures of their deities in glass and earthenware, which with beautiful ornaments have been repeatedly found in recent excavations in Egypt. That the early Egyptians had a complete knowledge of the making and moulding of glass, and also of its colouring, which often is so beautiful a blue, there is no doubt. But Professor Flinders Petrie, a great authority on anything Egyptian, is of opinion that the ancient Egyptians, as far as can be said at present, had no knowledge of enamelling on metals, the inlays being the precursors probably of the later development of cloisonné enamel in other countries.

On examining the Greek jewellery in the Gold Room in the British Museum we can see enamel, or traces of it, in many things. Among the objects from Enkomi (Salamis) in Cyprus, and also from Amăthus, are some blue paste inlays; these, we are told, are of about 800 B.C. The metal is treated in a ruder fashion than the fine work from the Isles, and the paste is too worn to show at a glance whether it has been fused into the cloisonné spaces or not, and it more resembles the Egyptian work.

But amongst the golden ornaments of the later and finest Greek period are some absolutely perfect examples of genuine cloisonné enamel

on gold, two exquisitely wrought necklaces from Melos, and Cyme in Æolis, with tiny enamelled leaves and flowers, in blue and green, such as we use to-day, and as fresh and perfect as when made so many ages ago. The spaces enamelled bear but a small proportion to the whole design, most attention being given to the wonderfully fine gold work. There are also earrings with gold pendants, figures of cocks, swans, and a horse, the bodies of the animals being enamelled ivory white apparently in the same manner as the small enamelled figures in the jewellery of the Renaissance period; but a close investigation shows us that the enamel or glass is *blown* over a skeleton of gold wire, and not on to a carefully moulded body of gold, as in those of the later date. The swans have golden wings, which, rising out of the white enamel on the body, are very effective.

The following interesting note by a friend who has worked at the excavations and in the museums at Athens, on the question of early Greek enamel, may here be quoted:—

'It seems quite probable that the Greeks used enamel ornaments at a very early date in the development of their art. The objects discovered by Schliemann in the Homeric graves at Mycenæ include bronze sword-blades richly inlaid with gold and silver set in a non-metallic substance

or hard paste which would seem to have been fired into the design. This is probably what Homer in his poems calls "kyanos" (κύανος), as with

"ten stripes of black kyanos"

in Agamemnon's breast-plate (*Iliad*, xi. 24), although it is difficult to reconcile this with

"a cornice or edging of kyanos"

ascribed to a room in the *Odyssey*. The substance, where its colour is not otherwise specified, seems generally to have been blue, and Theophrastus, who compares it in one place to a dark sapphire, in another mentions that an artificial kind was made in Egypt. Among the Mycenæan sword-blades, which may be ascribed to 1400-1200 B.C. and are preserved in the National Museum at Athens, is one with a lively and Egyptian-looking design of a (gold) cat hunting (silver) birds in a (silver) river against a background of what may well be kyanos enamel.'

It has been suggested that the moulded blue glass used by the primitive Greeks for vases and for dress buttons was probably the same as the kyanos used along with bronze-work, according to Homer, for interior decorations.

Maybe at a not far distant time some of the

BRONZE ENAMELLED HORSE BIT, AS DESCRIBED BY PHILOSTRATUS

TWO BROOCHES ENAMELLED ON BRONZE. EARLY OR ROMANO-BRITISH

explorers who are finding out so much that is valuable every day by their excavations and study, both in Egypt and Greece, may be in a position to speak more definitely on the subject of enamel. At present it is impossible to say if these early productions are true enamel as we know it. The only way to find out would be to analyse chemically one of the specimens. Although we have abundant proof that enamelling was carried on to a great extent by many nations in early times, the examples that remain to us are comparatively few. The history of the art therefore is incomplete, and much has to be left to conjecture. This is especially the case with work on gold and silver, for when the owners became tired of their jewels, or these grew to be out of date, nothing was easier than to have them melted down, the metal to be converted into ornaments of newer fashion, the enamel to perish and be forgotten. The very perfection of technique of those left to us, if there is nothing else to do it, proves, I think, that many more must have been made at the same time. Even bronze was not always safe from the melting-pot, though, as we shall see, we have still many enamels on bronze of a very early time.

But of those on gold and silver, the wonder is that so many do remain, for of these not

a few have been discovered hidden away or lost in country hiding-places; in holes in banks like the Ardagh chalice of Ireland; exposed by the fall of a cliff like the Tara brooch; turned up by the plough like some of the Anglo-Saxon jewellery; overridden and bent by a wagon wheel, hung on the collar of a farm-labourer's dog like the gold ring of King Æthelwulf, father of Alfred the Great; lost in the marshes of Athelney, like the jewel of Alfred himself; buried in tombs like the Greek jewellery, safe, it is true, from the melting-pot, but lost completely under the ground and in contact with the various subterraneous acids or gases which decompose the surface and edges of any vitreous substance; when discovered, at the mercy of the careless hands of peasants and workmen who knew not what treasures they held, truly it is marvellous that so many did escape, and more wonderful still that much of what we have is so perfect. The Greek enamels on gold from the Isles, such as the necklaces mentioned earlier in this chapter, are as perfect as if they had been finished yesterday, though made for the beauty of long ago. As in the case of much ancient glass, some are iridescent with age, and some absolutely perfect. If any have lost their original beauty and are fit subjects only for the archæologist or historian, after the

vicissitudes of the thousand or more years of their existence, even then the wonder is that they still exist at all.

As the number and examples of the oldest enamels are after all few and far between, and authentic contemporary writers who speak of them are all but unknown, and there being still so much doubt expressed regarding them by modern writers, it is with relief that we approach the Christian era, for it is then that the art of enamelling grew to its full strength, and especially in our own British Islands, where there was undoubtedly a large quantity of enamel work produced in the early centuries after Christ, though most of it probably before Christianity was brought to these islands.

Every writer on enamels makes a point of quoting a certain passage from the writing of Philostratus, a Greek Sophist and connoisseur of art, who in the year 200 A.D., in the reign of Severus, went to Rome, and during the rest of his life taught rhetoric in the brilliant court where genius and art were ever made welcome. In his *Icones* Philostratus describes a boar-hunt and the people who met there, their splendour and fine apparel, and especially the costly ornaments on the harness and horse-trappings, enriched with gold, silver, and colours. 'For,' he writes, 'the

barbarians of the regions of the ocean (islanders) are skilled, as it is said, in fusing colours upon heated brass (or copper), which become as hard as stone and render the ornament thus produced durable.'

This well-known sentence about the barbarians who live in the regions of the ocean is the earliest known written reference to enamel work, and was quoted by Michelangelo and many others since his time. Labarte, the Frenchman, takes it as applied to the Gallo-Roman work, though the enamels of the Gallo-Roman period are scarce, and so also is work of other European countries of this time; but, as has been pointed out by Albert Way, although some of the enamelled objects found in this country, such as the 'Bartlow Hills' vase pictured in Labarte, were apparently made under Roman influence, and also other small enamelled ornaments found in parts of the country which had been occupied by the Romans, 'there have been also discovered in various parts of England ornaments enriched with vitrified colour which bear no analogy to Roman work in the character of their design. It is remarkable that not a few of these relics appear to have been intended for decoration of harness in accordance with the statements of the Sophist, but until some collection of our earlier antiquities shall have been

"LATE CELTIC" SHIELD FOUND IN THE THAMES.
WITH BOSSES OF RED ENAMEL

formed and arranged in series, no positive assertion can be offered in regard to this curious subject,' and Mr. Way continues, the 'Opus Anglicanum,' which was a certain kind of decoration mentioned by ancient writers as most highly esteemed, may be analogous to that 'produced by the barbarians of the British Isles or neighbouring regions in the third century, and which called for the commendation of Philostratus.'[1] This was written so long ago as 1846, and probably since the writer's day many specimens of this early enamel work on bronze have been added to those he knew so well, in museums and collections up and down the country, though but little has been done in the way of adding to their history.

In the British Museum are specimens of work of this early time, 'late Celtic' and Romano-British, which consist of brooches, pins and rings, armour, and more especially plates of bronze for decorating harness, containing enamel, and which have been found in various parts of the British Isles, Ireland, Scotland, Wales, Yorkshire, Northumberland, Cheshire, Lincoln, Essex, Derby, Norfolk, Suffolk, and elsewhere, enamelled in blues, greens, vermilion red, and white, sometimes green and yellow with age and corrosion. Some-

[1] Albert Way (London Arch. Instit., 1846). See earlier in chapter.

times there is a geometrical pattern of colours, as in the pin from Clonmacnois in Dublin. The making of this with canes of different coloured glasses is described by Miss Stokes in *Early Christian Art in Ireland*, and the method is attributed to Roman glass-makers. Some brooches are large and round, the bronze is beautifully worked, and the enamel colours perfect even on the surface, though of course many bear only traces of the enamel they have lost. It is remarkable that so many of those in the 'late Celtic' cases consist of horse-trappings as described by Philostratus. It is in the British Islands alone that these enamelled decorations for horse furniture have been found, and all authorities are now agreed that they are Celtic in character. What is generally known as the trumpet pattern, which is so characteristic of the work of the Celts who settled in these islands, often accompanies the enamel of this time. Kemble the antiquary, in his address to the Irish Academy many years ago, said: 'There is a peculiar development of the double spiral line, totally unknown to the Greeks and Etruscans and the nations of the Teutonic north, which is essentially characteristic not only of the Scoto-Celtic but the Britanno-Celtic population of these islands; the trumpet pattern or divergent spiral. We see it in the beautiful Book

of Kells in Dublin, in the Book of St. Cuthbert of Lindisfarne, or the Durham Book in the British Museum, and in the equally beautiful records of Scoto-Celtic self-devotion and culture in the manuscripts of St. Gaul in Switzerland. In metal it belongs to our nations alone. Above all, it calls in the aid of enamel to perfect its work, enamel, not cloisonné like the enamel of the East, not mosaic work of tesserae like the so-called enamels of the Romans, but champlevé enamel (on bronze), as Philostratus described the island barbarians to have invented it.' This brilliant ornamentation of horse furniture, which, along with enamelled armour and shields, is found in so much larger numbers in the British Isles, more especially England, than elsewhere, was noted by Pliny, the Roman admiral and historian, as well as by the Greek philosopher, as a characteristic feature of Celtic art.

We must not omit here to mention the two splendid Celtic shields of bronze in the British Museum. The trumpet pattern is clearly shown in these, but the enameller is chiefly interested in that one which was found in the river Thames, and which, in spite of its having been under the swift-flowing river for possibly more than two thousand years, is decorated with small rounded bosses of still perfect vermilion enamel, with the

curious metal pattern embedded therein, making the 'false cloisons' to be seen in later Irish work, such as the Ardagh chalice of 900 A.D.

The other shield has bosses of red coral, and is possibly earlier. The red enamel was used, after 200 B.C., as a substitute for coral, when the supply was exhausted or unobtainable. A lump of this red enamel from the larger piece in Dublin, and which we mention later when speaking of the Irish work, is shown in the same room, and near it is a very fine and heavy bronze armlet with centre of still perfect enamel, a yellow cross on a red ground of late Celtic work from Perthshire.

There is no doubt that some of the early enamelling on bronze, in both design and colour scheme, was influenced by the refinement of Roman culture, and also that some of the objects were made for the use of the Romans—these were most likely of a slightly later date; but of pure Roman enamel work of this period I can find no trace whatever. A large flat plate with red, blue, and greenish white enamel in the British Museum, representing an altar, was found in London, and had apparently never been finished, and is therefore supposed to have been made in London, though for the use of the Roman conquerors, as also were the five little bronze stands in the same case. The 'Rudge' enamelled bowl

ROMANO-BRITISH ALTAR FOUND IN THE THAMES. WITH TWO SMALL STANDS OF THE SAME CHARACTER

found in Wiltshire has round it names of the towns situated on the Roman Wall. The beautiful 'Bartlow Hills' vase, from a tumulus in Essex, where it was placed after the time of Hadrian, and since discovery almost destroyed by a fire, is of this Romano-British work. It is pictured in Labarte, and there is a coloured cast of it in the Scarborough Museum.

That the Celtic inhabitants of Gaul also carried on enamelling on bronze before the coming of the Romans has been proved by the discovery of the enamel workshops at Bibracte, with tools, moulds, colours in the lump, and polishing-stones, as well as furnaces in full working order. This ancient Gallic city was sacked by the troops of Cæsar, and has only been excavated in recent years; and though the work of its enamellers was noticeably inferior to that of the Celts in Britain, its examination strengthens the conclusion that the Celts of both the British Isles and the Continent were fully proficient in the art of enamelling before the influence of Roman culture had reached it.

Later, when the Saxon invaders drove all before them through the countries of Western Europe and England, this working in bronze and enamel, which had been practised so largely by the Celtic races, came to an end, except in Ireland, where the art of enamelling on metals survived

in all its beauty, and, as we see in our chapter on the Irish work, with characteristics which distinguish it from that of any other country.

Though the few enamels we have which are now called Anglo-Saxon, and were possibly contemporaneous with some of the fine Irish work, and although the work of both England and Ireland in the 'late Celtic' period was so similar, this Anglo-Saxon work, the Alfred jewel and the one or two brooches and bosses in the British Museum and elsewhere, the enamels of which are in cloisonné and on gold, bears very little resemblance to the work of Ireland either in design or treatment. Some authorities claim as Scandinavian the gold work on the Alfred jewel, whilst the enamelled head in this and also in the 'Dowgate Hill' brooch certainly resembles the Byzantine cloisonné. More of this Anglo-Saxon work will very likely be found as time goes on, which will help our researches, but the few examples we have already are full of interest. Jewels of this time were worked on gold or silver in filigree with adornments of precious stones and also occasionally enamel, thereby showing us that this art, though changed in character, had not left the country. We no longer see the trumpet pattern or the bronze of the Celtic period, but designs of geometric character, circles, diamond shapes,

squares, and interlacings which were introduced about the Christian era.

Kemble refers to this work as under Frankish or Merovingian influence. Inlays of stone were very frequent, especially of thin slabs of garnet placed over chequered gold foil to give brilliance; agate, a blue stone or paste resembling lapis lazuli, and amber, which was believed in those days to protect the wearer from evil spirits; and also inlays of glass, fitted into gold, silver, and other metals —true enamels being still rare in this part of the world.

It seems a natural evolution from the inlays or mosaic of stone or glass to true cloisonné or champlevé, and thence to enamelling of all kinds, not only at this time, but whenever enamel came into use in the various periods of history.

Beginning by using inlays of rare stones, the jeweller, wishing to make something less costly, would take glass cut into similar shapes. With either of these he would find the filling of any narrow curved spaces awkward; still he would be contented until ambition led him to carry out a more elaborate design, with many rounded spaces and small curves, when the time and care he must bestow on cutting out the small pieces would be endless. He would find, too, that small stones or glass would soon drop away in

places and become irregular on the surface. What more natural and entirely satisfactory step for the craftsman than to fuse the glass into its position between his prepared metal lines, either in whole slabs, or as he would subsequently find, what was still more suitable, to grind up his glass and so fire it? He would further discover that glass for this purpose should be considerably altered in composition, made more easily fusible, with great variety of colour, liable to oxidisation on a metal ground, and altogether requiring different treatment from the usual forms of glass, and thence would come true enamel with its subtle opaque tints, and, later on, fine transparent colours. These he would use in conjunction with his precious stones, only not as thin slabs, but in fine round cabochons, as jewels simply, thereby gaining in beauty and richness in no small degree.

In speaking of Frankish influence, we must remember that, although enamels were so comparatively rare at this time in this part of the world, where in the 'late Celtic' period the art of enamelling had had so flourishing an existence, in other countries of Europe the cloisonné enamels of the Byzantine school on gold were being made in abundance, and were at the very height of their beauty. Indeed, it is only of quite recent years that archæologists have admitted that the

THE BARTLOW HILLS VASE. ROMANO-BRITISH.
ENAMELLED ON BRONZE

few specimens we have of Anglo-Saxon enamelling may be of native production. Sir A. W. Franks at one period held that the enamel on the Alfred jewel had been imported from the Continent, which opinion was probably universal forty years ago, but now enamels which have even been found abroad have been attributed to Anglo-Saxon workmanship. That the Anglo-Saxon goldsmiths in their day were held in great esteem for the beauty of their work is shown in an Anglo-Saxon poem from their ancient Exeter book, which tells us:

> 'For one a wondrous skill
> in goldsmith's art
> is provided.
> Full oft he decorates
> and well adorns
> a powerful king's nobles,
> and he to him gives broad
> land in recompense.'

Both Anglo-Saxon and Byzantine enamels are mentioned in Chapter II., but it may be as well here to recapitulate the dates when some of the most important examples are supposed to have been executed. We know that Charlemagne patronised this art amongst others, and that his crown, containing cloisonné enamels in gold, is now in he Royal Treasury at Vienna. He was

crowned 800 A.D. The 'Paliotto' at the Church of Sant' Ambrogio at Milan was made about 835; the early cloisonnés on this are now claimed by some to be English in character. Our King Alfred reigned from 871-901. The Pala d'Oro in Venice is said to have been begun in the year 1105; the 'Hope' pectoral cross, now at South Kensington, is of the tenth or eleventh century; and the Textus cover there also is of the twelfth century. As we have said earlier, the waves broke late on the Irish shore, and the dates of the work there do not compare with those of the Continent, and with exceptions we may say the same of English work.

One might mention here the wonderful series of early French enamels shown in the 'Exposition Rétrospective' held in Paris at the Exhibition of 1900, notably the beautiful 'Reliquaire de Pépin d'Aquitaine' of the ninth century, of gold, with curious cloisonné panels of Byzantine design, with arches at the sides. Here were also shown a little altar in beaten gold, with heads and symbols in cloisonné enamel, in the style of those on the pectoral cross at South Kensington; and a very fine cover to a copy of the Gospels, which has at the back an ancient bust cameo, cabochon stones, and enamel plaques, some of them with the rosette design of the later champlevé work,

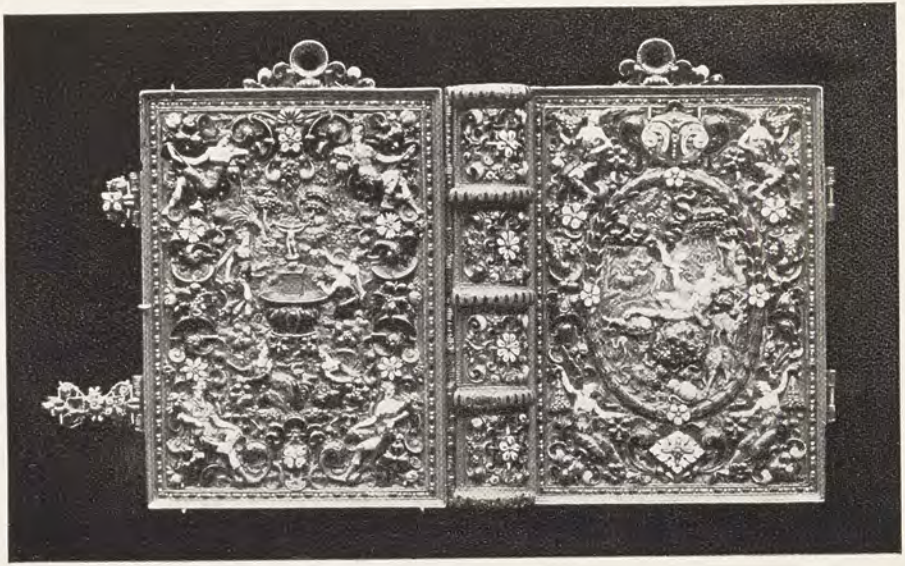
very curious and beautiful. On the front of this Textus cover is a ninth-century carving on ivory of the Crucifixion and Resurrection. Among this very early French enamel work I believe we might find, especially on the altar before mentioned, bosses and heads of enamel with insertions of gold or silver work, something like those on the Ardagh chalice and Tara brooch in Dublin. At the Exposition also were various caskets and reliquaries of champlevé work; some plaques apparently early, but marked twelfth century, have extremely fine colouring in blues and purples, and where figures occur in these the flesh was in white or pinkish enamel. Here too was shown the large champlevé plaque said to represent Geoffrey Plantagenet. This fine historical collection had been gathered together from all parts of France, and its treasures will in all likelihood never come together again.

The jewellery of the Renaissance in Italy and France, the bijouterie, snuff-boxes, and miniature frames of these countries, as well as what was made in other parts of Europe and in England, deserve a much fuller account than we can give them. Of fine work in gold ornamented with gems, pearls, as well as the most perfect work in enamel, these jewels are sometimes so overloaded with ornament, that the enamel merely enriches

with brilliant colour what is already overladen with richness. An elaborate little book-cover in gold, in South Kensington Museum, said to have belonged to Queen Henrietta Maria of France, which has been attributed to Cellini, is representative of work of this school. It is only a few inches high, with minute enamelled figures in the round all about it, crowded with intricate details of Renaissance ornament, gay with jewels and small touches of enamel in many parts. Cellini, in his treatises, describes the making of this sort of work fully, and doubtless he introduced this style of ornament to the court of King Francis.

The monk Theophilus gave full directions for the working of cloisonné enamel on gold. It would be interesting to compare the writings of this artist monk, so full of piety, giving his life and knowledge to the service of that Church under whose wing he sheltered and worked a lifetime, with those of Cellini, the craftsman-sculptor of the Renaissance, who made rich ornaments in gold and enamel for the popes and kings and courtiers of a luxurious age, who, in spite of all his boastfulness, his badness, and all his failings, many of them typical of his time, possessed a vigour and energy that even now are infectious.

Benvenuto Cellini was an able and enthusiastic



ENAMELLED GOLD BOOK COVER. FRENCH. 1580.

craftsman, no doubt, though not to be considered in the same plane as the many great Italian sculptors of his time. Nearly all these, besides working in enamel on bas-relief, made jewellery and small objects of gold. Cellini, who boasted openly of how large a range of work he himself was capable of producing, goes through the list of his contemporaries and gives a scornful description of those men who had gained a mere smattering of each different way of working in gold, who tried a great many things at once and did nothing well. He describes the great artists of Florence, how they were goldsmiths and enamellers many of them, as well as painters, sculptors, and architects,—Donatello, Ghiberti, Pollajuolo, Amerigo, Michelangelo, the goldsmith of Pinzidimonte, who worked in so many materials, enamel among them, and whom his contemporary called a first-rate fellow.

The great Mantegna too tried goldsmithing but could not manage it well; possibly, after the grand style he was used to working in, this was too small a medium for his large powers.

Fine examples of the jewellery of this period were brought over to England and are to be seen about the country. The style is one which stayed for a long time. One beautiful example is a gold

pendant in the Victoria and Albert Museum in the form of a three-masted ship, the hull being enamelled in transparent blue, red, green, and white; three pearl drops hang from the ship, the five gold sails are enamelled white with gold bands, and the rigging is of twisted gold wire. This is typical work of the sixteenth century. One may think, in looking at these enamelled pendants, it seems a pity to hide such fine work in gold with a covering of opaque enamel, but the tasteful way in which this is used in contrast with the yellow of gold and with translucent enamel is certainly effective.

A good deal of jewellery, similar though as a rule simpler than the Italian, was made in England about the time of Queen Elizabeth, and enamel is frequently used thereon. A fine example of Elizabethan cloisonné enamel on gold, with arabesque scrolls and flowers on a black ground, is the miniature case at South Kensington which contained a miniature portrait of the Queen by Hilliard, and was supposed to have been presented to her by a courtier. In the Franks collection at the British Museum we see many hundreds of rings, of all nationalities and all times, ranging from Anglo-Saxon and Merovingian examples which have inlays of niello, to rings of the seventeenth, eighteenth, and nineteenth centuries;

state and ceremonial, betrothal and mourning, ecclesiastical, historical, sepulchral. A description of this splendid collection of rings would fill a large and interesting volume. Very many of them are decorated with enamel, and of these the larger proportion are English.

A visit to the Tower will show us that among the Regalia a considerable amount of enamel has been used.

For a fuller description of these we would refer our readers to Mr. Cyril Davenport's interesting book on the Regalia, in which the 'St. Agnes Cup' referred to in our third chapter is mentioned as having at one time been in the Royal Treasury. Venice appears to have been so much occupied with its glass-making, its beads and its glass mosaic, that not much enamelling has been undertaken there nor for any length of time. But there is one school of enamel which is called Venetian, examples of which are to be seen in all collections, which being perhaps quieter in their decoration do not call for the notice which is given to the more showy work of Limoges. Dishes, flagons, and other vessels in fine copper shapes were covered with white enamel, and then coloured blue or green, and arabesque patterns in gold were placed over the surface. A little opaque red or turquoise was sometimes added to

enrich them, but no figure work of any importance was attempted on these enamels, which one might think were rich Eastern earthenware at first sight. There are examples of this work in South Kensington, and also at the British Museum, where two square trays in blue are especially pleasing.

Much enamel work was made in Russia during the seventeenth and eighteenth centuries and later; the work, which is generally in cloisonné, can be studied in the British Museum and also at South Kensington, where is shown a large chandelier of the second half of the seventeenth century, of coarse work and of no great interest, though it would possibly look better in the church it was intended for than among the more delicate historical work among which it is now placed. The colours—blue, black, and yellow, raw and cold—are on a white ground. There are also Russian enamels in silver filigree, and at the present day many spoons are made by them in *plique à jour* enamel. A really beautiful example of Russian enamelling is the large tea-urn given by the late Czar to Sir Colin Scott Moncrieff, an elaborate piece of work covered with very fine cloisonné enamelling, on both gilded metal body and dainty cups attached. Speaking from memory, this has some very fine blue enamel, and

PENDANT JEWEL OF GOLD, ENAMELLED AND ORNAMENTED WITH PRECIOUS STONES. ITALIAN. SIXTEENTH CENTURY

resembles Chinese cloisonné more than other Russian work in this country.

There are a number of jewels at South Kensington from Spain which are enamelled, many of these from the Treasury of the Church of the Virgin del Pilar at Saragossa, several showing the little enamelled figure of the Virgin with the pillar. Enamels were made in Spain in the sixteenth, seventeenth, and eighteenth centuries. There are also bowls, ewers, and basins of copper in the Imperial Institute. These are Turkish, and have applied medallions of champlevé and traces of a coarse kind of enamel.

Here also are Albanian, Algerian, Syrian, and many other cloisonné enamels of the eighteenth century. Indeed, nowhere more than here would one feel that enamelling is truly an art which belongs to all people the world over.

We will proceed in the following chapters to describe some of the different sorts of enamel work that have been carried out, it may be said almost throughout the world's history, though it is far beyond the possibilities of this book to cover the whole. We will simply describe some of the principal methods and also the best-known examples which can be seen in public collections, choosing, when possible, from either the Victoria and Albert Museum at South Ken-

sington or the British Museum, both being easily accessible, as well as containing representative collections of enamel work.

Enamels may be divided into the three following orders :—

1st. Cloisonné, in which the outline of the design is in filigree or upright wire lines, usually soldered on to the metal base, being the manner in which the Byzantine or Greek enamellers executed their rich little enamels on gold, and also the Anglo-Saxons, the Chinese and Japanese, the Russians and others; and also the plique à jour work.

2nd. Champlevé, in which the metal base itself is cut away or engraved to make the design, and the spaces so made filled in with enamel. This is the manner of the Celtic enamel work of the British Isles long ago, of the earlier Limoges school and that of the Rhenish provinces, and of the more delicate work on gold and silver engraving covered with thin coats of transparent colours, of the French and Italian 'basse-taille' schools of the fourteenth century. Also the method frequently adopted by the Persians, and always by the enamellers of Jeypore and other parts of India.

3rd. The so-called painted or applied enamels, in which the metal is completely covered with

enamel, the designs being painted over in white or on foil, and sometimes coloured by transparent colours. The later Limoges work represents this style. Also the Battersea and French enamels of a later period, and most modern enamelling in France, England, and elsewhere.

Regarding our illustrations, it must be borne in mind that enamels, especially the transparent ones, do not photograph satisfactorily, neither do they reproduce well in any black and white medium, and many of the finest examples it is impossible to illustrate. This, of course, is largely owing to the reason that colour, the soul of enamel, is missing. In addition to this there is the difficulty of photographing anything with so highly glazed and transparent a surface, which reflects and absorbs the light from all around. However, memory of a beautiful thing may be refreshed by black and white reproductions, and we hope our illustrations will induce all readers who do not know them, to hasten to see for themselves the beauties of the objects here shown.

I am indebted to the kindness of Messrs. Macmillan for permission to quote the sentences from Mr. Rudyard Kipling's *From Sea to Sea* (in Chapters II. and V.), and also that from the life of the late J. H. Shorthouse, which heads the Introduction; to Messrs. T. C. and E. C. Jack for the use of the

quotations from Captain Brinkley's *Japan* (Chapter v.), and also to Mr. W. Griggs for kindly allowing the quotations from Dr. Hendley's paper in the *Journal of Indian Art* (Chapter v.), as well as from his special book on *Jeypore Enamels*. Also my thanks are due to the Rev. C. A. Barry, Mr. Stanley Clarke, Mr. Warwick H. Draper, Mr. A. Diósy of the Japan Society, Professor Tilden, Dr. Irving for the beautiful photograph of the cast of the Bartlow Hills Vase in Scarborough Museum, and others for help given; and especially to Mr. Cyril Davenport for his many valuable suggestions throughout the book, both as editor and also as one who possesses much knowledge of the subject; which help I acknowledge with many thanks.

CHAPTER II

CLOISONNÉ ENAMELS

'For every craft and every power soon becomes old and is passed over in silence, if it be without wisdom; for no man can accomplish any craft without wisdom. Because whatsoever is done with folly, no one can ever reckon for craft. This is now especially to be said—that I wished to live honourably while I lived, and after my life to leave to those who were after me my memory in good works.'—*King Alfred on the Craft of Kingship.*

IN the whole of the enamel work that is left to us, both of the early Christian and also of later times, we may safely say that cloisonné is the rarest and most precious, and, excepting perhaps some examples of transparent colours laid over bas-relief engravings on gold or silver, the most beautiful of all.

It seems as if these two methods, champlevé and cloisonné, so different and yet so closely allied, which were both developed to their full beauty long before the later painted or surface enamelling had been thought of, were one or the

other the true way of using the material. In both, the enamel is intimately connected with, if not subservient to, the working of the metal itself, and what was said in Chapter I. about the place of enamel being to add colour to metal-work applies to these methods more than to any other. Their very limitations, which are great, simply add to the dignity and beauty of the whole, and when, as so often happens, the colours are necessarily opaque, there is a subtle and refined beauty of colour, which added to the wisely proportioned use of metal needful to the perfect construction of the complete work, is really as effective and often more so than the sparkling brilliancy of transparent enamels.

We dwellers in the British Isles, and especially perhaps the inhabitants of Ireland, may lay claim with well-founded reason that our country was an important centre for work in both gold and enamel in its early days of Christianity, and a great deal of this work remains in both countries even now, after running the risk of the melting-pot of so many generations. But I think we should all be patriotic enough to be pleased if some learned and ingenious person would rediscover suitable English names for the various processes used in the art of enamelling, not that it matters so much, in that all arts and crafts too may be called cosmopolitan;

VENETIAN BOWL, OF COPPER COVERED WITH BLUE, GREEN AND WHITE ENAMEL. EARLY SIXTEENTH CENTURY

yet when we find so many beautiful objects which by their character and surroundings tell us they were made in these Isles, I think we should all be the more pleased with ourselves if we could use words of our own tongue in describing them.

It is quite possible that, especially in Ireland, there may yet be unearthed in the early languages of these Isles, documents which describe and give names to the various processes in the arts then used. Be that as it may, there is little literature of this description known at present, and we must be content and not ungrateful to use the French words which Labarte says were adopted by the antiquaries in describing the processes of Limoges — cloisonné, champlevé, basse-taille, plique à jour, and others, remembering that these words, now in universal use, really originated long after the actual processes themselves, and have sometimes misled writers into the mistake of concluding that all enamel work was carried on, if not in France alone, in the continental countries bordering thereon; as Labarte complaisantly calls it, 'this art, so truly French.' Can we blame him when we consider the masses of work executed in Limoges in the middle and later ages? Should not we ourselves do the same?

In enamelling in cloisonné, the preliminary

work on the metal is as important as the actual enamelling. The design, figures, flowers, or whatever is chosen, is outlined with flat narrow wire to the required size, the edges standing upright and forming little cells or 'cloisons' for the reception of the enamel colours. In drawing or shaping the wire it is always found that the simpler the design the more effective will be the result, and even then the work requires great patience and care. But simplicity of treatment gives breadth and dignity to cloisonné enamelling as much as to anything else, and it is again proved to be best to follow closely the limitations of the material.

The wires when shaped are soldered to the metal base, and the colours ready ground applied in their due places, fired and filled again until the enamel quite fills up the little cells and is ready to be rubbed level and polished. Among the Japanese enamels at South Kensington is a group of six plaques giving the various stages of a cloisonné enamel, the first of which is the curious little plaque with pattern in wire affixed, and the others showing the different applications of enamel colours; and finally the last and completed one shows the wires, shining like threads of fine gold from a surface of polished enamel, as we often see in the well-known Japanese work. Enamels may be polished in the same way that the lapidary

polishes stones, or the enameller may do what is easiest and give them a 'fire polish.' The hand polish, which was the only process used in old days, is very laborious, but a beautiful range of surface can be produced in this way, from the softness of the 'eggshell' polish to the brilliancy of plate-glass, though it is seldom adopted nowadays owing to the labour and time involved. Indeed, except by the Japanese who work in this method, one or two Parisian artists, and a very few elsewhere, cloisonné is not a process favoured by the modern enameller, as he wishes to turn out quantity more than quality, or to be fair, we should perhaps say that he could not make a living from so slow a method, though there is no other way of arriving at so beautiful a result.

The Japanese thus far have worked under different conditions to our own. Mr. Rudyard Kipling gives a very entertaining description of his visit to one of the superior enamel factories in Kioto, which we quote in Chapter v., in his *From Sea to Sea*; but I cannot refrain here from giving his words on the polishing of these enamels:—

'It may take a month to put a pattern on a plate in outline, another month to fill in the enamel, but the real expenditure of time does not commence till the polishing. A man sits down with the rough article, all his tea things, a tub of

water, a flannel, and two or three saucers full of assorted pebbles from the brook. He does not get a wheel with tripoli, or emery, or buff. He sits down and rubs. He rubs for a month, three months, or a year. He rubs lovingly, with his soul in his finger-ends, and little by little the efflorescence of the fired enamel gives way and he comes down to the lines of silver, and the pattern in all its glory is there waiting for him. I saw a man who had only been a month over the polishing of one little vase five inches high. He would go on for two months. When I am in America he will be rubbing still, and the ruby-coloured dragon that romped on a field of lazuli, each tiny scale and whisker a separate compartment of enamel, will be growing more lovely.'

That was in Japan nearly twenty years ago.

In old times cloisonné was nearly always worked on gold, and being precious, in small pieces, each piece being afterwards used in the manner of precious stones, being attached to the object which it was to ornament by claws or settings of gold. These small enamels were carried about sometimes long distances, being so easily portable, and this has caused confusion to writers who have occasionally attributed periods and nationalities incorrectly, owing to their being

attached to work of other parts and possibly later times.

Fine gold was used, none of the soft alloys withstanding the heat necessary to melt the enamel; the wires were of the same, and the solder also. Silver was sometimes used, but enamel does not hold so well to this metal as it does to either gold or copper. Fine, that is pure silver, is so full of white light which shines through the transparent colours, blues and greens, in the most fascinating manner, that, especially in the two methods of cloisonné and champlevé enamelling, its use is very tempting. But if possible, it is best to lay silver aside, the durability of enamel fused upon it being too uncertain, and there is always a tendency for it to split and fly off this metal. If silver must be used, it should be prepared and shaped in the way which best retains the enamel. Carelessness in this respect, as well as the use of inferior colours for softness in firing, and the neglect of the use of 'backing,' are among the reasons that enamels are sometimes unjustly characterised as frail and perishable objects of beauty.

The sincere worker in any material whatsoever, wishes without vanity or self-glorying that the work to which he has given his best self may endure, and we can only be sorry that some of

our most beautiful modern work has been carried out in methods and materials which have ignored either the lasting of the object or its liability to perish. A work gains dignity if after years have passed by it still remains as strong and true as when it came from the artist's hand.

Sometimes, as with some of the Japanese work of the present day, we find cases of cloisonné enamel in which no solder has been used. So much depends on the sort of design whether this is successful, but the wires are apt to get out of shape or away from their proper place, and as a rule, soldering down is desirable. Very few cloisonné examples are to be seen anywhere, even on pure gold, that show perfectly transparent in colour. There are reasons for this. Oxide of tin, which is generally present in solder, causes opacity, so also might any impurity in the metal, and the wire 'cloisons' cast shadows through the depths of transparent colour, making it dark. The early enamellers knew this, and recognised also that the fine quality gained with opacity was more valuable than absolutely clear colouring. The beautiful Textus cover at South Kensington, with its opalescent whites and semi-transparent greens with opaque blues, is an example of the beauty obtained by the judicious admixture of opaque and

semi-translucent colours, but this quality is to be seen in nearly all the early cloisonné enamels which will be referred to in this chapter.

It was in this method, the cloisonné, that the earliest known enamels of the Christian era were executed, which are included with so much rich work in metals, ivory, and other materials, under the wide-reaching name of Byzantine. In the fourth century, when the greatest and most powerful and richest court of the world, that of Constantine, the first Roman Emperor to uphold Christianity, was taken from Rome to Byzantium, or as it was afterwards called Constantinople, a school of artists arose, many of them brought originally from Italy and Greece, which was to influence the whole of the work of the Western world through the centuries that followed. At Constantinople they were safe from the many wars which desolated Europe till the tenth century was well over, and their traditions still linger on, we are told, in the Christian Churches of Greece, Constantinople, and Russia to this day. Writers on Byzantine art have often confused the student by giving the name especially to the work of the early middle ages, when the stiffness and severity of asceticism was the predominating characteristic. But much of the Byzantine work is quite different from this in character, especially that of the earliest

period, which was in some ways allied to the contemporary art of Rome. The influence of classical art can be traced in the early Christian work of Byzantium, and it was in this first period that fine school of cloisonné enamelling on gold arose, which came to perfection about the tenth century. We cannot here go into the story of the beginning and character of this vast influence, but to the student of enamelling, and indeed of any art, it is most interesting and profitable to gain some true knowledge of how and when it arose, and of its peculiarities. In the earliest art of the Christian Church all was symbolical. There was no realistic portraiture of this or that personage or scene. The figure of Christ is of an ideal youth, smooth-limbed, unchangeable, divine. It was later, when Greece and Rome had ceased to influence it, that the art of the Church gave instead the Man of Sorrows wasting on the cross, the worn and saddened Mother, and the harrowing scenes of martyrdom.

Though Byzantine influence stayed on, and in its later stages affected the champlevé enamel workers of Europe, it is the cloisonné enamels of its earlier times that are more purely Byzantine, and many of those now remaining are supposed to have been actually made in Constantinople. These little enamels, all on gold, are extremely

rare and precious. We have several examples at South Kensington which are among the country's greatest treasures. Earlier in this chapter we spoke of them as having been used in the same way as were precious stones, being fastened to the objects they were to decorate by collets or settings of metal. They were easily sent or carried about by the monks or pilgrims to shrines up and down the countries of Europe, or sent as presents from kings to courtiers, and often eventually rested at places very far from where they were made. We read of the old shrine of Thomas à Becket, that it was surrounded by a trellis of gold wire to which jewels such as these were attached by pilgrims, as was the custom of the day. Doubtless this is how so many became scattered throughout the Continent, though unfortunately, owing to the value of the pure gold of which so many of the finest examples of sacred and royal vessels and plate were made at this time, comparatively few of these early cloisonné enamels are now to be seen, the work having been melted for the value of the gold. Of those at the Victoria and Albert Museum, one of great interest is a very small plaque, not two inches square, with a head of St. Paul most exquisitely and delicately worked with the finest gold wire, even the tiny eyebrows being of black enamel enclosed in a double

gold line; the drapery is arranged in layers of colour, the flesh is tinted a natural flesh-colour—a feature only to be seen in this early work, later enamels having the flesh in white. The colours appear to be opaque, or semi-opaque, dark blue and grey, white, red, and black; the nimbus is a fine turquoise. The name is engraved and filled with niello on the side in Greek lettering: altogether this is a very perfect and beautiful jewel of the early Byzantine style. It is supposed to have come from the wonderful Pala d'Oro in Venice, possibly having been taken by the French soldiers in 1797.

Venice, as Mr. Okey tells us in *Venice and Its Story*, means 'Come again and again, for how many times soever thou shalt come, new things and new beauties thou shalt see.' Every one who has visited Venice will appreciate the meaning of the name. One of the city's chief beauties is the Pala d'Oro, placed over the high altar in St. Mark's, a splendid example of this early cloisonné enamel on gold, with semi-opaque and transparent colours mellowed by the glow of the golden background. The original part was made to the order of Doge Ordelafo Faliero by Byzantine craftsmen at Constantinople in 1105, and has Gothic additions, restorations of both 1209 and 1305. It has been looted of its gold, pearls,

and precious stones: some have been replaced by modern inferior stones, cut facet-wise instead of the beautiful old tallow-cut jewels, but they can never replace the Byzantine enamels that have gone, though there is now enough left to show that this was truly the greatest triumph of Byzantine gold and enamel work. Another very fine altar is to be seen at Milan, the 'Paliotto' of the Church of Sant' Ambrogio, in perfect preservation, with much work in repoussé and cloisonné enamel on gold on the altar itself, the borders alternating with precious stones. This was executed by one Wolvinus in 835, which is earlier than the Pala d' Oro; the enamels are slightly coarser in treatment, and the wires thicker than in the very fine work on the Pala d'Oro. Some small enamels at the back of the Paliotto appear to be of different origin from the rest of the altar, and it has been suggested that these may be amongst those very English enamels whose discovery upon the early shrines in continental churches has been predicted. Other cloisonné enamels in gold of the early middle ages are to be seen in various parts of Europe. The crown and sword of Charlemagne are notable examples of Greek or Byzantine 'filigree' enamelling, the shrine of the Magi at Cologne, the great shrine of Notre Dame at Aix-la-Chapelle, besides others in

Paris, Munich, and elsewhere. A Byzantine cloisonné enamel on copper is described by Labarte from a private French collection. In the British Museum is a small flat piece of gold with a space sunk, in which is placed in cloisonné enamel a figure of Christ, of early Byzantine or Italian work. This is not so fine as the head of St. Paul at South Kensington, but the colouring is rather similar; on the gold ground the name of Christ is engraved and filled in with niello, as in the St. Paul and others of this type. We have so far only mentioned one of these cloisonné enamels in South Kensington, but in the enamel gallery there are four more, and two of these are most important. The finest is the Byzantine pectoral cross of the tenth or eleventh century, the two enamelled parts, back and front, which originally formed the reliquary, being now shown as two pieces. On one part is the Saviour on the cross, with the Virgin and St. John on either side, and on the other is the Virgin, with SS. John Baptist, Paul, Peter, and Andrew; the name of each is in Greek lettering. The delicate lines of wire and the enamel also are deeper than one sees in most of these enamels, making the body of colour considerable, as we can see in parts where it is broken. The ground is a beautiful transparent apple-green, through which the gold ground

gleams occasionally, making it glow like a warm coloured emerald. The depth of wire casts shadows and breaks up the transparency in a lovely mottled effect, which with the gold wire coming to the surface in fine lines is very beautiful. Only this ground is transparent; the semi-opaque blues and whites of the drapery, and the deep semi-transparent flesh-colour, with opaque yellow glories or nimbuses, a few specks of dead white and black and also turquoise, are together most effective. In the cross and nimbus of the Saviour, and one or two other parts, are small thin touches of opaque red. It seems as if the transparent ruby red, made from the purple of Cassius of gold in later times and praised by Cellini, were not yet discovered in these days; the colours on this cross are reserved and cool, and one can wish for nothing more to add to its beauty. Doubtless it has been greatly knocked about, especially the figure of Christ, where possibly a stone has been inserted, or a crystal exposing the relic enclosed, but it is our chief jewel among the few Byzantine enamels we possess. Besides the cross, ornamented with Byzantine enamel in gold of the tenth century, which came from the Soltikoff collection, and the Greek cross in copper, springing from a ring, which is set with plaques of cloisonné enamel on gold, which

we can do no more than mention, there is also the most beautiful and precious Textus cover, enclosing a MS. copy of the Gospels, with the figure of Christ enthroned in the centre in gold repoussé work, and the border enriched with precious stones tallow-cut, many and rare, alternating with plaques of cloisonné enamel on gold. This is German, and supposed to be work of the twelfth century, but is possibly of earlier date. Here no figure has been attempted in the enamel, but there are symmetrical floral designs in small square plaques, with a great variety of light, semi-opaque blues, some almost transparent, in a green ground as in the cross. Some of these plaques have been restored by a modern French enameller, and so cleverly done that it is not easy to tell the new work from the old. The lettering, outlined in golden wires in panels surrounding the central figure of Christ, is filled with a fine opalescent white and surrounded by what was originally a transparent blue, and again bordered by a fine edging of light turquoise. This book with its beautiful case was once one of the principal ornaments of the high altar in a continental abbey church, and was only read from on great festival days, having in its long life passed through many vicissitudes before reaching its present home in the Museum, for which it was acquired a few years ago, and is

TEXTUS OR GOSPELS COVER IN GOLD WITH CLOISONNÉ ENAMELS AND PRECIOUS STONES. ELEVENTH OR TWELFTH CENTURY. GERMAN

now valued as a triumphant example of mediæval work in enamel and gold.

It is when we have examined and admired these precious objects that we turn to the book which all writers on the arts of the middle ages, also even of our own times, have thankfully quoted, and which all workers in those arts, if they have not done so already, should make haste to become acquainted with, to study carefully, and finally, as they grow more intimate with, to rejoice in greatly—The Book of Theophilus. One would fain devote a chapter to the writings of this beloved fellow-worker, this artist monk of the middle ages. The book, *A Treatise on Divers Arts*, by Theophilus the monk, also called Rugerus, is of the eleventh or twelfth centuries, in Latin and in three parts, in which he gives full directions for the carrying on of all manner of crafts: how and where to procure ingredients and colours for all sorts of painting, for glass-making; how to paint missals, and the walls of churches; of furnaces and workshops; how to make bellows of the skins of rams; of gold, silver, brass work, iron and precious stones, and enamelling by the filigree or cloisonné method, though he does not use our names for the processes, and for many other things of mediæval wisdom and lore—all the knowledge indeed that he had gathered together

either in his wanderings, from the manuscripts he had read, or gained by his own practical experience. R. Hendrie, to whom we owe a great debt of gratitude for his able translation of the book, published in 1847, says that Theophilus most likely lived in the early part of the eleventh century, and probably wrote his treatise in Germany. Nothing is actually known of him except through his book, but Hendrie tells us his name would most likely be Rugerus, he adopting the name Theophilus as a fancy common in his day. His nationality is not known, as in those times monks in bands, or with companies of pupils, travelled freely from place to place, giving away useful knowledge and also learning the secrets of many arts, and Theophilus may have belonged to any part of northern Europe. His writings are full of devout and patient love of his work, of wisdom, tempered with the quaint superstitions of his time, so human, and so refreshingly simple-minded, that one can pore over his writings again and again with renewed delight and interest. In the preface to each book he gives sound and serious advice to the student, advice which is badly needed in our own heedless days of hurry and unrest. One loves every word in these three prefaces, but must be content to give but one or two small quotations. He begins: 'I, Theophilus,

an humble priest, servant of the servants of God, unworthy of the name and profession of a monk, to all wishing to overcome or avoid sloth of the mind, or wandering of the soul, by useful manual occupations and the delightful contemplation of novelties, send a recompense of heavenly price.' Later on, in Book III.: 'Wherefore, gentle son, whom God has rendered perfectly happy in this respect, that these things are offered to thee gratis which many ploughing the sea-waves with the greatest danger to life, consumed by the hardship of hunger and cold, or subjected to the weary servitude of teachers, and altogether worn by the desire of learning, yet acquire with intolerable labour, covet with greedy looks this "book of various arts," read it through with a tenacious memory, embrace it with an ardent love.

'Should you carefully peruse this, you will there find out whatever Greece possesses in kinds and mixtures of various colours; whatever Tuscany knows of in mosaic work or in variety of enamel; whatever Arabia shows forth in work of fusion, ductility, or chasing; whatever Italy ornaments with gold, in diversity of vases and sculpture of gems or ivory; whatever France loves in a costly variety of windows; whatever industrious Germany approves in work of gold, silver, copper, and iron, of woods and of stones.'

Then he goes on to say it is not for his own glory nor for desire of temporal reward, but to the honour and glory of God, that he has 'consulted the progress and hastened to aid the necessities of many men.'

In Book III. Theophilus describes the working of all metals: 'Act therefore now, well-intentioned man, happy before God and men in this life, happier in a future, in whose labour and study so many sacrifices are offered up to God; henceforth warm thyself with a more ample invention, hasten to complete with all the study of thy mind those things which are still wanting among the utensils of the house of the Lord, without which the divine mysteries and the services of ceremonies cannot continue. These are the chalices, candelabra, incense burners, vials, pitchers, caskets of sacred relics, crosses, missals, and other things which useful necessity requires for the use of the ecclesiastical order.'

He then directs the building of the workshop, the seat of the workmen, the furnace, anvils, hammers, pincers, wire-drawing, and other things, many of them made then as they are at this day. It is in the third book that he tells how to make a golden chalice and ornament it with pearls, gems, and 'coloured glass stones' or enamel, or as he wrote it, 'de electro.' I think we can but quote

from this in full and also the chapter on polishing, and remind ourselves, when reading it, that this is how the enamels on our Textus cover and others at South Kensington were made, if not by the actual hands that wrote the words, probably by those of contemporaries.

The chalice made, Theophilus directs the ornamentation thereof and the preparing of the gold base with border for the little plaque of enamel: 'You cut small bands of exceedingly thin gold, in which you will bend and fashion whatever work you may wish to make in enamel, whether circles or knots, or small flowers, or birds, or animals, or figures, and you will arrange the small pieces delicately and carefully, each in its place, and will fasten them with moistened flour over the coals. When you have filled one portion, you will solder it with the greatest care, that the slender and fine gold may not be disjointed, nor liquefy, and do this twice or three times until the separate pieces adhere a little.'

Theophilus then proceeds to describe the manner of filling in the separate enamel colours, and how, when the little plate with the upright wires affixed is covered with enamel, to place it ready for firing.

'Which being done, arrange large and long coals, making them very hot, among which you

make a space, into which the iron is raised, so that when covered you will place it carefully, and arrange the coals around and above it everywhere, and taking the bellows with both hands, you will blow on every side until the coals glow equally. You have also a wing of a goose or other large bird, which is extended and tied to wood, with which you will wave and fan strongly all over it, until you perceive between the coals that the holes of the iron quite glow inside, and thus you will cease to fan. Waiting then about half an hour, you uncover by degrees until you remove all the coals, and you will again wait until the holes of the iron grow black inside, and so raising the iron by the handle, you place it in the furnace, behind in a corner, until it has become quite cold. Then opening it, you take out the enamel, and will wash it and will again fill it, and melt as before, and you do this until, melted equally everywhere, it has become full. In this manner you compose the remaining pieces.'

OF POLISHING ENAMELS

'This being done, take a piece of wax the length of half a thumb, in which you will fix the enamel so that the wax may be all round it; by this wax you will hold it, then you will rub it for a long

time upon a hard and smooth hone until it acquires a polish; and you will also rub upon the same stone, wetted with saliva, a piece of potter's ware, which is found among the fragments of ancient vases. This you anoint upon a flat leaden tablet, upon which you will lightly rub the glass stone until at length their colours appear transparent and clear, and you will again rub the clay ware upon the hone, and you anoint it upon a goat-skin, smoothly fixed upon a wooden table; upon this you polish this electrum until it shines perfectly, so as if one-half of it were wet and one-half were dry, no one could distinguish which was the wet and which the dry part.'

It is a great loss to us that in the second book the receipts for making several glass and enamel colours are missing. One other short chapter, although more on glass work than enamelling, shows well the curious mixture of mediæval learning, and what one might call superstitious foolishness, which are to be found in this fascinating book. It is in the form of a Latin poem, and my excuse for quoting is that when examining the remarkable carved or moulded glass or enamel heads, so minute, inserted in parts of the Tara brooch in Dublin (see Irish chapter), one was reminded of this chapter in Theophilus :—

DE SCULPTURA VITRI

'Artists who wish to engrave glass in a beautiful manner, I now can teach you as I have myself made trial. I have sought the gross worms which the plough turns up in the ground, and the art necessary in these things also bid me to procure vinegar and the warm blood of a lusty goat, which I was careful to place under the roof for a short time, bound with a strong ivy plant. After this I infused the worms and vinegar with the warm blood, and I anointed the whole clearly shining vessel; which being done, I essayed to sculp the glass with the hard stone called pyrites.'

Here we must bid farewell to our monk friend and come back a century or two earlier to our own island countries, where the art of enamelling had been by no means neglected. I make mention of the Early British and Celtic enamels in the next, and also the first chapter, but there is abundant proof that the art of cloisonné enamelling on gold, accompanied by much fine goldsmithing, was carried on in Anglo-Saxon times in this country, and also by the Irish, whose gold work has a character all its own, and to which I devote a short chapter.

Besides much work of this period which has been discovered in Great Britain, of gold worked in

filigree with twisted or beaded wires and inlays of garnet, carnelian, and amber, often accompanied by enamel in a more or less perfect condition, we have the three fine examples in the British Museum, the brooch found at Dowgate Hill in 1839, the Hamilton brooch from Scotland, and also the very fine boss which, although it has been brought from Italy to its present resting-place, is so similar in every way to the unique work of early days in this country, that it is generally considered to be Anglo-Saxon, and simply to have returned to its early home.

Both this last and the Dowgate Hill brooch depict portrait heads in most delicate fine wire and enamel, and have translucent greens and blues with coloured flesh-tints as in the Byzantine manner, although with age, and owing to their having been buried so long under the earth, they are, especially the Italian one, quite iridescent on the surface. Flecks of opaque yellow are to be seen where the colour is translucent: this may be due to decomposition, but more likely, I think, may be taken as characteristic of work of this period, for as I have already noticed, specks of such colour are to be seen in the pectoral cross at South Kensington, which is in much better preservation.

These two enamels, in their exquisite gold

settings, are undoubtedly English in character, and several writers are now anxious to prove that a great many enamels hitherto considered of continental origin really come from these islands, and that many more and of like kind may yet be found on the early shrines of Europe which are decorated with precious stones, cameos, and cloisonné enamels.

The above-mentioned examples have no history attached to them, nothing is known of how or where or by whom they were made; only circumstances, their workmanship, and character point to their Anglo-Saxon origin. But by far the most interesting and best-known example of those times, carrying its own inscription and containing a portrait in cloisonné enamel, is what is called the 'Alfred jewel,' which for the last two hundred years has been in the Ashmolean Museum at Oxford and the subject of much learned discussion and conjecture, and although but small, being less than two and a half inches long, and rude in workmanship, is one of the most precious relics of our country's history.

The jewel is oval in shape, and the centre consists of a cloisonné enamel on gold, egg-shaped and pointed at the base, the design being a rudely fashioned figure representing, possibly, the Saviour, St. Cuthbert or King Alfred himself,

THE ALFRED JEWEL

supposed to be seated and holding in his hand what is generally taken to be a sceptre bursting into the leaf or blossom so often seen in Irish designs, notably in the Book of Kells. The ground is coloured blue, the drapery green, and sometimes a spot of red, and the flesh is of low-toned white. The wires appear rough and thick, the surface of the enamel still showing the scratches. This, I take it, means that either the enamel was never finished or the enameller had no knowledge of how to proceed with the final hand-polishing, and in which his surface would have lost the scratches and become quite smooth ; and also his wires, curious as it may seem, would thereby appear finer, even perhaps as fine as they are in the Dowgate Hill brooch.

The jewel is covered with a polished crystal ; this again, although it may prove that the enamel portrait was considered of great value, would not have appeared necessary if the final stages of polishing had been arrived at. This curious and interesting enamel is set in very rich gold work, and interwoven in twisted and beaded wire; round the edge are the words 'AELFRED-MEC-HEHT-GEVYRCAN,' 'Alfred ordered me to be wrought or made.' The jewel at the base slopes into a boar's head.

This head resembles those in Scandinavian

work, also that on the Cross of Cong in Dublin is somewhat similar, ending in a socket with a cross pin, showing that it originally had a stem or handle, which has now perished. This jewel, which was considered by Labarte purely oriental in parts of the design, and by the late Sir A. W. Franks as of continental origin, is now concluded to have been made in this country, and probably under the supervision of Alfred himself. It is as fresh as ever, and was found at Athelney, in Somerset, in 1693. Here it was that the great and good king, in the lowest ebb of his fortunes, fallen on evil days, fled from the Danes, and here happened the favourite theme of childhood's history, so well told in an old Saxon homily, which says :—

'The king then went lurking through hedges and ways, through woods and fields, so that he, through God's guidance, arrived safe at Athelney, and begged shelter in the house of a certain swain, and even diligently served him and his evil wife. It happened one day that this swain's wife heated her oven, and the king sat thereby warming himself by the fire, the family not knowing that he was the king. Then was the evil woman suddenly stirred up, and said to the king in an angry mood, "Turn thou the loaves that they burn not, for I see daily that thou art a great

eater." He was quickly obedient to the evil woman, because he needs must.'

No documentary evidence has been yet produced to show that enamelling was carried on in England in the days of Alfred of Wessex, 871-901, but it is a matter of history that, with a view to the improvement of the arts of his country, he brought over goldsmiths and other artificers from Rome, where he passed much of his younger life, and it was perhaps there that he learned of the art of enamelling as taught by Greek or Byzantine artists, and niello, the near relation of enamel, which is to be seen on fine English gold work of that time, especially in the ring of Æthelwulf, Alfred's father, and others. His grandfather, Ecgbert of York, had spent long years of exile at the court of Charlemagne, and had probably seen, amongst other treasures, the crown and sword of the Emperor decorated with enamel, which are mentioned earlier in this chapter. Ecgbert is known to have introduced Frankish fashions into this country, and was at one time the instructor of Alcuin, the Northumbrian scholar, whose influence over the art and literature of Western Europe was so widely felt at that time.

Small wonder, then, that the wonderful grandson of Ecgbert, Alfred, the enthusiastic patron of

the arts, useful and otherwise, as well as of all good things, should encourage enamelling along with work in fine gold, which was then carried on in this country.

Various uses have been ascribed to this little jewel, which is reproduced in colours in Shaw's *Dresses and Decorations of the Middle Ages.*

Our chapter on cloisonné enamelling would not be complete if we omitted to refer to the 'plique à jour' process. Labarte tells us that, while Theophilus called the enamels he described by the name of 'electrum,' in France they were called, until the end of the sixteenth century, by the name of 'émaux de plique' or 'de plite,' from the word 'appliquer,' and in his larger volume he speaks of 'émaux cloisonnés à jour'; he mentions a beautiful gold cup of the inventory of Charles v., 1379, 'très bien ouvrée à esmaulx de plite à jour,' or earlier still, in 1295, an order of Pope Boniface VIII., 'Una saleria cum tribus esmaltis claris.' So it appears this process was known in early times. It is cloisonné enamel, the wires being soldered to each other, but with no metal ground, so that, if we hold a completed one to the light, it is as a small painted window, daylight shining through the enamel, hence the word 'plique à jour.' It is a difficult process, and is supposed to have been one of the greatest secrets of the art of

enamelling, though certain modern work, both Norwegian and French, and also Russian, is largely carried out in this process, the result not being extremely interesting; but the modern French artist enamellers execute very perfect examples of plique à jour, notably M. Thesmar.

On examining the well-known example in South Kensington, the cup, which is supposed to be Burgundian, of the fifteenth century, we see the enamel is quite flat with the wires, and has therefore been polished, and is the same both sides. This cup, of silver gilt and seven inches high, has round its sides three little pointed Gothic windows made and united by a band of filigree, and these are all filled in with clear enamel colours—French blue, clear flux, yellow, and a cold green. The blue of the little windows is as clear as the green, and the surface is perfect. The blue flowers on the green ground in the band were probably never perfect, even when made. The cover is enamelled in the same manner. This cup is engraved in Shaw's *Decorative Arts of the Middle Ages*, and also in Pollen's *Gold and Silver*. It is a beautiful piece of work, and one wonders how and by whom it was made, but the plique à jour method, as can be seen in some of the modern French work, if carried too far, can become more a dexterous trick than work for an

artist; indeed, it is not always easy to distinguish from blown or moulded glass. And I do not look upon this branch of cloisonné enamelling as entirely satisfactory, for often it does not justify, by any additional beauty or grace, the laborious processes which have brought it into being.

Cellini, although he confessed he had never done any of this work himself, greatly admired plique à jour enamelling, and gives a full description of how he imagined it to have been done. In an entertaining account, given with his usual boastful naïveté, but probably founded on a good and true method, he tells how, when he was working by the favour of the great Francis in a castle in France, in the year 1541, he was one day shown by the king a small bowl of filigree work, and between the wires transparent enamel, with the clear light shining through, very beautifully. The king and his courtiers standing round, the quick-witted Benvenuto gave them promptly a long and detailed account of how this had been done: how the wires had been worked into the requisite shape, piece by piece, by fitting on to a mould, the enamel filled in and fired with exceeding care, and the whole afterwards polished; whereat the king praised him beyond all measure, and added that Cellini's description was so clear, that he was

CUP OR BEAKER WITH PLIQUE A JOUR ENAMELS
EARLY FIFTEENTH CENTURY

sure he could make plique à jour enamels himself after hearing it.

The Burgundian cup in South Kensington is, in all likelihood, very similar to the bowl so admired by King Francis, and described with so much ardour by Cellini.

CHAPTER III

CHAMPLEVÉ ENAMELS

'The lyfe so short,
the crafte so long to lerne.'
CHAUCER.

IN that wonderful book, *The Arts of the Middle Ages*, the more wonderful because of the time in which it was written, early in the nineteenth century, enamels are arranged in three divisions—(1) the incrusted: in this class are included both cloisonné and champlevé; (2) the translucid upon relief; and (3) the painted enamels. From the point of view of an antiquary and the historical treatment of the subject this was doubtless the best arrangement. In the 'incrusted' class are placed together the cloisonné work of the Byzantine artists of early Christian times along with the champlevé work of Limoges and the Rhine and elsewhere, work so different in character and treatment that I find it difficult to class them together; indeed, to those familiar with the

methods of the actual work in enamel, I think the word 'incrusted' carries very little significance. Nearly all subsequent writers have followed in the footsteps of Labarte in this classification. I feel it bold to suggest any other arrangement, nevertheless I prefer to classify enamels into—(1) cloisonné, (2) champlevé, (3) painted enamels. Champlevé to me includes enamels both opaque and transparent, and completely embraces M. Labarte's second division, which he calls translucid upon relief, which is the same as what are sometimes called basse-taille, or as Cellini called them, enamels on bas-relief. In this class, as well as the best-known champlevé enamels of Limoges, we include also enamels on cast metal, both of the early British and Romano-British times, on bronze, and also the handsome work done in this country in Tudor times on cast brass, enamelling on stamped or beaten metal, too; and I think one may say that heraldic work of all times should come under this heading, which is, indeed, by far the largest of the three divisions into which we have classed the enamels of the world.

The word *champlevé* is, of course, French, signifying in this case that the field or ground has been removed or cut away, the word 'champ' being used in the same way as our 'field' in

heraldry. This is interesting, because this particular process always was and is to this day the most suitable for heraldic work in enamel. Champlevé enamel then, as we take it, includes all in which the metal ground has been cut away or hammered so as to make enclosed spaces to receive enamel.

As we have seen in cloisonné, the walls of the cells or cloisons in which the enamel was placed were made by soldering wires to the metal base; here in champlevé the walls are made by carving out the metal itself. They are therefore secure and fast, and there is no danger of their floating up or sideways when in the furnace, as in cloisonné. In cases where the walls left by the chopping are as fine as cloisonné wires, it is extremely difficult to tell by which method the enamel has been worked; but this is not often the case, as the champlevé offers so much more freedom to the worker to leave lines irregular in width, and also broad, flat spaces of metal on which delicate surface patterns are frequently engraved, thereby enriching the parts enamelled, as well as the more slender lines which stand up from the ground, and which serve as outlines for the spaces where enamel is to be placed. The metal is cut or dug away with engraving tools or chisels, and much skill and knowledge is required

in this part of the work. In describing the process of champlevé enamel, we find the preparation of the metal for receiving the colours is a more important part of the whole than is the case with cloisonné, where wires were shaped and fastened on to the flat metal base. As we shall see, if we study the cases full of this kind of enamel in either the British or South Kensington Museums, there are many ways and fashions in which the metal may be worked, from the simple cutting away of flat spaces on copper or bronze for the reception of opaque colours, such as occurs in the Limoges work, to the exquisitely engraved and modelled figure subjects, carried out in gold and silver of the basse-taille variety, in which thin coats of brilliantly transparent colours are laid over the metal worked in bas-relief.

Some knowledge of modelling, chasing, and engraving is required for this class of work, which was practised so delicately and beautifully by the Italian goldsmith-painters of the Renaissance, and I do not know of any serious attempts at its revival in recent times in this country or elsewhere. A certain familiarity with engraving is required for the simplest form of champlevé, as it is no light thing for a person of little experience to attempt to carve out even a simple design from a piece of metal. There are several good hand-

books which describe the process fully, and are helpful to students, telling of the various ways and means by which designs are carved out of the metal, which must be annealed and of a sufficient thickness to allow of fairly deep engraving, so that it may contain the required depth of enamel. This, of course, varies according to the size of the work, the quality of the enamel colours, and the purpose to which it is to be adapted. The design is traced on to the flat piece of metal, copper as a beginning, and outlined afterwards with the sharp point of an engraver's tool; then it is cut out carefully, piece by piece, the wooden handle of the sharp steel tool being firmly held, and dug into the metal. The tools require to be sharp so as to make a clean edge for the outline. It will seem slow and difficult at first, but experience soon finds out the way, and it becomes less tedious. After digging out the pattern many engravers cut the base of the part to be enamelled in zigzag lines, as this is supposed to hold the enamel more securely in its place. This may be well when the enamel is opaque, as the zigzags do not show through, but where transparent colour is used over gold and silver, it is advisable to omit this, as the effect is often anything but pleasing, though the process of giving a broken ground is much favoured by the present-day trade

enamellers, it being supposed by them to give brilliance to the colour.

This engraving of the metal to receive enamel in the champlevé process is really an art in itself, especially if colour is to be laid over bas-relief. The student may well have a lesson or two from the practical engraver; he should, at any rate, know something of the process; and to perceive what a variety and beauty there may be in this work, and to realise to what extent subject designs may be carried out, he should examine the work of this kind in our museums. The worker will soon learn to modify his design to his material, and soon find out that the simpler the treatment, the better the result will be.

Enamel work on cast metal comes under the heading of champlevé. These are generally larger objects, and the enamels are soft and coarse, though much effective work has been carried out in this style, and which we will speak of later on in this chapter. Neither cast, stamped, punched, nor electrotyped metal is suitable for the finest or best kind of work, the finer enamel being liable to 'fly' off these.

In champlevé, more especially on copper, as in cloisonné of the same description, opaque colours are generally found to be most suitable. Besides the actual oxidisation on the metal, which for some

reason always happens more persistently in these two processes than where enamel is laid on a plain metal ground, the walls of the cells cast shadows on to transparent enamel even as they do in cloisonné, and it is sometimes impossible to get the light shining through transparent colours to the bases of these engraved cells, so that when we lay in what should be brilliant, transparent colours, they lose their brilliancy, and become disappointingly dark brown or even black. One finds this happens repeatedly, especially when working in copper, until one gets to know and to feel that opaque colour is the only suitable thing for this metal; and as one works on and grows to find this experience confirmed again and again, one realises a certain satisfaction in filling up the spaces with solid, opaque enamel, with creamy whites and turquoise blues of various shades, greens and other colours. The process of enamelling the metal after it has been engraved is very much the same as in the cloisonné, the great difference being in the preparation of the metal. The metal being prepared and well cleaned, the colours are filled in and fired, cleaned, refilled, and fired again, until the enamel comes up as high as the metal. The whole is now rubbed down until all the little metal lines and divisions are shining clear out of the enamel, just as in the

cloisonné the filigree lines do. It is then polished, and the metal, if copper or bronze, is usually gilded, and the complete champlevé enamel goes to form the side of a casket, part of a tablet, a jewel, or whatever other use it has been all the time intended for.

Excepting for the discoveries of the ancient workshops at Bibracte, very little is known of the actual working of the early British and Gallo-Roman enamels on bronze, though so many, still very perfect, are to be seen in our national collections. In the British Museum are many enamelled objects of this period; they are supposed to have been on cast bronze, many of the more finished ones being chased before enamelled; the edges are very clean cut, and the lines so fine that it is easy to imagine at first sight that they were worked in cloisonné. The colours are very varied, and many of them in perfect preservation. This must be due to the very fine bronze casting as well as carefully prepared colours. We learn from a label in the British Museum that 'the art of casting on bronze was probably known in these islands before 2000 B.C., and was universally employed for more than one thousand years. For ornamental purposes the metal has never been superseded.' Here we might mention the small altar

coloured in blue, red, green, and white, and also several little stands with bright red enamel. There have also been beautiful cups and bowls discovered in different places enamelled on bronze, and of fine workmanship, but we would refer our readers to Chapter I. for a more complete account of these. The Anglo-Saxon rings of gold, mentioned in our last chapter, are cut in the champlevé manner to receive niello. Shaw's *Dresses and Decorations of the Middle Ages* pictures the ring of Æthelwulf as containing both blue ground and bright green leaves in enamel. On examining the object itself at the British Museum, these leaf spaces are seen to be empty of anything they may have originally contained. Labarte, quoting the *Archæological Journal* for 1846, placed the ring among enamel objects.

But when thinking of champlevé enamel, we naturally turn to the great mediæval schools of Limoges and Lorraine and other Rhenish provinces, examples of whose work are to be found even now all over the civilised world, more especially in France and Germany, in museums of our own country and its colonies; in the churches, where they have been happily preserved from the time they were made, and in private collections there are numberless examples of this work, which are invariably in opaque colours on copper.

We find that the greater number come from Limoges, and have been made for ecclesiastical purposes—reliquaries or chasses, with their high-pitched roofs repeating the form of the churches on whose altars they stood; pyxes, crosses, processional and for the altar; croziers, chalices, bowls, shrines, book-covers, as well as more secular objects, such as candlesticks, swords, and armour, caskets, panels, and plaques of all descriptions. As M. Labarte says, speaking of the general characteristics of these enamels: 'They are almost always executed upon copper, the cheapness of the material admitting the use of plates of large size; these are not like the cloisonné enamels attached as ornaments to pieces of jewellery or plate, but are mostly on the contrary, complete works of art in themselves, and owing to the depth of the sculpture and the thickness of the enamel, possess great solidity and are durable. The vitreous matter is employed in two ways: sometimes it gives the colours to the flesh tints, the draperies and the ground, and in that case the metal which touches the surface serves merely to trace the principal outlines of the design; at other times it is employed to colour nothing but the ground, and to form a border round the figures of gilded metal, which are either expressed by fine engraving on the plate, or are

chiselled in bas-relief.' The former method, described by Labarte, is earlier, especially in the case of coloured flesh tints, which is supposed to have been brought from the school of Byzantium, and is only seen in the very earliest examples of champlevé enamel of the eleventh and twelfth centuries. Labarte proceeds with pride, as well he might, to point out how comparatively few examples known in his day had been executed by any but the French artists of Limoges, 'the focus whence emanated all these beautiful specimens of enamelled copper which are still so much admired and sought after for museums and collections,' and whence skilled craftsmen were sent to execute their enamel work all over Europe during the eleventh, twelfth, thirteenth, and fourteenth centuries, though by far the larger quantity, if we may judge by specimens now left, was carried out in the twelfth and thirteenth centuries. But though Labarte attributed the greatest number of the specimens of champlevé enamel of these two centuries to Limoges and France alone, there were other schools which produced a large amount of somewhat similar work, especially those of the provinces of the Rhine and the Meuse, excellent examples of these being kept in the British Museum among those marked as 'enamels from Lorraine,' and also at South Kensington in the

CROZIER. LIMOGES. ENAMELLED BLUE ON COPPER.
THIRTEENTH CENTURY

case labelled 'Rhenish enamel,' which contains the wonderful Soltikoff reliquary which we refer to again in this chapter. Although this champlevé work on copper is neither so delicate nor so precious as the finer work on gold in cloisonné of earlier times, or the transparent work over bas-relief on gold and silver of a later time of Italy and France, these opaque enamels, more especially some of the earlier ones, have an interest and beauty all their own. Doubtless owing to their having been based on a less precious material, as well as the almost imperishable character of the work, they have come down to us through the centuries, many of them as perfect as when they left the enameller's workshop long ago.

For there were times when, instead of being valued, this work—which possessed all the noble severity of decoration acquired under Byzantine or early mediæval influences, its richness, devotion, glory, and wealth of colour—was considered too rude, barbarous, and unseemly to be in any way treasured, and was thrust into corners out of sight, suffering neglect, abuse, and often destruction. We read of two twelfth-century champlevé altar plaques being sold in 1790 to a brazier for old copper; these having been rescued, are now among the treasures of the Cluny Museum. Notwithstanding all this, we have left in public

and private collections and churches in this country, France, and many parts of Europe, all manner of treasures ornamented with champlevé enamel work of this time, in rich colouring, sombre and severe in design, as befitted the usages of the churches for which they were made.

One characteristic of these enamels may here be mentioned. As they were usually for church decoration, or at any rate for the enrichment of halls and large public places, and also of more considerable size than transparent work on more costly metals, there is little doubt that the flat opaque colours, with their 'eggshell' or polished surface, were preferred, because they would 'sing out' or 'carry,' to use a painter's expression, a great deal farther down the church from the altar or through the great state hall, than would any transparent colour, which, though possibly more sparkling and jewel-like with its glowing brilliance, reflecting and receiving to its very foundation all the varying lights and shades from around, is still less powerful. We find opaque blues of all tints, glorious blues some of them; and how a blue can be made soft, bright, and more beautiful by other colours which are placed near it judiciously, or hard, staring, and ugly by unsuitable colours in juxtaposition, only the

painter knows. Turquoise blue is there, light and dark; lapis blue, and an intense and beautiful sky colour; various shades of green, cold and warm; a certain yellow, a colour which is used sparingly in the best work—it was not a good yellow often but rather 'mustardy,' but effective when used in very small quantities, as the early enamellers well knew; beautiful whites—perfectly dead white one seldom sees, but subtle, low-toned whites; and how many shades of white there may be without being grey and still white, no one who has not looked into the subject may have any idea. Purples also, lilacs, greys, all opaque; and black, which is an extremely difficult colour to manage owing to the surface being liable to 'bloom' or become clouded over with a dusty film, after the final firing; and, above all, the opaque red, sometimes a dull Indian, sometimes purplish, but often also the most satisfactory and brilliant vermilion red, the sight of which makes the heart of the modern enameller burn within him, for it seems as if the art of making this peculiarly useful and beautiful colour was hopelessly lost to the present time, which we must greatly deplore, especially when we turn to heraldic work, where we find the need of it greatly magnified. All these colours are, as a rule, used in judicious proportion, the lines of draperies in

some cases being in layers of colour without boundary-lines of metal, to suggest shading, as well as softening the colour effect. An example which shows this especial characteristic finely is the 'Blois Plate' in the British Museum. Blue is the colour most largely used, this being a perfect colour, technically speaking, and having a larger range and variety of shades, and also being suitable for placing in, and harmonising with, the colour of the gilt copper.

At Limoges, the headquarters of this work, and also in the countries surrounding, at Cologne and Liége and other neighbouring towns, many small workshops and factories arose for the carrying on of this enamel work, and whence it was sent to all parts. The Abbé Texier, whose writings are repeatedly quoted by Labarte, and who was a learned archæologist of Limoges of about 1840, has proved by laborious researches into the town documents that even in the tenth century remarkable goldsmithing was produced in that city, and had been for generations, and from the earliest times, when it was an ancient Roman colony. Byzantine influence is said to have come to France from Constantinople by way of Venice towards the close of the tenth century, and one may well imagine how this great influence which reached the whole of the Western world would

affect a people born to use their hands to such purpose, and how the art of enamelling, too, would appeal to such dexterous and artistic craftsmen, and how a school working in champlevé enamel on copper would arise, simply because the material, being less costly than gold or silver, would allow of larger scope for the exercise of their faculties.

In going through collections of this work one can realise how the workers therein must have revelled in the colour and capacity of their art. We have very few specimens in this country of eleventh-century work, but abundance of that of the twelfth and thirteenth; the earlier examples are largely influenced by Byzantine feeling. It has been said that the figures are 'stiff and indifferently executed,' but, apart from the limitations of the material, which, as in stained glass, tend to give stiffness, or what may even be called indifferent drawing, to a figure, is not this stiffness a feature in all art of this early mediæval time?

The peculiar beauty, devotion, and thoughtfulness of so much of this work makes us overlook defects in the simple-minded drawing—simple and fresh with the same simplicity and freshness as the drawing of an intelligent child to-day.

Later on, as in the history of so much endeavour and art, just as the work reached the perfection of *beauty*, which climax I think we generally find

has been passed before the perfection of *execution* has arrived, the work of the champlevé enamellers became less interesting. Sad to say, with great technical excellence there came a fatal mechanical facility. Eventually the enameller, no longer an artist, became a minor workman, merely filling in the ground with a dull uniform blue, which was now the only colour used against the engraved figures. Labarte gives as the reason for this decadence in the art of enamelling, the evident progress in the art of drawing in the thirteenth century, and tells us how this kind of work came to an end during the later years of the fourteenth century; and he says: 'The tradition of a manufactory of incrusted enamels having formerly existed at Limoges, was in course of time forgotten, and for two centuries the shrines, the croziers, and all other objects for ecclesiastical use that the Limousin artists had so abundantly produced, were regarded as Byzantine.' 'Nor was this without some show of reason, for the Byzantine style displayed itself almost exclusively in the Limousin enamels of the eleventh and twelfth centuries, and the enamellers resisted, even longer than any other artists, the invasion of a new taste which effected at the end of this century a revolution in the arts.'

Many fine examples exist of mediæval champlevé

RELIQUARY, DEPICTING THE MURDER AND ENTOMBMENT OF THOMAS A BECKET.
LIMOGES. 1200 A.D.

work in this country. The longer we examine the subject, and the more intimate we become with any one piece, the interest naturally grows. As this little book is designed more to serve as an introduction of the subject to its readers than to go into elaborate detail, I think my best plan will be to describe some of the more noticeable examples in our two principal galleries, both of these being peculiarly rich in interesting specimens of this class of work.

In the mediæval room at the British Museum are one or two cases containing roundels, or differently shaped pieces of engraved copper and bronze, worn and weather-beaten many of them, and showing traces of the colours with which they have been enamelled. These medallions are of various ages and countries, but many of those which are engraved with heraldic devices are English in character. The metal is green and old, many of them having been buried for ages possibly under the earth or in the water, yet it is interesting to see how perfect the cutting away of the metal is to this day. You can see how they appeared when ready for enamel, so much so that if an enameller happened to take them in hand to-day, and refilled them and polished them, one would not think they were so old, save for what is so unwonted in engraving to-day, excel-

lence of drawing. Remains of red, blue, green, and white are to be seen in many of these little mediæval slabs, which have been originally fittings for armour or harness, or other similar uses.

Among the early Limoges work in the same room, I may draw particular attention to a beautiful cross of the twelfth century with the figure of Christ crucified. Here the whole of the design is cut away and engraved, and, what is only seen in very early examples, the face is enamelled in flesh tints, a relic of the early cloisonné school, when coloured flesh was the rule; all the rest, the nude body, arms, legs, feet, hands, are of an ivory white. Where the colour has flown, it is curious to see how the engraver left little pin-heads of metal throughout, to help to stay the enamel. There are many plaques of champlevé enamel, which have been sides to caskets, or portions of altars, but the British Museum is rich in complete reliquaries, croziers, and pyxes. The earliest reliquary is a small wooden one of the usual shape with the high-pitched roof covered with copper plates, gilt and enamelled, made during the late twelfth or early thirteenth century. In this casket the figures along the side are entirely in relief, and the drapery on these engraved and enamelled, very primitive

altogether,—indeed so like some work elsewhere which is dated eleventh century, that I should like to suggest these may have been made earlier, and attached to the casket at some later time.

There are six caskets or reliquaries in the British Museum, all labelled as from Limoges and of the same period, thirteenth century, the work upon them varying considerably. Any one not very familiar with these works may have supposed that one could lay down rules for judging the different periods of this work by the varieties of treatment. Labarte gives colour-schemes which he believes indicate certain periods; these were given originally by the Abbé Texier; but since those days many more examples have been discovered, and put together in collections, and although one may judge by similarities of treatment that this or that casket came from the same workshop as a certain pyx, yet it seems that each workshop kept the same traditions of treatment strictly for a long period of years. For instance, four of the caskets in the British Museum have figures engraved and gilt and the ground and accessories enamelled, the ground invariably blue 'powdered,' with rosettes shaded with white, red, yellow, green, and blue; while of these four, three have curious little heads in relief, affixed to

the casket, which special feature, one would be tempted to think, denoted some one period; the remaining casket of the four has the heads simply engraved in the flat metal. The other two of the six caskets, a marriage casket and a reliquary, are of similar workmanship, the figures being elaborately and beautifully enamelled; the drapery especially is fine, the ground being left in the copper, richly engraved on the surface and gilded. The flat lid of the marriage casket is a beautiful example of champlevé, both ground and figures being richly enamelled with blue, green, and white; the heads are also engraved in the copper, whilst in the reliquary the heads at the sides are in relief, at the ends flat. Two of these six caskets represent the murder of St. Thomas à Becket, a favourite subject of this time. Many other things of interest are in the same room, notably a sword, of English workmanship, which was the State sword of Edward v. when Prince of Wales, with three lions on the shield in champlevé enamel, and also three stall-plates, but we will leave these till we come to heraldic work. There are innumerable small pieces of interesting Limoges work in the British Museum, but one case shows examples of that done by the school of Lorraine and the valley of the Meuse, whose work is still to be seen in Cologne Cathedral.

One of the chief enamellers of this school was 'Godefroid de Claire of Huy on the Maas, who worked at Liége, Maestricht, and Cologne in the third quarter of the twelfth century.' There are the curious semicircular panels of Henry of Blois and the angels, pictured by Labarte, in this collection; the colour in this is seemingly more refined than in the other work of this school, possibly because the gilding on the copper has worn away, though it is very noticeably tender in the sleeve of the angel. There is a fine cross among the Lorraine enamels, labelled as by Godefroid de Claire, with biblical subjects, very elaborate, and surprisingly new-looking. But the colours in these enamels are crude and not so attractive as the Limoges work; the excellence of the gilding, which remains on most of them, is almost as fresh as when new, emphasising the raw effect of the colours.

In the Victoria and Albert Museum at South Kensington are many beautiful Limoges enamelled caskets, pyxes, and crosses of the thirteenth century. Among these there is the remarkable eleventh-century crucifix, decorated on the cross itself with enamel and precious stones, and with the figure of our Lord in full relief, crowned and clad in a long tunic enamelled blue, which reaches to the feet, very simple and sombre, and Byzantine

in feeling. The figure of our Lord on the cross is only robed in this manner in the earliest examples. Space will not allow us to mention a quarter of these treasures, but in the collection of works belonging to Mr. Pierpont Morgan there is a casket with enamels of singular beauty of colour, which is pictured in Von Falke's new book on German enamels. Although labelled as being of the thirteenth century, it is primitive and rude in execution, and not in any way similar to the usual reliquaries of that time, with their high-pitched roofs, but merely an oblong box, studded along the angles with large brass nail heads, and with a later German lock set in the lid. On the top is depicted our Lord in the act of benediction, surrounded by emblems of the four Evangelists, sadly cut into by the German lock, and round the sides the crucifixion and various saints. The figures show no attempt at grace or elaboration, no flowing lines of drapery, the outlines being stiff and hard lines of metal, each one being drawn as a child would draw them, but the beauty and the colour of this little casket are inexpressible. The ground is an intense blue, the figures being in various flat colours; the nude body of Christ is white, suggesting work of the twelfth century, which colour is repeated in some of the drapery; there are rich turquoise and

CRUCIFIX. LIMOGES. ELEVENTH CENTURY

greeny blues in the lid, and also a fine red. This casket stands in the midst of a case full of the ostentatious painted enamels of later Limoges work, and the severity of its lines, and purity and mellowness of its colours, make it to my mind far more attractive and precious than all the rest in the case put together. There is a fine plaque also shown near by, attributed to the Rhenish Byzantine school of the thirteenth century, of St. William between two monks. In the gallery upstairs is the case of work of this Rhenish school, very perfect and beautiful, of the twelfth and thirteenth centuries. Here is the large and imposing 'Soltikoff' reliquary, in the form of a Byzantine church, with its ivory and gold and precious stones, and pillars and sides of champlevé enamel work. It is suggested that cloisonné work was used in these enamels, as well as champlevé engraving, but a cursory glance does not reveal this peculiarity. This reliquary was made by Fredericus of St. Pantaleon, in Cologne, about 1170, and a similar shrine by the same hand is to be seen at Vienna. In this case also is the curious triptych from Alton Towers, which more than one writer has suggested to be of English workmanship, but which is now found to be from the workshop of Godefroid de Claire. Also the very beautiful crucifix with fine enamelled

plaques of the twelfth century, and other Rhenish work. In the splendid book recently published on German enamel work of the middle ages, by Otto von Falke and H. Frauberger, the greater part of the altar cross is said to have been made about 1165 in the workshop of Godefroid de Claire.

The champlevé enamel of mediæval times was used largely for heraldic purposes, for which it was most suitable; indeed there is no better medium for representing shields and armorial bearings than this opaque enamel work on engraved copper, which is satisfactory in every way for the purpose. In the gallery of South Kensington we have the beautiful 'De Valence' casket, covered with the armorial shields in diaper of England, Angoulème, Valence, the Earl of Pembroke, Dreux, and the Duke of Brittany and Brabant, probably made for William de Valence, half-brother of our Henry III., or for Aymer, his son. This casket is a square box raised on feet very simple in shape, the enamel being worked into the very thick copper slabs which form the sides and lid. I remember, a few years ago, a friend, being asked by some city guild or body to design them a presentation casket, drew one after this same simple but effectively handsome fashion. The venerable body being used to presenting to their

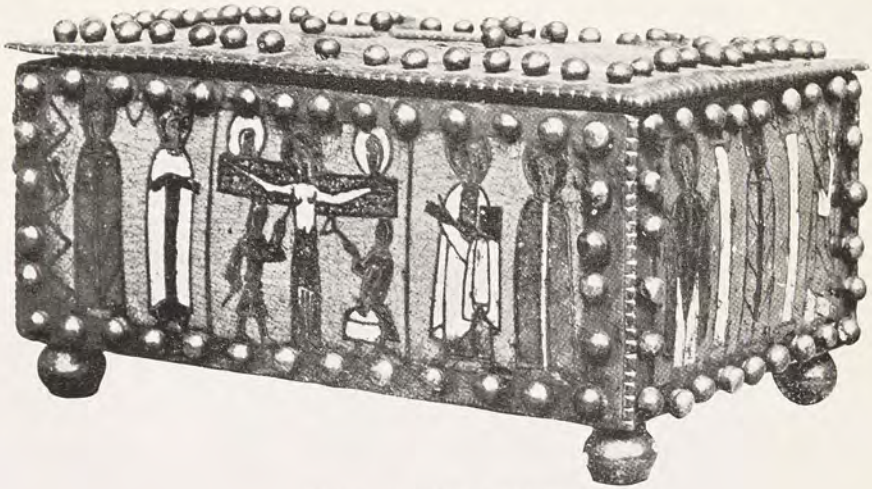
noble friends caskets of very different and elaborate appearance, were aghast at this novel idea. This a casket! it is only a box; we will have nothing to do with it. And they would not.

The name of De Valence reminds us that, besides having so much of this work in our collections, we have a real champlevé monument *in situ* in our own Westminster Abbey, in the tomb of William de Valence, who died in 1296.

In 1846, before Labarte wrote his handbook, Albert Way, the antiquary, read a paper before the London Archæological Institution, in which he tells us: 'About the year 1276, the enamel work of Limoges was so highly in repute in England, that an artist in that city, "Magister Johannes Limovicensis," was employed to construct the tomb and recumbent effigy of Walter de Merton Bishop of Rochester.' The monument was despoiled of its enamelled metal at the Reformation, but the accounts of the executors supply the items of expenses incurred in sending a messenger to Limoges, and conveying the tomb from thence, accompanied by Master John, to Rochester. It is supposed that the tomb of William de Valence, in Westminster Abbey, was executed by the same Master John, or others of his contemporaries, and though we should much like to claim, as has been done by some, that this work is English, it

is shown, both by its style and also by the above, to be in all likelihood work from Limoges.

Let us now walk through Westminster Abbey, through the ambulatory, where so many of our dead kings and queens of long ago lie buried. In a quiet chapel, heedlessly passed over by the crowds of gazers who throng in and out day by day, we find the still beautiful though sadly mutilated tomb of William de Valence, Earl of Pembroke. The tomb is of oak, and so also is the core of the recumbent figure, but all originally was covered with plates of copper, gilded and enriched by much work in enamel, gold, silver, and precious stones. These latter have long since disappeared, but enough enamel is left, noticeably on the pillow for the head, which is enamelled all over, to make this monument a study and a wonder to the modern worker in enamel. The fine De Valence shield is on the left side of the figure, a perfect and beautiful example of heraldic work in enamel, with its bars of azure and argent, and orle of martlets, gules. The tunic was originally 'powdered' with small shields, repeating the same device, of which, as far as can be seen, only one remains. We are told that the 'thirty small figures of mourners, richly decorated,' which once adorned the sides of the tomb, have long since disappeared. Some



CASKET. THIRTEENTH CENTURY.

time ago, on visiting this tomb, the old verger, whose seat was in the ambulatory close by, seeing we were interested, revealed to us beautiful little enamelled shields, hidden away under accumulations of dust at the back, on the part next the screen, and told us how, in the days of the vandals not so very long ago, many more were carried away from the front. The kindly dust saved those at the back, and they are as perfect as when they were placed there six hundred years ago. At the present day there is less dust, and what is left of the tomb is taken care of. A painting in the chapter-house, executed under the direction of the late Dean Stanley, gives us a representation of this tomb as restored; and in South Kensington Museum is a carefully constructed little model, made many years ago by Mr. Albert Way the antiquary, giving another representation of the De Valence tomb.

Across the ambulatory is the tomb of King Edward III., 1327-1377, father of the Black Prince, with some fine enamelled shields: four of these are very large, with the arms of England, the three lions on red, and fleur-de-lys on blue enamel on two of them, and the cross of St. George on the others; above are left four out of the six smaller shields which represented the children of Edward and his queen, Philippa.

These are beautiful specimens of champlevé enamel work, with that fine and princely red, which would be admirable for heraldic work to-day, as well as blue, white, and black, and it is surprising how fresh and well preserved they are. There is apparently no record of these as regards their workmanship; it is similar to that of Limoges, though, doubtless, we should all be glad if we could prove the shields to be English work, a claim which has already been made by one writer.

We read of traces of 'glass enamelling' on the tombs of Aymer de Valence, Edmund Crouchback, and also on the frontal of the original high-altar. Also that in 1774 the tomb of Edward I. was opened, and in the king's left hand there was found a rod surrounded by a dove and oak leaves in white and green enamel. We conclude this was left there when the tomb was securely sealed up, and that it will never be seen again. But these few shields, and the tomb of De Valence alone, are well worth visiting by all students of enamel work. One of the larger shields, with the English arms, is pictured in colour for the frontispiece of Mr. St. John Hope's *Notes on the Stall-Plates of the Knights of the Garter, at St. George's Chapel, Windsor*; and here we may touch on the subject of these stall-plates, the principal ones of

which are said to be of English enamel work. It is difficult to get a sight of the stall-plates in their position at Windsor, but that valuable and interesting book gives reproductions in colour of the fine enamelled ones, many of these being as early as the fourteenth century. The plate of one knight who was degraded in 1553 was taken down and broken, and it is now in the British Museum, greatly to the benefit of all students of heraldry or enamel. The Order of the Garter was founded in 1348, and we are told by Mr. St. John Hope that, in spite of their age and the risk of damage they have passed through in times gone by, these splendid examples of early English heraldry and enamel work are many of them still perfect. Some of the early plates have been roughly treated, broken, and what is almost worse in the case of enamelled objects, bent and pushed out of place, the enamel thus being made to fly off the copper, to make room for the inferior painted work of later days. Now, happily, interest has been aroused in these historical and national works of art, and more care is taken of them, and we may hope that on some not very distant day they may be placed in a more suitable position. It is interesting to read the notes on the enamel on these plates; evidently the enamellers were not perfectly skilled in their work. Often it is said that, owing

to incomplete fusion, the colours have a spotty or mottled appearance, or have turned semi-opaque and irregular. The reds in many are very fine, and the accidental effects frequently add beauty to the colour. Some appear to be more skilfully treated than others; some early ones are perfect on the surface, as well-wrought enamels should be from the beginning always; others are said to have been worked by untrained hands, the enamel of even some of the later ones being spotty or having flown off, or perished on the surface.

An illustration is given of the back of one plate which has been partly engraved for champlevé and never carried out, owing probably to some fault having been discovered in the design. This is of interest to the enameller, the metal being cut away, leaving bold lines standing up, plainly showing the fine simplicity which is a quality of nearly all in this magnificent collection of stall-plates, the colours being laid in broad flat masses, early heraldry allowing scope for great breadth of treatment.

Albert Way in his paper on enamelling, quoting from an old manuscript written when the Roll was taken of the inhabitants of Paris, A.D. 1292, mentions the names of gold-workers designated as Englishmen, or of London, and that of five enamellers then settled in Paris one was entered

THE "SOLTIKOFF" RELIQUARY. RHENISH, WITH CHAMPLEVÉ ENAMEL DECORATION. TWELFTH CENTURY

as 'Richardin l'esmailleur, de Londres.' So it seems there were enamellers settled in England at this time. Is it not possible that he and others with him may have introduced or taught working in enamel by the champlevé method in this country where enamelling was already not unknown, and that the stall-plates may be the results of the labours of his pupils or of his teaching, or that of his contemporaries? They are evidently, some of them at any rate, the work of inexperienced hands; the accidental effects mentioned in the book are more often probably the result of imperfectly prepared colours, as well as of insufficient firing, and also an imperfect knowledge both of applying the colours, and as one can see by the plate in the British Museum and two other heraldic plates there also, a thorough knowledge of polishing the surface finally had not been sufficiently acquired.

There is a beautiful plaque at South Kensington, heraldic, presumably a stall-plate, dated 1554, and with English inscription and the motto 'Espoir en Dieu,' in which apparently transparent blues and greens have been placed over white to gain brilliancy, red being the only opaque colour used. The engraving in all this English work is excellent, bold and strong, showing a masterly drawing. Regarding the enamels

from Limoges of the same period, we never hear complaints of insufficient firing, of imperfect colours, of incomplete or unskilful work in any way; indeed, too much facility and technical perfection led the way to their final downfall, while it is owing to the 'happy accidents' of the less skilled but enthusiastic workers on these English stall-plates that additional interest and beauty have frequently been brought.

We will now leave the opaque enamels to devote a short space to that class which we also include in this chapter, the translucent or transparent enamels on silver and gold. These are always small in size, and not many are left to us, the precious metal on which they were based having too often found its way to the melting-pot, to be refashioned into something new. On examining the examples we have before us, we feel satisfied that they are properly classed as champlevé, for, although appearing so different from the work in copper by their transparency, the gradual transition is readily followed, from the simple digging out of flat spaces in the metal and filling in with colour, to the final beauties of the work which was called by the French 'basse-taille,' and which was so admired by Cellini and the Italians.

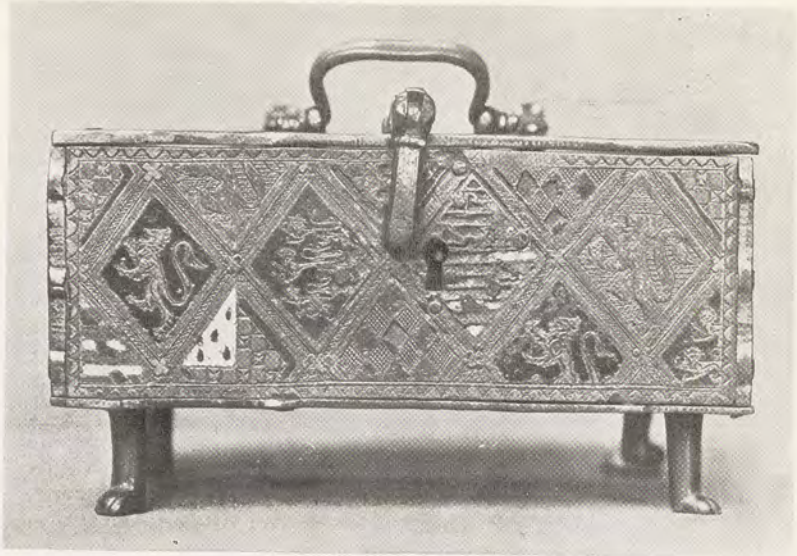
The museum at South Kensington is especially

rich in examples of this work, and there are specimens at the British Museum, some French and some Italian, of the fourteenth and fifteenth centuries. Occasionally niello is used for a background; one heraldic medallion on silver at the British Museum is Flemish of the seventeenth century. It would be useless to attempt to describe the varieties of the ways of working in this method. A case at South Kensington contains all stages of the transition, and they are all Italian of the fourteenth century. Some have tiny figures engraved in the flat silver, and merely the background cut away to receive the transparent enamel, which is always a bright cobalt blue; others have a diaper pattern behind the enamelled ground. Sometimes, when the artist grew more expert, the figure is engraved in relief out of the plain metal background and enamelled, and some have both background and figures engraved in relief and enamelled, which is the true basse-taille, or enamel over bas-relief.

As we said in Chapter II., silver is an unstable metal for receiving enamel, which often flies off, and very few old enamels on silver are now perfect. Among the treasures in silver from France and Italy of the fourteenth and fifteenth centuries, very many contain little engraved panels which originally were enamelled in translucent

colours. It is interesting to the student to see how shallow, and yet how true, is the engraved work where the enamel has flown off these. A remarkable collection of four or five very small and very brilliant triptychs, with panels of this style of enamel work, is to be seen in the gallery at South Kensington. The colouring is chiefly bright blue and green, some purple and yellow, and a little thin opaque red. In these examples the face or flesh is left in plain silver; the only example in the gallery of the flesh coloured over bas-relief is a German work of Mother and Child. Two at any rate of the five triptychs come from the same workshop, though all are labelled as of different origin. An attempt has been made to claim these as English work, and we should all be glad to call them so, but nothing seems to be known of their history, nor have we any other means by which we can prove it, and though they possess what are thought by some to be English characteristics, they are generally known as Italian.

Labarte gives a full account of these translucent enamels on relief as practised by the Italian goldsmith-painters, and as he says, 'they executed these so well that it needed a practised eye to distinguish them from true paintings in enamel,' and he quotes Vasari, who



THE "DE VALENCE" CASKET. LIMOGES. THIRTEENTH CENTURY

described this as 'a sort of work upon gold and silver commonly called enamel, which is a species of painting united with sculpture.' No other enamel work was known in Italy at this time, or if known, ignored; the 'stiffness' and technical limitations of the early mediæval enamels in opaque colouring on copper never seem to have met with acceptance in Italy, where, as Labarte tells us, 'the great artists who, during the second half of the thirteenth century, shook off the Byzantine yoke, had struck out into new paths.' Finding enamel suitable for decorating work in gold, they sought to employ it in some other manner. The time was one of great luxury and ostentation, hence gold and silver were largely used in all church work and in the houses of noblemen. Domestic vessels and other objects were made of the precious metals only; transparent coloured enamels were therefore used by the skilful hands of the Italian craftsmen, the figures being drawn naturally, as they so well could. Gradually the art was perfected until we find in the fourteenth century the most exquisite work was produced, wonderfully thin plates of gold and silver being used, as the engraving was extremely shallow.

Cellini fully described this method of enamelling, and he considered it the only true way. He

held that the bas-relief should be made no deeper than the thickness of two ordinary sheets of paper, and this should be cut with very sharp tools, especially over all the outlines. The folds of light stuffs on the figures must be well and clearly engraved to suggest drapery. Little designs and flowers on this make an appearance of damask, and help to hold the enamel in its place. The beauty of the work, he said, depends on the sharpness of this chiselling and its cleanness, and the more care there is bestowed upon it, the better the result will be.

He then proceeds to give a detailed account of how to colour the relief with perfectly prepared transparent colours, firing the whole with the greatest care, and how to rub down and polish the whole by hand with stones of various textures, but mostly with what he calls 'frasinella.'

Besides the small and valuable collections of this work on silver, we have in England a great historical treasure, with fine work in enamel on gold executed in this method, in the 'St. Agnes' Cup, or the Golden Cup of the kings of England and France, at one time in the Royal Treasury of this country. This wonderful cup has undergone much wandering and many vicissitudes during its long life. Where and when it was made we do not know. History tells us it was

THE GOLD CUP OF THE KINGS OF ENGLAND AND FRANCE, CALLED THE ST. AGNES CUP. WITH BANDS OF BASSETAILLE ENAMEL

given to Charles VI. of France in 1391 by his uncle, Jean Duc de Berry, and was afterwards in the possession of the kings of England, from Henry VI. to James I., who gave it in 1604 to the Constable of Castile. Being put up for sale in 1892, it was purchased by subscription for the nation, and is now placed in the Gold Room at the British Museum.

The cup itself is of simple form, with lid enamelled both inside and outside, not all over but in effective spaces; it has been added to, and very likely renovated, at various times. The boss at the top is missing and also work round the edge of the lid, but in spite of all this the shape of the cup, with the exquisite enamel work, the band round the body of figures with the scenes of St. Agnes's life, the emblems of the Evangelists round the base and on the lid, all combine to the perfecting of the beauty of a treasure lovely in every respect, and show also great judgment and taste in the way in which they are placed on the cup. The colouring is rich and glowing with ruby reds, deep blue, grey, brownish purple and green, and the engraving of the faces and hands is covered with an almost clear flux which is not lilac nor yet brown, but almost the same colour as the 'rose chair' of the modern French, which over gold is

not red at all. At each visit to this cup its beauty strikes us afresh, above all the simplicity of its shape and the judicious arrangement of bands and masses of enamel on the flat face of glowing gold, as well as the fine workmanship.

In one part where the enamel has been knocked off, it is most interesting to examine the engraving of the figures, which is wonderfully flat and shallow and simple; the enamel colour brings these out and perfects them to a most unexpected depth and variety of light and shade. So fine are the shadows that one might be tempted to think a brush must have been used to help them, which, of course, is only the skilfulness of the engraving. From the position of the cup in its place in the Gold Room—which is high, so as to show as much of it in as good a light as can be had—it is not possible to examine the enamel very minutely. It is unlike any other work we possess in both design and workmanship, and we can only hope that some records may eventually be found giving some clue to the origin and nationality of this fine cup.

One work of alleged English origin in this style is the Lynn Cup, the property of the ancient borough of King's Lynn in Norfolk. This is a covered cup, largely ornamented with figures in Early English costume of the time of Edward III.

whose tomb in Westminster Abbey we mentioned earlier in this chapter as bearing the fine enamelled shields. This cup, being silver, is enamelled with translucent colours. It is said to be the oldest piece of corporation plate in the country, but, we are told, is very largely restored. A coloured illustration of this is given in Traill's *Social England.*

Various other examples of this translucent enamel work in silver or gold are to be found up and down the country, on many of the fine old cups possessed by our colleges and other ancient bodies; on croziers, notably that of William of Wykeham, now at Oxford; and a fine specimen is the enamel work on the silver bands on the ivory 'Bruce horn,' which is supposed to have been made for the first Earl of Moray, who died in 1332.

It is a great step from the delicate, jewel-like qualities of the class of work of which we have been speaking, the St. Agnes Cup and others, to the last kind which comes into this chapter—the English enamels on cast and engraved brass of the Tudor and Jacobean times. No history has been written about these handsome firedogs, vases, candlesticks, and heraldic medallions—they were mentioned by neither Albert Way nor Labarte—but to English students especially they

are important. The opaque colours used, blue, white, yellow, green, red, black, were extremely coarse and rough, but they seem suitable enough on the brass work in which they are placed, and possess their own especial beauty. Examples are in both the British and South Kensington Museums, and also in the collections of Sir Samuel Montagu, Bart., M.P.; Mr. Stopford Sackville, and others. A pair of altar vases very similar to some at South Kensington are in Hackness Church, near Scarborough; some in a Lincolnshire village church, and probably others are to be found. At the exhibition of European enamels at the Burlington Fine Arts Club in 1897, a fine collection of these enamels was shown. They are supposed to have been made somewhere in the Midlands. It has been claimed that these enamels on brass were a revival of the early British work on bronze, but those were immensely superior to the Tudor enamels, or perhaps they would not have stood so well the battering of time, their colours especially being more carefully composed and prepared.

ENAMELLED BRASS ANDIRON OR FIREDOG. ENGLISH.
SEVENTEENTH CENTURY

CHAPTER IV

PAINTED ENAMELS

'To-day's brief passion limits their range,
It seethes with the morrow for us and more.
They are perfect—how else? they shall never change:
We are faulty—why not? we have time in store.
The Artificer's hand is not arrested
With us—we are rough-hewn, no-wise polished:
They stand for our copy, and, once invested
With all they can teach, we shall see them abolished.

'Tis a life-long toil till our lump be leaven—
The better! what 's come to perfection perishes.
Things learned on earth, we shall practise in heaven.
Works done less rapidly, Art most cherishes.'

R. BROWNING, *Old Pictures in Florence.*

WE now come to that class of enamel work, the painted or 'applied' order, which Labarte considers to be the true method of painting in enamel, and which is so largely represented by the later school of Limoges of the sixteenth and also the seventeeth centuries. The word 'painted' is in a measure misleading,

as the enamel colours are by no means painted in the same way as the colours of oil, water-colour or tempera painting, with a brush, but applied grain by grain in layers, one layer being fused on over another; though we shall see, as we follow the course of the development of this school, that the brilliancy of colouring of the earlier examples gave place later to a mere show of dexterity in the painting of white, which is actual brush work, as is also the gold outlining and occasional touches of black, red, or brown. The result aimed at by these later enamel painters was certainly to make a picture with effects of light and shade as completely realistic as any work in the more usual mediums. This has been considered by many writers and connoisseurs as the culminating point of perfection which can be reached in the whole history of the art of enamelling. If we look upon the great technical dexterity, combined with the skill and knowledge of drawing shown in many of these works, one may not wonder at this, though there are some who look for other and more subtle qualities that the older enamel work possessed, and which do not exist in these later ones. The work of the Renaissance does not give us the simple-minded love of beauty, the mediæval unconsciousness, the reverence, of the

early workers, guided as these so continually were by the all-ruling hand of the Church; but instead we find a conscious glory in producing clever work, more in effects of light and shade and in correct drawing than in the pure and beautiful colour of the earlier time.

There are now no dividing lines of metal, no wires or filigree, or champlevé engraved cells for the enamel colours, which fixed limitations both in outline, colour, and subject; but here the whole surface of the metal ground, which is generally copper, or, as in the latest period, sometimes gold, is to be covered over with enamel as you will, with any subject and with what colours you may choose. Though, again, even in this freest and least law-bound kind of enamelling, there are still limitations. The metal ground, unless it be pure gold over which the enamel is placed, is not a clear sheet for colour as is the paper in water-colour or the canvas in oil-painting. Many of the transparent colours will not fire clearly over this, but appear discoloured by oxidisation in one form or another, and even if clear in the first firing, several colours are liable to oxidise in subsequent ones. The enamellers of Limoges found this out, no doubt, and that is why so very few of their productions are enamelled over the clear metallic

ground, but are coloured with transparent enamel over white or foil. Any student who makes a study of this, both by practical experience and also by examining the painted enamels of the sixteenth century, will find it to be so, but this is one of the limitations of enamelling of which it is impossible to be rid of.

It seems but a step in natural evolution from the transparent enamels over delicate engravings on gold or silver of the basse-taille process, where the art of engraving had so much say in the matter, to those where the enameller had the whole affair in his own hands, free to do as he wished so far as his medium would let him. To obtain brilliancy of colour he had simply to lay in flat 'paillons' of gold or silver on which he could paint the shadows and then colour them in various tones, or paint with his brush the white, modelling this thickly in his high lights, or leaving it thin where the shadows come, and afterwards overlaying colour or leaving the work in monochrome as in the case of the 'grisaille' enamels. There is a feeling of great freedom from technical restraint when it is realised that we can obtain unmeasured elaboration of realism, and, if we choose, as small and fine as work in miniature, and paint life-like portraits, colour rich garments, or trace scenes with many figures

in enamel all on one piece of metal, without calling in the help of the engraver. The enamel painters of the sixteenth century gloried in it to the full. The process suited well the times in which they worked. I suppose it is a matter of temperament as well as of personal taste which we prefer—the abundant overflowing power and realism as shown in the enamel paintings of the later Limoges school, which represents so well the spirit of the Renaissance; or the more conventional, stilted, and at the same time more serious and thoughtful work of mediæval times as we see in the cloisonné and champlevé enamels. Limitations in art, as we know, have often the happiest result, while mere skill and freedom from restraint easily run riot. This reminds me of a saying of the late Sir E. Burne-Jones which seems appropriate here. Speaking of stained glass and how people expect a picture instead of a glass cartoon—'It is a very limited art,' he said, 'and its limitations are its strength and *compel* simplicity.' This is applicable to many things, and of enamel work it is especially true.

Most of the work of the modern 'Renaissance' is executed in this way; it is 'painting' in enamel which is taught in the enamelling classes at our Art Schools as a rule, for in some ways, being so independent of engraving and kindred fine work

in metal, which are necessary to champlevé and cloisonné, it is the easiest and simplest kind of enamel work to teach the beginner or amateur, the actual metal-work connected with it being so slight. At the same time, I would still impress upon my readers that even in these applied or painted enamels, the enamel is still the hand-maiden of metal-work. True, the later Limoges painters made pictures in enamel which were sometimes set as panels in caskets or even frames of wood or ivory, but enamels never seem really at home in these settings of other material than metal, and seem to lose their especial need for existence when so placed. Here we do not include the *core* of wood overlaid with plates of enamelled metal which were used both by the Byzantine workers on gold, and the mediæval on copper, in crosses, reliquaries, croziers, and other things. As we all know, a very great many objects of metal, dishes, tazzas, bowls, salt-cellars, and other things, were constructed of copper, and afterwards enamelled entirely all over and on both sides by the enamel painters of Limoges. In these the building of the metal required much skilful manipulation by the coppersmith before the enameller touched it, and although we may not always approve the taste shown in these last, we can at least admire and envy the wonder-

SIDE PANELS OF A TRIPTYCH BY NARDON PENICAUD

ful skill which produced so good a result in this rather difficult and uncertain medium, which vied with oil and water-colour painting in producing elaborate pictures.

Though painted enamels have been carried out in Italy and Germany, and specimens of these are occasionally met with, they are but few in number and as a rule inferior in execution, and also later in date than the early work in the same manner done by what is generally called the later Limoges school, to distinguish it from the work on champlevé copper done there in the middle ages. As we have seen, that school came to an end at the close of the fourteenth century. Labarte mentions a painted enamel belonging to the Abbé Texier, of St. Christopher, which is the earliest known example of this kind of work, and he considered that some of the effects produced by glass painters suggested a new style to enamellers. Very little work is known to us of this period, and not till towards the end of the fifteenth century do we find much painted work carried on, many of the principal glass painters of this time being also workers in enamel.

The early enamels were generally on thick plates of copper very slightly raised towards the centre, the 'backing' on the back of the copper being of considerable body and frequently opaque,

this strengthening the whole and preventing the picture in front from cracking, or worse, in the cooling. One modern writer on enamel goes so far as to say you can recognise the artist by the sort of enamel used in the backing. Thus you can identify the Pénicaud family by the colourless glaze they used, and possibly with reason, as they had a stamp for the back of their work which would be more clearly seen through a colourless glaze. Jean Courteys used a peculiar red colour; Pierre Raymond, yellow; one of the Laudins of later times, blue, another violet, and one very late in the seventeenth century used always pink backing. I do not find any other writer referring to this, and as it is the front and not the back of the enamel that we generally see, we will pass this over lightly. Many are not signed at all, and others bear unknown initials, but one can frequently recognise the school or style to which these belonged.

The late Sir A. W. Franks, in his paper on vitreous enamels, divides the work of the enamel painters of Limoges into four classes:—

1. The early style about 1475-1530.
2. ,, fine ,, ,, 1530-1580.
3. ,, minute ,, ,, 1580-1630.
4. ,, Decadence, to the close of the manufactory in the eighteenth century.

For convenience we will follow this classification, remembering that much of the work is unsigned, some of the best bearing no name. Labarte tells us that the Limousin artists, simple and unpretending artisans, are scarcely known except in their works, and only a few of the more celebrated names have been transmitted to us. Of all four divisions, the earlier style appeals to me as being by far the most beautiful and interesting, the work of the school of Nardon Pénicaud, who lived and worked in the earliest years of the sixteenth century. These enamels are executed with much painting in white over a brown ground, which, when the white is thin, makes shade; where left out, makes dark outlines. The flesh, faces, and hands have a peculiar and unpleasant purplish shade, being painted over, I fancy, on the surface with thin colour to lower the otherwise too staring whites, and not merely being the shade of the brown ground showing through. The types are decidedly Flemish. But the colouring of these enamels is splendid, and we soon forget the convention of the flesh-tints in the rich and varied blues, cobalts, and turquoises, purples, greens, yellows, and browns, so brilliant, so beautifully light, in flat harmonious masses of the figure subjects, generally scriptural, such as these earlier enamel painters knew so well how to

reproduce. Their work was usually for the ornamentation of triptychs, or to be placed on altars, and this lovely work would doubtless glow in patches of bright colour, even as the stained-glass windows above, which were often by the same hand, and had the light of heaven to shine through them, and not merely the white of enamel paint.

Though in some ways the treatment of these enamels may be elementary, it seems to me that this management of light and bright colour is exceedingly skilful, making the work much more attractive than the later enamel paintings, in which all the light of the background has been sacrificed. Foil is but seldom used in this early work except under little raised jewels of all colours. Fine examples are to be seen both at the British and South Kensington Museums, and also in Mr. Pierpont Morgan's collection. The most beautiful is in the Salting collection at South Kensington, a crucifixion dated 1500, very perfect and lovely in colour. That in the British Museum is dulled or bloomed over the surface, though perhaps a good rub would bring out its freshness again.

In the Salting collection, also, is an enamel entirely over foil, attributed to Nardon Pénicaud, which in its position in the case looks thin and garish. Placed higher, this would, no doubt,

PORTION OF A VOTIVE PICTURE IN ENAMEL,
WITH PORTRAIT OF KING FRANCIS.
BY LEONARD LIMOUSIN

appear richer and fuller in colour, and it is interesting to compare work by the same hand coloured over white.

One of the earliest painted enamels we have is inserted in a little Pax engraved in curious work of embroidery, beads, and pearls, of the seventeenth century, in South Kensington. The enamel, a dead Christ supported by the Virgin, is dated 1490, and is apparently of the school of Nardon Pénicaud, though inferior to those signed by him. Two very beautiful enamels of this period, though much more approaching grisaille, or work in monochrome or uncoloured white painting, are in the same gallery, dated 1520 and 1530, with finely painted drapery. The high lights in these, however, are too 'chalky' to be pleasant, and give nothing like the flat, bright colouring of Nardon Pénicaud. There are two examples, a triptych and a plaque, of early painted enamels in the collection of Mr. Pierpont Morgan at South Kensington, that are now attributed to one Mouvearni, who is mentioned by Labarte as one of the earliest enamel painters, but about whom very little is known. He is supposed to have lived in the fifteenth century and produced a considerable amount of work. The triptych, which is very fine, depicts the Last Judgment, with Christ in majesty and attendant Saints, and

the dead underneath, little nude figures tinted grey, one apparently a cardinal with a large red hat, another in a bishop's mitre, rising from their graves. All are strongly drawn, and the colour is good, with a fine blue background. The side panels give the saved shown into Paradise by St. Peter, and demons taking the lost to hell. The plaque is inferior; it has probably been spoiled by bad restoration, though, as Labarte says, the work of Mouvearni is very unequal in quality.

2. *The Fine Style of Limoges Painting.*

About this time a great advance was made in drawing, probably through Italian influences. Sir A. W. Franks lays great stress on the fine glaze and finishing of the enamels of this period. At this time painting in 'grisaille' became common. By that is meant painting in monochrome in enamel, the lights being worked up in successive stages on a dark ground, the whole of the actual painting being done in white paint. No colour was used in these excepting perhaps a very thin flesh tint; the rest is entirely in monochrome.

We now come to Léonard, considered the greatest enamel painter, called also Limousin, which name was bestowed on him by King

Francis I. to distinguish him from Leonardo da Vinci: he worked from 1532-74, and painted many things in a vigorous manner, cups, bowls, vases, dishes, plaques, in fine bold designs, sometimes with scriptural subjects and others, frequently adapting drawings by Raphael and the great painters. Léonard was for long considered the founder of the school of enamel painting, before its genealogy became more known; but he was in reality only head director of the royal manufactory founded by Francis. He worked in various methods, but is always broad in treatment, as may be seen in our collections as well as in the Louvre and elsewhere. Some in very light tints over white appear like majolica, and were presumably the origin of enamelling on a white ground of a later day; much work in grisaille bears his signature, subjects of all sorts in colour and elaborate borders for his frames. The twelve plaques of the Sibyls in the British Museum are by this artist, good technically, but calling for no remark; but Léonard Limousin is best known for his magnificent portraits of the French nobility of his time, from the well known profile of King Francis downwards. Sometimes these are very large, and in frames enriched with bosses enamelled in a bold and free manner with figures, heads, masks, and cupids often in

grisaille, which show that the master had all the ways of the craft at his finger-tips. An opaque Venetian red is sometimes used as in the portrait of Charles de Guise, Cardinal of Lorraine, at South Kensington. There are several of these portraits in the enamel gallery, notably that of the white-bearded Jacques Galiot de Genouilhac, master of artillery to Francis I., and some in the Pierpont Morgan and Salting collections, and also in the Wallace collection at Hertford House. They are in the style of Holbein, clean-cut and flat, and one would imagine them to be excellent likenesses. They are usually on a dark-blue ground over white or purple, appearing black; this latter colour is generally used for coats, hats, and hair, being touched up with fine gold lines afterwards. Léonard evidently had a knowledge of over-glaze colours, which really belongs more to porcelain-painting, as his faces are frequently coloured with these over enamel.

When speaking of portraits in enamel, mention might be made of the four little medallions in the British Museum, which have portrait heads, and are North Italian of about 1480. These are on copper, and the rich red ground is over gold foil. The faces, hair, and shoulders are in white over blue and untinted, the hair finely worked with gold lines. These heads are

ENAMELLED PORTRIAT OF CHARLES DE GUISE IN ENAMELLED FRAME. BY LEONARD LIMOUSIN

excellently painted and well drawn and have much spirit and life, and, excepting the blue shade of the faces, which is not so unpleasant as it might be, and could easily have been altered, the manner of them seems an excellent way of treating portraiture in enamel. No china paints or over-glaze colours have been used; all is straightforward and honest enamel work.

What shall we say of the crowd of enamellers who arose about the time of which we are speaking, and their endless productions, their jugs, dishes, bowls, plates, with feasts of the gods, the story of Psyche, and many and various representations of mythological personages and assemblies, as well as scriptural scenes? The work of this period is indeed much alike in its great dexterity, its flesh-tints, its frequent use of patches of foil, and its colouring in blue, purple, and green. Pierre Raymond, that industrious worker in grisaille and colour too, worked now, and so did the four Pénicauds, some of whom did most excellent and beautiful work in both grisaille and colour. Pierre and Jean Courtois belonged to this period: Pierre, 1530-1568, who painted the largest plaques ever known, five and a half feet high, for the king of France; and Jean, most prolific of all, known by his salmon-coloured flesh-tints and his use of brilliant colour over paillons. Also Jean Court 'dit Vigier,'

who worked mostly in grisaille, the flesh being delicately tinted. Parts of a casket in the British Museum with much of a strong green colour over white, and many figures, bear the inscription 'à Lymoges par Jehan Court dit Vigier, 1555.' Also work by Martin Didier, signed curiously M. D. Pape, royal enameller from 1574-1609.

In the work of all these artists in enamel, and of many others unnamed or unknown, to be seen in many collections, the great skill in working in white is noticeable; combined with fair drawing this may be taken as a criterion of good workmanship.

To obtain a rounded effect with the high lights in an even mass of white, shading smoothly into the deepest shadow, with accompanying good drawing and a glassy surface in firing, is certainly an engrossing labour, and the ambition to do this perfectly took hold of the Limoges painters of this time and eventually carried them too far, to the great loss of the more valuable qualities of the work.

Excellent painting in white is to be seen in the work of Jean Pénicaud II., notably in the little scenes from the set giving the life of Christ, in South Kensington Museum. The drapery of the angel in the Annunciation and the tablecloth in the Last Supper especially deserve notice. Also

in the British Museum is a small and interesting unsigned plaque, of the marriage of Louis XIII. with Anne of Austria, reminding us of the casket by Jean Limousin of which we shall speak later, the white drapery of the angel being extremely good. Even the best of these enamels have flaws and cracks and 'blebs' which came, not with age, but in the firing, and which it is quite satisfactory to see, showing that so long as such defects were not too bad, they did not interfere with the beauty of the work, but were considered of no account, especially by those who worked in the broader and larger style as did Léonard Limousin; though the *surface* of the enamel must have been a strong point with most of these artists—that in the painted white is usually wonderfully bright and perfect. The high lights and hair of the figures are nearly always enriched with fine lines of gold drawn on the surface with pen or brush.

There is some very beautiful work, unsigned, of this period in which comparatively little white has been used. Of this kind are the small plaques of the months represented by country scenes, very bright and dainty. Two are in the British Museum and three in the Pierpont Morgan collection at South Kensington. Warm colours suitable for their clearness are on the copper ground, probably over clear flux, the little figures

alone being in white, partially coloured. They are excellently well drawn and tinted, and their fresh, pure colours are a relief after the endless black and white tones of the grisaille paintings. Two larger plaques in the gallery at South Kensington giving scenes in the life of Æneas are of somewhat similar workmanship, though they more resemble some early illuminated manuscripts. One can imagine that the enameller for once was determined to get away from the everlasting blues and cold greens, however beautiful these might be, and he gives us here clear browns and yellows, a warm grey and bronze green, the little figures warm in tone and enriched with gold, the whole being mellow, partly with the scheme of colour, and partly also the golden colour of the copper shining through the clear enamel.

3. *The Minute Style.*

Jean Courtois, it is thought, originally influenced the school which makes the third division, and whose work is, as a rule, easily distinguishable. Its chief craftsman is generally acknowledged to be Jean Limousin, usually understood to be the son or descendant of the great Léonard. As the father stood at the head of the enamellers of the sixteenth century, so does Jean of those of the seventeenth. Two fine salt-cellars by him,

TAZZA ENAMELLED IN GRISAILLE BY JEAN PENICAUD III

representative of this school, depict Roman deities on a black ground, with much small ornament in colour over foil, enriched with gold lines, and a large plaque of the Crucifixion, which is more ambitious and contains fine colour, but is harsh and overdone in places. There is also a beautiful casket at South Kensington, made for Anne of Austria, and covered with large plaques of enamel, signed by Jean Limousin. On it are little figures, clothed in gay raiment, dancing in a row amid butterflies and birds on a lilac-blue background in the front, and at the back a royal monogram, a double A 'powdered' over a blue ground, with three long panels of mythological subjects on the sloping lid, and pictures representing Asia and Africa in enamel at the ends, copied from engravings of the period, with cherubs' heads at the feet. This fine casket is certainly one of the greatest treasures of our national collection.

Besides Jean there were others of the Limousin family, Léonard II., Joseph, and François; their work is of the same character, though varying in quality. Like most of the enamellers of the time, they usually took their designs from well-known engravings, in this case generally from the prints of Etienne de Laune.

Susanne Court, supposed to have been a

relative of Jean Court, belongs to this school, and much of her work is to be seen in this country, especially in the collection of the late Baron F. Rothschild, now in the British Museum. Her work is feeble and small in execution, the flesh-tints standing out sharply from a strong green, blue, and purple background. The drawing is weak, and much foil is used. Susanne Court also copied from Etienne de Laune, and worked up to a minute finish. She must have been a diligent person, judging by the amount of her signed works to be seen in this country alone. Many other enamellers of this time left similar work; chief of these stands Jean Raymond, whose work was considerably above the average in quality.

4. *The Decadence.*

Enamelling as a really fine art at Limoges began to die out about 1610. It was continued by many for years after this, but the work, though occasionally excellent, does not as a rule call for notice. Colin, Isaac Martin, Poncet, the Laudin and the Noalher family, are a few among many names one meets with as carrying on enamel work at this time, but by far the best of all these was Jean Laudin, who produced much work, some in colour, but the most part in grisaille.

Toutin, a goldsmith and skilful enameller,

ENAMELLED COFFRET OF ANNE OF AUSTRIA. BY JEAN LIMOUSIN

about 1632 introduced painting in enamel on gold and had many imitators. Labarte credits him with the discovery of vitrifiable colours that could be used in the same manner as ordinary water-colours. This minute work in gold was taken up everywhere in place of the enamel paintings of Limoges, which had by now almost entirely fallen into neglect. Gribelin the painter worked with Toutin, Morlière, Vauquer of Blois; Chartier of that town also painted flowers in this method. Petitot of Geneva and Bordier worked together, settling for a time in England under Charles I., afterwards in France, where they were honoured by Louis XIV. Their work at its best is very exquisite and graceful. The work of these and of Toutin is to be seen in the many watch-cases and trinkets of the period. Among the Dutch and German watches in the British Museum are several enamelled plaques of this school. The painting is dainty and delicate, but the designs frequently foolish and insipid, and the drawing feeble.

These paintings, beyond their being executed on an enamel ground which has been fired on metal, belong more to the school of china painting than to actual enamel. The colours do not contain enough of the elements of true enamel, as can be seen by the rough and unglazed surface

of many examples, though the clever French painters knew how to conceal this by a variety of means.

The snuff-boxes on gold of this time, which are held in so great esteem by collectors, often richly jewelled, and giving opportunity for exquisite goldsmith's work, are sometimes ornamented with transparent champlevé enamel which is plain and easy to see, but the little pictures of shepherds and shepherdesses, the portraits, flowers and fruits, the gods and goddesses, and landscapes, the simpering ladies, which look out from these treasures may be called enamels insomuch as they are painted and fired on to an enamel ground; but we can in nowise class them with the earlier work, the champlevé or cloisonné enamels of the middle ages, nor even do they as enamels deserve the respect that we may bestow on the painted productions of Limoges.

Much the same may be said of our Battersea, Bilston, and Liverpool work on copper; of the bowls and vases, cups and saucers, patch and snuff-boxes which were made rather later, about the second half of the eighteenth century. The metal-work of these is extremely dainty, and calls for the highest praise; and the simple little boxes and vinaigrettes with their lids fitting so neatly and well, enamelled all over with white, blue, or

TEA CADDY. BATTERSEA ENAMEL

other light opaque colour, with just a little motto or small design painted on, are very charming, but do not rank high as works of art in enamel, and those which are printed from engravings still less so. Only a little is known of these English enamel factories, and although the work produced by them is now sought after, in their day they had very little success and soon came to an end.

The Germans produced similar work, rather more elaborate, on powder-flasks, knife and pencil cases, and many little boxes. Russian painted enamel work, too, but on a larger scale, was executed as early as the seventeenth century. In the British Museum are bowls used for ecclesiastical purposes of this period, painted in designs almost Oriental in character, and reminding us of the large Armenian tray, placed among Chinese enamels, referred to in the chapter on Oriental work. Much also was done in Spain, and in other European countries, but it was in France that this miniature painting on enamel continued for so long a time.

CHAPTER V

ORIENTAL ENAMELS

'"'There is also cheap cloisonné to be bought," said the manager with a smile. "We cannot make that."

'I respected him for saying "cannot" instead of "do not." There spoke the artist.'

RUDYARD KIPLING, *From Sea to Sea.*

ON the enamels of the East we can touch but lightly. Covering as they do so wide an area, of many nationalities and of so great diversity in both method and character, they would require much more space and thought than we can give them, and this chapter must not be considered in any way complete or final, but only as referring to some of the points of interest connected with Oriental work which have come before our notice, more especially of that of Persia, India, China, and Japan.

It is a far cry from the enamels of our Western world, the better part of which work was carried out so largely under the influence and for the use of its Christian Church, during what we call

mediæval times, to that of the distant countries of Asia, till recently comparatively unknown to us, but nevertheless rich in work of many arts; and among these enamelling, the 'master craft of the world,' as Sir George Birdwood calls it, stands one of the foremost.

In India and China, both in the prolific eighteenth and nineteenth centuries, and also in the centuries before, enamels are known to have been made. The work of both countries is said to have been influenced by Persian art, but, although we may fancy we can trace this in their earlier productions, there is very little or no resemblance at all between Indian and Chinese work itself, and the Persian origin is now disputed, especially in the case of India.

It is curious that, although every one seems to have a dim idea that the whole art of enamelling is of ancient Asiatic origin, the examples of really old work from that part of the world, as far as we stay-at-home people can gather, are few, compared with the ancient examples from the Western world. Possibly this may appear so to us more on account of the remoteness of these lands than for any other and truer reason, yet the world grows smaller every year by the ever-increasing intercourse of countries far distant from one another, and eventually, before long, much more will

doubtless be known about the arts of many countries concerning which we are still profoundly ignorant.

Labarte tells us that the art of enamelling was practised in Persia as early as 531-579 A.D. under Chosroes, and mentions a fine cup in the Imperial Library at Paris, which is formed of compartments of gold enriched with translucent cloisonné enamels, and containing an effigy of that prince himself in work of his time. One feels that this statement must be accepted with caution.

It is known that Chardin visited Persia several times, and stayed there during portions of the years 1644-1678, and he tells how the arms and armour of the Persians were then, as now, enriched with enamel work. In our principal museums are many specimens of arms embellished with plates and bands of this fine Persian enamel of the best kind, as well as examples of the eighteenth century and later, but of the very early work I know no example in this country. This work is champlevé, or has at least its enamelled ground laid in incised spaces in the metal, but is only occasionally transparent. Jewel-like brilliancy of glowing colour in this work is all but unknown, the ground is always white, the design being painted on this in thin colour with the

brush, after the manner of the later French enamel painters, or our own Battersea work. Indeed this method has undoubtedly been brought from Persia by Chardin, or others in his time, to France, and thence to England.

The design is often elaborately worked with highly finished and realistic flowers and birds; the better ones of these are sometimes beautifully executed, though in a 'finicking' manner, which may not appeal to our taste, so used to broader treatment. On a gold plate in the Indian Museum some of this bird and flower painting on white is to be seen; it is dated 1817. A little translucent green among the painting of this example gives brilliance; the enamel is curiously varnished, making it appear almost like miniature work in oil or water-colour. Flowers of all shapes and hues, and many-coloured birds, are depicted so faithfully and minutely that one can but admire the skill with which they are done. In the centre of the plate is a curious design of a Persian lady and a lion, with the sun behind, much inferior to the rest. Roses, pinks—blue, red, yellow—and lilac blossoms highly shaded and intense in colour, miniature birds and animals of all sorts intermingle with the flowers on a white ground sometimes coloured pink, so strong in tone, one might think the effect would be unpleasantly

'spotty' and startling, though this Persian painted enamel work looks wonderfully well in many instances, particularly on the guns and sword-cases it is frequently used to ornament. Sometimes figures and portraits appear in surprisingly modern European costume, possibly signifying some historical fact with which I am unacquainted, and also we often find the 'houris,' with their large and languishing eyes, simpering on beds of fat pink roses. These belong to the early part of the nineteenth century, and, absurd though it may seem, remind us continually of a certain type of beauty of the early Victorian time, of the days when *Lalla Rookh* was written, which type is seen in all pictures where ladies and gentlemen walk about the Great Exhibition of 1851.

Ancient history tells us how the large and important country of Armenia, which adjoins Persia, was at one time under the dominion of the Medes and Persians, until conquered by Alexander the Great, and later by the Romans. The country, we are told, received its name from Armenus, one of the Argonauts, a Thessalian. In a case of Chinese enamels, at South Kensington, is a very large tray dated as of late eighteenth-century work, and labelled Persian. In the centre of this is an inscription in Armenian which gives the date of its execution, and says also that it was made

to the order of an Armenian prince. This tray came from Ispahan, and it has been suggested by Major R. Murdoch Smith, in *Persian Art*, that it may have been made by an Armenian in a certain colony of Julfa, which was established by the great Shah Abbas early in the seventeenth century, mainly to bring before his own people the knowledge of the arts of the Armenians. It is enamelled white all over, and painted in floral designs on both sides, not especially Persian in character, the colour being of a lighter tone, and the work freer and less 'tight.' The pattern has cracked, possibly in firing, but the size of the tray must have rendered this process extremely difficult.

Although this tray is of so late a date, it is curious and interesting when we consider the early relationship of Armenia with Persia. Its connection with ancient Thessaly might lead to useful conjectures regarding the origin of the arts of the country: that the tray has been placed with Chinese enamels may have no significance on this point, though the workmanship slightly resembles that of some of the distinctly Chinese enamels in the same case.

Representative Indian work, wherever it sprang from, and under whatever influence, is not like any other enamel in the world, and has a beauty

all its own. Dr. Hendley, secretary and chairman of the Jeypore Exhibition held in 1883, whose excellent article on enamelling in the *Journal of Indian Art* is well worth reading by all students of Indian life and arts, combats the idea of the Persian origin of the work, and claims for the enamels of Europe, as well as of India, a Turanian origin, that is, coming from Scythia, a province of Central Asia. He describes the earliest known example of Indian enamel work, the crutch staff of Man Singh, Maharajah of Jeypore, in Rajpootana, upon which he leaned when before his sovereign, being one of the chiefs of the Court of Akbar at the end of the sixteenth century, and himself coming from the northern provinces. This chief introduced various arts of the north into Jeypore, and from Lahore he also brought five Sikh enamellers or *minakari*, and to this day the principal enamellers of Jeypore are the lineal descendants of these. Dr. Hendley insists that the character of the early Jeypore enamels is Turanian, and not Persian. Speaking of the staff, he says: 'We must also remember that the owner of this most venerable piece of enamel was one of the pillars of a true Turanian sovereign, a most munificent patron of the arts, alike of his new home in India and of his ancestral dominions in Central Asia.'

NECKLACE FROM DELHI. ENAMELLED GOLD PLAQUES
CONNECTED BY ROPES OF PEARLS

The Indian enamels are certainly far superior to the Persian, and more brilliant and quite unique in themselves. A visit to the Indian Gallery at South Kensington will give the student some idea of this beautiful work, which is considered by some the finest enamelling in the world, and which is well worth the careful consideration of any who wish to become either expert in or familiar with the art of enamelling. Daringly brilliant in contrasting colours as only those of the East may be, in translucent reds, blues, greens, and dead white overlaid in work of massive gold, champlevé, in regular geometric patterns, or but rarely with naturalistic forms, set with a profusion of diamonds, emeralds, pink and red rubies of Oriental cut and splendour, the especial character of this Indian work is in its sumptuous richness. The semi-opaque and less definite tone of the jade, which so frequently accompanies it, only enhances its beauty. The enamels of Jeypore are considered by all authorities to be the very best, and some of the Delhi work almost equals it in richness. And, as Sir George Birdwood points out, even the enamellers of Paris cannot excel the ruby and coral reds, the sapphire blue, and the vivid green of Jeypore, Lahore, Benares, and Lucknow. This work is all on gold, and often laid at the

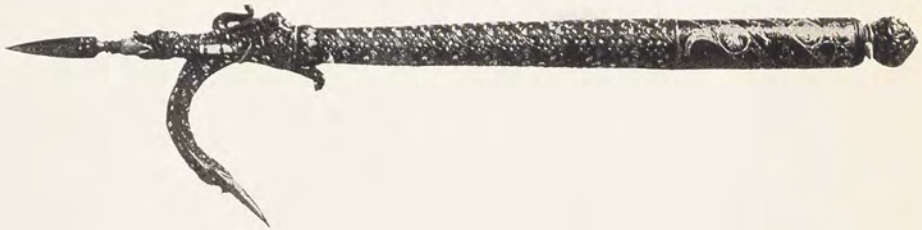
back of square or round pendants of which their necklaces, armlets, and other articles of jewellery are often made, the faces of these being set with diamonds and rubies. The great feature in Indian enamel work is the very rich and brilliant transparent red which only the enamellers of Jeypore can bring to perfection. Among some samples of enamel colours in the Indian Museum is a red from Jeypore which looks nearly black in the lump, and moreover is not nearly so glassy or perfectly made as our enamel colours. All enamellers know how curiously reds behave, and the many varieties of red which we Europeans use nearly all change in the firing, the darkest and best of the rich ruby reds appearing almost as colourless flux before being placed in the furnace. But this ruby red of the Jeypore enamellers, through the kindness of Mr. Stanley Clarke, Curator of the Indian Section, I have fired, and found it would take a long time before it would be possible to become truly acquainted with its vagaries. When first applied to its gold base, the ground enamel looks black in colour; a very slight firing turns it to a pale, thin, reddish yellow, and only very judicious firing will bring out the true qualities of this red—and such a red it is when brought to perfection! Professor W. A. Tilden, of the Royal College of Science, has

kindly analysed this red for me, and finds that it owes its colour to peroxide of iron and a little copper. It is generally understood that the brilliant transparent reds are made from oxide of gold, but I am told by Professor Tilden that there is no gold in this red. Cellini mentions a very similar red, though made of gold, the 'smalto roggio,' which will fire so yellow that you can hardly see it on the gold; on refiring this a second time, very carefully, lest the colour become too strong, or indeed black, the full rich ruby red appears. But at one point only of the firing is the colour at its best. The way in which the clever Indian enamellers make the best of their reds is admirable. It rarely appears against any other enamel colour, which by so doing might destroy the purity of the red, but it is almost always surrounded by white in some manner, if it is not actually on a white ground; sometimes gold lines surround the red, but more generally white with enrichments of gold, and beyond the white the emerald-green.

An ankus or elephant goad of nineteenth-century work in the Indian Museum is a typical example of this jewelled and enamelled work from Jeypore on a larger scale than the jewellery. The upper part is inlaid with a beautiful spiral band of rough-cut diamonds used as leaves, the

stems and outlines being in gold, and the setting of the whole of this is in rich blue enamel. Towards the pointed upper end are many lovely Eastern rubies and some red and green enamel, noticeably the figure of a bright little bird with ruby wings. The knob at the upper end is decorated with leaf tracery in diamonds and gold, with a transparent green enamel ground, but the part principally enamelled is on the handle just above this knob, where are alternating spiral bands in champlevé of hunting scenes, painted or worked in opaque and various colours on a clear green ground; and, on the other band, peacocks and other Eastern birds in brilliant translucent colours. Both hunting scenes, animals, and birds are well drawn in a naturalistic manner, and a peculiar opaque pink which is frequently used in Indian work is to be seen in some of the figures.

In the four towns we mentioned, much enamelled work is carried out on armlets, charms, anklets, bangles, necklaces and jewels of all descriptions, the dazzlingly brilliant colours of these being more suited to their dark-skinned beauties and also the princes for whom they are made, than for the fairer dwellers in the West, though this work is both copied and to some extent worn in this country.



GOLD ANKUS OR ELEPHANT GOAD, WITH SPIRAL BANDS OF ENAMEL AND DIAMONDS. JEYPORE

Dr. Hendley gives a full account of the descendants of the five Sikhs brought from Lahore in the sixteenth century by the Maharajah Man Singh, and who were still in 1888 carrying on the traditions of their forefathers in being the chief enamellers or *minakari* of Jeypore. These men do not make their own colours, but still obtain them from the bracelet-makers of Lahore.

Hari Singh and Kishan Singh were considered the best. Kishan had the first prize at the late Jeypore Exhibition. They work at home and are assisted in it by their families. 'For example, Kishan Singh, the father, works in a room on the ground-floor to enable him to watch the furnace which from time to time is fed by the women of the family, who carry on their domestic occupations in the central courtyard. His sons and grandsons sit in a small hut on the roof, painting the enamel on to ornaments of all kinds, ranging in the case of the sons from elaborate plates, to small lockets and similar articles upon which the youngest children of seven or eight are trying their powers. . . . Rare old designs and valuable ornaments and pigments are tied up in dirty rags, and kept in niches in the walls of the rooms. A strong carved door shuts off the house and its occupants from the street and serves to keep out thieves and too curious visitors. Such are the

conditions under which most art work is executed in India.'

The enamellers having been largely patronised by the princes of Jeypore, whose portraits show them laden with jewels, are thus able to remain so long a time in this ancient city of the arts. They generally work to order of the rich jewellers, whose *chitera* or artist prepares the design ready for the enameller (*minakar*), drawn from the pattern-books of his master, which are often of a great age, and from which buyers can make a selection. The *sunar*, goldsmith, makes the article to be enamelled, and the *garai* or chaser engraves the pattern, all this before it reaches the hand of the enameller. So we see labour is sub-divided even in native India, the joint results being often very beautiful.

The work is, curiously, sold by weight, not by quality, long experience of generations having taught the enameller to be sure of his part in this 'uncertain' art, and woe to that beginner who makes mistakes in his firing, though, as Dr. Hendley says of Kishan Singh's household, all the family are presumably well acquainted with the technical processes and colours; the father alone is the master workman, and his work will count for much, while that of his sons counts for considerably less. 'The power of producing a

good pure red is the measure of the ability of the enameller.'

All native writers and others quote the regulation prices for this work done on a given metal and in a certain given pattern; so many rupees is charged in a methodical manner.

In the Indian Museum are many fine specimens of enamel on the old Jeypore arms. A shield of buffalo hide with six bosses of Jeypore or Delhi work in most beautiful colours, is especially fine, the golden brown of the hide harmonising with the gold and enamelled bosses, and giving a rich and splendid effect.

In the British Museum, amongst other enamelled Indian arms, is the dagger of Hyder Ali, 1728-1782, given by him to Sir Hector Munro, the sheath being enamelled on gold.

Dr. Hendley remarks that India, like Europe, has not gained but rather lost by any newly discovered secret of the craft having been kept too closely by its finder. He quotes Mr., now Major-General, Baden Powell on the making of the Indian colours in the Punjab, and also Mr. Kipling, Sen^r., on the more perfect beauty and careful technique of the older Indian enamels.

As it is nearly twenty years since Dr. Hendley wrote his excellent paper, we greatly fear that the

difference between old and new will be even more noticeable now than it was then.

Enamels on silver and copper are also made by the artists of Jeypore, Lucknow, and many parts of Scinde and the Punjab, and indeed all parts of India, but the colours are limited on these metals, nor is the work so attractive as that on gold, and varies much in interest and quality. At South Kensington a very beautiful *huka* or water pipe base, bell-shaped, of silver, enamelled with floral designs in transparent blue and greens, is champ-levé work of the eighteenth century, and is rich and refined in colour, possessing less of the gorgeousness of Eastern jewellery, but much refinement. Some little boxes are similar and labelled as Mogul work, eighteenth century.

A very large quantity of work comes from Cashmere; it is in opaque colours thinly run on a 'shawl' pattern and arabesques, engraved in vases, *huka*-stands, plates, dishes, inkstands, salt-cellars, rose-water bottles, and what not, on copper, brass, or silver, parcel gilt. The colours are varying blues and greens, black, white, yellow, and none of them being earlier than nineteenth century. Work of this description is carried out at Kangra also and other parts.

As we have said, enamelling is done all over India, and it would be impossible to give the

A BELL SHAPED HUKA OR WATER-PIPE BASE, ENAMELLED WITH BLUE AND GREEN, CHAMPLEVÉ. ON SILVER. EIGHTEENTH CENTURY

names of the innumerable enamelling centres of that vast country, where also are many travelling craftsmen, who carry it on in one method or another wherever they go. But the enamels of Multan or Jang deserve notice, where, though there appears to be no regular trade, cups and trays, tumblers, parts of pipes of silver or copper are occasionally enamelled in opaque colours. Rings from Multan are to be seen in the wall cases of the Indian Museum, but are not especially interesting, being dull, both in colour and design, though well executed. There are also a large flat *huka*-stand with brilliant colouring, imperfectly fired, and other rings on silver of a fine blue with dots of red.

Partabgarh work is referred to by many writers on enamels, but there is a doubt as to their being really true enamel; they certainly appear more like slabs of green glass set over a sheet of gold foil, with gold inlaid and engraved on the front surface. Similar plaques in blue glass come from Indore. The secrets of this special craft are strictly kept by the few families who work at it, and who are travelling jewellers, their furnace being made in an extemporised hole in the earth wherever they happen to be.

An interesting manuscript on the manufacture of modern Kashi earthenware tiles and vases, written

in imitation of the ancient Persian style by Ustad Ali Mahomed of Teheran, and translated into English in pamphlet form by Mr. John Fargues, and kindly lent me by Mr. Stanley Clarke, gives among other valuable information a description of how and where the wonderful sky-blue colour for colouring tiles was found. He tells how in the hill-country surrounding Kashan there is a mine of a substance he calls lapis lazuli, but which is not the true lapis lazuli, but a cobalt ore, probably the black oxide. This blooms out of the hillside like flowers, and every few years the people of Kashan gather this blossomed earth and make it into balls, the shape of flower-buds. Craftsmen of the country buy these buds, and pound them up with Yezd borax, and tanagar as used by the blacksmiths. The Persian proceeds to describe how to mix this preparation till the result is a flux coloured by cobalt, or as a note says, cobalt smalt. This, he tells us, is the cerulean colour as the men of the craft like it. He then shows how to make it light or dark. Although this refers to Persian work, it doubtless is much the same colour as that used in the cloisonné work of the Chinese enamels, which show such a range of shades of the most heavenly blues; indeed, the blues are the most noticeable colour belonging to them. Although they have fine green, grey,

yellow, indefinite whites, and a darkish opaque red and black and other colours, the blues are by far the finest and most used.

The Chinese had a fancy for painting in vitreous colours on a white or tinted enamel ground at about the same time that the factory at Battersea was at work, or even earlier; the Persians were also doing the same.

But they carried on enamelling in cloisonné long before this time. In both our National Museums are large collections of this Chinese work, some of it as early as the fifteenth century, though many pieces are labelled vaguely as Old Chinese. In the Chinese Gallery at South Kensington is a vase with a ground of beautiful deep turquoise colour that has an inscription which says it was made in the King Tai period, 1450-1457. One tall-shaped vase of subdued colouring is supposed to be of the Ming dynasty, which dated from 1368-1643. One lovely vase in the British Museum, of great refinement in both colour and shape, dated fifteenth century, has an unusual free flowing design of a vine, with large purple and green grapes, and yellowish-green leaves, on a fine blue ground, and there are near this many bowls, vases, and other objects of many and varied shapes and sizes. All this work is on copper, and was and is still called by the Chinese *Shippo* or *Jippo*.

Many appear to belong to the eighteenth century, and some are even later, but although on the whole we might say the ancient work was the finest, it is not easy, at first sight, to decide from their appearance which of them are old and which modern.

Some of this Chinese work is large and handsome, the colours varied and beautiful, especially in many of the older pieces, which come from palaces in China. When corroded, it is generally round the wires, where original oxidisation has given the ravages of time more opportunity. Even in the more modern examples the work is frequently pitted with surface marks and holes, but so great is the size and so beautiful is the colour, that it in no way spoils the effect of the whole. Naturally, in such massive work, the wires are thick and the patterns large. Only those who have tried to make a cloisonné enamel, even in a small piece, will have any idea of the labour involved in making these immense bowls, dishes, stands, and salvers.

The surface was originally hand-polished, and it may be possible that the holes that showed after the rubbing were filled in with coloured paste, as the Japanese fill them nowadays, but which has now disappeared. The polish on these large Chinese enamels probably never

ANCIENT CHINESE CLOISONNÉ ENAMEL VASE

reached the final brilliance of the smaller kinds of work, but had possibly only an 'egg-shell' polish, which was better than a very glassy one on so large a surface. In some instances cloisonné is worked along with some champlevé, and on one covered vase of the Kienling period, eighteenth century, much finer wires are used than usual. These copper vases are gilded, as they are in most Chinese work. Besides the cloisonné work, there is much of the old 'all-over' and painted enamel work at South Kensington; some is coloured with blue and other colours over the white. In one case much pink is used; this is in the pendants from the huge lamp sent for presentation by the Emperor of China to the Empress Josephine, but captured on its way by the English. I am glad to say the English afterwards wished to send it to France, but the offer was refused.

A case of interesting enamel work brought by the Thibet expedition, chiefly from the monasteries of that country, is now being shown in the Indian Museum. These are mostly bowls, and all are enamelled in cloisonné in the Chinese manner. Several appear to be of very early workmanship, especially four beautiful small bowls, which have much small wire pattern on a dead white ground, and are supposed to be of the

Ming period, probably brought to Thibet by Chinese long ago. Some of the other bowls have Thibetan emblems: especially we see in several the double *dorjé* or thunderbolt sceptre, which is used by their priests for exorcising demons. It is thought that the Chinese introduced the art into Thibet, and that these, even if made by Chinese enamellers, were for Thibetan use. The beautiful colouring resembles the Chinese, and though the enamels appear pitted and rough on the surface, I think their apparent coarseness is very likely due to their being worn with constant usage, and not kept, as so many of the Chinese examples were, as mere show pieces.

The subject of the age of Japanese enamelling must be approached with hesitation, as very little is known with certainty about it, and Western writers have disagreed entirely on the subject. It is generally understood, I think, that the Japanese learned the art of cloisonné enamelling from the Chinese, and many ancient examples which were at one time thought to be Japanese by Europeans are now considered to be Chinese work. The Japanese may have produced little plaques of cloisonné or champlevé enamel in earlier times; but Captain Brinkley tells us in his recent valuable work on China and Japan: 'One thing is certain, however, that until the nine-

teenth century enamels were employed by Japanese decorators for accessory purposes only, on wood and porcelain as well as on metal. No such things were manufactured as vases, plaques, or bowls having their surface covered with enamel in either style,' and he proceeds to tell us that none of the objects which English and American collectors call enamels were produced by any Japanese artist prior to 1838.

And, adds Captain Brinkley, 'it is necessary to insist upon this, as Mr. J. L. Bowes, who alone has undertaken to discuss Japanese enamels at any length, made the mistake of saying enamelled vessels exported to Europe from 1865 were the outcome of industry beginning in the sixteenth and culminating in the eighteenth centuries,' and even claimed as work of two centuries ago some which was identified by living men as having been made and signed by themselves quite recently. The Koreans, who were learned in many arts, understood enamelling in the sixteenth century, perhaps earlier, and they are said to have instructed the Japanese in making the small enamelled ornaments of that period for sword furniture. But for long after that the Japanese tea-clubs, which represented public opinion in those days, did not approve of the Chinese cloisonné work being imitated in their country. At last Japan

awoke, and wished to stretch herself, and feel her power in a different and more modern way than she had ever done before. This, of course, affected the national arts as well as everything else, whether for their loss or gain we cannot yet say, but many fear for the art of that wonderful country. It was early in the nineteenth century that Kaji Tsunekichi made the first Japanese vessel covered with cloisonné enamel, at Nagoya. Honours came to him speedily, and also pupils, and then a class of enamellers came into prominence who carefully copied fine Chinese work, even improving the technique, but not the colour. Branches were set up in Tokyo and Yokohama, and export trade began. But unfortunately the artisans soon found that the exquisite work they produced was not a commercial success. The foreign export merchants desired cheap quantity, not good quality, and the result of this soon became apparent in the great inferiority of the work turned out at a rapid pace to sell to European and American merchants. 'The industry was threatened with extinction had not a few sincere artists, working against difficulties, struck out new lines, altered the work in various ways, and improved the colours and reached the stage of mechanical perfection in Japanese cloisonné which we now see.' We

can hardly go as far as Captain Brinkley, who in his able and well-worded chapter proceeds to praise highly and uphold the modern Japanese work. I fear most of that which reaches these shores is not of the better kind, but made simply for quick sale at our cheap Japanese shops. That there is better modern work is true, probably made more for the Japanese themselves. We have one good example at the Imperial Institute, a graceful vase, showing a beautiful drooping purple flower, the wisteria, in minute and delicate wire outline : so fine are the wires, we can scarcely see them, on a flawless grey ground. It is hard to believe this to be enamel, so perfect is it in every way; indeed it is too 'faultily faultless.' For beauty let us turn to the broken blues and greens and subdued whites of the Chinese work, even though we find in them imperfect surface, coarser wires, and various other faults.

The polished surface of the cheap Japanese cloisonné wears off very soon and becomes dull. The defects, holes, and blemishes, which are filled up when the article is first sold, become visible.

Seeing this, and considering the marvellous cheapness of these things, I was led to believe that the enamel colours used must be soft and inferior, and ventured to break off some of the enamel from a small piece to try. This

was done with difficulty, and firing it, I found my mistake, for the colour, which was an ivory white, was as hard in the furnace as some of our hardest colours. The cheapness of this work, and some of it is very pleasing too—it varies in interest greatly —is both painful and puzzling to contemplate, when one knows by experience the hours and hours it takes to prepare even a small piece of cloisonné and enamel it.

Certainly some of the finer work is costly, and justly so. It was the making of the better kind of enamel that was described by Mr. Rudyard Kipling in his entertaining description in *From Sea to Sea*. It was at Kioto when visiting one of the little enamelling workshops there, and the rest of Mr. Kipling's account is instructive. 'In the next room sat the manufactory, three men, five women, and two boys, all as silent as sleep. It is one thing to read of cloisonné making, but quite another to watch it being made. I began to understand the cost of the ware when I saw a man working out a pattern of sprigs and butterflies on a plate about ten inches in diameter. With finest silver ribbon wire set on edge, less than the sixteenth of an inch high, he followed the curves of the drawing at his side, pinching the wire into tendrils and the serrated outlines of leaves with infinite patience. A rough touch on

VESSEL AND COVER OF JAPANESE CLOISONNÉ ENAMEL. NINETEENTH CENTURY.
FORMERLY THE PROPERTY OF LORD LEIGHTON, P.R.A.

the raw copper plate would have sent the pattern flying into a thousand disconnected threads. . . . Followed the colouring, which was done by little boys in spectacles; with a pair of tiniest steel chopsticks, they filled from bowls at their sides each compartment of the pattern with its proper hue of paste. There is not much room allowed for error in filling the spots on a butterfly's wing with avanturine enamel, when the said wings are less than an inch across. . . . After the enamel has been filled in, the pot or plate goes to be fired, and the enamel bubbles all over the boundary-lines of wires, and the whole comes from the furnace, looking like delicate majolica.'

There are not many Japanese enamels at South Kensington. Some fine cast-iron *saké* kettles have cloisonné lids and are antique, whilst one other remarkably similar, and looking just as old, is alleged nineteenth-century work. Some beads are of fine cloisonné on copper, also some fine plates, notably one with white lizards in the Chinese manner, which it resembles closely, but some of this work is inferior. A *netsuke* of iron enriched with gold inlay and champlevé enamel is of the seventeenth century; a fine old copper teapot enamelled all over in low-toned colour, and also a sweetmeat box, and as well the series of six little panels giving the

stages of the process which are described in Chapter II., and of course all these are enamelled both sides; in the Japanese work the back is generally blue.

Mention might be made of the very beautiful old bowls and plates, covered with cloisonné enamel on a porcelain ground, that are to be seen sometimes among the treasures of china collectors, but these hardly come within the scope of this book.

We read of the poetical names given by the Japanese to their colours—canary yellow, liquid dawn red, leaf or grass green, dove grey. The secrets of the craft are closely kept by the modern Japanese, although we are told of one important change. Up to the year 1890 the cloisons were attached to the metal base by solder; since then they have almost given up this, being satisfied with a vegetable gum merely. Some cases are to be seen also of enamels worked apparently in the same manner as cloisonné, but with the dividing wires missed out altogether.

CHAPTER VI

IRISH ENAMELS

'Praying to God and hammering away.'—SANCHO PANZA.

NO great advance has been made in knowledge of the early history of Ireland in connection with its antiquities since the middle of the nineteenth century, when Albert Way, Wright, Labarte, and a little later Franks, Kemble, and many other antiquaries were revelling in recently found treasure, and deducing facts and suppositions therefrom. The period of a particular specimen is not yet, and perhaps never will be, determined; but the enameller is not so much concerned with questions of provenance and archæology as to inquire by what means the workman of ancient times succeeded in producing work of such beauty. What patience this shows! With enthusiasm in his mind a student will turn with delight again and again to the great collections of old work, and sigh only

because his opportunities of working are so small, when he sees that of the ages before him; yet he may rejoice that the art, of which he knows the processes well, is capable of so great a variety of treatment, of producing such beautiful treasures, that he can only be proud to have any connection with it.

By far the larger number of the enamelled horse-trappings described by Philostratus have been found, as we have already seen, in England; yet it is in Ireland, the ancient Scotia, that some of the finest early work in enamel is to be seen, and some of it of a character also unique and beautiful. Culture in those days travelled slowly, and we are told by Miss Stokes, in *Early Christian Art in Ireland*, that 'it was long centuries after leaving its original source that it broke upon the Irish shore.' When once it reached Ireland, however, it stayed, and ancient traditions lingered there long after they had been forgotten in other countries. Therefore some of the Irish work, similar possibly, in details of workmanship, to that of more Eastern countries, is later in date than one might expect to find it. Ireland is rich in ancient learning and church lore, in beautifully illuminated manuscripts; and saintly and skilful artificers of the early Christian times have lived there.

Among Irish treasures we find bells, books, and croziers that belonged to holy men of long ago, and their beautiful and costly shrines and satchels, chalices and brooches too, adorned with the finest work in gold and silver filigree, in enamel, in gems. With a people sensitive and appreciative to the beautiful in any shape to the highest degree, Ireland is awakening to a sense of large possessions in these wonderful treasures, which will perhaps some day be connected with her history more than has so far been possible. In early times Ireland supplied the whole of the Western world with gold, and even in the present day the finding of alluvial gold in small quantities keeps two or three families in parts of the country. They tell strangers in Dublin that the city is built on gold, and one may well believe that it was quite common in the days when the massive golden ornaments and vessels now in the College Library and the Museum were used. These and other treasures are still being unearthed by peasants in the bog, or turned up by the plough in various parts of the country. But Ireland has not yet been thoroughly searched, and what has already been found may be considered as chance finds, and there is doubtless a rich mine still untouched. Scientific archæology is a modern study, and before this century is

much older many things may be made plain, of which we are ignorant to-day.

In the early times of the Christian religion in Ireland, all large churches in the country possessed valuable shrines. Many treasures, it is feared, of gold, silver, and enamel, have been discovered there, that have never reached the eye of the antiquary. The law of treasure-trove is perhaps hard on the poor agriculturist, who, discovering a jewel in a field, will find it of no avail to sell all that he has to buy that field, and so take to himself the treasure. He must instead deliver it up to the powers that be. Owing to this, but more perhaps to ignorance, his findings have too often passed silently into the melting-pot of the nearest goldsmith for the mere money value of the metal. Thus it has happened in Ireland, a country peculiarly rich in valuable antiquities, that many examples of fine work in gold and silver have been melted down during past years, to an extent and an alleged money value that are almost incredible.

But all this we will leave to the historian, and visit the Museum at Dublin, where so representative a collection of Irish work is to be seen. On first entering we do not see enamel among the examples, such as appear in the British

THE ARDAGH CHALICE; SHEWING ENAMEL BOSSES

or Victoria and Albert Museums. On closer examination we find, as well as a considerable number of enamels on bronze of the Celtic period, others most beautiful, unusual, and interesting, but generally small and delicately quiet in character, not crying for notice from a distance like the work of Limoges we are accustomed to. Among the objects decorated with enamels of this character are the chief treasures of the Museum, the Ardagh cup or chalice, and the Tara brooch.

The curious and refined Irish enamels which decorate the chalice and brooch and also a few others, among them the Cross of Cong, are used as jewels encrusted in the gold or silver or bronze and alloys which they ornament, often surrounded by a setting of pieces of amber, which has frequently perished, whilst the enamel is still perfect; with precious stones, with cabochons of crystal, with bosses of glass even, and with panels of the very finest gold filigree, showing the trumpet and interlacing patterns, as only the Irish work of early Christian times can, very small and exquisite. The colours used are transparent blues and greens, the latter generally as gems of glass, more than enamel fused on to metal, an opaque yellow, purple, a greyish white, a good black, the surface of which modern

enamellers may well envy; a certain semi-opaque red of a crimson tone, very occasionally only the vermilion red of earlier times, and in one instance at least an attempt at imitating the colour of pale amber. Niello also is used, and many and various inlays. The early Irish metal-workers may be said to have rivalled the Japanese in their knowledge of curious alloys. No figure-work, such as that in the Alfred jewel or the Byzantine cloisonné, is attempted in these Irish enamels, nor are the designs at all so elaborate as the accompanying filigree in gold and silver wire, for these early workers were wise enough to use their enamels in a simple, refined manner, adding colour and beauty to elaborate metal-work, with a reserve and dignity that in the present day we may well admire.

Through the kindness of Mr. Coffey, who knows more about this work in Dublin, perhaps, than any other person, I was allowed to examine the Ardagh cup minutely, and to see its full beauty this is necessary. A written description can give but an inadequate idea of the subtle character of this mysterious and wonderful treasure. Absolutely nothing is known of its history, but it is supposed to be of the ninth or the tenth century, and is a cup seven inches high, composed of many metals—gold, silver,

bronze, brass, copper, and lead—ornamented with beautiful work in engraving, repoussé and gold filigree, and many bosses and plaques of enamel; some set in amber, round the bowl, on the two handles, round the shaft and the base, and even on the underside of the base. It was discovered, with four annular brooches and a bowl of later date, by a peasant lad, when digging potatoes in the Rath of Reerasta, near Ardagh, in 1868. Espying something glittering brightly in a hole in a bank, the lad tried to reach the treasure, but being stabbed in the hand by one of the brooches, he fled, thinking the devil himself was there. Coming back later, probably with some more courageous companion, he ventured to investigate further and found this treasure, which had been hurriedly concealed there, with only the protection of a large stone at the side in the bank, for possibly a thousand years and more.

At first sight the enamels on the chalice appear to be bosses or half-beads or marbles of glass; looking closer, we see metal on their surface such as no beads nor marbles ever had, and which is apparently cloisonné work; but looking closer still, we find they have been fashioned like no other enamels in all history.

Besides the bead-shape there are small panels of enamel, and these have been shaped and fitted

to the requisite curves of the cup, and especially the handles.

We find further that there are three varieties of enamels on the chalice.

The first kind is enamels of one colour, the design being made by the metal. The second is of two colours with design outlined by metal. The third of two colours, but with no separating metal lines.

The first kind is similar but of finer work to the red bosses in the late Celtic shield in the British Museum. Here the metal, probably an alloy, but silver-coloured, is thin, and fret-cut from the solid sheet, and laid over the bead of enamel, generally of a sapphire-blue colour, when hot, and pressed over the circular shape, so as to fit closely and become embedded in the enamel; the whole having a level and polished surface. When these are first seen they appear to be true cloisonné work, but looking into the sapphire blue you see no wires in the depth thereof, only on the surface.

The second kind are done in a similar way, but are more elaborate, in that instead of being all fretwork, the metal is in parts beaten into very thin and minute cells into which again some other colour is fired, often opaque crimson red, which shines on the surface of the sapphire

blue. It is only where a slight break occurs in this most delicate work that the peculiar processes can be detected, and with wonder and delight we see how perfect and how beautiful these small enamel bosses are.

We can see also in parts where the silver fret has broken away, small channels in the enamel where they once lay. The enameller and student could pore a long while over these and their great merit, but we must pass on to other details. The square straps on the handles are executed like the bosses of the first division, and are shaped to the handles following the necessary curves, each handle having twelve panels attached to it.

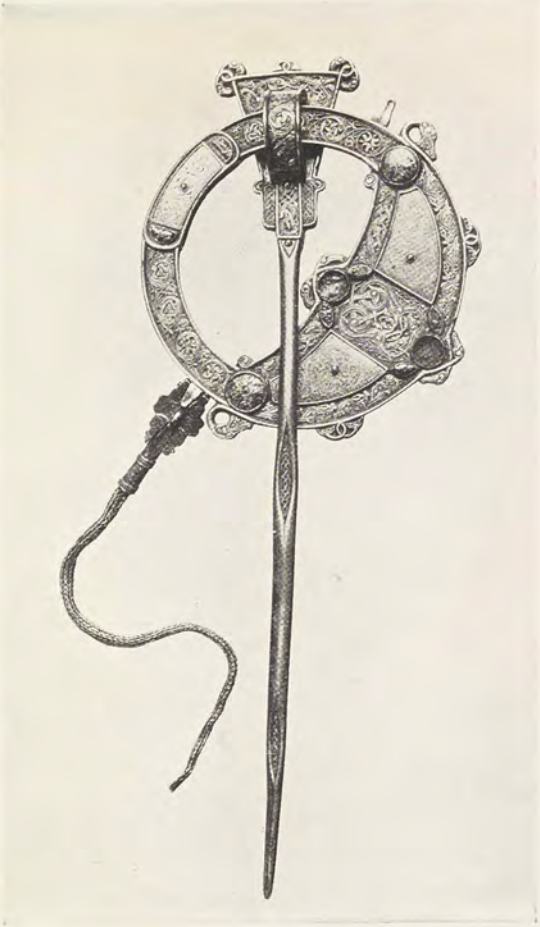
The third kind of bosses are plain, of different coloured glass or enamel used as precious stones, and many of these hollowed out or moulded as intaglios with various patterns, and the designs so made filled with another and most probably softer enamel fired in without any dividing metal lines, so making an enamel in champlevé, having glass for a ground instead of metal.

Much amber was originally used in ornamenting the Ardagh chalice, but has all disappeared.

These engraved enamels of the third division of the Ardagh chalice are seen to be even more

curious and elaborate in the Tara brooch, a treasure in some respects even finer than the beautiful chalice. This, we are told, was found in 1850 by some children playing on the strand near Drogheda, Co. Meath, after part of the cliff had fallen. A dealer in metals refused to buy it, but a watchmaker in the town gave a trifle for it and sold it to a jeweller in Dublin. The brooch is of the annular type; it has no actual connection with Tara, the name being given to it on account of its 'marvellous workmanship.'

It is supposed to be of the ninth or tenth century, and is made of white bronze and ornamented both back and front with panels of exquisite gold filigree, with trumpet patterns and interlacing designs, so minute that to see their full beauty a strong magnifying glass is needed; also with inlays, niello, amber, and variegated glass and enamel. Among the latter are a tiny diamond shape of blue with a hollow centre of filigree gold, and a very small blue boss inlaid with an 'annulet' in a tiny metal frame of red enamel—the fellow of this has lost its inlay of enamel and shows the cloison or metal lining for its reception laid bare—and other blue beads are set with a central pin of minutely ornamented gold work. The Museum label calls attention to two 'settings of dark purple beads in the form of



THE TARA BROOCH. BACK VIEW, SHOWING ENAMEL ROUNDELS

human faces.' Also two moulded purple glass beads show a daisy pattern. These call to mind the Latin poem by Theophilus quoted in our chapter on Cloisonné, 'On the sculpturing of glass,' where the good monk recommends an infusion of worms in vinegar to prepare glass for engraving. The back of the Tara brooch is as elaborate and rich as the front, and has 'bosses' of red and blue, and red and black enamel. The blues of these Irish enamels vary from a pale harebell colour to the blue-black of the deepest sapphire. If used thinly it is generally of a medium shade, but the thickness of the bosses makes it deeper, though it is seldom very dark.

These two great treasures of enamel work in Dublin are supposed to be of the same period, and are similar in character, design, and workmanship; they have unfortunately no history. If, as is probable, they were made at about the same time as the Alfred jewel or the Dowgate Hill brooch in England, they show a knowledge and skill to which the English craftsmen of those days were not equal.

There is interesting enamel work on the curious shrine of St. Moedoc (pronounced Mogue), with its figures in repoussé on the front and sides, which show traces of Byzantine influence, and remind us somewhat of the Alfred jewel, one of

the figures, as in the jewel, holding the budding sceptre so often seen in the Book of Kells and other Irish illuminated manuscripts.

This shrine is supposed to be not later than the ninth century, and is much the shape of the latter-day chasses of Limoges. The whole was in bronze gilt, the bottom, like the back, being ornamented by a pattern of rectangular crosses, similar to those on St. Patrick's bell shrine, enclosed in a border of knots and squares of bronze inlaid on a ground of red enamel. A pattern within the squares is formed by four smaller panels of blue glass disposed alternately with five others of red and white enamel, while a boss in the centre of the border on one side is in blue enamel on a gold ground.

Of later work, 1150, is the famous Cross of Cong, ornamented with circular jewels of glass, amber, and niello, and eighteen bosses of champlevé enamel round the edge, mostly in opaque yellow and red. Although of a later time than the work mentioned before, and having by now quite lost the early trumpet pattern, it is ornamented with compartments of fine interwoven strap and tracery work, this form of design lasting a long time, and being very representative of Irish work.

Miss Stokes, in *Early Christian Art in Ireland*,

mentions a shrine, that of St. Manchan, which is kept in another part of the country, as having enamel work in yellow and red similar to those in the fine bronze armlets in the British Museum from Perthshire. The date of this is 1166. The Domnach Airgid shrine bears enamelled shields.

Many of the crosiers and cumdachs, or book shrines, of Ireland bear traces of enamel, but are not among those in Dublin; such as the Lismore crosier, and the very early enamel at St. Columba's College, which resembles the work found in England more than the usual Irish work. And there are the many ring brooches, generally in bronze, of late Celtic times, showing the development of this shape of brooch, with expanded ends ornamented by a modification of the trumpet pattern which was a survival from pre-Christian times, and which culminated later in the Tara brooch. Many of these are ornamented with champlevé enamel in opaque red, white, blue, and yellow.

Like that on the late Celtic bronzes to be seen in this country, the metal-work is fine in execution, but in no way can these be compared with the delicacy and refined beauty of the Ardagh chalice, or the Tara brooch.

There are also bronze pins with enamelled

heads, and, as they are sometimes called, tesserae of glass. But as any glass-like material fused on to metal comes under the name of enamel, we will so call the pin with the head enamelled in champlevé found at Clonmacnois.

On one of these pins is a round bead of bright red enamel used as coral, and riveted to the bronze as a coral bead might have been.

There is also in Dublin the well-known knife handle of iron enamelled in champlevé, the only known specimen of early work on this metal, and also the block of opaque red enamel, of which there is a portion in the British Museum, said to have been found on Tara Hill, 1860. It is difficult to compare colour in the mass like this with the small inlays of enamel fired into its metal bed, often amid other and contrasting colours, but this appears to be more of a crimson colour, perhaps like that used in very small quantities in the cloisons of the Ardagh chalice more than the vivid sealing-wax red of the late Celtic and Limoges work, the colour which is the despair of the modern enameller. Possibly, like the transparent reds, it changes in the furnace. This lump of colour has been lectured upon and written about, but in spite of this we cannot make a red enamel to match it.

Analysis shows it to be composed of a lead

glass coloured by oxide of copper. I have heard that a small piece of this colour was once tried by a modern enameller, and that it fired some sort of green. I have not tried it myself, though experience shows how all reds change in the firing, and that when the one point of perfection of colour is lost by overfiring or other cause, the colour will not come back but remains a dingy brown or black, or even a nondescript green. It has been supposed that this lump has already passed through the furnace, perhaps by accident, and been thrown aside as useless; though this is only one of several conjectures, it is reasonable.

CHAPTER VII

MODERN ENAMELS

'I hear it said continually that men are too ambitious: alas! to me, it seems they are never enough ambitious. How many are content to be merely the thriving merchants of a state, when they might be its guides, counsellors, and rulers—wielding powers of subtle but gigantic beneficence, in restraining its follies while they supplied its wants. Let such duty, such ambition, be once accepted in their fulness, and the best glory of European Art and of European Manufacture may yet be to come. The paintings of Raphael and of Buonaroti gave force to the falsehoods of superstition, and majesty to the imaginations of sin; but the Arts of England may have, for their task, to inform the soul with truth, and touch the heart with compassion. The steel of Toledo and the silk of Genoa did but give strength to oppression and lustre to pride; let it be for the furnace and for the loom of England, as they have already richly earned, still more abundantly to bestow, comfort on the indigent, civilisation on the rude, and to dispense, through the peaceful homes of nations, the grace and the preciousness of simple adornment and useful possession.'—RUSKIN on Modern Manufacture and Design, *The Two Paths.*

LIKE the other arts, enamelling has followed the ups and downs of nations and epochs and in its own way reproduced the fashion of any

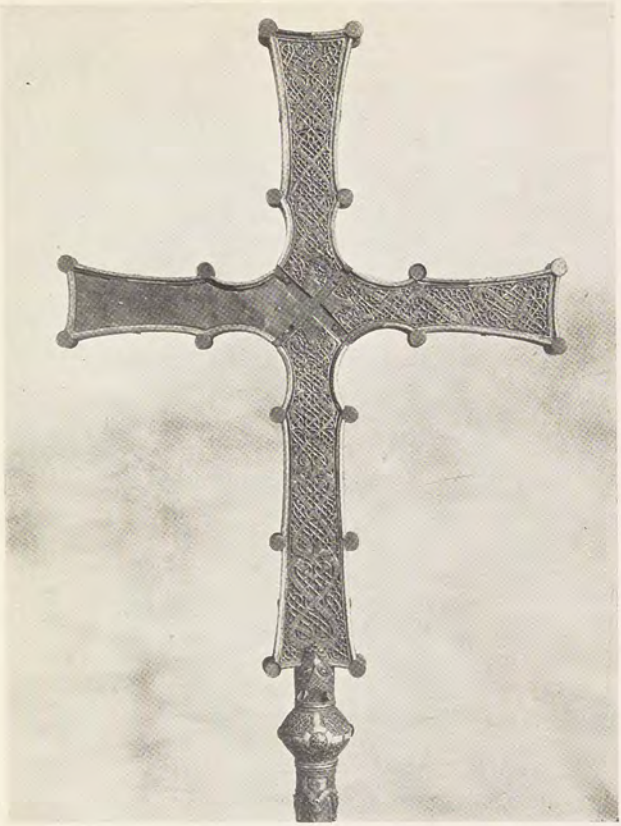
given time, and it is interesting to notice how towards the end of the eighteenth century, when, in this part of the world, Architecture, the great Mother of the Arts, was all but dead, when classic traditions in both art and literature had been blindly followed until they had reached the point of inanition, then it was that the art of enamelling also was dead and all but forgotten; worse still, if not forgotten, thrust aside and ignored as too rude a product of the barbarian middle ages to be worth the notice of the cultivated classical mind who could only brook with 'propriety' the insipid graces of Petitot and Toutin. When the beautiful mediæval arcading in our cathedrals, particularly in Westminster Abbey, was cut through for the substitution of an inflated classic urn in memory of some Georgian nonentity; when the Church of St. Mark's at Venice was scoffed at as ugly; when priceless treasures of Byzantine and similar fine workmanship were sent to the crucible by those who should have known better—then it was that somewhere underneath all, in the ground perhaps, taking deep root and slowly sending upwards the plant that was to bud and blossom eventually in the early days of the nineteenth century, the so-called Gothic revival, bringing in its wake the antiquarian

spirit, the craze for archæology, was heralded by Walpole with such remarkable architectural results, and later by the more rational influence of Welby Pugin.

In painting, the work of the Pre-Raphaelite Brotherhood was doubtless an outcome of this Renaissance, and also in our own time the Arts and Crafts movement, headed by the late William Morris, which has in the present day so many followers.

That the revival of the antiquarian spirit was abroad in France also was evidenced by the publication of the great *Handbook of the Arts of the Middle Ages*, written by Jules Labarte, published about 1850, originally as a descriptive catalogue of the Debruge-Duménil collection, of which he was co-inheritor, and which was, especially when we take into account the time in which it was written, a wonderful production, giving unwonted information about each art. Among the many he describes are sculpture in ivory, wood, and stone, glass-making, painting, embroidery, work in gold and silver, and enamelling, with many other crafts, each one being treated of in a learned and comprehensive manner.

Labarte's chapter on enamels, in which he often refers to the writings of M. l'Abbé Texier, an antiquary resident in Limoges, is



THE CROSS OF CONG. BACK VIEW. SHOWING BOSSES OF CHAMPLEVÉ ENAMEL ROUND THE EDGE

long and comprehensive and brimful of deep research and carefully sought out knowledge, laid before the reader in a most helpful and interesting manner. As M. Laborde says of this book, 'L'ouvrage de M. Labarte est dans toutes les mains, il serait inutile d'en faire l'éloge, il est dans toutes les bouches.' Labarte was translated into English and published by Murray in 1855, and although written fifty years ago, is still one of our standard books of reference.

It was even before Labarte brought out his book that Albert Way, the English archæologist, wrote in a learned manner on enamel work in 1846. Way is quoted by Labarte; he chiefly wrote papers for the Archæological Society on objects of antiquity recently discovered in his day, and opening the way for discussion on enamels generally. There were others of his time, Thomas Wright, who wrote *The Celt, the Roman, and the Saxon*; Dr. Petrie of Dublin; Kemble and Westwood; and Anderson of *Scotland in Early Times*; besides Sir A. W. Franks of the British Museum, and rather later, J. H. Pollen, and others, who discussed with fervour the enamel work of old times as shown in contemporary and recent discoveries.

In 1847, the Treatise of Theophilus was translated into English by Robert Hendrie and published by Murray also, another proof of the vigour

with which mediæval art was studied at this time. We might notice that the translation was dedicated to the good Prince Consort, father of the present King, to whose energies there is no doubt we owe more of the modern revival of interest in the arts than we are at present aware.

Curiously enough, it was also about this time that so many discoveries of early enamel work were made, of Celtic and early Christian times: the Anglo-Saxon brooch found on Dowgate Hill in 1839, and on which Mr. Roach-Smith discoursed in *Archæologia* in 1840; the 'Bartlow Hills' vase in 1835; the shield with the red studs, in 1857; the Tara brooch, 1850; the Ardagh chalice, as late as 1868. I do not call to mind when the enamelled Romano-British altar was discovered, or the enamelled armlets from Scotland, or the gold rings of Æthelwulf, Ahlstan, Æthelswith, and Æthred, and many others which I believe were dug up or discovered in the British Isles about this time, or at any rate, if not actually unearthed, were taken up and reconsidered as was the Alfred jewel, which had lain almost unnoticed for two hundred years in the Ashmolean Museum at Oxford. Collections were begun at this time, archæological and other treasures were gathered together, and beautiful work of the middle ages taken from the corners and cup-

boards where it had lain hidden away for many years, secure from marauding hands maybe, but in neglect.

It is wonderful to think what a clearance, what a turning out there must have been, when we see the precious things now the pride of our galleries, many of which having so long lain unconsidered. Every one became eager to possess, or, better still, to discover, some example of the work of old times. This fashion, the running after antiquities, is one which can be carried to lengths which become ludicrous. We all know the story of the discovery of the stone by Mr. Pickwick, and the inscription thereon; it is quite likely that Dickens took this part of his story at least from the life of his day.

So much for antiquarian research, which has continued until the present time, and out of which the history of the arts of other times is being slowly built up. Old work has now become so rare that even the purse of the nation has to give way and leave it to the enterprising millionaire who alone can purchase. After the antiquary and the collector come the artist and the craftsman, who can gain much knowledge from our magnificent national collections, where examples of all schools and all ages can be seen and studied

As we have said before, enamelling reached a very low ebb in this country, and in the early days of the nineteenth century very little indeed was known of genuine enamel work.

Placed next to the fine set of mediæval reliquaries and caskets in the British Museum, and among a few of the painted enamels of Limoges, are some large enamelled copper plaques, highly coloured, in the miniature style, by W. H. Craft, the first depicting King George III. as a Roman senator, the other Queen Charlotte as Ceres or some such mythological personage. These are dated 1773, and represent the feeling of the time on such matters as enamel work, possibly having been thought more highly of in those days than was the work of the middle ages, which we prize so highly now.

In a book bestowed on an art student some years ago the following remarks from an article in the *Art Journal* for 1851 were quoted: 'Pictures in enamel have been very rarely produced until within the last eighty or ninety years, for, although Petitot, in the reign of Louis XIV., drew with exquisite neatness, he seldom produced enamels which aimed at more than a microscopic finish and accurate drawing of the human head. It was reserved for modern times to try a bolder flight, and the result has been that enamel paintings are

now produced with every possible excellence in art. The rich depth of Rembrandt and Reynolds can be perfectly rendered together with all their peculiarities of handling and texture.' We are informed that the writer was himself an 'enamel painter of much reputation.'

If enamel could truly lose its own beautiful qualities and become as pictorial as oil-painting, all this might be to some purpose. But enamel must be enamel with the characteristic and necessary conventions belonging to itself, and the quotation merely shows the taste of the day in which it was written, and how little was known of the enamel work of history so short a time ago as 1851.

Apart from that done by jewellers, which was not interesting as a rule, we might say that so late as twenty years ago very little was known by people in general on the subject of enamelling; only the connoisseur and the antiquary in this country knew anything of what enamel meant. A little more may have been known in Paris, but I do not think even in that appreciative centre of art it was really understood. Now the word is in everybody's mouth, in all the shop windows, even on drapers' jewellery. Enamel classes are held, and enamel work of sorts is being done by students and others all over the country—England,

Scotland, and Ireland, more still in Paris, in Berlin too, indeed everywhere. The result of all this it is impossible to foretell.

It was in the year 1886, owing to the energy and enthusiasm of Mr. Thomas Armstrong, then Director of the Museum at South Kensington, that the first class for enamelling was held in this country. M. Dalpayrat, one of the few painter-enamellers in Paris at that time, was induced to come over and give twelve practical demonstrations on painted enamelling in the later Limoges style to twelve of the students of the Royal College of Art. On the walls of the Director's room are still to be seen in one frame twelve plaques representing the whole work of this class, most interesting, showing a careful teaching of a style which clearly followed the leading of Jean Courtois and his school, whose work M. Dalpayrat himself copied largely. Some are in grisaille and show the beginner's hand, and some are coloured over foil. Doubtless those who were students could tell us much of interest about the class, but we do not know that any one of them has kept up enamelling, excepting Mr. Alexander Fisher, who was among their number. But this little class has had far-reaching results; the length and breadth of these we can by no means yet ascertain. It was the beginning of the recent

revival of enamelling in this country, of the classes which are now successfully held for students in nearly all our Art Schools, and also affected the work in Paris, giving strength to a revival even there, which perhaps is going to work great things. Dalpayrat's class was held about twenty years ago. After that, for a time, there was a lull, when nothing further was done. It is only during the last four or five years that facilities for learning the practical part of enamelling have been afforded to students.

Ten or eleven years ago it was extremely difficult to gain any information on the subject, and the present writer, who would gladly acknowledge with gratitude any teacher, if it were possible to do so, had not the advantages that students of the present day possess, from which we may hope to see great results in the future. The great testing time is when the student stage is over.

One speaks of recent work with diffidence: it may be that a new school is in its infancy. Many have taken up this work more or less seriously, and are giving some good results, but the surroundings and circumstances of life in the present day do not yet point to the arising of any certain school of fine work produced as that was by the calm, slow ways of the craftsmen of old. It is not so much for lack of ability as for

want of opportunity that, in the fight and bustle of modern life in which men are engaged, the arts of mediæval times have so little scope.

A modern writer has laid down the axiom that an art can only be learned in the workshop of those who win their bread by it—a severe saying, but one which contains some germ of truth. How to earn daily bread by this work alone is a problem that for the present wants solving. Labarte said, 'In our times cheapness and expedition are the great requirements of the day,' and this is very much more so to-day than it was when he wrote it sixty years ago. Referring to actual work of the present time, along with hosts of others, there are two Parisian enamellers who are well known in London, M. Lalique and M. Thesmar. M. Lalique, who shows his work in London occasionally, exhibits marvellous dexterity and great knowledge of his material. One can only stand amazed at his productions. He has produced naturalistic forms of flowers, butterflies, beetles, figures in enamel, with matt surfaces, engraved, carved, and moulded enamel, plique à jour, enamels blown in metal shapes or frames. So much ingenuity is bewildering. Creating difficulties simply that he may overcome them as only an expert Frenchman can, he has carried out in enamel things that

would startle even Benvenuto Cellini, who considered himself a marvel in these things. These are infinitely more clever than anything we can show in this country, one reason being that the English enamellers have not gone so deeply into technical problems; at the same time they aim, I think, at different qualities, more especially the fresh and beautiful colour found in simpler methods, and which is one of the chief beauties of enamel work. Another Parisian enameller to whom the same remarks will apply is M. Gaillard, whose fine work has been frequently shown in London.

The plique à jour cup of M. Thesmar in the Victoria and Albert Museum is a good example of his beautiful work. It is wonderfully perfect, so much so as to seem almost a mechanical production; the colour does not altogether appeal to English taste, but the skill and pains shown in this little bowl are well worth considering. Only those who have tried their hands at such work as this can have a guess at the infinite patience bestowed and the breathless anxiety which must have been spent over the making and firing of this, and, indeed, of all M. Thesmar's delicate plique à jour and cloisonné work.

A good deal of inferior cheap work is carried

on in both England and France and other countries at the present time, in jewellery, in stamped metal enamelled with poor and soft colours, though recently some of considerably improved workmanship have been seen; they are so cheap that one wonders at it. Also one must not forget the enamelled advertisement which was a commercial invention of the end of the nineteenth century, and which flourishes extremely, but so far has aimed at use and not beauty. These are on iron, and the constituents of the colours, and the manner of application and firing, though done by mechanical means, follow the same rules as the smaller enamelling on copper, silver, or gold. Plique à jour enamelled spoons and cups of a sort are being made in Norway, and also in France and in Russia, and possibly elsewhere, and painted work, is, I believe, largely carried on in Paris; but even if these are fairly well executed, the designs are inferior and the colours frequently garish. Enamelling, indeed, is being carried out in one form or another the world over. We must put before ourselves the truth that, if this beautiful art is to be saved, the true artist alone can do it.

We refer briefly to some of our English enamellers. Of the work of Mr. Alexander Fisher

an example may be seen in the Victoria and Albert Museum with some very beautiful blendings of colour. Mr. H. Wilson has produced work in gold, silver, and enamel of fine feeling and design; Mr. George Frampton, R.A., introduces enamel work into his sculpture; Mrs Traquair of Edinburgh; Miss Hallé; Lady Brooke, Ranee of Sarawak, who takes the Jeypore and other Indian enamels as her guide; the Gaskins of Birmingham; and many others. Of the work of the schools, we might especially mention Birmingham, whose students are working with steady enthusiasm.

Enamelling must be taken seriously; it entails work of both mind and body. As for its becoming once more a living thing in our midst, as it was in old times, one can hardly believe it possible that, in these days of rush and hurry, this gentle little art could revive to so great a distinction.

Before this can happen, all the foolish uses to which, alas, so much modern enamelling has been placed, all the poor, inefficient and misleading work seen in our shops and even in 'Art' exhibitions, all the blobs and patches stuck here, there, and everywhere, badly done, with undue haste for the mere catching of a chance customer's eye, must be swept away. This, above all other arts, if it is to live, must

be done well, and with a purpose, a good conscience working with capable hand and brain, and we may yet have a school of enamellers equal to, perhaps even better than any that the world has seen.

A LIST OF BOOKS AND ARTICLES ON ENAMELS

The Arts of the Middle Ages, by Jules Labarte. Chapter on Enamels.

A Treatise on Divers Arts, by Theophilus. Chapters on Enamelling.

Cellini's '*Treatises*' *on Goldsmithing*. Chapter on Enamelling.

Gold and Silver, by J. H. Pollen. Dealing with Enamel.

The Alfred Jewel, by the Rev. Professor Earle, has a chapter on Enamels, and notes also by Mr. C. F. Bell of the Ashmolean Museum.

Albert Way on 'Enamels,' London Archæological Institute, 1846.

Introduction to a Catalogue of European Enamels, Burlington Fine Arts Club, 1897, and also papers on English Enamels in the *Portfolio*, 1893, by J. S. Gardner.

Sir A. W. Franks on 'Vitreous Art' in Waring's *Art Treasures of the United Kingdom*.

Franks and Kemble in *Horæ Feriales*.

Celtic Art, by Romilly Allen, refers to enamel work.

Early Christian Art in Ireland, by Margaret Stokes.

A lecture on 'Enamels' was given by Mr. Cyril Davenport March 1899, at the Society of Arts, and is in the

Journal of the Society; and in the *Anglo-Saxon Review* is an article by Mr. Davenport on 'Anglo-Saxon Enamels.'

'The Celt, the Roman, and the Saxon,' and various papers by T. Wright, F.S.A., in *Archæological Journal.*

Silverwork and Jewellery, by H. Wilson, has a chapter on Enamel.

The Goldsmith's Handbook, by George E. Gee, has a chapter on Enamel.

Enamelling on Metals, by Henry Cunynghame, C.B.

Three papers on 'Enamelling,' by Alexander Fisher, appeared in the *Studio* magazine, May and July 1901, and March 1902, and are now in book form.

Various scattered papers in the *Journal of the Society of Arts*, *Transactions of the Society of Antiquaries*, *Vetusta Monumenta*, *Archæological Journal*, and others, referring to Enamels.

Pictures of Enamels are to be found in Shaw's *Decorative Arts of the Middle Ages* and *Dresses and Decorations of the Middle Ages.*

Also a few in Traill's *Social England.*

Histoire de la Verrerie et de l'Émaillerie, by Garnier.

Limoges Enamels, by L. Dalpayrat.

L'Art de l'Émail de Limoges, by Alfred Meyer.

Enamels and Enamelling, by Paul Randau, Technical Chemist. Translated from the German by Charles Galter.

Deutsche Schmelzarbeiten des Mittelalters, by Otto von Falke and H. Frauberger. Illustrated.

Industrial Arts of India, by Sir George Birdwood.

'Enamelling,' by Dr. Hendley, *Journal of Indian Art*, April 1884.

Jeypore Enamels, by Jacob and Hendley, 1886.

Japan, by Captain Brinkley.
Japanese Enamels and *Notes on Shippo*, by J. L. Bowes.
The Pictorial Arts of Japan, by W. Anderson.
Les Émaux Cloisonnés, by Ph. Burty.
The Ornamental Arts of Japan, by G. A. Audsley (VIIth Section).
The New Far East, by Arthur Diósy, refers to Japanese Enamel.

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