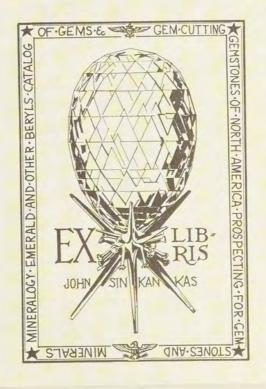




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# TREATISE

ON

### DIAMONDS AND PEARLS.

IN WHICH

THEIR IMPORTANCE IS CONSIDERED;

AND

PLAIN RULES ARE EXHIBITED FOR ASCERTAINING
THE VALUE OF BOTH;

AND THE

TRUE METHOD OF MANUFACTURING DIAMONDS.

By DAVID JEFFRIES, Jeweller.

The third Edition, with large Improvements.

### LONDON:

FRINTED BY C. CLARKE, NORTHUMBERLAND-COURT, STRAND,

FOR R. LEA, GREEK-STREET, SOHO,

AND J. NUNN, NO. 48, GREAT QUEEN-STREET,

LINCOLN'S-INN FIELDS.

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TO THE

## KING.

SIR,

Beg leave, with the profoundest humility, to dedicate the following treatise to your majesty, the patron of truth and justice, and friend to the common interest of mankind, more particularly to that of your majesty's sub-

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jects:

jects: in which your royal character thines with the brightest lustre.

It contains rational and plain rules for estimating the value of diamonds and pearls under all circumstances, and for manufacturing diamonds to the greatest perfection: both which have hitherto been but very imperfectly understood. From hence, all property of this kind has been exposed to the greatest injury, by being subject to a capricious and indeterminate valuation; and the superlative beauty of diamonds has been much debased.

To countenance a work calculated to promote a general benefit, it is humbly apprehended, will not be deemed unworthy the condescension of a crowned head, as these jewels constitute so large a part of public wealth; and, as they are, and have been in past ages, the chief ornaments of great and distinguished personages, in most parts of the world.

That the supreme disposer of all things may long preserve your majesty, the guardian of the commerce and properties of these your kingdoms, and a 3 that

that you may continue to reign in the hearts of a grateful and loyal people, is the fervent prayer of,

May it please your Majesty,

Your Majesty's most dutiful,

And most faithful Subject,

DAVID JEFFRIES.

## READER.

As the following treatife is calculated to inform the world concerning the value of diamonds and pearls; the weights made use of relative thereto, are here previously explained, as the knowledge of them will be found necessary to the public. They agree the nearest to troy weight of any other, and are commonly called carat weights; 150 carats make about an ounce of that weight. Carats are divided into halves, quarters, or grains; eighths, fixteenths, and thirty-two parts.

The draughts of the fizes of brilliant and rose diamonds, exhibited in the plates, are tests to prove the truth and defects of the manufacture of any diamond, and will be found as necessary as scales and weights, in attaining to a right judgment of their value. To make the truth of this affertion appear more evident, it is here to be observed; first, that either a brilliant or rose diamond

may be wrought in fuch a manner as to contain one fourth, or even one third, more weight than it ought to have, which neceffarily injures the beauty of its form, and likewise injures its true spirit and lustre; and, if that overweight be injudiciously valued, together with its due weight, the price will be thereby greatly heightened above its just value, more especially in large diamonds. All which overweighted stones will easily be discovered by the sizes exhibited in the plates, which exactly shew the true expansion of well wrought diamonds.

Secondly, it is to be observed, that the fizes before referred to will discover if any stones do not carry their true substance. An important circumstance to be regarded, inasmuch as any degree of want thereof, necesfarily lessens the spirit and lustre they would otherwise be possessed of. In both cases, directions are given in the treatise, in what manner every such stone is to be valued, as well as all other well proportioned ones, according to their water, and several degrees of perfection or imperfection, of what size or weight soever.

POST-

## POSTSCRIPT.

THE price of this book, I hope, will not be thought too large, when the following matters are taken into confideration.

First, that of its being calculated to settle the value of diamonds and pearls, on a rational and firm basis; a circumstance of no small concern, inasmuch as their worth has hitherto been rated by sancy and caprice, which has frequently proved very injurious even to traders in them, as well as to others who have bought them for their use.

Next, as the fubject concerns only perfons of rank and fortune, and those of the trade for whose use the book is principally designed, the sale of it is not like to be very large. To this may be added, that what it contains is the product of many years fludy, and difficult labour of various kinds, attended with an expence much beyond what can readily be imagined.

And here I shall take leave to observe, that inafmuch as the tables of the prices of diamonds and pearls answer the fame purpofes in attaining to the knowledge of the value of these jewels, as scales and weights, they may be confidered in the fame light; and that the diamond fizes may be depended on for their truth, they are all engraved by myfelf, not daring to trust that performance to any one elfe; which is likewife the cafe in respect to some other things, that I shall not here particularize; all which have ingroffed my thoughts and time to the neglect of my private concerns; by that means I have greatly injured a fortune (not got by trade) that put me above entering on this work with any mean lucrative views; and least of all that of publishing for the sake of the profit that might arise therefrom. On the the contrary, my former circumstances enabled, and my inclinations led me to engage in this attempt, in order to ferve the public, and the jewel trade. And to my great fatisfaction, I find the principles of the book begin already to operate; from whence it may be prefumed they will more and more, and that the world will experience their utility. That this was my original motive is a fact well known to fome; and that I former. ly intended to have published the matters contained in this treatife, without having any regard to the profit arifing thereby. These circumstances, doubtless, will have their due weight in accounting for the price of the book.

And now I think it my duty to mention, that whatever knowledge I may have acquired by applying my thoughts and time this way, I shall endeavour faithfully to employ in any business that I may be honoured with in the jewelling trade. This I have not spoke of in my former edition, nor should I

now, if I were not countenanced in fo doing by fome perfons of rank, and many of my particular friends, both which have of late favoured me that way: and this leads me to hope for an increase thereof, which I flatter myself will not be found disadvantageous to any that may engage me in their fervice. In faying this I am not apprehensive of having said too much.

#### AN

### EXPLANATION

Of some Technical Terms made use of in this Treatise, in alphabetical order.

THE bezils are the upper fides and corners of the brilliant, lying between the edge of the table and the girdle.

The collet is the fmall horizontal plane, or face, at the bottom of the brilliant.

The crown is the upper work of the rofe, which all centers in the point at the top, and is bounded by the horizontal ribs.

The facets are fmall triangular faces, or planes, both in brilliants and rofes. In brilliants there are two forts, skew or skill facets, and star facets. Skill facets are divided into upper and under. Upper skill-facets are wrought on the lower part of the bezil, and terminate in the girdle; under skill-facets are wrought on the pavilions, and terminate in the girdle; star-facets are wrought

on the upper part of the bezil, and terminate in the table.

The girdle is the line which encompasses the stone, parallel to the horizon; or, which determines the greatest horizontal expansion of the stones.

Lozenges are common to brilliants and rofes. In brilliants they are formed by the meeting of the skill and star facets on the bezil: in roses, by the meeting of the facets in the horizontal ribs of the crown.

Pavilions are the under fides and corners of the brilliants, and lie between the girdle and the collet.

The ribs are the lines, or ridges, which distinguish the several parts of the work, both of brilliants and roses.

The table is the large horizontal plane, or face, at the top of the brilliant.

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## INTRODUCTION.

of all jewels, of the greatest importance to this and most nations of the world, justly demand the highest regard of any; inasmuch as they constitute the largest share of wealth of this kind, and are the chief ornaments of great and distinguished personages: more especially diamonds, as being the most beautiful and valuable of all. On which account, as I have been above thirty years a considerable trader in A them,

them, and a manufacturer of diamonds. I have studiously employed great part of my time in fearch of rules to afcertain the value of both under all circumstances, whatever be their weight and magnitude; and, likewife, for manufacturing diamonds to the greatest perfection. And apprehending that I have fully fucceeded-for the promotion of the commerce, and for the benefit of the public, I have exhibited, in this treatife, means by which the inquisitive may attain to a right knowledge in these matters; and more especially concerning those from one carat weight, to those of one hundred carats.

The plates of the fizes of diamonds, and the tables of the prices of both, are extended no farther than to diamonds

monds and pearls of that weight. They might be carried on ad infinitum; and the rule of valuing will hold good, though they should weigh as much as Governor Pitt's diamond, purchased by the Regent Duke of Orleans for Louis the Fifteenth, then a minor, which weighs 136 carats 3; or as three others mentioned by Monfieur Tavernier, in the fecond part of his voyages, p. 148, English translation, viz. that of the Great Duke of Tufcany, which weighs 130 carats 1/2; or that in a merchant's hand which weighs 242 carats 5; or that of the Great Mogul, which weighs 279 carats 2.

If what is contained in this treatife be found true, it will confute the notion that fome diamonds and pearls are

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inesti-

### INTRODUCTION.

inestimable, on account of their extraordinary magnitude; which, to this time, prevails, upon the supposition that no methods can be found to determine their value; and will likewise greatly contribute to support the dignity of the diamond manufacture.

## TREATISE

ON

### DIAMONDS AND PEARLS.

Of the Production of Diamonds and the Principle of valuing them.

valuing of diamonds, according to their increase in fize and weight, is reasonable to suppose, from this consideration; that nature has produced in times past, as well as it does at present, diamonds in the following manner, viz. a vast number of small ones, and progressively a less number of larger; and that they promiseuously inherit the same properties, and share alike of perfection, and impersection. This, therefore, is a sufficient soundation for rules to be

A 3

give

given for valuing them in proportion to their fize and weight, which will be found hereafter exhibited; and if the use and application of them were conformable to the production of nature, the rules thus founded and prescribed, would never be interrupted: and, therefore, if the humour of the world demands, at any time, more or lefs of any particular fizes and weights than nature provides, the price obtruded thereby must be reckoned the occasional, and not the just price, and complied with as fuch; which happens to be the case at present, by the extraordinary use of fmall diamonds in the decorations now fashionable in jewelling. And as the price of these small diamonds will always fluctuate by the alterations of fashions, little regard will be had in this treatife to any, under the weight of one carat.

It may be also observed, that the value of rough diamonds, from two to three carats, and also of polished diamonds, from one to one and a half, do not correspond with the rules hereafter laid down; the price at prefent being lower than what is afferted by

the rules; which is acknowledged, and will remain fo, as long as the humour prevails of fupplying the place of diamonds of that weight, by meanly fetting small stones in a cluster in their room, for the sake of a showy and slashy appearance, at a less price than stones of these sizes would admit of; by which means these sizes are less used than formerly, and become cheaper (the production of nature being always the same) and from hence they are depreciated in their value; so that the present prices of these sizes must also be reckoned the occasional, and not the just price.

The rules are, nevertheless, just, uniform, and consonant to nature; and therefore are here proper to be offered, in order to affist in coming at the true knowledge of the value of diamonds of a higher worth, than such as are liable to be affected in their price by the alteration of fashions in jewelling.

The principle or rule is, that the proportional increase, or value of diamonds, is, as the square of their weight, whether rough or manufactured. For the explanation

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whereof,

whereof, an inftance is first given in rough diamonds; on which account it will be necessary to lay down a general price, which is supposed to be 2l. per carat; meaning, the whole species, good and bad blended together, which are worthy the expence of manufactory. For example, suppose the value of a rough diamond of two carats, at the rate of 2l. per carat, should be required; the rule is, first, to multiply 2 by 2, which makes 4, the square of its weight; then multiply the product of 4 by 2l. the price of one carat, that makes 8l. which is the true value of a rough diamond of 2 carats.

To make this rule applicable to manufactured diamonds, it will be necessary to afcertain what waste, or loss of weight, will be sustained in manufacturing them. And here it may be advanced as a matter of fact, that half the weight will be lost; consequently doubling the weight of any manufactured diamond, renders the rule of the same use to show their value. This loss is to be understood to relate to the general manufactory of brilliant and rose diamonds, in the most perfect manner. To that end,

rules are to be offered for a general practice in both kinds of manufactory; which, if conformed to, will be found to exhibit diamonds in fuch a manner, as to be productive of greater perfection and faving of weight, than any other standards of practice.

Of Brilliant Diamonds, and the Method of manufacturing them.

Brilliants are first to be considered. And the manufactory of a square one, is fixed on for the sundamental and governing rule of practice; nature for the most part directing thereto, as it produces abundantly more apparent six pointed stones, than stones of any other form; and because the same depth or substance, and the same manner of proportioning that substance, which are essential in rendering a square brilliant of any other shape complete; and more substance, or any other manner of proportioning, will be sound, upon experience, prejudicial to the beauty of their

A 5

form,

form, and the true dignity of their spirit and lustre: compared with such as are made conformable to the following rules:

The form of a fix pointed rough diamond is previously to be described; as the shape of it is not much known.

It is a figure composed of two square pyramids, joined at their bases, and which form an outline of a true square. The whole figure is composed of eight triangular saces or planes; four above the base, and four below it; all meeting in two points, one at top, the other at bottom; terminating in the poles of the axis, or line passing through the centre of the stone from top to bottom. Some stones are found to answer this sigure very nearly. To make a complete square brilliant from such a stone, if it be not exactly true by nature, it must be made so by art.

The first thing therefore to be done, is to reduce that part, representing the base of the two pyramids, to an exact square, which forms what is called the girdle of the stone; and then work by the square from the girdle, which will produce the two points points of the axis; and, if it be truly executed, the length of the axis from point to point, will be equal to the breadth of the fquare from fide to fide. A draught of a fide-view of fuch a stone, will be found in the first plate, No. 1.

The next thing to be done, is to produce the table and collet. In order to which, divide the block into eighteen parts from top to bottom; and then take away from the upper part \( \frac{5}{18} \), and from the lower part \( \frac{7}{18} \). This gives the upper part, or table fide, \( \frac{4}{18} \) above the girdle, which is \( \frac{7}{3} \) of the remaining fubftance; and the lower, or collet fide, \( \frac{8}{18} \) or \( \frac{2}{3} \); only 12 of the original 18 parts being left in depth. And thus the table and collet are formed, which will be found to bear this proportion to each other, \( viz. \) the collet will be one-fifth of the breadth of the table. In this ftate it is a complete fquare table diamond.

Its different parts are denoted by the letters a, b, c, d, e, -a, shows what is usually called the table of the stone, which is an horizontal plane at the top; b, the upper sides or bissis; c, the girdle, which shows

its expansion; d, the under sides or pavilions; e, the collet, which is a small horizontal plane at the bottom. The pricked lines above the table, and those below the collet, show what has been taken away. A side-view of one will be found in plate I. No. 2.

Note—This species of manufactory has been exhibited time out of mind; and the brilliant, which is an improvement upon it, has been introduced within the last century; as will appear to those who shall give themselves the trouble of an enquiry. But this not being effential to the present undertaking (which will be pursued with the utmost brevity) an historical account of these matters is omitted.

This is the foundation of a fquare brilliant; and, in order to render it a perfect brilliant, each corner must be shortened \(\frac{1}{20}\)th part of its diagonal; and then the corner ribs of the upper sides must be slattened, or run towards the centre of the table \(\frac{1}{6}\) less than the sides; and the lower part, which terminates in the girdle, must be \(\frac{1}{8}\) of one side of the girdle; and each corner rib

rib of the under fides must be flattened at the top, to answer the above flattening at the girdle; and at the bottom  $\frac{1}{4}$  of each fide of the collet. A side-view of one will be found in plate I. No. 3.

The parts of the fmall work which completes it a brilliant, are called ftar and skill faffets, and are of a triangular shape. Those which join to the tables are the ftar faffets, those which join to the girdle the skill fassets. Both of these partake equally of the depth of the upper fides from the table to the girdle, and meet in the middle of each fide of the table and girdle, as also at the corners; and thus they produce regular lozenges on the four upper fides and corners of the stone. The triangular fassets on the under fides joining to the girdle, must be half as deep again as the above faffets, to answer to the collet part: that is to fay, in the proportion of three to two. A draught of a brilliant rendered complete, will be found in plate I. No. 4.

Under the before-mentioned draughts, are represented four complete brilliants in an horizontal view, by double draughts, weighing 36 carats each. No. 5. is a fquare, No. 6. a round, No. 7. an oval, No. 8. a drop. The left-hand draughts regard their upper parts, and those on the right their under parts, which are supposed to be divided at their girdles. They are thus separately represented, the better to show their whole work, and in what manner it should lie; and likewise their size or expansion, and the size of their tables and collets.

Note-Their perpendicular depths from table to collet, are shown by the length of the bars placed under each double draught. The octagon in the middle of the left-hand draught of No. 5. is the table, which is an horizontal plane or face, at the top, and is denoted by the letter a. The triangular fassets adjoining to the table are star fassets, and are denoted by the letter b. Those adjoining to the extreme part or outlines, are skill fassets, and are noted by the letter c. Thefe, meeting in the middle of the upper fides and corners of the stone, form figures of a lozenge shape, round the upper sides and corners of the stone, and are denoted by the letter d. The outlines of this, and that

of the right-hand draught, are the girdle of the stone, and are denoted by the letter e. The triangular faffets adjoining to the outlines of the right-hand draughts, are the under skill fassets, and are denoted by the letter f. The lower fides are denoted by the letter g. The octagon in the middle is the collet, which is denoted by the letter h; and and is an horizontal plane or face, at the bottom of the stone. This description serves as an explanation of the other three double draughts. All lines within the outlines of the draughts, are called ribs in diamonds. These draughts, with these explanations, will always be found of use to give a right idea of a brilliant diamond. In plate VI. there is a draught of an instrument, useful for examining the fize and depth of any diamond, called a prover.

## Of the Sizes or Expansion of Brilliants.

IN plates II, III, IV, V, is exhibited a lift A of the draughts of the horizontal reprefentation of 55 fquare brilliants, from one carat weight, to an hundred carats, ranged in a progressive order, according to their increase in fize and weight; which are so many tests to prove the truth or error, of the manufacture of any brilliant diamond. Here it is to be observed, that their depths are expressed by the length of the bars placed under each draught; and the fize of their collets, by the octagons under the bars, in order more diffinctly to difcern their feveral parts. The numerical figures on the lefthand of each draught, regard their number; those on the right-hand, their weight.

The reason why the number of size is not more multiplied, is, lest the progression of increase in size should not be discernible; and, by that meant should create too great difficulty in adjusting the degrees in which any stone departs from truth. And this the rather, on account of other stones differing

in their shapes at the table, girdle, and collet, from those of square brilliants; which increases, in some measure, the difficulty of determining any difference to a great nicety; the use of the fizes being to expose any confiderable or grofs departure from truth, and to prevent the carrying on the base and heavy manufacture, which has of late prevailed in an extravagant degree, to the great disparagement of the diamond species; and has contributed, likewife, to a great deception and imposition on the public. It may with truth be faid, regarding fmall stones (which means stones under the weight of a carat) that, in general, they are fo ill made, as to be void of their true beauty in all refpects; and, by reason of their closeness or want of due expansion, they will not fill up, by one-fourth, the fame space as well made ftones do in a piece of jewelling work. Confequently, they are fo much lefs in appearance; and as they retain one-fourth more weight than well made stones of the same expansion; and, as they are wrought for one third, or half the price, the vendor of fuch can afford to fell them at least 30 per cent.

lefs, than he can afford to fell well made flones.

The truth of these matters will evidently appear by future enquiry and observation.

Of the Use of the Brilliant Sizes in discovering ill wrought ones.

TERE it may be proper to show, how far this ill manner of working before mentioned may debase diamonds of larger fizes, and how much it may contribute to the deception both of buyer and feller. To that end will be shown the use of the sizes in discovering a well, or an ill made, brilliant. For example, suppose two stones of fix carats weight each, the one a well made, the other an ill made stone; the first will tally in all circumstances with No. 20. of fix carats weight; and the last may be loaded with undue fubstance, by which means its expansion may not exceed one of five, or four carats weight. If any brilliant be fo circumstanced, it is to be valued only as it agrees agrees with any of the fame expansion in the lift, allowing for the expence of rectifying; because, whatever substance, or weight, it carries beyond what its fize demands, deftroys, in proportion to such excess, the beauty of its make, and its true spirit and lustre. And here may be seen the difference it would make to a purchaser, who may be induced to give the price, that a well made stone of six carats weight demands, for one whose expansion may not exceed that of sive, or sour carats weight. For example, a stone of six carats weight, by the rule before laid down, is worth

		2.	s.	d.
		288	0	0
One of five carats	-	200	0	0
One of four carats	-	128	0	0

If the difference be so great in the instance given, how much greater must it be in regard to stones of larger weights; and as that may be easily known by the same method of enquiry, no other instance need be here given.

Since then, fo great a deception may arife from

from the ill manufacture of diamonds, the great use of the fizes in discovering such, evidently appears. And, as the attaining a right knowledge of the true make of diamonds, will be found, of all other circumstances, the most necessary in arriving at their value, fome remarks are here made, by which the reader is informed in what manner the defects of ill made brilliant diamonds will appear. To that end, an instance is given of a stone of fix carats weight, which is but of the expansion of one of five carats. It will partake, more or lefs, of all the following defects. Either it will be deeper than a stone of five carats, or if not deeper, its table and collet will be larger, and that will render it blocky, by the fides being too upright; or it will be left too thick at the girdle, before the fmall work (which means the star and skill fassets) is performed; and, if fuch thickness be sufficiently reduced, that is, fo as to be confiftent with fafety in fetting, the skill fassets will be executed in an obtuse or blunt manner, and that will cause an undue swelling in the stone; or it may, after all, be left too thick at the girdle. A stone

A stone thus made will unavoidably be of an ill form, and be rendered lifeless and dull; which cannot be rectified without the loss of its super-abounding weight, which will reduce it to five carats; and therefore it is to be valued only as one of five carats. And in case a stone, weighing six carats, should tally only in size with one of sour carats, these defects will be proportionably increased, to the still greater prejudice of the stone; and therefore it will be purchasing deformity at the price of beauty.

Of the Method of manufacturing, and valuing, Spread Brilliants.

CONCLUDING it unnecessary to add any thing farther on the head of full substanced, and over-weighted brilliants, the next thing that requires notice, is, the method of manufacturing and estimating spread brilliants. And as to the method of making them, to do it in the most complete manner, they must be proportioned, as in the

the case of full substanced ones, 3 at the upper, or table fide, and 2 at the under, or collet fide; and whatever be the diameter of their tables, that of their collets must be thereof. The small work is to be performed in the same manner as is practifed in full Substanced stones. This is all that is necesfary to be taken notice of, in regard to their manufacture. But, previous to the method of valuing them, the following observation may be fuggested :---that, as fufficient reafons have been given to make it appear, that brilliants may be injured in their shape and true beauty, by a fuper-abounding of weight, fo, on the contrary, it will appear, that if they do not carry their true or full fubstance, they will be injured in both these circumstances; by reflecting on the confequence of rendering them very thin or fpread, which has frequently been carried to fo great an excefs, as to deprive them of the benefit of workmanship; for the work must necessarily be fo flat, as to cause such stones to be faint and languid in luftre, and thereby lefs worthy of esteem in proportion to such excefs. Notwithstanding which, it will be found.

found, that in past times, instead of valuing the weight of such wrought diamonds, less on that account, it has been valued the more; merely for the sake of their making a showy appearance. To which may be added, that all such stones are more liable to receive injury by blows, falls, or hard pressure, than full substanced ones.

Here it is necessary to explain what is meant by excess, because it must be allowed, that some stones are so formed by nature, as not to be capable of being manusactured by art into any other than spread brilliants, without too great a waste of the diamond species. Therefore, it may be laid down as a fit rule, to include under that denomination (viz. of excess) all spread brilliants expanded beyond the size of full substanced ones of double their weight; and such are to be valued only as they may be supposed to weigh, if reduced to this standard.

It remains to show in what manner spread stones are to be valued; which is as full substanced ones are of the same weight, similar in all other circumstances. And they are to be so valued, on account of their expansion

pansion to the degree above-mentioned; for it must be admitted, that the spaciousness of their appearance to that degree, counter-balances the desiciency of lustre, owing to their want of substance. And this is all that can be offered in justification of so valuing them, which carries the appearance of partiality rather in their favour than disfavour; especially in regard to such as are of the greatest expansion within the limits mentioned; considering, that full substanced stones have all the advantages that both nature and art can bestow.

# Of Rose Diamonds.

ERE it is to be observed, that nothing can more perpetuate rose diamonds in the esteem they have hitherto had in the world, than maintaining the truth of their manufacture. Nor was it ever more sit to be recommended than at present, on account of the corrupt taste that has of late prevailed, in converting rose diamonds into brilliants, under pretence of rendering them,

by that means, a more beautiful and excellent jewel. This has frequently been done, to the great prejudice of their value, by leffening the weight and expansion they bore in their preceding state; and they have frequently been more injudiciously manufactured in the new species, than they were in the old. This will appear to have been often the case, by the upper part of such stones not carrying a true proportion of the fubstance of the stone; which of course renders the upper part flat, and the table of an immoderate extent; fo that the fide-work. or bezil, appears but as a narrow border. This method of working, has been introduced for the fake of preferving the expansion and weight of fuch stones, which unavoidably would be more reduced, if they were allowed their true proportion of top: which reduction, both of their weight and expansion, will appear ever necessary to be done, to render fuch stones complete spread brilliants; for fuch only are they capable of being manufactured into.

Of the Impropriety of transforming well-wrought Rose Diamonds into Brilliants.

ROM what has been observed, it will appear, that no rofe diamonds are proper fubjects of this metamorphofis, but fuch only as are over weighted; and of fuch, those are the most proper subjects of the metamorphofis, which have the bafe, or girdle, too thick. The over weight will be discovered by the fizes hereafter mentioned. To convert any rofe diamond, not fo circumstanced, to a brilliant, will be shown to be a practice not founded in reason; and which carries in it the appearance of an attempt to depreciate this ancient and spacious manufacture of diamonds, in order to exalt a new one beyond its real and true merit.

For it will be found, that a complete rofe diamond will be more expanded than a complete brilliant of the fame weight, and proportionably fo in regard to spread stones; therefore, as it has been shown, that an increase of expansion is substituted in the room of depth, or fubstance, in brilliants, the same is to be admitted in regard to rose diamonds, provided their expansion does not exceed the limits prescribed in the case of spread brilliants.

And if it be admitted, as fome have afferted, that there is a superior excellency in brilliants, what must be the consequence, but that rose diamonds must sink in their value, to the great prejudice of the most noble and ancient families, who are greatly possessed of them, as being a more ancient jewel than brilliants; but, on the contrary, it will appear that rose diamonds, when truly manufactured, are not inferior to brilliants, all circumstances considered.

## Of the Form of a Rose Diamond.

SOME observations are now to be made concerning their form. Their being called rose diamonds, probably took its rise from their shape, in some measure, resembling that of a rose-bud before it expands its

leaves. They appear in a kind of femi-globular form, only terminating in a point at the top; which form, and likewise the work, or facets thereof, covering the whole face of the stone, being more equal, exhibit a more even display of beauty, than a brilliant, whose lustre is derived from the angles, or facets, of the sides only. And as their angles are larger than those of a brilliant, they throw forth more copious rays; the lustre of which appears to be equivalent to the sparkling vigor of the smaller, and more numerous angles of a brilliant.

The fitness of afferting the dignity of the rose diamond manufacture having been shown, the manner in which it is to be performed, is next to be pointed out. But first, it is necessary to lay down what is requisite to constitute a complete rose diamond. A round, or circular stone, is found the fittest for that purpose; because its form is the most beautiful, and productive of more vigor than any other shaped stone; which arises from its admitting of more equal and better connected facets, than other shaped stones will allow of. And for this farther reason,

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that the fame substance and manner of proportioning, which renders them most complete, will render stones of any other shape as beautiful as their forms will admit. The right substance, proportions, and manufacture of a circular rose diamond, are as follow.

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# Of the Manufacture of a Rose Diamond.

to the point, must be half the breadth of the diameter of the base of the stone; and the diameter of the crown must be  $\frac{3}{5}$  of the diameter of the base; and the perpendicular from the base to the crown, must be  $\frac{3}{5}$  of the depth of the stone; and then the lozenges, which appear in all circular rose diamonds, will be equally divided by the ribs that form the crown. The upper angles, or facets, will terminate in the extreme point of the stone, and the lower in the base or girdle.

In the fixth plate, there are four draughts of rofe diamonds manufactured by the before mentioned rules. The first is a fide-

view of a circular shape. The second, an horizontal view of the fame. The third, an oval. The fourth, a drop. Their feveral parts are explained by the first and second draughts. As to the first, a, is the point; b, the crown; c, the girdle. The upper triangles, or facets, show half the work of the crown; the under triangles, half the fide. As to the fecond draught, the common interfection of the fix crofs lines meeting in the centre of the draught, is the point; the lines that form the hexagon, and the triangles within it, compose the crown; the triangles without the hexagon compose the fides; the outlines show the girdle. All lines in the draughts are called ribs in diamonds, except what express the girdles. These draughts are representations of rose diamonds of 36 carats weight each, and may be of perpetual use to give a right idea of their proper figures and workmanship.

Of the Sizes of Rose Diamonds, and their Use in discovering ill-wrough! Ones.

I N the following plates VII, VIII, IX, X, is exhibited a lift of 55 draughts of circular rofe diamonds, from one carat weight to an hundred carats, which are fo many tests to prove the truth, or defects, of any manufactured ftone of that kind. Their use, as in the case of brilliants, will be shown in proving a rose diamond to be either truly made, or not. For example, suppose one of five carats weight; if it be truly made, it will be as expanded at the base, or girdle, as No. 18. of five carats, and the fize of the crown will also agree therewith; its depth will be likewife half its diameter or breadth. But if it be basely made, and left loaded with undue weight, its expansion at the base may not exceed one of above three, or four carats weight. Such a ftone, according to the degree in which it falls short of its just fize, will partake of fome, or all the following defects. Either its depth, from the base to the point, will exceed the rule; or, B 4 though

though it should not be too deep, its fides below the crown may be two upright, which will be discovered by the crown exceeding its proper extent, and that will confequently cause a flatness from the crown to the point; or the crown may be fituated too high; if fo, the fize of the crown may not exceed its just extent, but then it will occasion an increased flatness of the crown, and produce an extravagant depth below it; or the girdle may be left two thick. If any rofe diamond is made after this manner, it will, according to the degree in which it is thus defective, be injured in its shape, spirit, and lustre; and therefore is not to be valued by its weight, but only as it agrees in fize with any in the lift; for the fame reasons as are given in the like cafe of brilliants.

Of the Method of manufacturing and valuing Spread Rose Diamonds.

THE next thing to be regarded, is the manner of making and valuing spread rose

rose diamonds. As to the manner of making them; what is necessary to be observed, is, that their crowns must be of such an extent, and placed in such a situation, as to prevent any disproportionate slatness in the crown, and unequal division of the lozenges: and, that they be made as thin at the girdle as is consistent with safety in setting them. This is all that is necessary to be observed on that head. As to valuing them; the same method is to observed, as in the case of spread brilliants in all respects.

Note—This article of making fpread rofe diamonds, is as necessary to the same ends and purposes, as the manufacture of spread brilliants; inasmuch as they occupy thinner matter than brilliants can,

From what has been faid of rose diamonds, it seems evident, taking in all circumstances, that they deserve as much esteem and regard as brilliants, and are entitled, weight for weight, to an equal value: some persons with us, and those of great reputation for knowledge in diamonds, prefer the former to the latter; but, although this be the opinion of particular persons, it seems no

better grounded than that of others, in giving brilliants the preference; for the fame confequence must follow from thence to the possession of brilliants, as has been mentioned concerning the possession of rose diamonds; which was, that if brilliant diamonds were preferred to rose diamonds, these latter must fink in their value; so, on the contrary, if rose diamonds are preferred, brilliants must fink in their value; and if they are equally esteemed and valued, as appears they ought to be, it will conduce to the faving of weight, that a bias to either mode of working will unavoidably occasion.

The next thing that falls under confideration, is the methods of valuing diamonds.

The first Method of valuing Wrought Diamonds, in Conjunction with Rough Diamonds, out of which they are supposed to be wrought.

A N example is here given to show in what manner the value of a manufactured, or wrought diamond, of one carat, is to be found, upon the principle advanced, fup-

fupposing rough diamonds to be valued at two pounds per carat.

The weight of fuch a stone must be doubled (on account of half being supposed to be loft in working it) which is confidered as its original weight, making two carats; then multiply that weight into itself, which fquares it, and makes four; lastly, multiply the four by two, that produces eight pounds, which is the value of a stone of one carat, wrought or polished, and is equal to the va-Iue of the rough diamond of two carats, out of which it is supposed to be made. This fingle inflance is here given to flow the va-Iue of rough diamonds in the price of wrought ones; and as a farther explanation of the rule of valuing them, and previous to the offering any other, it is to be observed, that although two pounds is laid down as the general price of rough diamonds, it is nevertheless to be understood, that rough diamonds differ in their value, according to their different degrees of perfection or imperfection, and according to the lofs of weight they may be supposed to sustain in being truly wrought; as it is well known,

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that fome will lose abundantly more than others, arising from their ill forms and other defects that may attend them, which defects are so numerous and difficult to be expressed, that what may be said of them would probably not be understood, but by the most experienced traders and manufacturers of them. This consideration, and that of its being but of little concern to the public, prevents my saying any thing more relating thereto.

In farther explaining the principle of valuing wrought diamonds, three other inflances, befides that already given, will be offered, to show the operation of the principle in coming at the value of wrought diamonds, which, it is judged, will be fufficient in all other cases in this way of proceeding. After that will be offered three more of the same weight, in a different manner of proceeding, but to the same end.

Here it may be proper to hint, that all the inftances that will be given, are founded upon the price of rough diamonds in general, being put at two pounds per carat, viz. good and bad blended together, as has been before noticed; fo that two pounds is the price of the middle fort only. And it is also to be remembered, that in manufacturing, half the weight is supposed to be wasted. And as mistakes may be made in calculating the value of particular diamonds, in the manners hereafter prescribed, it is here noted, that the prices of diamonds, from one of one carat to one of an hundred carats, of this degree of goodness, are contained in plates XI, XII, XIII, XIV, XV, XVI; which will prove the truth or falfity of any calculation: and it is also to be observed, that the expence of manufacture, or workmanship, is excluded in all the inftances that will be given on this occasion, the reasons of which will hereafter appear.

Now follow the three other inflances proposed, to explain this first method of finding the value of any wrought diamonds.

## The first Instance.

To find the value of one of five carats weight, the weight must be doubled, on account of half being supposed lost in working it; that replaces its original weight, which makes

makes ten carats; then multiply ten by ten, that fquares the weight, and makes one hundred carats; and, lastly, the one hundred must be multiplied by two pounds, the price of one carat; that produces two hundred pounds, and is the value of a wrought stone of five carats, and the price of the diamond when rough.

### EXAMPLE.

Multiplied by		Carats Pounds
Multiplied by	10	1 ounds
Makes	100	
Multiplied by	2	Pounds
-101/12/2009/12/1	Constitution of the last	
Makes	£ 200	

## Second Instance.

To find the value of one of five carats \(\frac{1}{8}\), the weight must be doubled, that makes ten \(\frac{1}{4}\); next multiply that weight by four, to bring it into fourths, or grains, which makes forty-one; then multiply forty-one by forty-

forty-one, that makes one thousand six hundred and eighty-one, the square of the weight in sixteenths; therefore divide the one thousand six hundred and eighty-one by sixteen, that brings it again into carats, and makes one hundred and sive carats  $\frac{1}{16}$ ; which multiplied by two pounds, produces 210l 2s 6d. and is the value of the stone, rough or wrought.

#### EXAMPLE.

	Cara	ats
	10	4
	4	
	41	
	41	
	164	
-()		Carats
16)	1001	105 16
	to.	210 2 6

Third

## Third Instance.

To find the value of one of five carats  $\frac{1}{4}$ ; the weight doubled is ten carats  $\frac{1}{2}$ ; reduce that weight into grains, by multiplying it by four, that makes forty-two; then multiplying forty-two by forty-two, that makes one thousand seven hundred and sixty-four, the square of the weight in sixteenths; which divide by 16, that brings them again into carats, and makes one hundred and ten carats and  $\frac{4}{16}$ ; which multiply by 2l. that produces 220l. 10s. and is the value of the stone, rough or wrought.

#### EXAMPLE.

$$\begin{array}{c}
10^{\frac{1}{2}} \\
4 \\
4^{2} \\
4^{2} \\
4^{2} \\
8^{4} \\
168 \\
\hline
Carats \\
16) 1764 (110^{\frac{4}{16}} \\
2
\end{array}$$

The second Method of valuing Wrought Diamonds, in Conjunction with the Rough Diamonds, out of which they are supposed to be wrought.

## First Instance.

Carats weight, as in the foregoing cases, so in this the weight must be doubled; that makes ten carats. As a rough diamond of one carat is valued at two pounds, every carat in this stone accumulates ten times that value; and so every carat in this stone is to be valued at twenty pounds; therefore multiply ten carats by twenty pounds, that will produce two hundred pounds, and is the value of the stone, rough or wrought.

### EXAMPLE.

10 Carats

Multiplied by 20

Makes the total 200 Pounds

Second

## Second Instance.

To find the value of one of five carats  $\frac{1}{4}$ ; the weight doubled makes ten carats  $\frac{1}{4}$ ; next reckon that weight in the foregoing manner, that makes every carat in this stone worth twenty pounds, ten shillings: so first multiply ten carats by twenty pounds, that makes two hundred pounds; then multiply ten carats by ten shillings, that makes one hundred shillings, or sive pounds; next add the value of a fourth of a carat at the rate of 20l. 10s. that makes 5l. 2s. 6d. lastly, cast up these three sums, the total will be 210l. 2s. 6d. and is the value of the stone, rough or wrought.

### EXAMPLE.

Multiplied by	20		Carats Pounds	
Makes 10 cts. mult. by 10s. makes The value of $\frac{1}{4}$ of a carat at 20l. 10s. is	200 5 5	2	Pounds	
Makes the total £	210	2	6 Third	

## Third Instance.

To find the value of one of five carats  $\frac{1}{4}$ ; the weight doubled makes ten carats  $\frac{1}{2}$ ; reckon that weight as in the two other cases, that makes every carat in this stone worth twenty-one pounds: so multiply ten carats by twenty-one pounds, that makes 210l then add the value of the half carat at twenty-one per carat, that makes 10l. 10s. lastly, add the two sums together, the total will be 220l. 10s. and is the value of the stone, rough or wrought.

### EXAMPLE.

		10	Carats
Multiplied by		21	
		-	•
Makes		210	
The value of the 1/2 added, which is	carat	10	10
		-	
Makes the total	£	220	10
			The

The inftances that have been given of two methods, for finding the value of wrought diamonds, as they ftand connected with the rough (out of which they are supposed to be made) it is apprehended, are a sufficient explanation of the principle for valuing rough and wrought diamonds; and prove its being founded on reason.

Of the Method of valuing Wrought Diamonds, exclusive of any Regard to Rough Diamonds.

A Sinftances have been given of two different methods of attaining the value of wrought diamonds, in which cases the value of rough diamonds of double their weights have been jointly confidered, they being supposed to be made from such rough diamonds; three instances of manufactured diamonds, of the same weights, will be now offered, to show in what manner their value may be found, exclusive of any regard to rough diamonds: and as the last method appears the shortest, and most easy to be understood,

derstood, that method will be made use of on this occasion.

This is to be known by applying the price they bear manufactured, which has been shown, viz. that as rough diamonds are valued at two pounds per carat, a wrought diamond of one carat is worth eight pounds; so to find the value of a stone of that degree of goodness, whatever number of carats are contained in such a diamond, each is to be valued at eight pounds; and whatever sum they make, must be multipled by the weight of the diamond.

The inftances are as follow:

# First Instance.

To find the value of fuch a diamond of five carats weight, reckon every carat at 8 pounds; then multiply 5 carats by 8 pounds, that makes 40 pounds; fo every carat is to be valued at 40 pounds; then multiply 5 by 40, that produces 2001. and is the value of fuch a diamond.

### EXAMPLE.

Multiplied by 5 Carats
40 Pounds

Makes the total £ 200

## Second Instance.

To find the value of one of five carats  $\frac{1}{8}$ , at the rate of 8 pounds per carat; multiply 5 by 1, that makes 40; then add to that the value of  $\frac{1}{8}$  of 8 pounds, that is 1 pound; fo the value of every carat in this stone, is 41 pounds; then multiply 5 by 41, that makes 205 pounds; next add the value of  $\frac{1}{8}$  of 41 pounds, that makes 5l. 2s. 6d. These two sums cast up, produce 210l. 2s. 6d. and is the value of the diamond.

#### EXAMPLE.

Multiply by	5 41		Carats
Makes To which is to be added the value of * of 41l. which is	205	2	6
Makes the total	210	2	6

# Third Instance.

One of five carats  $\frac{1}{4}$ , the value of each carat is 42 pounds; multiply 5 by 42, that makes 210 Pounds

Then add the value of  $\frac{1}{4}$  of 42, which is 10 10

Makes the total £ 220 10

Of the highest and lowest Price of Rough and Polished Diamonds.

TAVING explained the different methods of finding the value of rough and wrought diamonds, of the middle fort, the first being rated at two pounds per carat, the second at eight pounds: as rough and polished diamonds may be of a higher and lower value, it remains to show what may be the highest and lowest of each.

First—I shall speak of rough diamonds, and shall suppose three prices; for instance, one pound, two pounds, three pounds; the middle being two pounds, there appears an advance of one pound above the middle price, and a fall of one pound below; which is a deviation of fifty per cent. each way, and makes the worst fort be but \(\frac{1}{3}\) the value of the finest.

That the two extreme prices naturally proceed from that of the middle price, I shall endeavour to prove; and in order thereto, I shall first show, that no rough diamond, which is not worth one pound per carat,

carat, ought to be manufactured; because all that are of less value must be very defective, carrying many, or all of the following blemishes, souls, or stains, specks, slaws, being veiny, craggy, ill-formed, and of an ill colour; which, consequently, must obstruct and defeat the purposes of manufacture; for with all that art can do, they will be void of lustre, which will sink them below the rank of a jewel.

Next, it is to be observed, that all under that value will fell for as much, to be used in cutting or forming the better fort, as any one can afford to give for them, with the view of manufacturing them; for the expence of workmanship must be the same as for better ftones, if well done; and if not well done, it will add to the other defects; and the lofs of weight must be greater than what attends better ftones, by its being frequently necessary to discharge or lessen the defects before-mentioned: indeed, when a ftone of a very large fize falls in the way, it may be thought worth the expence of working, as its fize may recommend it; thefe being rarely to be met with, but not as orna-

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mental to any thing; and fuch may be valued below four pounds per carat, as the buyer and feller may agree on.

As it cannot but appear, that no rough diamond ought to be wrought that is not worth one pound per carat, this must be allowed the lowest price of rough diamonds, worthy of manufacture; which, as has been observed, is half the value of the middle price; so allowing as much advance above it, makes the price of the finest rough diamonds worth three pounds per carat.

This being admitted, it shows that manufactured diamonds, of the worst fort, are worth four pounds per carat, and the finest twelve pounds per carat; and this, probably, will be thought scope sufficient to employ speculation and judgment; and if the value of rough diamonds should rise or fall, the middling price must be always that which the whole was valued at, good and bad blended together; and as many prices as will lie between those of the lowest price, and those of the middle price, so many must be admitted above the middle price, and that will determine the highest price: or,

in other words, whatever the worst are valued at below those of the middle fort, so much must the finest be valued at above the middle fort. And, therefore, the value of all diamonds is to be adjusted within the limits of the extreme prices.

## Remarks on Brazil Diamonds.

ROM the want of this knowledge, and the rule of valuing diamonds, has arisen the wide difference of jewellers' sentiments, concerning their just and natural value; the ill effects of which difference to individuals I shall be silent about, that having been too sensibly felt to need any remarks: but proceed to show what an effect it has had, in times past, on this important property in general.

In the year 1733, rough diamonds were not worth twenty shillings per carat; in the year 1735, not worth thirty shillings; in the year 1742, not worth more than thirty shillings per carat; all which may clearly be

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made appear, from public fales in the before-mentioned years. Catalogues of them I have preferved, on which I have made particular remarks, and shall be ready to show them on any proper occasion. I have been the more careful to preferve them, believing there never will be the like exhibited again; and the farther cause of publishing these facts, is to show, that if the traders had better known how to value diamonds at that time, and had been better informed of the real cause of so great a plenty as then appeared, they would not have discovered so great a confternation as then possessed them; which occasioned many, even of the most capital traders in London, to believe, that diamonds were likely to become as plenty as transparent pebbles; and they were fo far influenced by this opinion, that most of them refused to buy diamonds on any terms.

The adventurers were chiefly perfons of low circumstances, on which account the Lisbon merchants dreaded any returns made them in diamonds, or any sent them for sale; being forced to deal with such persons upon credit.

credit, and at any price that these purchasers were pleased to give for them.

One of the most considerable Portugal merchants, with whom I dealt, told me, in the month of January, 1733-4, at which time I bought a parcel, to the amount of seven hundred and fifty pounds, that he had been forced (for want of more reputable buyers) to sell and give credit for many hundreds of pounds, to such as he would not have trusted with five pounds cash; and that he found other merchants were in the like case: on which account there were many large parcels returned to Lisbon, they not being able to find buyers enough, even of this sort, to take off their goods.

I shall here mention some other matters, that arose in conversation at this time. This gentleman observing me to be more exact than others, in weighing the large stones of the parcels I bought of him, and some of other parcels, asked me the reason of it; upon which I told him, that no man who did not know how to value diamonds in proportion to their weight (whatever knowledge else he might have of rough diamonds) could

be a proper judge of the value of any stone. Upon which he was pleafed to fay, if I had that fecret, he apprehended I might get what money I pleafed. I told him, it could be of no fervice to me till it became public, and the world made fensible of the truth of the principle. Upon this he faid, he thought it might be of great use to make it public; and asked, if I did not intend to communicate it to the world. I told him, it was my intention, when circumstances rendered it more proper; observing it would be by no means proper then, as the public, and likewife the traders in them, were fo apprehenfive of the Brazil mines producing an inexhaustible store; judging from thence, the world would fcarcely think diamonds worth any confideration, especially as jewellers fo undervalued them.

As this has been, and still is, in a less degree, the state of the case in regard to diamonds, it may be proper to enquire, whether it be fact, that these mines have produced any diamonds; or whether the diamonds that have been sent from thence, be not such as they procured by trade.

Having

Having many years past been very solicitous to know the truth of this matter, I have spared no pains to come at as good a knowledge thereof as I could procure; and what information I have met with, I shall disclose.

In the year 1734, I had the pleafure of being acquainted with a gentleman that had been, but a few years before that time, governor of Fort St. George. He told me, upon my talking with him about the Brazil mines, that he did not believe a tittle of the report, and gave this as a reason for his difbelief of it; namely, that when he was at Fort St. George, he was informed that the Brazil people had long carried on a fecret trade with the India people at Goa, for diamonds, and was affured they had a vaft stock, but not very fine, they generally choofing to buy the more indifferent fort, for the fake of cheapnefs; and he faid, whatever quantity came from thence, would not alter his opinion, in regard to the value of what he was poffeffed of, nor would he abate of the price they were valued to him at, in India; faying, they only knew how to value diamonds. In this refolution he perfifted to

his death, which happened but a few years fince. Some of these diamonds he fold before his death, at his own price; and he then faid, it was his opinion, that their fending their diamonds to Lifbon, was not a matter of choice, but necessity; being forced thereto, in order to raife a large fum of money to discharge great arrears of indulto, which they then owed the king of Portugal; and the fame has, fince that, been faid by others. And, moreover, it has been faid, that the late king having been made acquainted that they were greatly in debt to their European correspondents, he infifted upon their fending a fufficient quantity to discharge those debts; and when they came to Lisbon, in order to give immediate satisfaction to the merchants, it was faid, the king ordered them to be fold in a public manner, for the fake of expedition; and fome have thought it was done out of refentment to his Brazil fubjects, for their using him and the European merchants ill; he knowing they had it in their power, long before, to have remitted these diamonds.

Another circumstance had like to have escaped

escaped my notice; which is, that it has been also reported here by persons of figure and unquestionable veracity, who happened to be at Fort St. George, when it was reported that the Brazil mines had furnished Europe with a great quantity of diamonds very cheap, that the India people laughed, and said, it would not alter their price.

From what has been observed, there feems room to think, that these diamonds are the effect of the king of Portugal's subjects trade, and not the produce of his Brazil mines; for it cannot be thought any prince would have countenanced such a disadvantageous method of disposing of the produce of his own mines, as was practised in getting rid of them, notwithstanding any redundancy; on the contrary, that he would have restrained the sending any quantity, that must tend to sink their value, which is always carefully avoided by the India people.

And if it were true that his Brazil mines fo abounded with diamonds, they must be come at with a great deal less expence than attends the fearch of diamonds in India; and of course he must become the richest prince in Europe: for it would be an additional employment for his Brazil fubjects, in confequence of which his commerce must be greatly increased; inasmuch as we should always encourage it, rather than that of the India trade, on account of our purchasing diamonds in India chiefly for bullion. And can it be supposed a wife prince would difregard a gift of Providence, fo highly efteemed by the eastern part of the world? And therefore the methods made use of, must be supposed to proceed from the late king's knowing they were the effects of trade; if fo, it cannot but be judged a wife and just step in him, to force them to discharge their obligations to himfelf and their correspondents, knowing they could procure no advantage to them, by lying in their hands as a dead stock. Besides, trading in diamonds has been difallowed by the late king; and to conceal it from his knowledge, is supposed to be the reason of their giving out, that the diamonds they were formerly poffeffed of, were the produce of his Brazil mines; and to make it the more plaufible, they fuffered it to be reported, that they were of a different

ferent nature, as well as worfe than India diamonds.

Upon this occasion I will venture to fay (from critical observations in an extensive commerce and manufacture of both) that there has not appeared to me a circumstance, in those called Brazil diamonds, that I have not found in India diamonds; and it is likewife noticed, that fome years cargo from the Brazils, have been as fine as any year's cargo from India; and that the fmall diamonds have fold at as high a price, as ever was given for fmall India diamonds. And it is also remarked, that what have of late been brought from Brazil, we hear but little of, more than their quantity yearly leffens, notwithstanding their price is raifed more than treble of what they bore fome years ago. There are various fentiments among traders concerning the cause of it; but being much divided in their opinions, I shall not trouble my readers therewith; not doubting but their fending fo few, will appear to arife from their not being poffeffed of more. And, from hence may be inferred, that they are interrupted in this commerce, and deprived of the means of procuring them as formerly; which means are supposed to have been their purchasing them with Brazil gold, wherein the Brazil mines are known to abound in a profuse degree; and in this fenfe it may be faid, the diamonds that we have had from thence, are the produce of the Brazil mines; and if there be a check, or an interruption thrown in the way of this barter, we cannot expect to have fuch quantities as formerly, although more or lefs may always come from thence; which has been the case before the great glut appeared; but they were not then called Brazil diamonds, and what was brought from thence was conducted with great fecrecy: and it is likely this trade will be continued, from the circumstance of diamonds being so portable a commodity, and what may be conveyed with great fecrecy, however firica his Portuguese majesty's orders may be in prohibiting thereof. As to the political reasons for prohibiting this traffic, it is not my province to meddle with that.

Amidst what has been said to show the improbability of the Brazil mines having

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produced the diamonds, that of late years have been placed to their account, the circumstance that has been before-mentioned, deferves more than ordinary notice; therefore I shall recite it again; which is, that notwithstanding the India people knew what despicable prices Brazil diamonds fold for in Europe, in the before-mentioned years, they kept up the price of their diamonds; which feems to prove they were the sellers of those diamonds to the Brazilians, and serves to explain what they meant by laughing at the report of the Brazil mines furnishing Europe with diamonds, and their saying it would not alter their price.

This conduct, furely, deferves the highest applause; for had they copied after the Brazilians, this great article of wealth, by this time, would have been reduced almost to nothing; the ill effects of which, words cannot sufficiently express: the prevention of this evil the India people must have the honor of.

To maintain as invariable a price of thefe jewels as is possible, must be of the greatest utility to the public; which they appear to be fenfible of, from their past conduct; but there is more to be offered in proof of this.

It is attested by unquestionable authority, that when they find a slack demand for diamonds, they always withdraw them; the consideration of any quantity they may be possessed of, seems to be no motive with them for abating their price; which is believed to arise from their supposing they have competitors to subject them thereto; and from what has been observed, the truth of it can scarcely be doubted; and their manner of trading with us seems to be a further proof of it, which is thus:

They first find out what forts are wanted, and then show such goods and put their price: if they are sold, they have their demand; for they suppose themselves to be the only judges of their value; and it does not appear that any one has disputed the truth of it. From hence it is, that diamonds are sent here in bulces, which means parcels of diamonds neatly tied up in muslins, and sealed by the sellers of them; which diamonds are generally bought here by the invoice, that is, are bought before they are opened;

opened; it being always supposed they contain their value which they were fold for in India; and the buyer here gives the merchant fuch a profit as contents him. The diamonds being thus bought, the buyer opens the parcel, feparates them, and then values them feparately as his judgment directs; making to himfelf, likewife, fuch a profit upon the whole parcel, as he thinks proper. And as this is the cafe, it is referred to the confideration of reflecting minds, whether or no any man can properly judge of the value of stones of different fizes and properties, without fome rule to direct his judgment. As for the different properties of diamonds, speculation, assisted by the knowledge acquired in manufacturing diamonds, is the only guide; but whether any can judge of their value, regarding their magnitude, is the thing in question. It feems as if our traders thought the India people were mafters of fome rule for that purpofe, by placing fuch confidence in them, as it appears they do by this reprefentation; and it is believed, when the European part of the world are acquainted with the true method method of estimating diamonds, it will be found, that the India people have generally valued their large diamonds alike at all times, let the demand for them vary as it may.

If that be the case, is not this issuing out another staple commodity like that of gold and silver? And although its value is not ascertainable to so great an exactness as either of those, by an assay, yet it may appear they are reducible to as great a nearness in speculation, as either of the other two. But however beneficial this may be, the value of diamonds can never be at all settled in Europe, whilst we are amused with the notion of the Brazil mines being productive of diamonds. How far it is the interest of these parts of the world to be well informed of the truth of this matter, is left to the consideration of the public.

But suppose it should be remarked, that although diamonds in India may at all times be near the same value, it cannot be the case in other parts of the world, arising from various circumstances: the chief cause of which variableness in the price of diamonds, or any jewels, in other parts of the world, cannot

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but be feen to be the difagreement in the fentiments of jewellers concerning the natural value of them. But the extraordinary inflances in the late wars in Germany, will be a farther proof of it; inalmuch as it has been told us by public papers, that not above one-third or one-fourth of the money which gems have cost, could be procured by way of pledge or fale: indeed the avarice of the buyers may have fome thare in occasioning fo great a lofs. Does this prove the intrinfic worth of jewels, to frequently talked of? Must not this be a valt discouragement to great perfonages from vefting themselves with this property?-How fit, therefore, is it to render them as invariable in their price as the nature of things will admit of; fince they poffeffed themselves thereof, not only for perfonal ornaments, but also as articles of folid treasure, to serve such emergencies as have been noticed? And it is known, that there are fome rough diamonds of great price, as well as polished, in Europe, which have been bought upon that principle.

Since it is thus, nothing can be a greater inducement to perfons of high station to

purchase diamonds, than rendering their value more staple. And as nothing can accomplish that so much as being well acquainted with their true value, the following method will be found the only way of coming at that knowledge.

It appears from the reason of things, that all large diamonds are to be valued according to the rule advanced, by the price that one of a carat bears, which is fimilar to a stone, whose value you would know; for as you value the weight in a stone of one carat, fo must you that of a stone of the same properties, let the weight be what it may, And as a farther proof of its being right, it will be found, that jewellers, of the greatest experience and knowledge, have generally estimated diamonds as this rule directs, by dint of found judgment: and as the younger and less experienced must want some affistance in this important concern, this will put them in the right way, and by means hereof the value of diamonds will be made univerfally known; as it lies in fo narrow a compass, as that of any one's making himfelf acquainted with the worth of a diamond of a carat weight; which, it is prefumed, perfons of good judgment cannot be at a lofs to know, let them be good, bad, or indifferent; and that fuch will agree in their fentiments concerning the value of a stone of a carat weight, be it, as it may, to five or ten per cent.

## Of the Table of Prices of Diamonds.

THE next thing to be taken notice of, is a table, which will be found in the 11th, 12th, 13th, 14th, 15th, and 16th plates. This table confifts of the price of diamonds, from one carat weight to an hundred carats; formed upon the principle of valuing them by the fquare of their weight, upon the fupposition that the governing price of rough diamonds, good and bad blended together, is 21. per carat; fo that 21. is to be reckoned the mean, or middle price, and will be found of great use to prevent the trouble of calculating the price of every stone by the rule. If any stone differs in its value from this mean or middle price, whether higher or lower, fo much much per cent. is to be added, or deducted, as judgment shall direct. It may be observed, that the tables do not defcend to fixteenths of a carat; it is omitted for brevity's fake, which may be supplied by casting up any two adjoining prices, and then take the half, that will give the prices of the intermediate weight. For example: a stone of one carat will be feen to be the first article in the table, and to come to 81. To find it out by the rule, the method is to multiply 2 by 2, that makes 4, which is the fquare of its weight; then multiply 4 by 21 the price of one carat, that makes 81. Here it is to be remembered, that all the prices which the table contains, are supposed to be of the middle fort: and also that half the weight is fupposed lost in making, which occasions the first multiplying by 2; but, as this method is more laborious and intricate, in regard to stones of odd weights, the table will be found of much convenience.

An inftance is here given as a proof of a diamond of feven carats  $\frac{7}{8}$ , in the two different methods of valuing. For example, the first method is this: the weight of a stone

of feven carats ? must be doubled, which makes fifteen carats 3; next, that weight must be multiplied by 4 to bring it to grains, that makes 63; then multiply 63 by 63, that makes 3969, the fquare of the weight in fixteenths; therefore divide the 3969 by 16, that brings it again to carats, which makes 248 carats and i, which multiplied by 2 pounds, produces 496l 2s. 6d. The fecond method is this: first, see what a diamond of feven carats ? is worth per carat, which will be found to come to 63 pounds; first multiply 7 by 63, that makes 441 pounds; then add the value of 7 of 62 pounds, which comes to 55l. 2s. 6d.; thefe two fums added together, produce 4961. 25. 6d. fo both totals are alike, and agree with the price of one of the above weight in the table.

It will be here proper to observe farther, that no notice is taken of the additional price, which the expence of manufacture would occasion in each stone. This is omitted on account of the different prices, their different sizes and weights demand; and, likewise, on account of the different prices which

which their various fubstances require. These circumstances render it impracticable to be inferted; and, therefore, the prices of both are contained in four tables, exhibited at the end of the treatife. The first table contains the price of full-fubstanced, or full-proportioned brilliants, explained as follows: the first column exhibits a supposed increase of fize and weight, from a stone of a carat, to one of an hundred carats. The first five articles are carried on by the increase of one carat each, the following by five carats each. The fecond column contains the price of their workmanship, according to their increase in weight, at the rate of 11. per carat. The reason of carrying on the gradation by the increase of five carats, is for the sake of brevity; as the different prices of the intermediate weights are inconfiderable, compared with the increased value of such stones. The first table being explained, it will ferve as an explanation of the other three.

The fecond table exhibits the price of making spread brilliants, which is rated at 11. 5s. per carat; and is so done for the following reasons; namely, that all spread stones

ftones require more care than full substanced ones, and are not so soon dispatched. The third and fourth tables regard the price of manufacturing rose diamonds; which manufacture demanding less labour than that of brilliants, causes the price to be one-fourth less, as will be seen by the third table regarding full-substanced, or full-proportioned rose diamonds. The fourth table regards spread rose diamonds, the price of which is the same with that of full-substanced brilliants; which is so raised for the same reasons as have been given in the case of spread brilliants.

N. B. The prices in these tables are to be doubled in wrought stones, half the weight being lost in manufacturing.

If I had not inferted the different expences of manufacturing diamonds, it would be found wanting in the value of every stone; but may now be easily supplied from the tables just explained. An instance will fully evince their use, which I will give in the case of a sull-proportioned brilliant. For example: suppose the value is required of one of the mean, or middle fort, of  $7\frac{7}{8}$  carats; the diamond, exclusive of the expence

of workmanship, comes to 496*l.* 2s. 6d.; the expence of workmanship must be reckoned at 3*l.* 15s. per carat, which comes to 26*l.* 14s.  $4\frac{1}{2}d$ .; that being added, the whole makes 522l. 16s.  $10\frac{1}{2}d$ .

From the various helps contained in this book, it may be reasonably expected, that such as are skilful in diamonds, and acquainted with the current price of them, will hereafter universally agree.

The innate perfections and imperfections of diamonds, come next under notice.

Of the innate Perfections, Imperfections, and Water of Diamonds.

THE circumstances which distinguish the finest diamonds are these. Their complexion must be like that of a drop of the clearest rock water: and if such stones be of a regular form, and be truly made, and free from stains, souls, spots, specks, slaws, and cross veins, they will carry the highest

highest lustre of any whatever, and will be esteemed the most perfect.

If any are tinctured yellow, blue, green, or red, in a high degree, which feldom happens, they are next in efteem; but, if any partake of these colours only in a low degree, it finks their value below the beforementioned.

There are other complexions of a more compound fort, fuch as brown, and those of a dark hue. The first of these sometimes refemble the brownest fugar-candy, the latter dusky iron. And if any diamonds are attended with stains, fouls, spots, specks, flaws, and crofs veins, it will abate their luftre and fink their value. Here it may be observed, that what is commonly called the first water in diamonds, means the greatest purity and perfection of their complexion, which, as was faid, must be like a drop of the clearest rock water. When any speak of a diamond falling short, more or less, of that perfection, it is expressed by faying, it is of the second or third water, &c. till a stone may be properly called a coloured one. And to fpeak of a diamond imperfectly coloured, and con-

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taining any other defects, as a stone of a bad water only, is very improper; as it does not convey an idea of the particular colour or defects belonging to it.

Of the superior Worth of Diamonds over all other Jewels.

IAMONDS have, in every age, been esteemed the chief of jewels, on account of their innate specific qualities; which, if not exhibited by proper skill, remain imprisoned. It is certain that, in their natural state, they have not fo much beauty or luftre, as fome other forts of jewels; but when truly and judiciously manufactured, they throw forth a splendor and lustre, furpaffing all others, which justly entitles them to the most perfect workmanship, and will confequently be the most likely means of perpetuating them in the efteem of the world. And this will tend to establish their worth, and fecure every one's property therein; whereas a neglect of exhibiting and difplaying

playing their beauty, by proper workmanship, will render them unworthy ornaments
of the great and distinguished; which, of
course, must sink their value. These considerations, doubtless, will influence the curious and discerning, to give all due countenance to their being exhibited, in future
times, with that beauty and lustre, of which
they are susceptible.

And if the following additional circumstances be taken notice of, they will farther show, that diamonds deferve the chief regard of all jewels. First, they are the best repofitory of wealth; inafmuch as they will lie in the smallest space of any, and are thereby the most portable and best conveyance of treasure. Next, their superlative hardness secures them from all injury by wear; as nothing can make any impression on them, or prejudice their luftre, but their rubbing against each other. They can only be affected by fire, and that must be strong and lafting to do them much harm; and the injury they receive thereby, arifes chiefly from taking them too hastily from thence, whereby the immediate impression of the

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cold air may possibly produce slaws, &c. A moderate fire will only occasion a roughness on their surface, which may be repaired by new polishing.

Reasons for working Diamonds in a complete Manner, and the Consequences resulting from a contrary Practice.

TYPHAT has been faid of the fuperlative properties of diamonds, &c. feems fufficient to recommend them to the protection of mankind, from any abuse arising by ill workmanship, as their pleasure, honor, and interest, are concerned in it; and nothing appears wanting to influence thereto, but that of the world being convinced of the necessity of it, from being made acquainted with the abuse that diamonds have fustained by the contrary practice. To that end I shall first resume the observation that has been made on fmall brilliants; which is, that they are in general fo ill wrought, as to be void of their true beauty and luftre, and Will

will not fill up, by one-fourth or one-third, the space that well-wrought stones do, in a piece of jewelling work; of course, purchasers of such are deprived of one-fourth or one-third of the show or appearance that well-wrought stones would make, and of the beauty and lustre that always accompany such; next, that the same effects attend stones of larger sizes, made after the same manner.

N.B. The fame ill effects also attend small or large rose diamonds, made in the same manner.

The ends and purposes that are to be ferved by this manner of working, naturally fall under consideration: the most that can be pretended, is, that by the world being brought into a favourable notion of these goods, on account of buying them at a lower price by weight than well-wrought stones, trade has been increased, and more hands employed; but it cannot mean the increase of England's trade, for that has been declining many years, and its hands unemployed, to the great impoverishment of the whole body of workmen, and those known to be

as good as any, if not the best, in the world: and which has arifen from their refufing to work after this rude manner, and not being able to support themselves by the wages that are given abroad for fuch work, which appears not equivalent to the wages here given to the meanest handicraftsmen.

Admitting our neighbours have increased the traffic, and employed more hands of the lowest forts than we could ever boast of, let the confequences which are like to flow from this manner of working be confidered.

By the continuance thereof, the difesteem that has of late been shown to diamonds may increase; which principally has taken its rife from thence, particularly in England; and that, probably, has been forwarded by the good appearance which crystal or false ftone-work, commonly fo called, has made of late (on which all the embellishment that care and skill can procure, has been bestowed). This is observed to the credit and reputation of thefe traders and their workmen; and in confequence thereof, this commodity frequently passes for diamonds: and if the fame care should be taken in com-

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pleting that fort of work for foreign use, they also may enter into the like contempt of diamonds; if so, what will become of this boasted increase of trade? But if the truth of the diamond manufacture be supported, their lustre will conspicuously excel the faint and languid efforts of all crystalline matter, with all the helps of art.

To difgrace this first-rate gem by ill work-manship, in bringing it down almost to the level of this commodity, seems to be very unwarrantable; especially as it tends to fink this part of public wealth, and is a manifest discouragement to art and ingenuity; and also of great prejudice to fair traders, who scorn to submit to the encouragement of such mean, deceitful artifices, to enrich themselves.

But notwithstanding what has been offered, to show the impropriety and ill consequences of working diamonds in an ill manner, it is to be feared, that such as have hitherto found their account in it, will pursue the same method, so long as they can find it their interest so to do. To prevent this abuse, the sizes of brilliant and rose diamonds are exhibited, by which any one may

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know,

know, whether a diamond of either manufacture be well or ill made; and this is thought the most effectual means of putting a stop to it; judging all persons, who have any considerable value of this kind, will afford their assistance in discountenancing such an injurious practice; if so, the world will see persons of rank and fortune distinguished from others, by the inimitable lustre of these jewels; for which purpose, doubtless, they were intended.

But it may be faid, that many perfons of rank and fortune are possessed of such ill-wrought stones; and the encouraging of this refinement of manufacture, will make them appear in a worse light. This is allowed; but, at the same time, it is to be understood, that all ill-wrought stones are capable of being made as perfect, in respect to workmanship, as any, without the least loss of their expansion or breadth; and that such rectified stones will appear to sight, rather larger than in their present form; for by being made more open, every part of their upper surface will be more clearly seen, and what loss of weight they sustain, will

be compensated by the remaining weight being of more value; or, in other words, that weight will be worth more per carat; and then fuch will weigh as much as they ought when fold; and by this means indifferent diamonds may be made fine, if the matter or stuff be fuch, which is frequently the case; and the reason of their being but indifferent before, was their being overloaded with weight, and otherways illwrought, which obscured their true lustre. This compliance with what is proposed, will make them of rather more value than when bought; and the lofs to the purchaser is that which is paid for rectifying them. This will prove a greater difadvantage to the purchasers of small diamonds, than to the purchasers of larger stones, as the workmanship of small stones is a considerable part of their value.

Here it may be proper to observe, that the worst workmanship is frequently performed on coloured stones, to render them cheap, by which means they are generally despised; instead of that, they should have all the advantage that art can bestow on

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them, to recommend them to the just favour of the world. And stones, however coloured, that are not attended with specks, fpots, fouls, stains, or any other defects, to weaken their luftre, ought to have the utmost skill of workmanship; and numbers there are, if well-wrought, that would carry as much or more vigor and spirit, than many that do not fall under that denomination: and, therefore, if any made ftones appear fusceptible of an improvement of their luftre, by being rectified, it is fit that fuch should receive the benefit thereof; for the fake of the pleafure and credit it must afford the owners, and the reputation that fuch a conduct will bring to this species of jewels. And it is to be imagined, that this will be thought worthy of fome notice, as the world feems fo ftrongly difpofed to value perfection in this jewel; and none can be faid to be fo, that has any manifest imperfection of workmanship.

And here I shall take the liberty to obferve, that the truth of the manufacture of either, was never brought under any stated rules of practice; nor was there any recourse to be had to prove the truth of the manufacture of any diamond, till this treatife made its first appearance; and for want of something of this kind, there have been, in all times past, innumerable disputes amongst workmen, concerning the true method of working diamonds.

But this must be owned, that the sewest disputes on this head, have been sound amongst those of the best judgment; and, moreover, it is known that their practice, when left to work agreeable to their own sentiments, has nearly been conformable to the rules here advanced; and to which practice they would always have adhered, if left at liberty; but the selfish views of those they have wrought for have obstructed it, and laid them under a necessity of working according to the directions given them. This has been the cause of so much defective workmanship on diamonds, and not only on middling stones, but likewise capital ones.

This was the very cause of the largest diamond, that ever appeared in Europe, being wrought in a deficient manner; which, if it be now as it came out of the hands of

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those who wrought it, I take the liberty to fay, may be rendered complete; by which means its form will be more comely and graceful, its lustre greatly increased, and of course its value, although its weight may be something reduced; and then it may be said to possess all the dignity that nature has favoured it with, and likewise that art has done it justice.

The first fact I can make appear, by two leads cast from the stone; one when it was a rough diamond, the other when cut and polished: and the second, how it came to be wrought as it was, I can prove by incontestible evidence, &c.

That this is the case of this and many other large diamonds, is not to be wondered at; but rather how those, who had the direction of manufacturing such stones, were influenced to submit to the loss of so much weight, having nothing but conjecture to direct their conduct; and their having lest an over-weight, must be owned to be an error of the right side, as that may be discharged, whenever it is thought proper; and it can scarcely be imagined, that any

will

will be fond of retaining weight in a stone, that renders it ungraceful in its figure, and destroys its life and vigor; especially as its expansion is not lessened thereby, but will appear to sight larger than before; which, perhaps, may cause a stone to be deemed good, that before was ranked in a lower class. And, as it has been before said, such stones will be worth as much or more, not-withstanding the reduction of their weight, than when possessed of their former weight, by the remaining weight being of a higher worth; so the expence of rectifying them is the only loss that will be suffained.

The Use of the Sizes in purchasing Rough\*
Diamonds.

As the use of the fizes cannot but be fufficiently seen in regard to wrought stones, they will appear of equal use in regard to rough diamonds; inasmuch as they will assist the judgment, concerning the loss of weight that may be sustained in working

any diamond; and therefore must be of great fervice towards forming a right notion of their value, as it is well known that fome rough diamonds must sustain a much greater loss or diminution of weight than others, arifing from their peculiar shapes. And to form a true judgment of the value of any rough diamond, the price or value of one of a carat weight, fimilar to the stone which is to be purchased, determines its value, as in the case of manufactured diamonds. But as it is more difficult to judge what a rough diamond will prove when cut, than to judge of one manufactured; the buyer, supposing him a merchant, must ast with proper precaution, and make fufficient allowance to himself, for the uncertainty of the stone answering expectation when wrought. And, if it be a stone of a considerable value, he must allow himself also for the interest of the money he lays out, according to the time he supposes the stone may remain unfold. These precautions are the only means of guarding against the hazards and disadvantages that attend dealing in large rough diamonds; and, by fuch a conduct, dealers

may

may be enabled to fell at a price, agreeable to the estimation of the skilful; which estimation is the only thing to be regarded, by those who purchase them for their own use. To urge any other considerations to the purchaser, for augmenting the price of any diamond beyond its just value, will, it is humbly apprehended, be judged a weakness, and likely to hinder the sale of such goods.

But, if it should be here remarked, that particular cases or occasions may justify the seller in demanding an advanced price for any diamond, such deviations must be considered as merely occasional, and the buyer is at liberty whether he will comply or not.

Remarks on the India Manusacture of Diamonds, and their Custom in Regard to Rough Diamonds.

A LTHOUGH it has been supposed, under the head of valuing diamonds, that the India people are acquainted with the

the principle of estimating them, it will be now shown, that they are masters of no other essential parts of knowledge concerning diamonds.

The manufacture of them they feem to know very little of, as appears by the wrought stones that come from thence, none of them being fit for use, and therefore are always new wrought when brought to Europe, which I shall describe as follows: they are called lasks; they are in general ill shaped, or irregular in their form at the girdle; their fubstance or depth is ill proportioned; fome have more of the stone's substance at top than at the bottom; their tables are feldom in the middle or centre of the stone, and the collets the fame; and fometimes the tables are of an extravagant breadth, and fometimes too fmall; in the fame manner are their collets, and feldom horizontal; and their girdles are often very thick and not level; the fmall work very irregularly performed, and none are properly polifhed; and the chief thing regarded, is that of faving the fize and weight of stones: and this is not much to be wondered at in them, as

they

they are unacquainted with the beauties of well-wrought diamonds. From hence it will appear, that they must be unqualified to judge of the true worth of individual rough diamonds. For instance: they cannot know what a diamond will lose in working, to be well made; nor can they know if a stone be coloured, what degree of colour it will retain, or what life and spirit a stone will carry well wrought; all which they are very conscious of; and this makes it very difficult to trade with them for single stones.

But it is not so difficult to trade with them for parcels, because in them there are stones of all shapes; and as some will lose more, some less, they guess at that as well as they can; and so in respect to their other properties, in which they are not quite so much at a loss; and then they value them by the lump, as they weigh one with another, by the rule.

From whence we may fee, how necessary it is for Europeans to be furnished with knowledge, as by that means they must have some advantageous opportunities in buying buying large ftones, through the ignorance of these people. Although it has been shown how much regard they have to the saving of weight in working of diamonds, their attachment thereto will farther appear, by the following custom having prevailed time out of mind, the reality of which seems not to be doubted.

The great people there employ a vaft number of flaves in fearch of diamonds: the finall and middle fize diamonds they fell, and fome of the large ones; but when they are fortunate in meeting with a very large one, they lay it up as a treasure, to aggrandize their family; and the head of the family has a fmall shallow hole drilled on the furface of the stone, and when he dies, the next chief does the fame, and fo from one to another: and the more of these holes a stone has, the higher it is in esteem, although such holes may prejudice it, if it were to be manufactured; but as that is never intended, they do not regard fuch prejudice; and thefe ftones are never parted with, let what will happen; and if they forefee any ruin to the family (as that fometimes happens in their further

further pursuit of diamonds, which is very expensive by the vast number of hands they employ in that undertaking) in such cases they bury those stones, so that they never appear again. For they cannot bear the thoughts of any others having the possession of that which they have obtained at so great an expense; and it is said, that, in consequence of that custom, there are many very large diamonds irrecoverably lost, and likewise many that will never be parted with.

This custom is imagined to arise from their being fearful of a diamond's lofing its value, by lofing weight and magnitude in being wrought; which is very true, as they work them, because they are void of luft.e: and therefore it is not an unreasonable conduct in them, on that account alone; but there is another reason assigned for it, which is, the hazard their diamonds are exposed to by their manner of working: this is much greater than what attends the working of diamonds in Europe, for they perform it in a rougher manner than is done by the Europeans, more especially in respect to polishing them; in doing of which they lay an exceffive

cessive weight on their diamonds through unskilfulness (and for want of such curious machinery or mills, as are in Europe) which makes it not practicable for them to give diamonds a true polish.

N.B. Although this is the case in respect to the India manner of working, there comes now and then stones tolerably well wrought and polished; but these have been supposed to have been done by Europeans, and upon their mills and skeves, and to have been the property of such.

Some Account of Authors, who have heretofore treated of Diamonds and Pearls, and the Improvements which have been made fince their Times.

THOUGH what I have advanced is really the produce of many years critical observation, in the course of dealing in rough and polished diamonds, and has been a work of much time, labour, and great expence; I am not a little pleased to see it agree

agree with what I have fince found to be mentioned by fome celebrated writers, who have exhibited the principle upon which diamonds are to be valued. The first which fell into my hands was Monsieur Tavernier, who mentions it in his voyages through Turkey, Perfia, and the East Indies; which he published in the year 1670, and which were translated into English in the year 1678. The next was the memorable Mr. Lewis Roberts, who published it in his Map of Commerce, in the year 1638. Sometime after, I communicated the principle of valuation I have exhibited in this treatife, to an acquaintance of mine, who was a dealer and a diamond-cutter, and who had lived many years at Fort St. George in that capacity; by whom I was informed, that the India traders (meaning the natives of India) had fome established rule of estimating diamonds, &c. which he believed to be the fame with what I then proposed. At length feveral years after the perufal of the above writers, a still more ancient one was shown me by means of a gentleman of great learning, and of great figure in the literary world.

This

This author was John Arphe de Villa Fane, who fpeaks of the principle of valuation in his treatife, entitled, the Standard of Gold, Silver, and Precious Stones, published in Spanish in the year 1572, by the King of Spain's especial licence. These writers have mentioned fome attempts to fettle rules for the manufacture of diamonds; but, it is to be observed, that not only what they have delivered is very imperfect, but that when they wrote, the art of making brilliants was not discovered; which manufacture is effential to the faving of the weight formerly loft, by cutting all rough diamonds into tables and rofes; to prevent which lofs of weight, as much as possible, a heavy load of subftance has been left on both thefe kinds of manufacture. Moreover, to fave weight, rough diamonds have been frequently fawed, especially such as had no corners, in order to make them into roses; but this practice was attended with a much greater expence of workmanship, and withal, a much greater loss of weight, than they have been subject to, since the making of brilliants has been introduced; this latter manufacture

nufacture being more fuitable to stones of most shapes.

These observations shows, that if the truth of the manufacture of table and rose diamonds had been known in times past, which appears not to have been the cafe, although it might have been of use in preventing the past defective manner of making them, it could not procure the advantages which flow from the addition of the brilliant manufacture, fince that renders the whole a complete fystem; and not only contributes to the greatest faving of weight, but likewise afcertains the general loss of weight, as has been already observed, which could not be known till the manufacture was reduced to fettled rules. The want of this, probably, occasioned a difregard of what has been taken notice of by these authors, concerning the manufacture and valuation of diamonds.

The next thing to be confidered is pearls.

## Of Pearls, their Perfections and Imperfections.

THESE jewels are next in importance to diamonds, as they conflitute the next greatest share of wealth of any other kind. The first thing to be observed concerning them, is, that what beauty they poffefs, is the mere produce of nature; and that they are not susceptible of any advantages or helps by art; a circumstance which recommends them to the esteem of the world. Those of the finest shape are perfectly round, which fits them for necklaces, bracelets, jewels for the hair, and other fuch like uses. But if a pearl, of any confiderable fize, be of the shape of a pear, it is not reckoned an imperfection, because it may be fuitable for drops to ear-rings, folitairs, and many other jewels. Their complexion must be milk-white, not of a dead and lifeless, but of a clear and lively hue, free from stains, fouls, spots, specks, or roughnefs; fuch are of the highest esteem and value.

Pearls are defective when rough, spotted, or dull; whether that be owing to any mifcarriage carriage of nature, or to age, to wear, or any other accident; when irregular in their shapes, be they flat or hollow, craggy or gibbous; when they are stained with any colour, as yellow, blue, green, red, brown, or that of a dusky iron. It is also an imperfection when they have large drilled holes, or are rubbed flat about the edges of the holes by long use. These defects cause a very considerable difference in the value of pearls, of the same weight and size.

# Of the Rule of valuing Pearls.

THE only rule of valuing them, is by the fquare of their weight, as in the case of diamonds; nature producing them after the same manner, viz. a vast number of small ones, and progressively a less number of larger, as they increase in size and weight. Upon this principle two tables are formed, of the prices of pearls. The first eight contain those of a carat weight downwards, of eight different values, which will be found in plates

plates XVII, XVIII, XIX, XX, XXI, XXII, XXII, XXIII, XXIV. The first being explained, it serves for the other seven. The first column contains the number of pearls in an ounce troy, from those of a carat weight, to such as weigh but the 32d part of a carat. The second column contains the progressive decrease of their weight, from those of one carat, to those of the 32d part of a carat. The third contains their several prices, from one carat at 2s. to those of the \(\frac{3}{128}\) part of a penny. The sourch contains the price of an ounce, at the rate of 2s. per carat, which makes 15l. to that of the smallest size, which is 9s. 4\frac{1}{2}d.

The next thing to be taken notice of, is a table that relates to pearls, of a carat weight and upwards, to an hundred carats, which will be found in plates XXV, XXVI, XXVII, XXVIII, XXIX, XXX. The prices of pearls in this table, are founded upon the supposition, that the general price of pearls, good and bad blended together, is 8s. per carat; which will be found to be the first article in it. This table, therefore, will be of the same use with regard to pearls, as the

diamond table is in regard to diamonds. For, if any pearl exceeds in quality, or falls short of, those of the middle fort, the rife or fall, upon the price of a pearl of any weight, must be so much per cent. as judgment shall direct; which prevents all trouble of Anding it out by the rule. To show the convenience of this table, the following example may be given. If the value of a pearl of 4 carats 7 is required, which may be supposed to be 10 per cent. better than one of the mean or middle price, its price will be found, by the table, to be of. 10s. 1-d. Then 195, is to be added, which is the produce of the 10 per cent. and makes its value to be 101. 9s. 11d.

To find out the first price by the rule, reduce the 4 carats  $\frac{7}{8}$  into eighths, which makes 39; then multiply 39 by 39, that makes 1521, the square of the weight in fixteenths; therefore divide 1521 by 16, that brings it again into grains, and makes 95; then divide the 95 by 4, that brings it to carats, and makes 23 carats, 3 grains, and  $\frac{1}{16}$  of a grain; which, at 8s. per carat, produces 9l. 10s.  $1\frac{7}{2}d$ .

E 2

And as another method is introduced for finding out the value of diamonds, which is as applicable to pearls, the foregoing weight is made use of as an example.

For instance: see what a pearl of 4 carats  $\frac{7}{6}$  comes to at 8s. per carat, which will be found to be 39s. so multiply 39 by 4, that makes 156s. or 7l. 16s. then add the value of  $\frac{7}{6}$  of 39s. which is 1l. 14s.  $1\frac{1}{2}d$ ; cast up the two sums, and that will produce 9l. 10s.  $1\frac{1}{2}d$ : so these two totals are alike, and agree in price with one of that weight in the table; and that being the price of one of the middle fort, the value of the 10 per cent. must be added, which is 19s. so the value of such a pearl is 10l. 9s.  $1\frac{1}{2}d$ .

These instances are supposed sufficient to show, how much readier the value of any single pearl is to be found, by making use of the table; the usefulness of which will appear in a stronger light, when it is considered what number of occasions pearls furnish by their multiplicity, and likewise the small value they are of individually, although not so regarding their quantity.

N.B.

N. B. Their value, compared with diamonds, is but as 8s. to 8l.

As an application to the table, appears to be by far the readiest way of coming at the value of any single pearl, its farther usefulness will be shown in valuing any parcels of pearls.

For inftance: suppose a parcel of pearls (be their number and weight what they may) and various in respect to their qualities or goodness; first, weigh the parcel altogether; when the weight is known, count their number; when that is known, fee what the weight would be per piece, if they were all of one weight, and then endeavour to form a judgment what they may be rated at per carat, as a mixed parcel; having fettled that, fee what a pearl is worth, of the weight you found they would be of if they were all of equal weight or fize, and then value the weight of the whole parcel by the price of that pearl, and that will give the value of the whole parcel. To illustrate this, suppose 9 pearls of 9 several weights, which may be of different qualities or goodness, but being blended together they may be reckoned worth 8s. per carat. As

E 3

this supposed price agrees with the table, the example will be drawn from thence, and will begin with the first article therein, as underneath.

	Carats.	£ s. d.
1st of	1000	0 08 0 0
2d	I 0 0 1	0 10 1 2
3d	I 0 1 0	0 12 6 0
4th	IO + 8	0 15 1 1/2
5th	I 1 0 0	0 18 0 0
6th	I 1 0 1	I QI I T
7th	I 1 1 0	1 04 6 0
8th	1 1 1 1 1	1 08 1 3
9th	2000	I 12 0 0

The 9 weigh 13 + and come to £8 9 6

The above 9 pearls weighing 13 carats \(\frac{1}{2}\), would make the weight of each 1 carat \(\frac{1}{2}\), the price of which in the table is 18s. therefore multiply 18s. by 9, the number of the pearls, that makes 162s. or 8l; 2s.

The value, rating them by their feveral weights, as above, makes the total 81. 95. 6d. which is 75. 6d. more than by the other method of valuing them; and this arises from

the

the loss of fractions in that case; and although that be something in this sum, it is not worth regard in a larger sum, which will be the same when pearls are rated at 8s. percarat: and for farther satisfaction the following case is inserted.

	Carats	1. £ s. d.
rst of	6000	14 08 0 0
2d	600	15 00 1 1
3d	6040	1 15 12 6 0
4th	60 # 1	16 05 1 1
5th	6 100	16 18 0 0
6th	6 1 0 1	17 11 1 1
7th	6 1 10	
8th	6 1 1 1	18 18 1 1
9th	7000	19 09 6 0
The 9 weigh	58 ± £	, 152 09 6 0

The above 9 pearls weighing 58 carats  $\frac{1}{2}$ , would make the weight of each 6 carat  $\frac{1}{2}$ , the price of which in the table is 16l. 18s. First, multiply 9 by 16l. that makes 144l. next, multiply 9 by 18s. that makes 8l. 2s. add these two sums together, the total will be 152l. 2s. which is 7s. 6d. short of the E. 4. above

above fum of 1521. 95. 6d. But if the number of articles had been more, and the price of any parcel of pearl should be higher, it can but little increase the difference; and therefore it is not worth regarding, more especially when it is considered, that none can judge the value of any one pearl, or parcel, to any such-like nicety. As to what has been said of the convenience of this table, the same might have been said of the diamond table; but as there seemed not to be the like necessity for it, in regard to diamonds, it has hitherto been omitted, and the rather, to avoid repetition.

As the convenience of this table is evidently shown, it may be proper to observe, that in making use of that, or either of the other methods for finding the value of pearl, the highest price of any pearl of a carat weight, cannot be valued at more than 16s, when the price of the middle fort, of that weight, is valued at 8s. nor those of the lower fort, of a carat, at less than 2s. because all of a baser fort deserve not to be considered as jewels. And this, probably, will be thought scope enough to employ speculation

culation and judgment; notwithstanding which, it is to be supposed, that all who are skilful will agree in sentiments concerning the value of any pearl of a carat weight, however circumstanced, as nearly as in the case of diamonds, as the value of pearls of any weight, is to be determined by the price of one of a carat weight, similar in all circumstances. Or, as was said of diamonds, the same may be said of pearls, that every pearl is to be valued as it is worth per carat, by the rule of estimating.

N. B. It is to be observed, that what is supposed of judicious jewellers agreeing in their sentiments to five or ten per cent. concerning the value of any diamond or pearl of one carat weight, by which the value of a diamond or pearl of any weight is to be determined, is to be understood to relate to the natural and just value of them only; and when there is a compliance with any other price, that must be considered as the occasional price; and if persons who buy for their use, could be affured what is the just price of any jewel, it would be the means of influencing them to give the value of them.

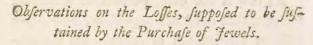
E 5

And this must necessarily facilitate the transactions of this business; and, I am humbly of opinion, if this had been the case in times past, many capital jewels, which have lain many years in the hands of persons who bought them in order to make profit of the money laid out, would have found purchasers of them long ago, to the advantage of their present owners.

As fo much depends on traders being mafters of the most complete knowledge of this business, it must be supposed they will not be wanting in improving themselves therein by all means that may be procured, as it will render them a beneficial body to the rest of mankind, and of course raise their characters, which have heretofore lain under disagreeable imputations.

Here it may be proper to observe, that whatever knowledge persons may have of the just value of jewels, it will not exempt those who buy them for their own use from sustaining a loss in purchasing them; but it will lessen the losses that might otherwise happen, which the world has heretofore been subject to for want of such knowledge.

That losses must be suftained is unquestionable, and that these must vary as circumstances differ, the following cases will evince.



of jewelling work, comes to a confiderable part of the purchase money; and generally where there is the least value of diamonds, the expence is the greatest, as when a large number of small diamonds are employed: when such a jewel is resold, that expence must be deducted, if it be injured by wear or by accident, or it becomes unfashionable.

Again, jewellers must be supposed to have a considerable sum of money employed in trade, the returns of which are not very frequent; and, therefore, a loss must unavoidably attend the purchasing jewels, and the greatest in buying large diamonds, although the expence of setting them be less,

on account of their lying much longer in the possession of jewellers than those of the smaller fort; and therefore all jewellers supposing the probability of this, never give so near the value of them as for smaller stones, they being always more marketable.

As this is the case, persons of rank and fortune, that need not regard any reasonable lofs, or the interest of money, are the proper purchasers of jewels; and the money laid out by fuch perfons, can no more be deemed luxury in them, than that which is expended in equipping and furnishing sideboards and cabinets, and on all other coftly personal equipments in gold and filver. But it may be faid, that the latter is more useful and necessary than the former. To which it may be answered, that its uses may be supplied at a much cheaper rate; fo the appearance and credit must be the remaining motive for laying out money that way, which is the fame in respect to jewels; and if the loffes attending the purchasing these be an objection, it will be found to lie as ftrong against the other, in respect to fashionable elegant things; the workmanship of which,

upon

upon an average, comes to at least  $\frac{1}{4}$ , if not  $\frac{1}{4}$ , of the purchase money.

The lofs by jewels, it is humbly apprehended, will not, in future times, exceed that, although it has been otherwife in times past, as appears by instances that have been given; which show that not above i or i of the purchase money could be obtained for jewels, either by way of pledge or fale; which has chiefly arose from jewellers not being well acquainted with the natural and just value of them, which cannot be the case in future time; it being evident that traders have it in their power to come at their true value, by estimating them as they are worth per carat, by the rule exhibited. This being the case, any one else may attain the knowledge of the value of any diamond or pearl, or parcels thereof, by applying to a skilful jeweller, to know what they may be worth per carat.

And this will be the means of preventing any perfons felling their jewels on fuch difadvantageous terms, as have been before taken notice of; fince they will rather pledge them, and wait for a more favourable offer;

and

and a better knowledge of their value will procure more money lent on them, if occafion requires it, than in times past. And as the skill of traders appears so useful, they must be supposed to be intitled to a suitable reward, for giving their opinions in all fuch. cafes. These measures will tend to support the worth of jewels, and render all property of this kind permanent wealth, exclusive of the deductions a little before-mentioned, and make them the proper possession of perfons of rank and fortune here, as well as in other countries; especially if the wealth of the nation increases; because all purchases of income must advance, as that augments, and of course brings down the value of money.

For example: if any one should be forced to give three hundred pounds for an income, that in time past could be purchased for two hundred pounds, it is evident that then three hundred pounds is reduced to the value of two hundred. If this be an evil, the laying out the exuberance of our money in jewels, seems to be the properest redress of it, as they are a durable, though not a profitable,

treafure; inafmuch as they may be found of convenience in any time of diffres, whether private or public. The latter, indeed, we have the happiness to have no reason to fear.

What has been observed of the utility of jewels, diamonds especially, to persons of dignity, and those of affluent fortunes; and of the conduct of the India people, in not forcing the fale of them, by lowering their price; but, on the contrary, withdrawing them, when there appears a flack demand, which is supposed to arise from the great expence they are at in the fearch of them ; for although the price of labour in India is. excessive cheap; yet the hands that areemployed in this work, as Monsieur Tavernier and other authors have taken notice of. are fo very numerous, that it makes it a coffly, and even a precarious undertaking: and confidering that, notwithstanding Europe has been supplied with diamonds from thence, and from the Brazils, within twenty years last past, abundantly more than in any preceding number of years; yet the amount of the annual value of them, on an average,

comes

comes a great deal short of two hundred thousand pounds sterling: and farther confidering, that many countries are come more into the use of them, of late years, than formerly; and that fome, which in times past, were almost strangers to their existence, are now buyers of them, but principally the most indifferent fort; which is a beneficial circumstance, as the taste of other countries, which I need not name, is fo much refined: all these circumstances taken into the account, and fuppofing the Brazil mines prove abortive, cannot but abate a fuspicion, that has been entertained, concerning this part of the world being glutted with diamonds; which, it is thought by fuch perfons, will in time fink the price of them.

Judging those confiderations are fufficient to quell fuch fears, I shall proceed to show it is not the case at present, their price of late being advanced (I mean in Europe only) and the cause of it is this: that most of the capital jewels are returned into the poffession of their proper owners, which have fome years past been in the hands of usurers, owing to the great expence that fome princes

have

have been at in the late war; which the peace has not only enabled them to redeem, but likewife qualified them to become farther purchasers. And this proves the fitness of pledging jewels rather than selling them below what they ought to setch, supposing that necessity does not force any thereto; which is not to be imagined of persons of high rank, or of good estates, as time gives them an opportunity of redeeming any pledges.

### CONCLUSION.

THIS concludes the important fubjects
I have been treating of; and the enlargements that have been made to this edition, I flatter myfelf will be found not only explanatory of my first publication, but that they will likewise give force to what is therein contained, and which would have been added thereto, had I then seen it to be necessary; but which I have not been convinced of till lately, and now think the omis-

defign, which is that of communicating truth and knowledge, beneficial to the public, and to all ingenious traders, and which is calculated to raife their reputations and ufefulness, and likewise to promote art in the embellishments of diamonds, and recover, if possible, the almost lost manufacture of them to this kingdom, that has in time past been possessed of the chief share thereof, and which has carried the improvement of it to the greatest height of any part of the world, and is now as capable of doing so as ever, if permitted; which I hope to see brought about.

The loss of this valuable manufacture, and of the trade refulting therefrom, has been wholly owing to a delusive manner of working them abroad, which enables foreigners to fell diamonds cheaper by weight than it is possible to afford well wrought ones for. By this means they are become possessed of almost the whole of this manufacture and trade.

And this practice has been much countenanced by some traders in London, who have sold for some years past 3 or more of these

these foreign wrought diamonds, to the great discredit of their wearers; which conduct feems to come but little short of an affront on the quality and gentry of this kingdom, and shows a manifest disregard of the interest thereof; which I am forry to have occasion to take notice of, as well as of fome other matters that could not justifiably escape my observation, but which I am fatisfied will give no offence to any impartial unprejudiced person; and the new matter in this edition, I doubt not, will meet with the approbation of the judicious, as it: must give an additional enforcement to what is contained in the first, and ferves to render these important articles of wealth of more established worth than in times past, fince their value appears to be determinable by rules founded on reason and truth, which has hitherto been fubject to the capricious estimation of unguided judgment. And I am the more encouraged to hope for the countenance of fuch persons, as my first has received that honor, as well among people of rank and condition, as among traders in jewels; and I have the fatisfacfaction. faction of knowing it daily gains ground, and am particularly pleafed in finding a confiderable increase of business within twelve months past, in the best manner of working diamonds.

And now being no ways conscious of having taken any unwarrantable freedoms in any part of this treatife, but purfued truth, justice, and the fitness of things to the best of my knowledge, I shall not trouble my readers with any farther vindication of my conduct. But in respect to any imperfection of stile that may appear in this treatise. I hope the candid part of the world will overlook it, as I make no pretension to any accomplishment in that way; and all that I have aimed at has been to convey my thoughts in as clear a manner as my abis lities would enable me to do: and this I question not, will be accepted as a sufficient apology for any inaccuracy of expression in the book.

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3	-	Y	5	0	3	-	I	II	3
4	-	1	7	6	4	-	I	14	41/2
5	-	1	10	0	5	-	I	17	6
10	-	2	2	6	10	-	2	13	$I^{\frac{1}{2}}$
15	-	2	15	0	15	-	3	8	9
20	_	3	7	6	20	1111	4	4	41/2
25	-	4	0	6	25		5	0	0
30	_	4	12	0	30	_	5	15	71
35		5	5	6	35		7	6	3
40		5	10	0	45	_	8	2	6
50		7	2	6	50	Apheneny	8	18	11/2
55	-		15	0	55	_	9	13	9
60	-	7	7	6	60	_	10	9	41/2
65	-	9	Ó	0	65	-	II	5	0
70	-	9	12	6	70	-	12	0	71/2
75	-	10	5	0	75	-	12	16	3
80	-	10	17	6	80	-	13	II	$IO\frac{1}{2}$
85	-	11	10	0	85	-	14	7	6
90	-	12	2	6	90	- Dimensory	15	3	II
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The expence of making full-proportioned rose diamonds.	The expence of making fpread rose diamonds.
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				_	-	-	-		-
Carat	S.	P	er (	Carat.	Carat	S.	Per	· Ca	rat
		l.	5.	d.			1.	5.	d
I	-	0	15	0	I	-	I	0	0
2	-	0	16	IOI	2	-	I	2	6
3	-	0	18	9	3	-	I	5	0
4	, between	I	0	71	4		I	7	6
5	-	I	2	6	-5	-	I	IO	0
·IO	-	1	11	$IO\frac{1}{2}$	10	-	2	2	6
15	-	2	1	3	15	-	2	15	0
20	-	2	10	71	20	-	3	7	6
25	_	3	0	0	25	-	4	0	0
30	-	3	18	41/2	30	_	4	12	6
35		3	18	9	35	-	5	5	0
40	-	4	8	1 1	40	-	5	17	6
45	-	4	17	6	45	-		10	0
50	-	5	6	$IO^{\frac{1}{2}}$	50	-	7	2	6
55	-	5	16	3	55	-	7 8	15	0
60	termina .	6	5	71/2	60	-	8	7	6
65	-	6	15	0	65		9	0	0
70	-	7	4	41/2	70	-	9	12	6
75	_	7	13	9	75	-	10	5	0
80	-	8	3	$1\frac{1}{2}$	80	-	10	17	6
85 -		8	12	6	85		II	10	0
90	-	9	I	$10\frac{1}{2}$	90	_	12	2	6
95	-	9	II	3	95	-	12	15	0
100	-	10	10	71/2	100	-	15	7	6

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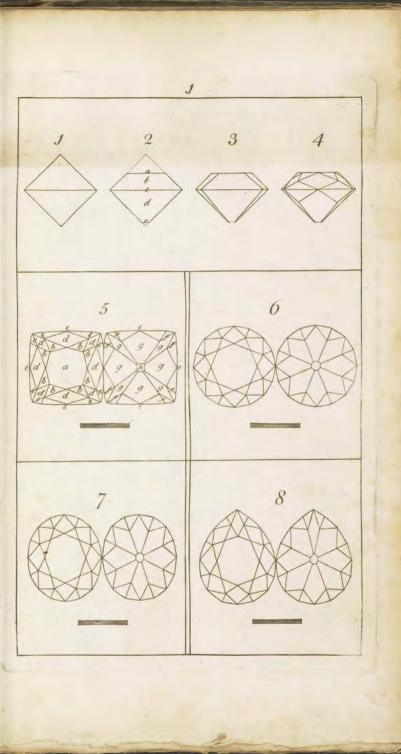
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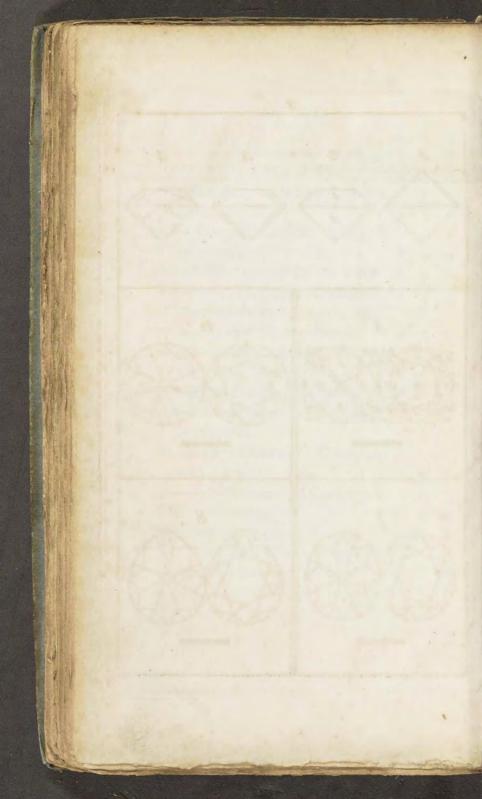
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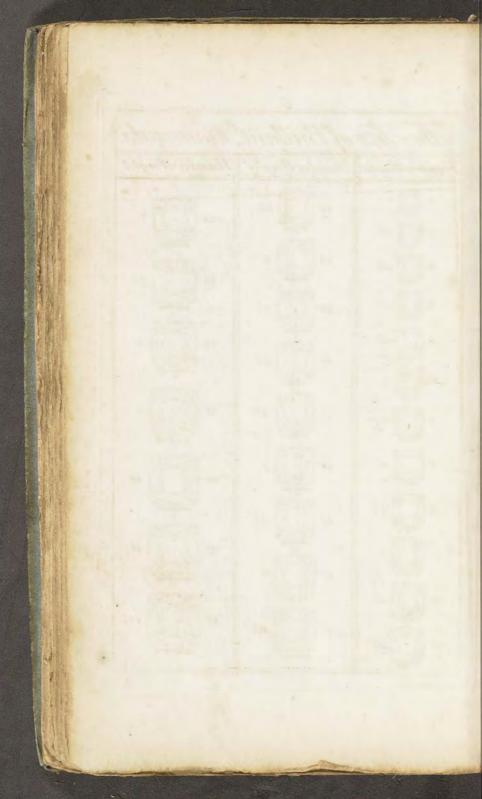
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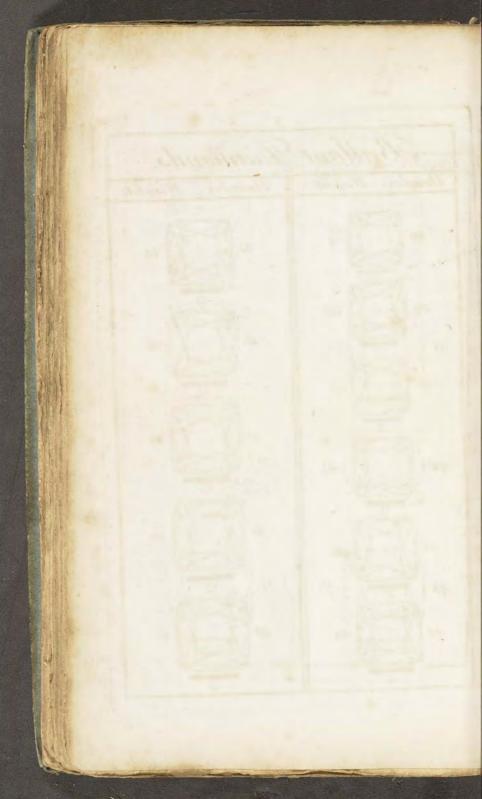
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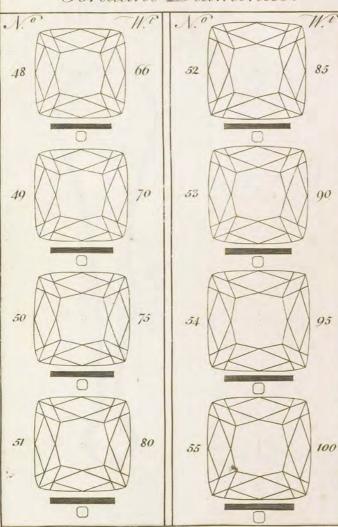


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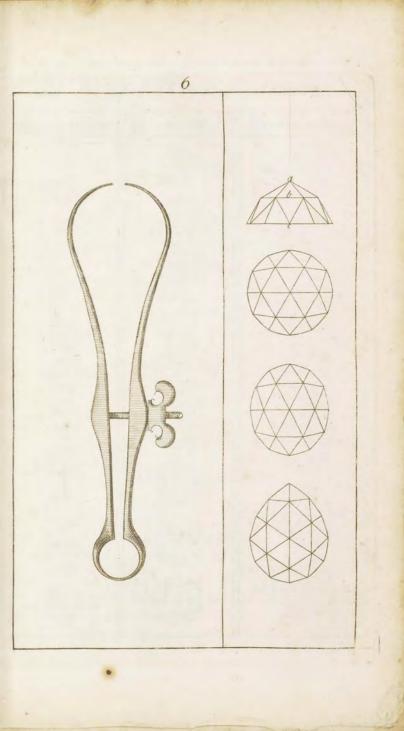
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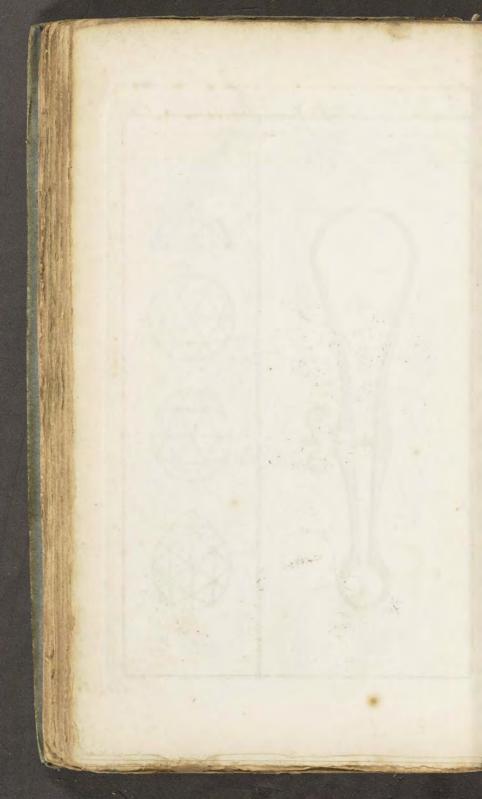


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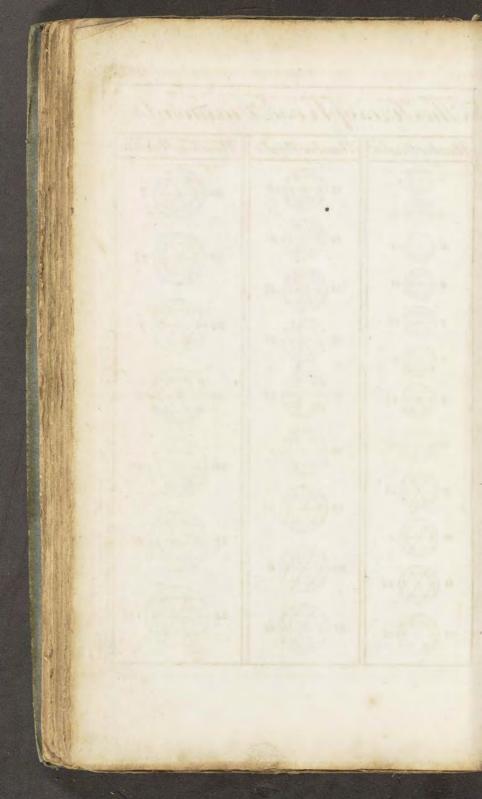






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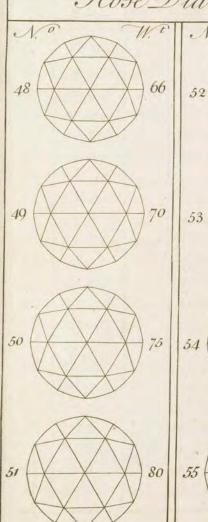


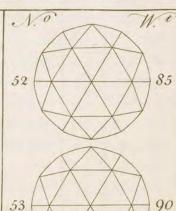
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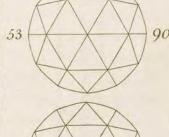
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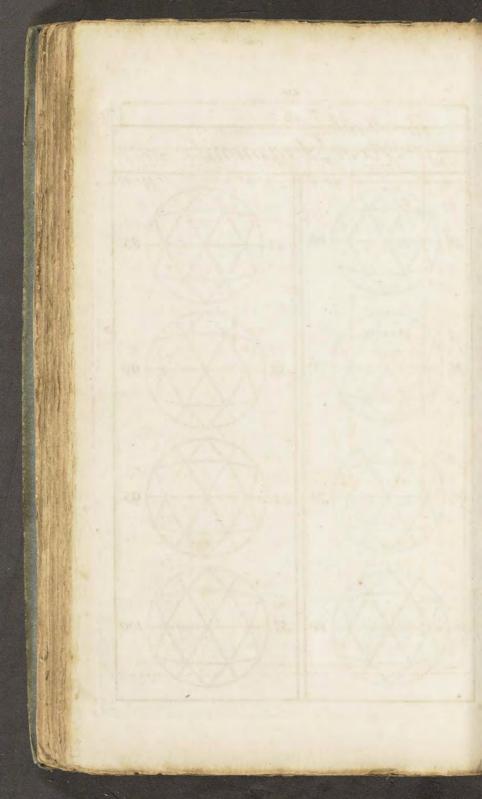












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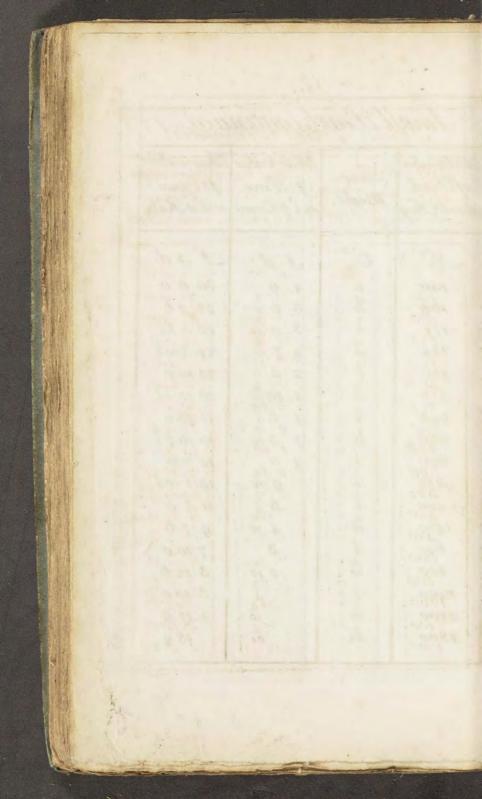
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800 1200 2400 4800	3/6 1/8 1/6 1/32	2 \frac{17}{32} 1 \frac{1}{8} \frac{9}{32} \frac{9}{128}	8:8:9 5:12:6 2:16:3 1:8:1½

The Number of Pearl in an (Z Troy	Their Weight	Their Value p.Piece at & p.Carrat	P. Ounce
150 160 171 184 200 218 240 266 300 342 400	67 1 15/16 78 13/16 34 11/16 58 9/16 12 7/16 38	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$f$ $f$ $d$ $60:0:0$ $56:5:0$ $52:7:4\frac{1}{2}$ $48:11:9$ $45:0:0$ $41:4:3\frac{3}{4}$ $37:10:0$ $33:13:3\frac{3}{4}$ $30:0:0$ $26:3:8\frac{1}{4}$ $22:10:0$
480 600 800 1200 2400 4800	5 16 14 3 16 18 16 16 17 18 17 18 18 18 18 18 18 18 18 18 18 18 18 18	9 3 8 6 3 8 1 ½ 3 8 3 3 3 2 2	18 15 0 15 0 0 11 5 0 7 10 0 3 15 0 1 17 6

The Number of Pearl in an 03 Troy	Their Weight	P. Piece	Their Value \$1.0 unce at that Rate
N.º	6.r	s d	£sd
150	15	10:0 8:9 32	75:0:0 70:6:3
171	7 8 13 16	7:7 8	65:9:25
200	34	$6:7\frac{7}{32}$ $5:7\frac{1}{2}$	60:14:8 <sup>4</sup> 56:5:0
218	11/6 5/8	$4:8\frac{23}{32}$ $3:10^{-7}$	51:10:416
266 300	9/6	$3:1\frac{31}{32}$ $2:6$	42:1:7 16
342	7 16	1:10 31	32:14:7 16
480	5/6	1:4 8	28:2:6
600 800	4 3 16	$7\frac{1}{2}$ $4\frac{7}{32}$	18:15:0 14:1:3
1200 2400	\$ 16	1 \frac{7}{8} \\ \frac{15}{32}	9:7:6 4:13:9
4800	1/32	15 128	$2:0:10^{\frac{1}{2}}$

C. China 17/1 1/2 0 5.0

The Number of Pearl in an 0z Troy	Their Weight	Their Value p. Piece at 12 p. Carrat	P. Ounce
150 160 171 184 200 218 240 266 300 342 400 480 600 800 1200 2400	C. 15/6 28/3/63/44/65/89/64/2 2/63/85/6 1/43/6 1/8 1/6	$5 d$ $12:0$ $10:6\frac{9}{16}$ $9:2\frac{1}{4}$ $7:11\frac{1}{16}$ $6:9$ $5:8\frac{1}{4}$ $4:8\frac{1}{4}$ $3:9\frac{9}{16}$ $3:0$ $2:3\frac{9}{16}$ $1:8\frac{1}{4}$ $1:2\frac{1}{16}$ $9\frac{1}{16}$ $2\frac{1}{4}$ $2\frac{1}{4}$	$f$ $f$ $d$ $g0:0:0$ $84:7:6$ $78:11:0\frac{3}{4}$ $72:17:7\frac{1}{2}$ $67:10:0$ $61:16:5\frac{5}{8}$ $56:5:0$ $50:9:11\frac{5}{8}$ $45:0:0$ $39:5:6\frac{3}{8}$ $33:15:0$ $28:2:6$ $22:10:0$ $16:17:6$ $11:5:0$ $5:12:6$
4800	32	$\frac{9}{64}$	2:16:3

The Number of Pearl in an Oz. Troy	Their Weight	p. Piece	Their Value p. Ounce at that Rate
N.º	6.r	s d	£sd
150	1	14:0	105:0:0
160	15	12:3 32	98:8:9
171	78	10:88	91:12:10 8
184	13/16	9:232	85:0:6 3
200	3+	7:10 \$	78:15:0
218	16	6: 7 32	72:2:6 16
240	8	5:5 8	65:12:6
266	9 16	4:5 32	58:18:3 16
300	1/2	3:6	52:10:0
342	76	2: 8 32	45:16:5 16
400	38	1:11 8	39:7:6
480	16	1:4 32	32:16:3
600	#	10 2	26:5:0
800	3 16	5 32	19:13:9
1200	8	2 8	13:2:6
2400	16	3 <u>21</u>	6:11:3
4800	$\frac{1}{32}$	128	3:5:7 2

The Number of Pearl in an Oz. Troy	Their Weight	Their Value p.Piece at 16 p.Carrat	The same of the sa
N.º	6.r	s d	£sd
150	15	16:0	120:0:0
160	15	14:0 3	112:10:0
171	7 8	12:3	104:14:9
184	13/16	10:6 3	97:3:6
200	3 4	9:0	90:0:0
218	11/16	7 6 3	82:8:72
240	8	6.3	75:0:0
266	9	5:04	67:6:72
300	2	4:0	60:0:0
342	76	3:04	52:7:42
400	38	2:3	45:0:0
480	5/16	1:64	37:10:0
600	4	1:0	30:0:0
800	3/16	6 3/4	22:10:0
1200	8	3	15:0:0
2400	16	3/4	.7:10:0
4800	32	3/6	3:15:0

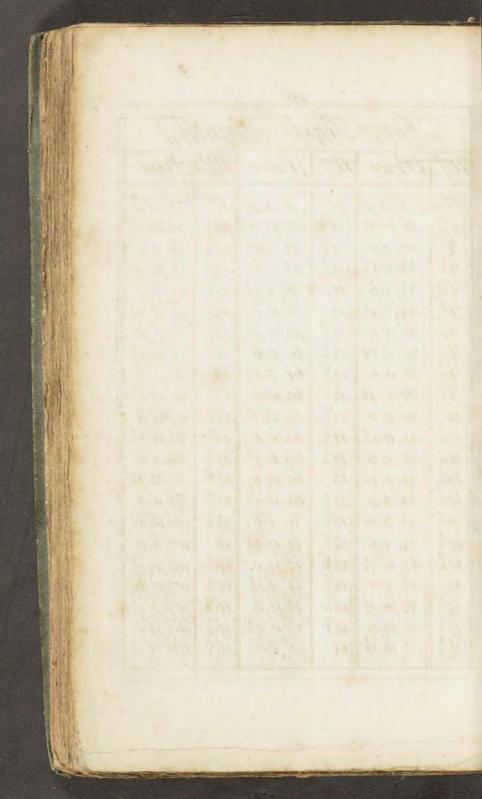
The Tables	oflarge	Pearl
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		/		11	
W.t	Price	W!t	Price	W!t	Price
Er	£1d	Cr	£sd	Cr	£1d
1	. 8:0	38	5: 5:12	64	15:12:6
18	10:12	3 3 4	5:12:6	63	16: 5:12
14	12:6	3 8	6:0:12	$6\frac{1}{2}$	16:18:0
18	15:12	4	6:8:0	68	17:11:12
12	18:0	48	6:16:12	63	18:4:6
18	1: 1:12	44	7:4:6	63	18:18:12
13	1: 4:6	48	7:13:12	7	19:12:0
18	1: 8:12	42	8:2:0	78	20:6:12
2	1:12:0	48	8:11:12	74	21:0:6
28	1:16:12	43	9:0:6	78	21:15:12
24	2: 0:6	43	9:10:12	72	22:10:0
23	2:5:12	5	10:0:0	78	23:5:12
21/2	2:10:0	58	10:10:12	73	24:0:6
28	2:15:12	54	11:0:6	78	24:16:12
23	3:0:6	53	11:11:12	8	25:12:0
28	3:6:12	52	12: 2:0	8 1/8	26: 8:12
3	3:12:0	58	12:13:12	84	27: 4:6
3 1/8	3:18:12	534	13:4:6	83/8	28: 1: 12
34	4: 4:6	58	13:16:12	8 2	28:18:0
3 8	4:11:12	6	14:8:0	88	29:15:12
32	4: 18:0	6%	15:0:12	8 3/4	30:12:6



## Large Tearl continued.

W.t	Price	W.t	Price	W.t	Price
C.	£sd	C.r	£1d	C.r	£sd
8 7 8	31:10:12	1/2	52:18:0	14 3	79:16:12
9	32:8:0	118	54: 1:12	144	81: 4:6
98	33:6:12	113	55:4:6	148	82:13:12
94	34: 4:6	1/8	56:8:12	142	84: 2:0
98	35: 3:12	12	57:12:0	148	85:11:12
92	36:2:0	12 8	58:16:12	144	87:0:6
98	37: 1: 12	124	60:0:6	148	88:10:12
94	38:0:6	12 3	61:5:12	15	90:0:0
978	39: 0: 12	122	62:10:0	15%	91:10:12
10	40:0:0	128	63:15:12	154	93:0:6
108	41: 0:12	123	65:0:6	158	94:11:12
104	42:0:6	12 8	66:6:12	15 2	96:2:0
108	43: 1: 12	13	67:12:0	158	97:13:12
10%	44:2:0	13 %	68:18:12	154	99:4:6
108	45:3:12	134	70:4:6	158	100:16:12
104	46:4:6	13 8	71:11:12	16	102: 8:0
108	47: 6: 12	132	72:18:0	16 8	104:0:12
11	48:8:0	13 8	74: 5:12	164	105:12:6
118	49:10:12	134	75:12:6	168	107:5:12
114	50:12:6	13 8	77: 0: 12	162	108:18:0
118	51:15:12	14	78: 8:0	168	110:11:12



# Large Fearl continued.

	- 0				
W.t	Price	W.t	Price	W.t	Price
B.	£. s.d.	6.	£. s. d.	8.r	£. J. d.
163	112:4:6	19 8	150:3:12	22	193:12:0
163	1/3:18:12	192	152:2:0	228	195:16:12
17	115:12:0	198	154:1:12	224	198:0:6
178	117:6:12	194	156:0:6	228	200:5:12
174	119:0:6	198	158:0:12	222	202:10:0
178	120:15:12	20	160:0:0	228	204:15:12
172	122:10:0	$20^{\frac{1}{8}}$	162:0:12	$22\frac{3}{4}$	207:0:6
17 8	124: 5:12	204	164:0:6	228	209:6:12
173	126:0:6	20 8	166:1:12	23	211: 12:0
17 %	127:16:12	202	168:2:0	23 %	213:18:12
18	129:12:0	208	170:3:12	234	216:4:6
188	131: 8:12	$20\frac{3}{4}$	172:4:6	238	218:11:12
184	133:4:6	20 5	174:6:12	232	220:18:0
183	135:1:12	21.	176:8:0	23 8	223:5:12
182	136:18:0	218	178:10:12	23 4	225:12:6
18 8	138:15:12	2/4	180:12:6	238	228:0:12
184	140:12:6	218	182:15:12	24	230: 8:0
18 %	142:10:12	2/2	184:18:0	248	232:16:12
19	144: 8:0	218	187:1:12	244	235:4:6
198	146:6:12	$21\frac{3}{4}$	189:4:6	$24\frac{3}{8}$	237:13:12
194	148:4:6	21 8	191:8:12	242	240:2:0



## Large Pearl continued.

W.t	Price	W.t	Price	W.t	Price	
C.	£.J.d.	8.º	£. s. d.	C."	£.J.d.	
248	242:11:12	29 2	348: 2:0	344	483:0:6	
244	245:0:6	$29\frac{3}{4}$	354:0:6	35	490:0:0	
248	247:10:12	30	360:0:0	354	497:0:6	
25	250:0:0	304	366:0:6	352	504:2:0	
254	255:0:6	302	372:2:0	$35\frac{3}{4}$	511:4:6	
25 2	260:2:0	$30\frac{3}{4}$	378:4:6	36	518:8:0	
254	265:4:6	31	384:8:0	364	525: 2:6	
26	270:8:0	3/4	390:12:6	362	532:18:0	
264	275:12:6	3/2	396:18:0	364	540:4:6	
262	280:18:0	3/4	403:4:6	37	547:12:0	
263	286:4:6	32	409:12:0	374	555:0:6	
27	291:12:0	324	416:0:6	372	562:10:0	
274	297:0:6	322	422:10:0	374	570:0:6	
272	302:10:0	$32\frac{3}{4}$	429:0:6	38	577:12:0	
$27\frac{3}{4}$	308:0:6	33	435:12:0	384	585:4:6	
28	3/3:/2:0	334	442:4:6	382	592:18:0	
28+	319:4:6	332	448:18:0	$38\frac{3}{4}$	600:12:6	
282	324:18:0	334	455:12:6	39	608: 8:0	
$28\frac{3}{4}$	330:12:6	34	462:8:0	394	616: 4:6	
29	336:8:0	344	469:4:6	392	624:2:0	
294	342:4:6	342	476:2:0	$39\frac{3}{4}$	632:0:6	

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M!t	Price	W.t	Price	W.t	Price
C.	£sd		£1d	C.	£J
40	640:0:0	454	819:0:6	51	1040:8
404	648:0:6	452	828.2.0	51 2	1060:18
402	656:2:0	454	837 4 6	52	1081:12
404	66446	46	846.80	522	1102 10
41	67280	464	855.12.6	53	1/23 12
414	680126	462	864 18 0	53 2	1144:18
412	688.18:0	464	874.46	54	1166 8
414	697 46	47	883.12.0	542	1188 2
42	705120	474	893 0.6	55	1210:0
424	714 0.6	472	902.10:0	552	1232 2
42 2	722.10:0	474	912.0.6	56	1254 8
42.4	731 0 6	48	921.12.0	562	1276.18
43	739 12 0	484	931 4 6	57	1299 12
434	748 4 6	482	940180	57.2	1322:10
43 2	756 180	484	950126	58	1345 12
434	70512.6	49	960.80	582	1368:18
44	77480	494	970:4:6	59	1392 8
414	7834:6	492	980.20	592	1416:2
442	792.2.0	494	990.0.6	60	1440:0
444	801 0.6	50	1000.0.0	602	1464 2
45	810:0:0	502	1020.2:0	61	1488 8

0	0	/		/
Large.	Lear	1001	ntini	red

W.t	Price	90!t	Drice	W.t	Price	
Cr 6.1	£J	C.	£i	Cr.	£s	
612	1512:18	72	2073.12	90	3240.0	
62 2	1537:12 1562:10	72 ½ 73	2102 10	91	3312 8	
63	1587:12	732	2160.18	92	3459:12	
632	1612:18	74	2190 8	94	3534 : 8	
64	1638:8	742	2220:2	95	3610 0	
642	1664:2	75	2250 0	96	3686 8	
65	1690:0	76	2310:8	97	3763:12	
652	1716:2	77	2371.12	98	3841.12	
66	1742 8	78	2433 12	99	3920:8	
662	1768:18	79	2496.8	100	4000:0	
67	1795:12	80	2560:0			
672	1822:10	81	2624:8			
68	1849:12	-82	2689:12			
682	1876:18	83	2755:12			
69	1904:8	84	2822:8			
692	1932:2	. 85	2890:0.			
70	1960:0	86	2958 8			
702	1988.2	87	3027:12		1	
71	2016:8	88	3097:12			
712	2044:18	89	3168 8			
			-1			

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