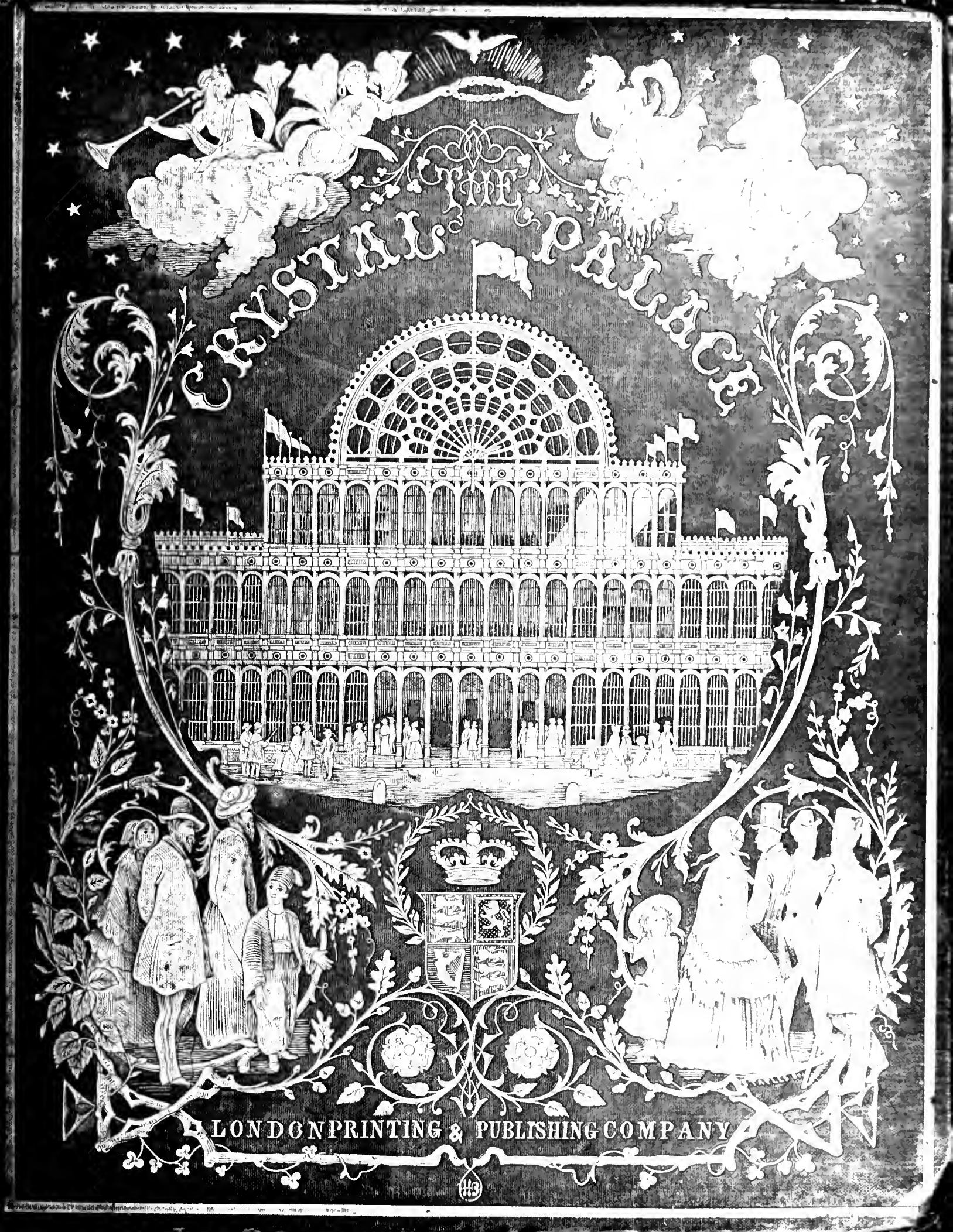
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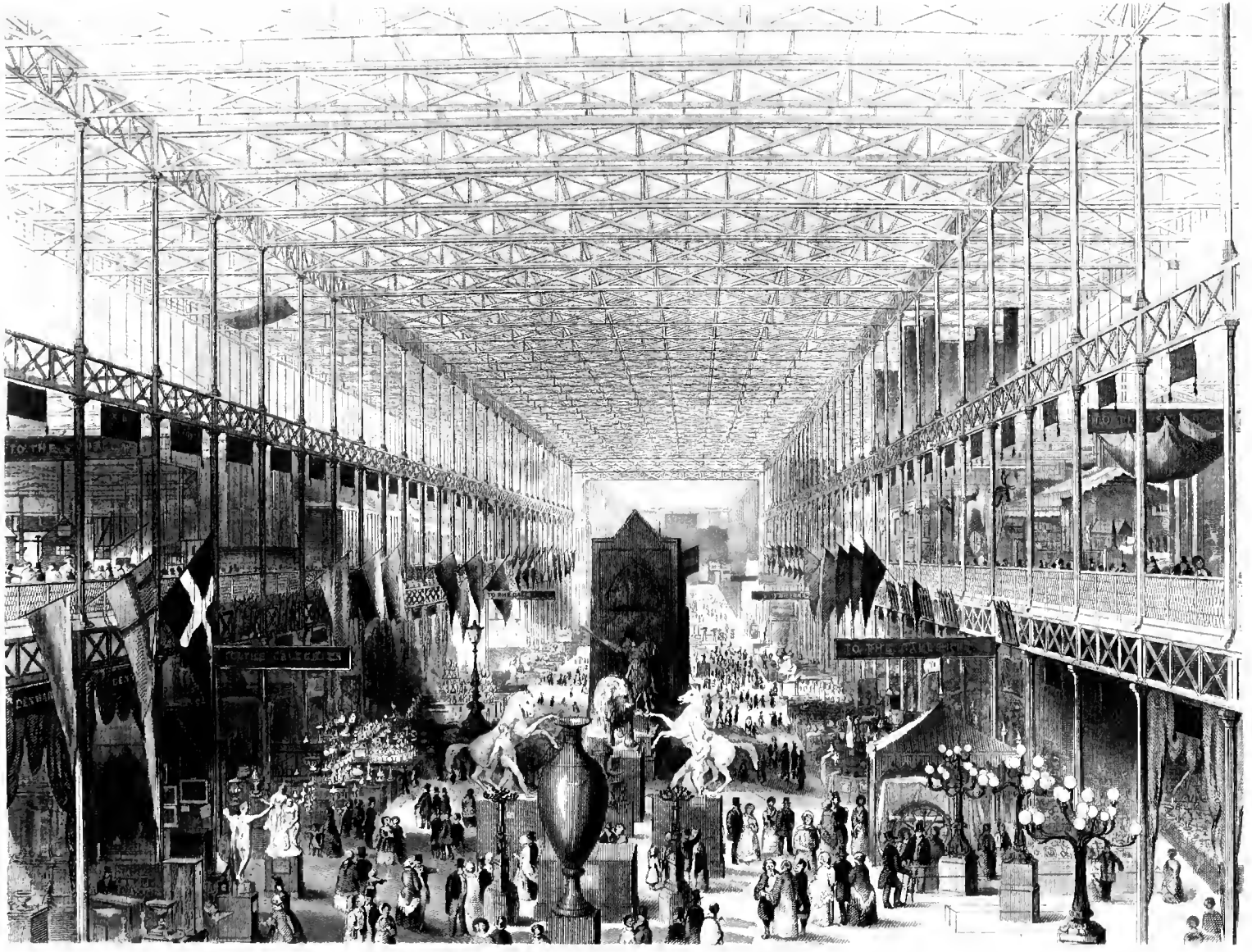

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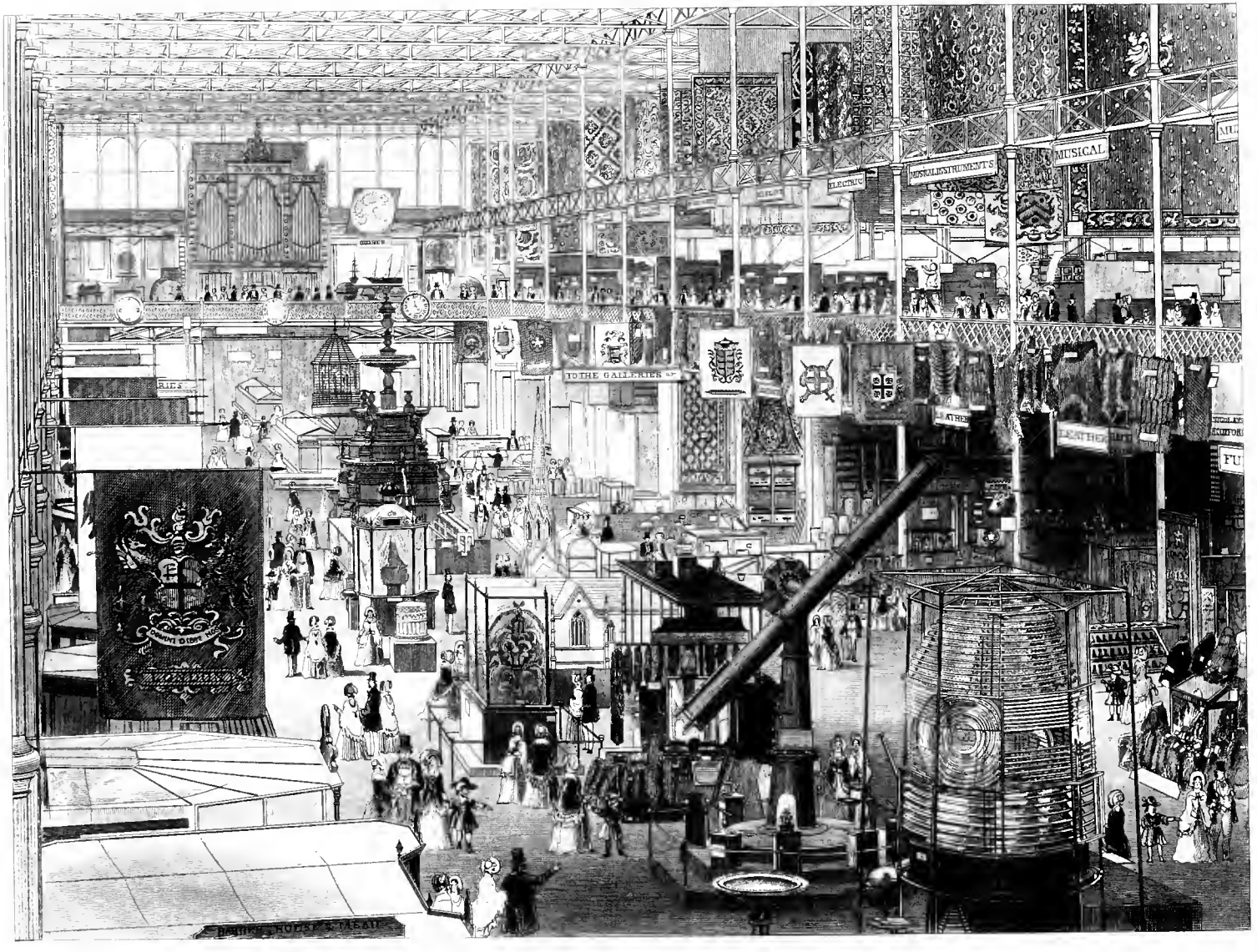
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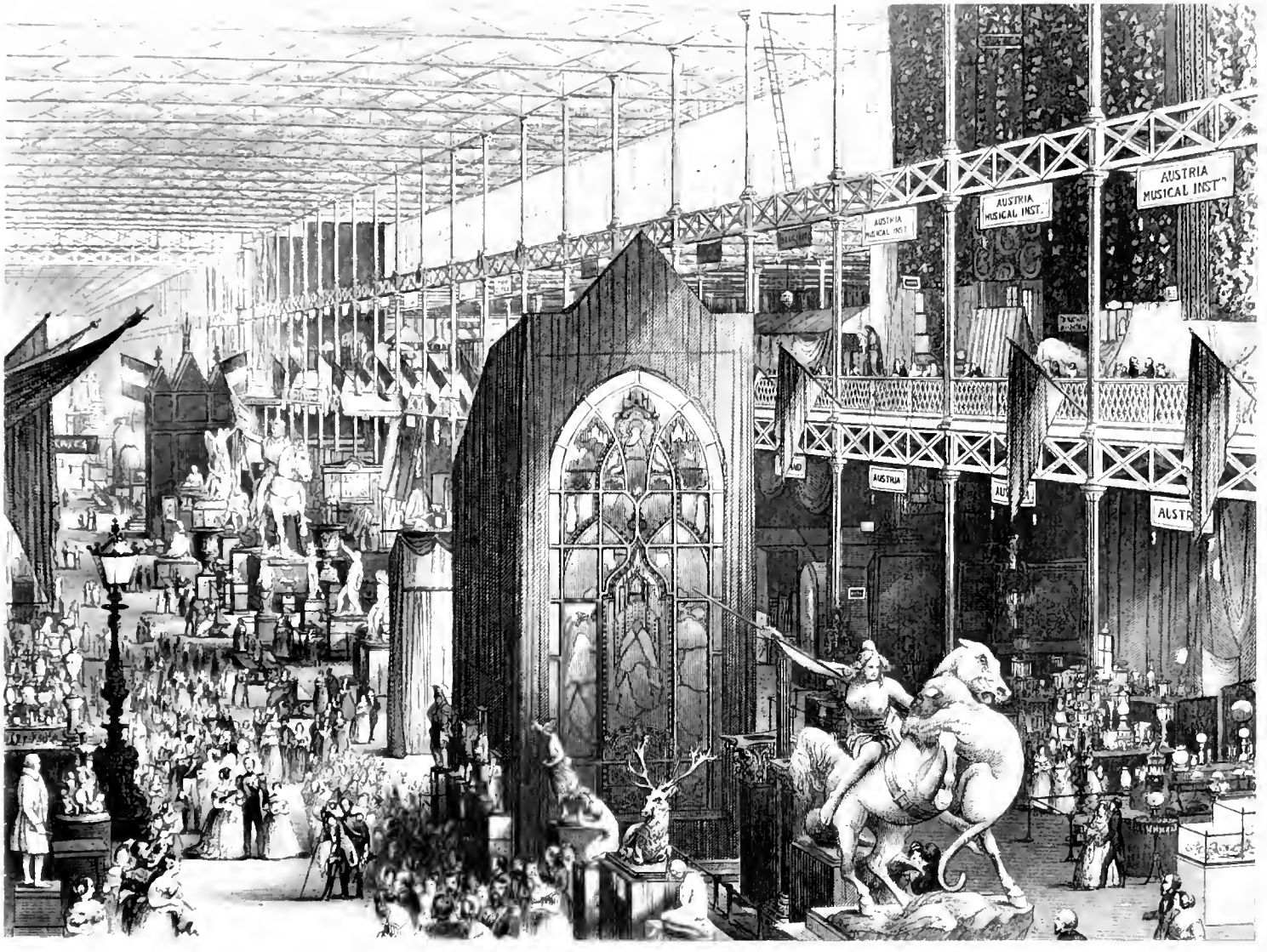
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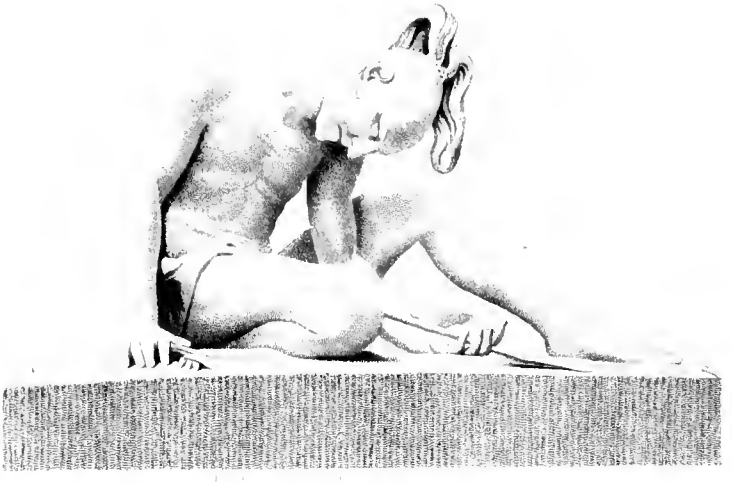

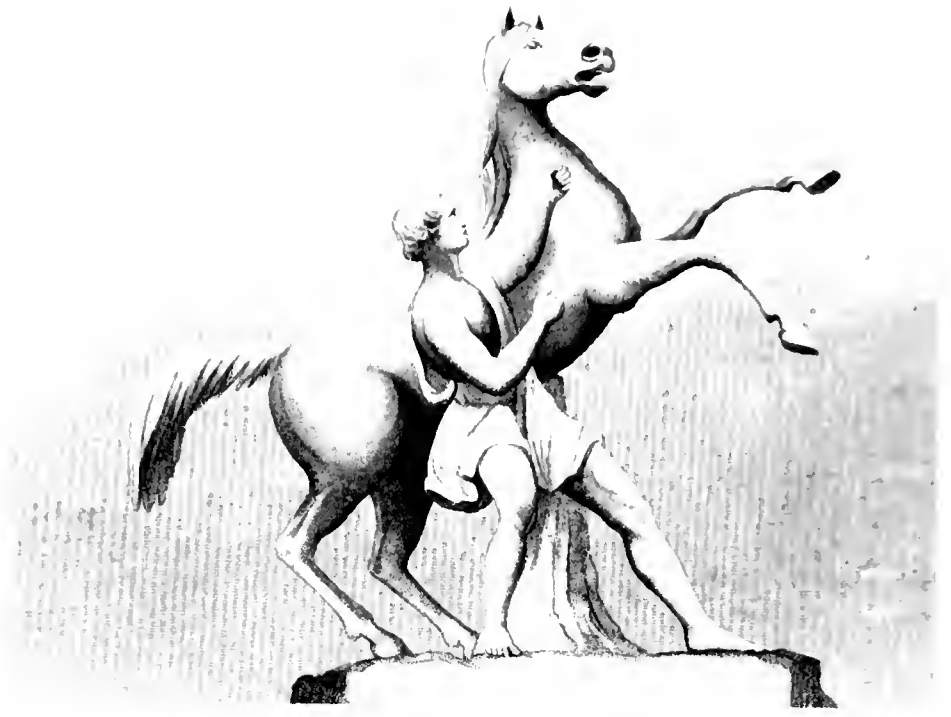

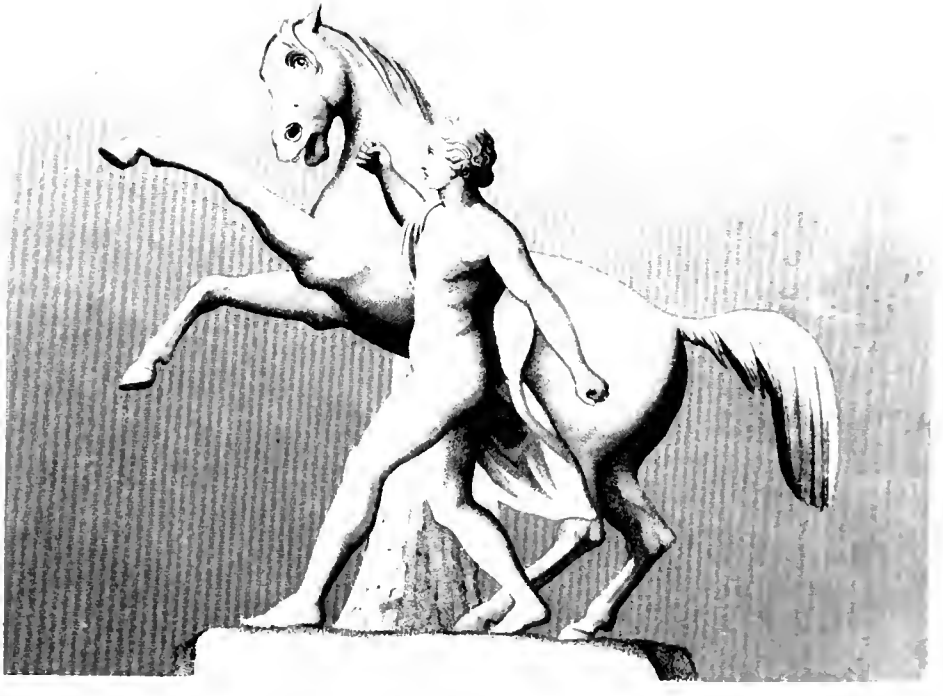

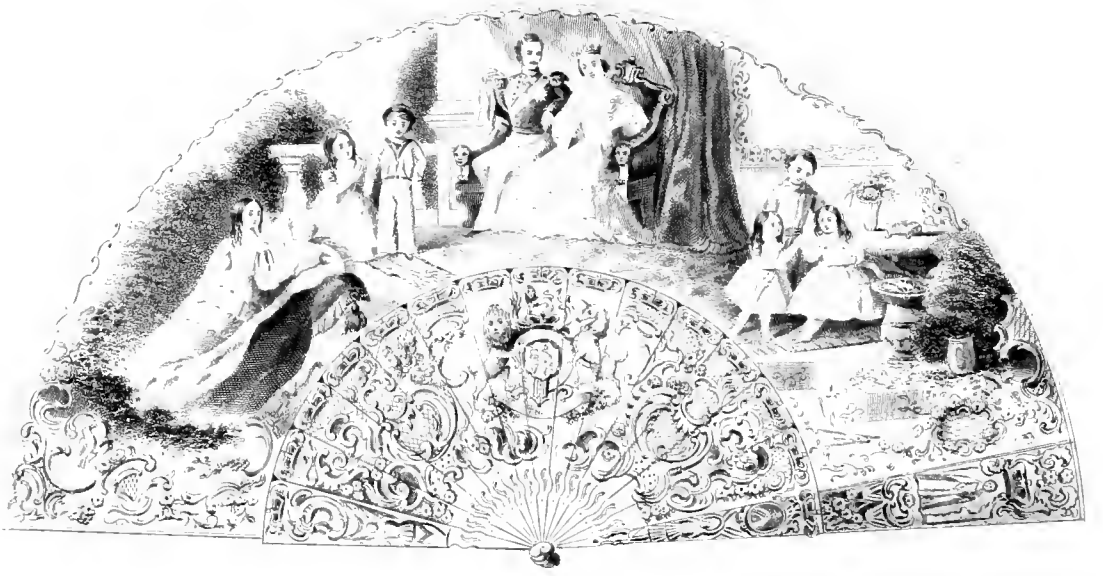

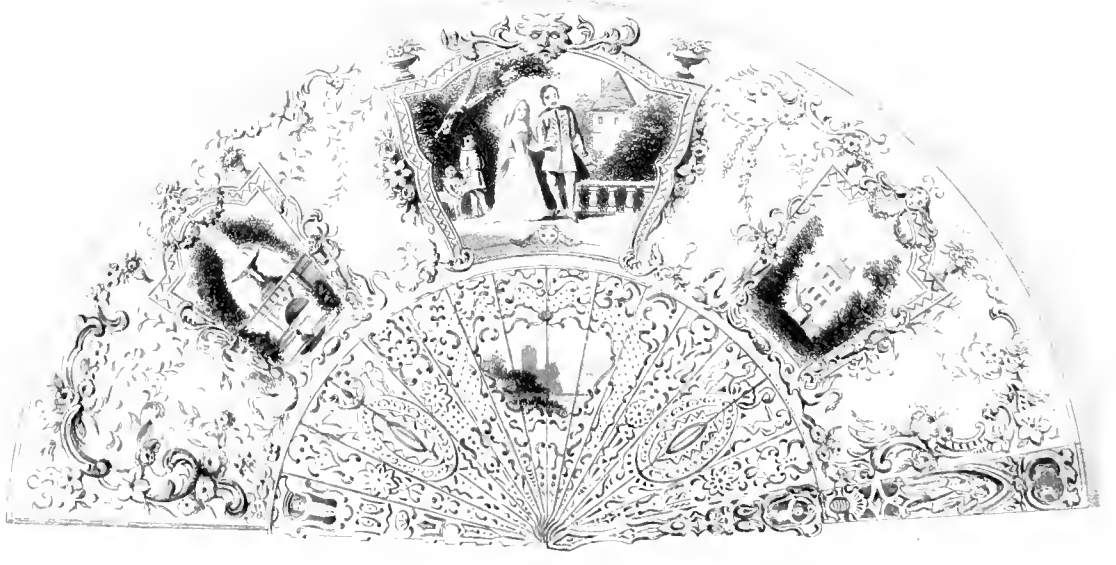

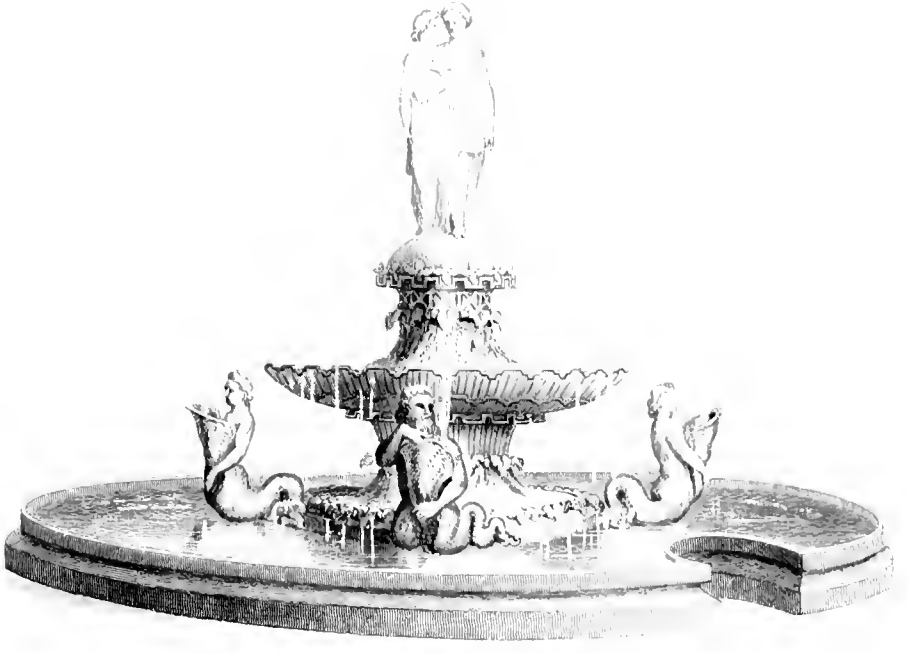

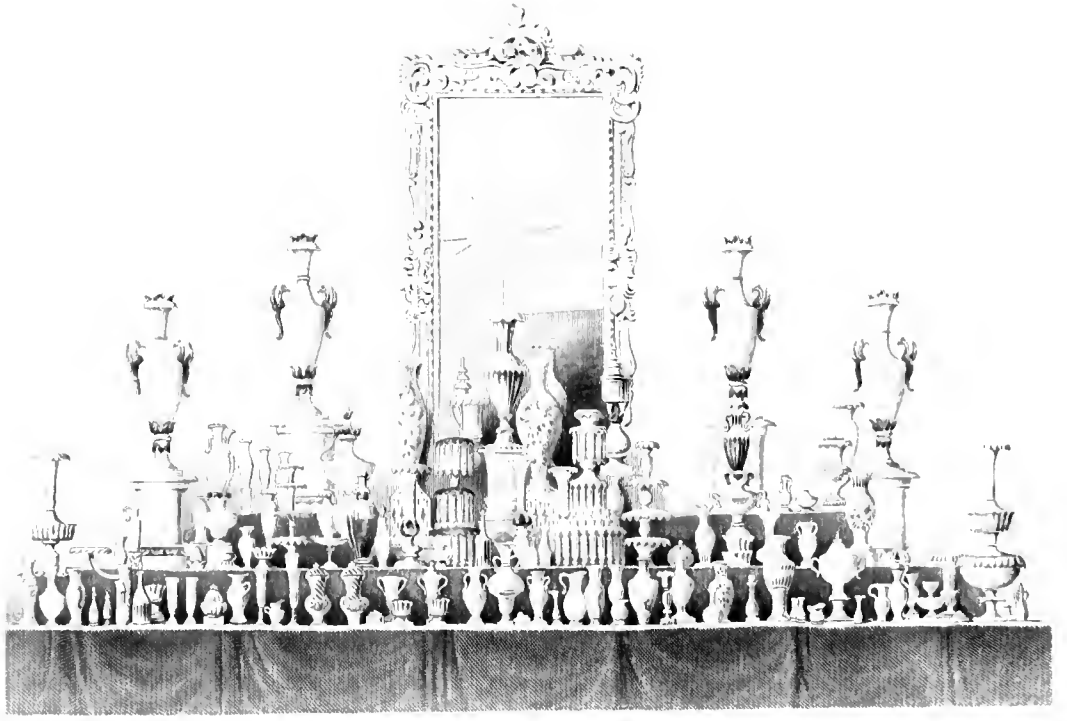

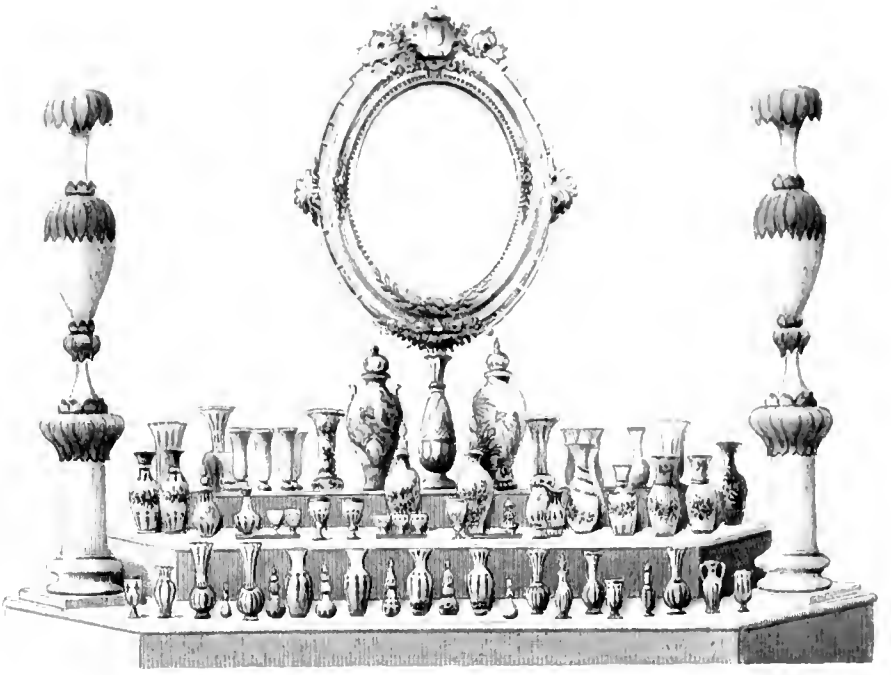

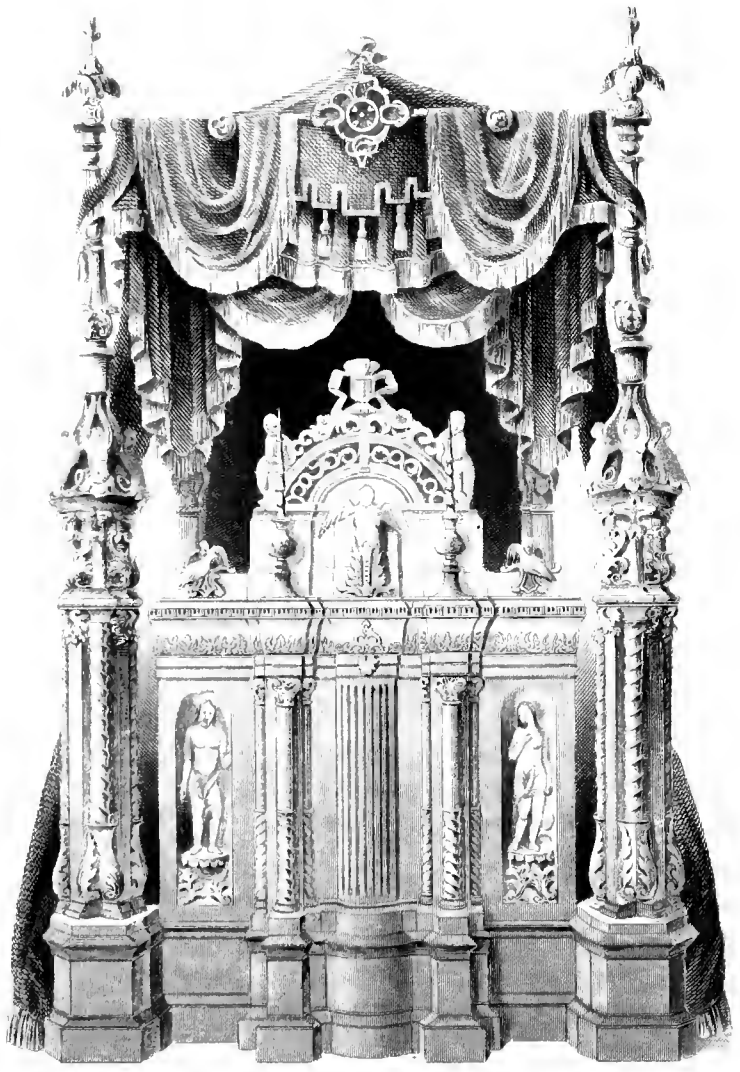

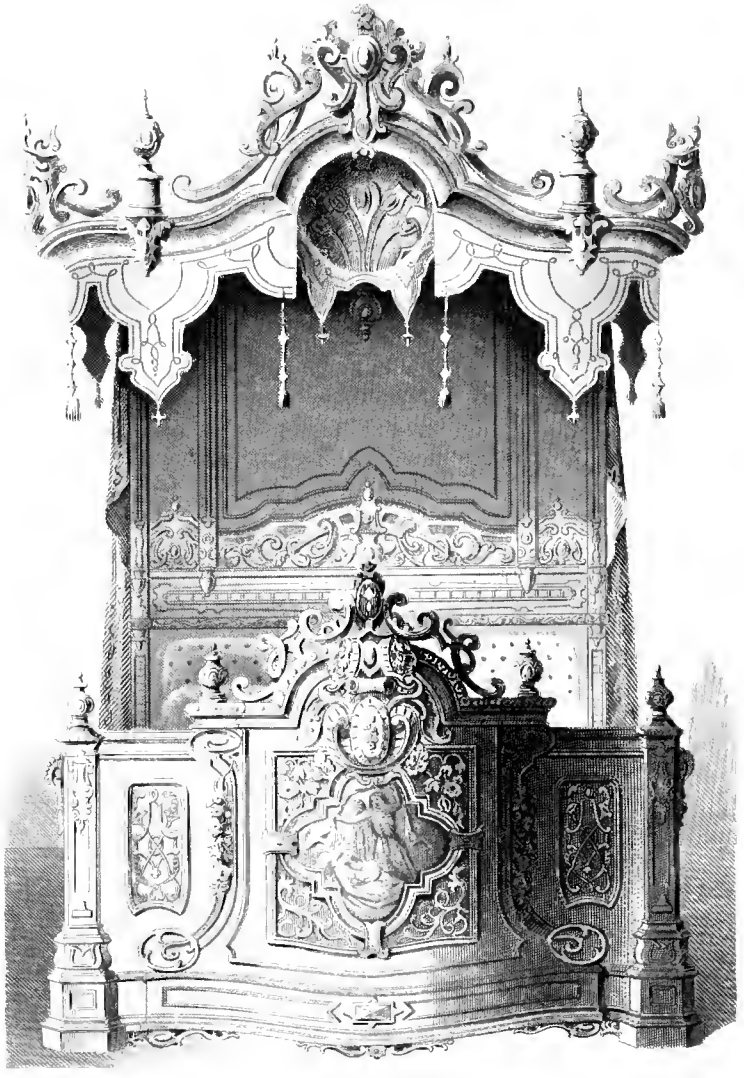

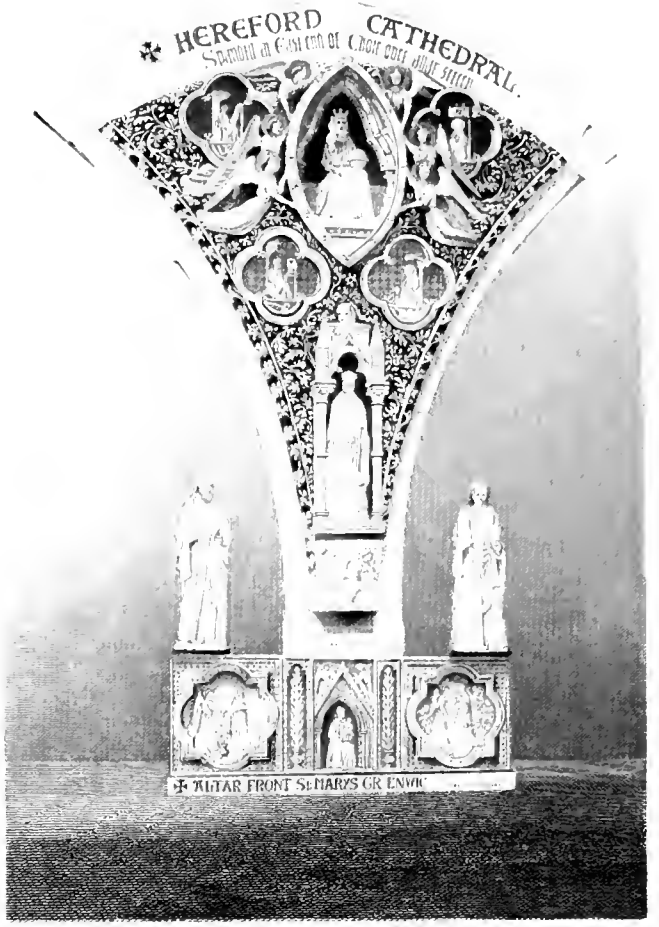
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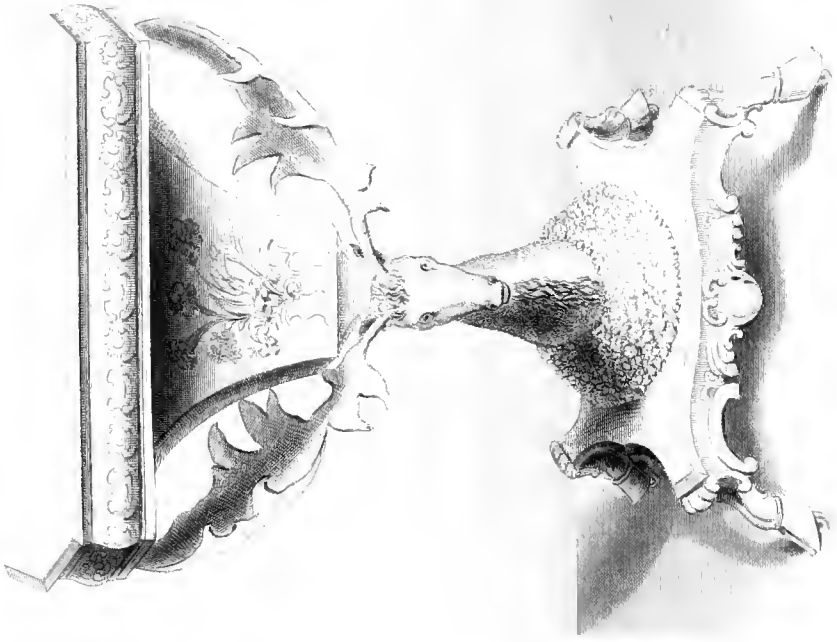

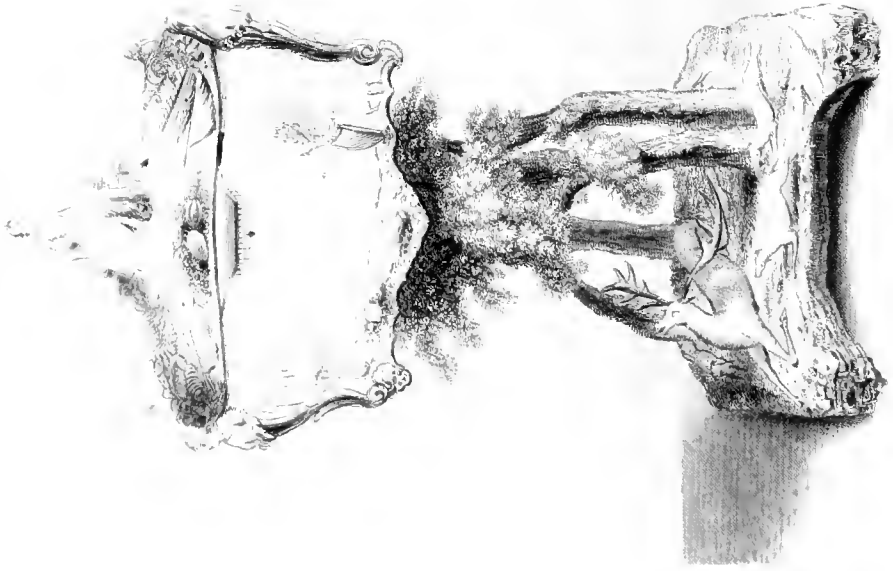

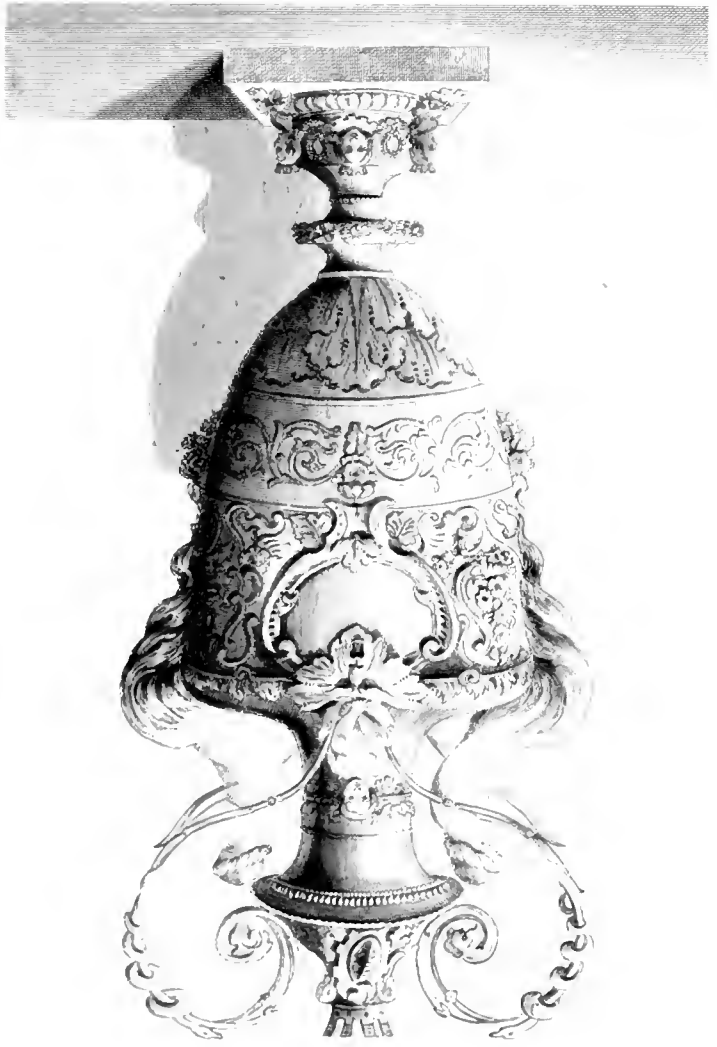

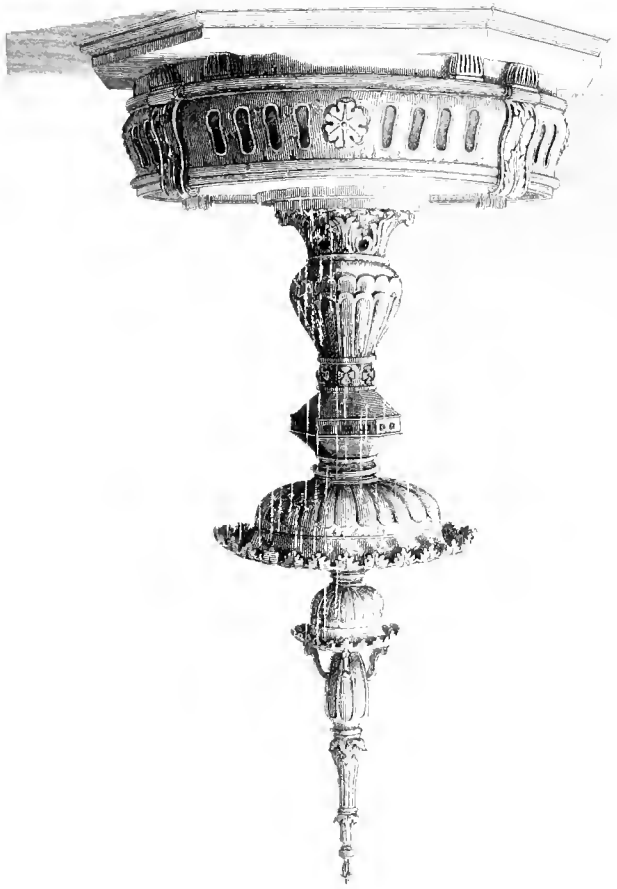

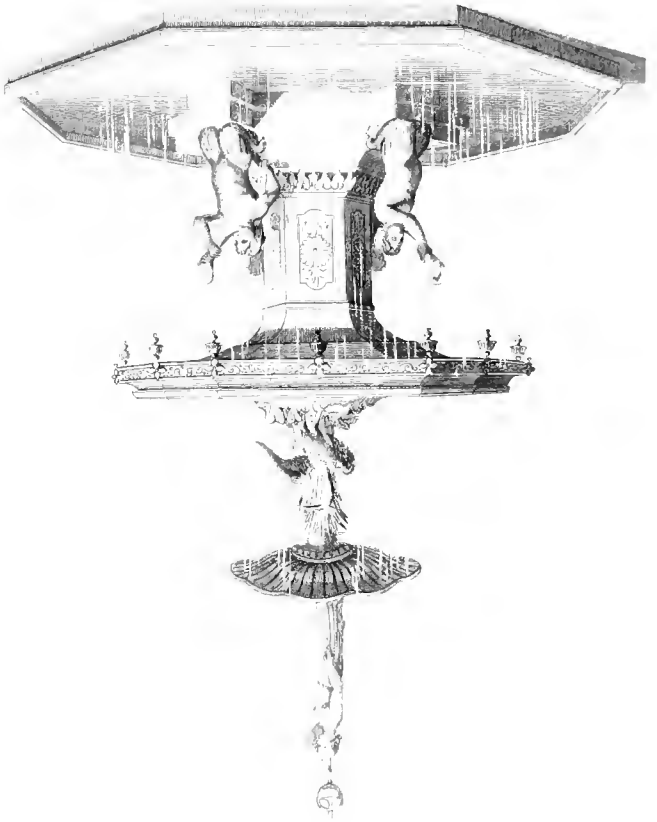

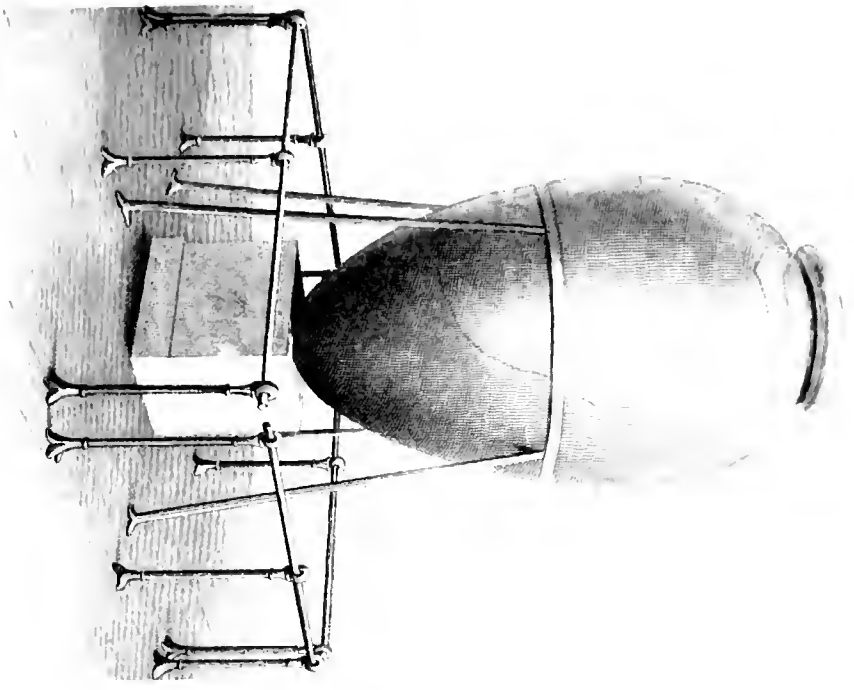

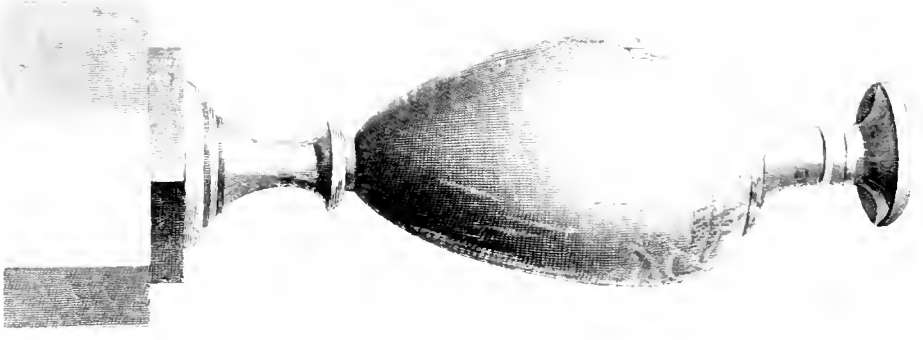

CHAPTER XXII.

ORNAMENTAL SILVER—ITS EXTRAORDINARY PROFUSION—FRENCH AND ENGLISH ARTISTS—VARIETY OF SPECIMENS DESCRIBED—VINDICATION OF ENGLISH TASTE, ETC. ETC.

Far down in the depths of Laxey Glen, in the Isle of Man, and overshadowed by the mountain of Snaefell, are some of the most valuable lead mines in the United Kingdom. Here, amid the green glory of nature, and with the solitude and stillness engendered by the constant contemplation of mountain scenery, clinging around them like a second nature, men work in bringing the ore from the bowels of the dark earth. This lead ore contains a large per centage of silver, which is extracted from the baser metal by a peculiar process, and specimens of which silver were to be found in the Exhibition. Other masses of silver ore, from Ireland, Cornwall, and countries far over sea, were also shown. A large proportion of the silver of commerce is obtained from the ores of other metals, and from these therefore proceeded the rich display of plate which was to be seen in various parts of the Exhibition.

The brilliant array of wrought, chiselled, and embossed silver-work collected throughout the principal compartments of the Great Exhibition, seemed to indicate that this noble art has been shorn of none of its pristine lustre, since the days when kings and princes, popes and cardinals, were sole patrons of the handicraftsman. Precisely three centuries have elapsed since the art of chiselling silver was at its zenith. On looking round and seeing the prodigious number and beauty of the works exhibited, one almost fancied that the many hammers which beat in such unison at the command of Cellini in the "Petit Nesle," had never ceased to resound on the banks of the Seine. England, on her side, strove with the wondrous aid of science to keep up the illusion, particularly by the dazzling brightness with which she invests the precious metals. In both England and France were found tacit acknowledgments of the eminent fitness of the Renaissance style of workmanship over all others, especially the classical, which is just at present under a complete ban. If we inquire further into the possible cause from which has arisen the present taste for all that appertains to the sixteenth century, we find that, as has ever been the case, the minor arts are influenced by the prevalent taste in architecture; as it is a fundamental principle of ornamentation that the component parts which serve to adorn any structure, even its furniture, should necessarily partake somewhat of its character. To Mr. Chenavard, patronised by the late Duke of Orleans, and an able architect, the French ascribe the honour of driving them out of the classical slough in which Gallic art was so long imbedded. The British silversmith, on the contrary, has seldom allowed himself to be influenced by the fluctuations of fashion, but has steadily, perhaps too steadily, adhered to time-honoured traditions and old sculptural forms. We fancy we recognise the hand of Flaxman even to this day, with its pure but somewhat quaker-like conceptions. One cannot be too thankful that the animal and vegetable kingdom should have been the only source of inspiration; or it is difficult to conceive all the vagaries and waste of metal which the straight lines of our perpendicular architecture and its Flamboyant traceries might have led us to. But if timidity has hitherto been the besetting sin, there is at present rather an opposite tendency, which is evinced in the somewhat audacious rejection of all wholesome rule. Silver is expanded over large surfaces, and made to branch in large chandeliers which would have made the old artificers stare at the lavish expenditure of the precious metal. We believe it is no exaggeration to say that the compartment of Messrs. Hunt and Roskell, late Storr and Mortimer, alone contained no less than three tons' weight of silver.

It was almost a relief to turn from the precious stones, whose intrinsic value escapes mental evaluation, to the more tangible merits of human workmanship. Contrasted with the bright and finished groups in silver, two works, executed by A. Vechte, in mingled iron and silver, stood out prominently by their subdued tones. The first was a shield, which, though unfinished, promised to be a most exquisite piece of embossed workmanship. It represented Shakspere, Milton, and Newton, surrounded by their embodied conceptions. The style of the figures was a singular medley of Raphael and Buonarroti's designs; that is, rather calling to mind the conceptions of the great Italians than closely adhering to them. The same might be said of the "Vase of Etruscan form," also executed by the same artist, and representing Jupiter hurling thunder at the Titanic host. The anatomy was worked out in a manner which would bear extension on the largest scale. Vases, salvers, and centre ornaments, presentation cups, &c., filled up the remaining portion. Messrs. R. and S. Garrard shone in bellicose groups, executed mainly in entire relief by the able designer, Mr. Cotterill, who identified himself with bull fights, boar hunts, and hunting meetings. Ever full of spirit, his groups were sometimes marred by a want of finesse in detail-work. Mr. Cotterill was too much at the mercy of the polisher; we need only point at the otherwise pleasant performance of the rider entrapping the wild horse by the lasso. A perforated chandelier attracted as much notice by its size and polish as the "Brassey testimonial" by its massive effect. In the assembled company of engineers whose portraits were here gracefully collected together, we fancied we saw the heroes of speed, which had its tardy counterpart in the progresses of Elizabeth, who was evidently a favourite with the silversmith. There were two effigies of her; the first had been somewhat modernized by B. Marochetti, for Mrs. Hancock, who had other meritorious productions on view. The next, of somewhat exorbitant dimensions for silver, had been worked under the direction of Mr. Morel, from the great seal of the time. The way in which the minutiæ of dress had been worked showed how far embossed work may go. Those who were curious in technical peculiarities might notice with satisfaction that there was no trace of subsequent soldering, her majesty being daintily fitted, as beseemed her precious person, on the barb or state horse. Her weight was considerably above a thousand ounces. Mr. Morel also exhibited a centre-piece of Children Playing with a Panther, which displayed all the fancy of Poussin in the juvenile attendants of Bacchus. The frosted imitation of the flesh texture was novel and pleasing. Caps of agate and lapis-lazuli of unusual dimensions, and convivial weapons, showed combined taste and art. As defenders of the powers of electro-metallurgy, Messrs. Elkington and Mason, of course, reigned supreme. It is well known that in the ordinary methods of electro-plating it is usual to construct a plated article as far as possible from plated sheet metal, while the edges and ornamental parts are completed by soldering thereto parts either stamped in plated metal or in silver. By this method of manufacture the design must necessarily be limited, being confined to such ornamental forms as could be produced by stamping or otherwise fashioning sheets of metal. The pernicious process of gilding by an amalgam of mercury and gold is superseded by the voltaic reduction of gold; and the voltaic precipitation is effected with far greater economy than the mercurial process. Messrs. Elkington and Co., though their patent has received wide extension by the grant of licences even to French firms, maintained their supremacy, and sorely puzzled their imitators by the great brilliancy of their gold and silver work. But it may be doubted whether the merits of the voltaic precipitation of metals are not more conspicuous in the larger scope afforded in its application to sculpture. In this respect it is to be regretted that fitter models than the lively Cupids of Flamingo or the dull effigies lately applied to the houses of parliament, were not selected to inaugurate the processes of electro-bronzing. In the

nave was a horse's head executed life-size by electro-deposit; it was from the hand of Marochetti, and interesting by the variation of its tone. It has always been an acknowledged fact in electro-metallurgy that the cost of the reduction of iron far more than counterbalanced the original cheapness of the raw material: whether this was the case in the instance we have cited we had no means of ascertaining. The East Indians, who laid bare the gorgeous splendours of the kingdom of Oude, displayed in the inlaid gold of their tents, crowns, and horse trappings, all that barbaric splendour which charms the eye by the natural and choice harmony with which colours are blended, regardless alike of the inroads of science on one hand, or calculations of novelty on the other. The sceptre and the fly-flap, as well as other accessories which filled their tent, showed that a spirit somewhat akin to that of the ancient Assyrians, is still abroad among these Indians. The transition from these vestiges of primitive splendour to the nicer discrimination of the present day is rather an abrupt one, but the same may be said of every stride taken in the Great Palace.

It is singular to find our neighbours, the French, doing their utmost to extinguish the brightness of the metals which the English handicraftsman does his utmost to preserve. It is well known that not only a certain dulness of tone is the natural consequence of the continual hammering and oiling of the silver necessary to bring it to a completion; but, not content with this, it has been the fashion, for the last year or two, of oxidising most part of the silver-work, which thereby acquires prematurely the sober and dusky veil which time has cast over all the brilliant sleights of hand bequeathed to us by the artists of the sixteenth century. Greater durability and a more permanent defence against the inroads of time, are also said to be secured by the present process. The system adopted consists in plunging the groups into acids, whence they emerge with their present sombre hue. Mr. Durand's "*Théière à grande réception*" was the greatest compliment ever yet paid to England's favourite beverage. It consisted of seventeen pieces, which combined chiselling, gilding, niello, and even oxidising. Though Diane de Poitiers had made way for an allegorical figure of Charity and her Children, the whole work smacked of the gusto prevalent in the reign of Francois I., in the imitation of the Florentine architecture and its incrustation of small figures. The whole design, and its adaptation to its purpose, was exceedingly ingenious, and was, we believe, originally designed by Klagman. The Louis XV. style, which the French now designate as "*rocaille,*" was splendidly represented. Mr. Durand exhibited a table-ornament of assembled cupids, with decorations in this style, which showed how far a skilful hand can reconcile one to the wildest vagaries of fancy. The firm of Rudolphi made oxidising their specialty, and seemed bent on proving that the process is equally well adapted for the largest or minutest proportions. They exhibited a circular table, or "*guéridon,*" ornamented with cupids and slender leaves at the base, the top part consisting of an inverted shield, with the embossed head of Medusa. There was also a salver with one of those nymphs Jean Goujon has made us familiar with. M. Odiot made the purpose of his ornamental work at once plain by chiselling fish, flesh, or fruit, with perfect freedom, decking his richly worked specimens.

Messrs. Smith and Nicholson exhibited a centre-piece representing a group of Arab merchants halting beneath the spreading leaves of one of those noble palm-trees, which affords them protection from the rays of their burning sun, and re-invigorates them by its refreshing shade. They were equipped in the usual travelling costume of Arabia, and were supposed to be in the midst of an oasis in the desert, watered by a solitary spring. The singular mode of life pursued by these nomadic tribes is forced upon them by the very nature of the country in which their lot is cast, and which necessarily imparts to the character and countenance an apparent solemnity not inconsistent with

the perils they so frequently encounter in crossing vast scenes of sandy desolation. The camel, the "ship of the desert," as he is poetically termed, was looking round upon his rider as if desirous he should dismount, so that he should be free to pick the herbage and enjoy the repose which the situation affords. As a whole the performance was full of character, and the disposition of the group was as picturesque as its execution was chaste and expressive.

The next subject we have to notice was of a very different kind. It was so essentially English that it was impossible to mistake the costume for that of any other country. It was an exquisite performance, coming home to the heart in all its fulness, and awakening associations with which every English reader is acquainted. It was an embodiment of the humour of Addison in the scene of Sir Roger de Coverley with the Gypsies. The good old knight was in the attitude of hearing his fortune told through the dubious light of palmistry, whilst the dark-eyed daughter of the East was wiling her way into his heart, and breaking down every barrier of prejudice that might arise to prevent the natural generosity of Sir Roger from displaying itself in a sum sufficient to reward her cabalistic knowledge. The spirit of the scene enabled us to fancy even her gradually experiencing emotions of kindness towards the knight, whom everybody esteemed, and for whom the inmates of his household felt the tenderest regard. The figure in the background, leaning upon the horse, was intended to represent Addison himself, who was evidently taking that brief interest in the scene which enabled him to realize it in a future Spectator. Messrs. Angell, of the Strand, were the exhibitors of this fine centre-piece. On the left foreground stood a sideboard bottle in the antique style, ornamented with Gothic oak leaves. This idea was suggested by the skins used in Spain for carrying wine down the mountains. The height of the object was twenty-four inches, and it was capable of containing eleven quarts. It was silver gilt, and made entirely out of one piece of metal. On the right we had a handsome claret jug, of a richly chased wine pattern. It was exhibited by Messrs. Lambert and Rawlings. We next noticed a magnificent ewer or race cup, from the establishment of Messrs. Garrard, of the Haymarket. It represented a group of Sioux Indians hunting the bison in one of the North American prairies. This was a work which deserved something more than a passing notice. Its original was run for at the Doncaster races, and the present was manufactured expressly for the Exhibition. In originality of conception, spirit of design, and elaborateness of finish, we think it will bear comparison with any production of the same class submitted for examination. The kindled rage of the infuriated bison, tossing his head as if to gore the horse and bring his foe to the ground, was striking and life-like, and, artistically speaking, formed an exquisite base to the column of the uplifted horse; whose position carried the eye freely to the top of the ewer. The strained attitude of the steed, too, was excellent, and the precision which was intended to be conveyed in directing the lance of the rider, was exemplified in the position he maintained as he seemed to rivet himself to his seat. On the other side was another Indian in the act of discharging an arrow.

Messrs. Gass, of Regent-street, exhibited a brilliant collection of elaborate workmanship, among which was a dessert service of an entirely novel character, consisting of four pieces, each representing different species of aquatic plants, modelled from water-plants growing in Kew Gardens, the leaves forming dishes. One of the pieces represented the beautiful and graceful *nymphæa thermalis*, or Hungarian water-lily, in flower, springing from rock-work, on which were several rock plants. The second was the rich *nymphæa rubrea*, or red water-lily of the East Indies. The third was modelled after the *calladium*, and the fourth after the *dillirea speciosa*. Mr. Emanuel, of Hanover-square, exhibited a splendid silver *pendule*, surmounted by a figure of Apollo driving the chariot of the

Sun, drawn by four horses, and supported by the Four Seasons. In the frieze were represented the Four Winds, and in the front of the dial the figure of Time recumbent; the whole designed and modelled by Woodington. Messrs. Hunt and Roskell, as we have before observed, made a grand and magnificent show. Their collection was worthy a palace, and was a source of great attraction in the central south gallery, where works in gold and silver of enormous value were deposited. There was placed the testimonial in silver, designed by Sir George Hayter, and modelled under the direction of Mr. E. H. Baily, R.A., presented a short time since to Sir Moses Montefiore, by members of the Jewish persuasion, as a mark of respect for his exertions on behalf of the persecuted Jews of Damascus. The group consisted of sphinxes—indicative of the captivity of Israel in Egypt—with a figure of Moses supporting the tables of the law, and of Ezra reading a scroll, upon which was inscribed the 22nd verse of the 8th chapter of his book. There were also two Jews of Damascus, one loaded with chains, and the other released, overshadowed by the vine and the fig-tree. The group on the summit was a representation of David rescuing the lamb from the jaws of the lion. In the *bassi rilievi* were pourtrayed,—the Israelites crossing the Red Sea, and the destruction of Pharaoh's host; the landing of Sir Moses and Lady Montefiore at Alexandria; Sir Moses obtaining the firman from the Sultan; the persecuted Jews of Damascus returning thanks for their deliverance; and the thanksgiving in the synagogue by Sir Moses on his return. Under the latter was inscribed the 124th Psalm. This firm has long been celebrated for the production of exquisite works of art known as race-plate; and in their stand was exhibited the Emperor of Russia's Ascot prize for the year 1847. It was an elaborately-chased vase, representing in the base and upper part, "Peter the Great receiving the swords of the Swedish generals after the battle of Pultowa, and an event which occurred shortly previous to his death:—Being near Cronstadt, he saw a boat full of men and officers upset by the violence of the waves. He ordered instant assistance, which being ineffectual, he then seized a small boat, waded through the surf, and succeeded in rescuing the sufferers, though it brought on the disease which terminated his life a week afterwards." On the base were relievi of the palaces of Peterhoff and Smolenski.

Notwithstanding the inroads which the electro-metallurgic art has made upon the old-established manufacture of plating, this method has, nevertheless, partizans, who insist on its special advantages over the new process. Mr. John Gray, of Billiter-square, exhibited a series of articles illustrative of the old method of plating, commencing with the ingot and terminating in the finished article. The ingot, as used in the old manufacture, is composed of copper alloyed with other metal, so as to impart to it the necessary toughness and rigidity. The plate of silver is tied upon its polished surface with wire, and the combined metals are then heated in a furnace. When the temperature is raised to a certain point, their union takes place, and the ingot is then submitted to the processes of manufacture. An ingot of copper previous to this process, with the plate of silver tied upon it with wire, was shown by this gentleman. The next articles in the series were ingots of copper and white metal, after the silver plate has been united to them by an elevation of temperature only, and without the intervention of solder or any other substance. The next article was the sheet of plated metal, which is obtained by submitting the plated ingot to the rolling process. A table dish, made from the rolled metal, was the next in the series, with the silver mountings laid upon it, but not yet soldered. The steel dyes in which the silver mountings are struck, together with the mountings produced by them, were also exhibited; in fine, the table dish was exhibited in its finished state, as well as a specimen of a salver produced by the manufacturer as above described.

Among the productions of "*La Belle France,*" we must not omit to notice those of

Froment, of Meurice, which, taken altogether, formed one of the most attractive features in the Exhibition. His gorgeous silver centre-piece, representing the Four Seasons, obtained, as it well deserved, the great medal. Numerous other evidences of his taste, skill, and high perception of art, were to be seen in the case appropriated to his works. An agate cup, of extraordinary beauty of form and skilful workmanship, we particularly admired, the frame and stand being gold and silver, gracefully twisted in the form of a vine.

Although in these and other exquisite productions of our continental neighbours, we fully appreciate their excellent invention and taste, still it must be allowed that British workers in precious metals have laboured successfully to place themselves in dignified contrast with their foreign rivals; and to vindicate themselves from the vulgar charge that they lack the taste necessary for the perfection of objects in precious metals designed for use. Our British exhibitors in plate, one hundred and twenty-eight in number, represented very fairly the manufacturing excellence of England in this department of industry; and their specimens, apart from their excellence as manufactures, included not a few curious and attractive objects. The collective value of this section it was hardly possible to estimate, but it must have been enormous. There were some fine specimens of chasing, which, before we conclude our present chapter, we shall endeavour to describe. The most conspicuous among them was a figure of "Death on the Pale Horse," after the well-known design by West. The silver on this figure was stated to be no more than $\frac{1}{32}$nd part of an inch in thickness. This specimen was contributed by Mr. T. Woodbridge, of Holloway. Messrs. Elkington and Mason exhibited a splendid display of electro-plated candelabra, tazzas, vases, table ware, &c.; and in the collection of Messrs. Martin, Basket, and Martin, of Cheltenham, we noticed a handsome model of a Great Western steam-engine, and a highly wrought inkstand, called the Milton inkstand. Bracelets, guards, chatelaines, tea and coffee services, flower-stands, &c., were to be seen in almost endless variety. A fine vase in silver, after a marble antique, in the Capitoline Museum, was exhibited by Messrs. Payne and Sons, of Bath; and amid the brilliant collection were found a silver tea-pot, coffee-pot, and tea-kettle, weighing together only 140 grains. As a curious subject for chasing, Messrs. Connell's cup, carved with designs from scenes at Donnybrook Fair, may be remarked; and the registered brooches, from the mineral products of Ireland, were interesting specimens of dawning industry. Effective specimens of industrial skill and taste were exhibited in some finely-chased silver mountings for a highland dress, richly studded with carbuncles, and exhibited by an Edinburgh firm. Passing by brilliant specimens of electro-plated articles, exhibited by Messrs. Wilkinson and Co., of Birmingham, and others, and plate in all its varieties—forks, spoons, fish-knives, candlesticks, Etruscan jugs, taper-stands, &c., we came to a solid silver table-top, 55 inches in diameter, weighing nearly 900 ounces, and manufactured for the Governor of Aleppo, by Mr. Collis, of Birmingham. Passing from this gorgeous and costly specimen of the silversmith's skill, the next object which claimed particular notice, was an epergne and sculptured silver candelabra, weighing about 750 ounces, and designed by V. Nicholson. This fine specimen of British taste and skill was the production of a Sheffield firm, Messrs. Dixon and Sons. Passing on, rapidly surveying the bright collections of tea-urns, tureens, claret jugs, communion plate, candlesticks, coolers, plated articles with silver mountings, venison dishes, rams' heads mounted as cigar cases, snuff boxes, &c., dirks, purses, ornaments of highland regiments, imitations of or-molu, we came to a fine embossed and chased salver representing Aurora, or the Hours, after Guido, surrounded with a border after the Tredacna shell. This brought us to a gorgeously mounted meerschaum pipe, exhibited by the celebrated Inderwick, of Leicester-square. Not far from

this luxurious tobacco bowl, sentimental young ladies in dense clusters might have been found admiring ingenious patterns, worked in hair by Mr. Cleal, of Poland-street, Oxford-street, while not far distant, thoughtful people of a "certain age," examined with painful attention, Mr. Mortimer's mechanism for rectifying irregularities in the growth of teeth. This class included also some ingenious specimens of imitation Cameos; but the admirers of brilliants clustered eagerly about Mr. Hope's casket, containing a blue diamond, weighing 177 grains, mounted as a medallion, surrounded by brilliants, "and supposed, from its size and colour, to be unique."

The dessert service, exhibited by Messrs. Gass, of Regent-street, we have already noticed. This firm also exhibited a dazzling silvered jewelled dessert service, in the Elizabethan style, and a bracelet, set with brilliants and carbuncles, and including portraits of the Queen and the Prince of Wales, after Thornburn, executed in niello, and engraved by J. J. Crew; also a silver gauntlet niello bracelet, designed by Maclise. In oxidised silver the English exhibited some fine specimens—among these the statuettes of Phillips, Brothers, of Cockspur-street, were particularly noticed. The progress of a lump of metal through its various stages till it is perfected in the shape of a bracelet, was illustrated by Messrs. Wheeler, of Bartlett's-buildings, Holborn. Rambling on in the vicinity of cases of gorgeous works in the precious metals, we came to a curious gold watch, invented by S. Borcham, to beat seconds and to strike at the minute. This watch attracted considerable attention, and was certainly a curiosity as a specimen of minute clock-work. Other attractions led us in various directions, and it would be impossible to carry a notice of the glittering display to any length. First, we were attracted by a fine drawing-room clock, designed by C. Grant, with subjects by G. Abbott. This composition was inclosed in an electrotyped case, and stood upon a base and pedestal of turquoise blue glass. Then we paused to notice a child's mug, upon which Wilkie's "Blind Man's Buff" was finely chased. Next our attention was attracted by the royal arms of England since the Conquest, engraved upon various metals. Then came the splendid cups, caskets, tazzas, centre-pieces, candelabras, vases, etc., exhibited by Messrs. Hunt and Roskell; then a tea-tray, illustrative of the purposes of the Exhibition, finely engraved by Donalds; then, in melancholy mood, we paused over the last work of Wagner, of Paris, a silver rose-water dish, exhibited by Mr. Forrest, of the Strand; then we endeavoured to picture to ourselves the delight of Staunton before the gorgeous chessmen, exhibited by Eady, of Clerkenwell; and then we could not but notice the candelabrum, given as a testimonial to Mr. Macready. Designs in every variety appeared to be here assembled, from the rigid Elizabethan style to the familiar and homely illustrations of Donnybrook fair. Here was a chased shield, representing the battle of Alexander and Darius; further on a salver, illustrating the labours of Hercules. Messrs. Armitage and Horsley's "Spirit of Religion," had been adapted to the dimensions of a silver tablet for a Bible binding; while the national pride had been fed with the Shakspere Cup, already described, chased with subjects from Lear, Julius Cæsar, Othello, the Tempest, Macbeth, and Hamlet. *Ohe jam satis!* we imagine our readers will be tempted to exclaim. We shall, therefore, conclude our remarks on the present subject, and commence a fresh chapter.

CHAPTER XXIII.

LETTERS OF M. JOHN LEMOINNE—LETTER I.—FOREIGN IMPRESSIONS—BRITISH AMENITY—VAST BUSTLE—OMNIBUSES—SUNDAY VISIT—FINE CLIMATE OF ENGLAND—INVALIDS—HER MAJESTY—VARIETY OF NATIONS.

We shall now pause awhile in our own retrospective survey of the glories and the wonders of the Fairy Palace, and present our readers with the *naïve* remarks of a lively and talented French writer on the all-engrossing topic of the World's Fair, which evince in a remarkable manner, the admirable spirit of kindliness and good feeling that has already resulted from the amicable admixture of all nations in a cause devoted entirely to peace, order, good-will, and mutual benefit and improvement; a cause of which the effects will, we doubt not, continue to extend themselves to the extremest points of social civilization.

LETTER I.

London, June, 1851.

If I remember rightly, it is Jean Jacques Rousseau who affirmed that he would rather be accounted a man of paradoxes than a man of prejudices; I hold the contrary opinion. There are amateurs of paradoxes, who come to London *not* to go and see the Exhibition. I was so prejudiced as to go there on my arrival, and was still more prejudiced, in common with many others, by being overwhelmed with admiration at the marvellous spectacle. This sentiment is universal. I hear it on all sides, and in all languages. There is no spirit so critical or sceptical as not to bend before this vast display. Independently of the difficulties opposed to the mere execution of the enterprise, there was a certain feeling of hesitation in the public mind as to its result. The effect of its opening was regarded with a certain misgiving, and the first month produced a degree of disappointment among the Londoners. The hotels were scarcely fuller than usual. The lodging houses exhibited their melancholy bills, and the innumerable preparations made to receive the whole world, seemed as though they had been made in vain. So much had been said in anticipation of the millions about to pour into the great metropolis from the first day, that vast numbers were alarmed rather than attracted, and paused to hear the result of the opening before venturing to come. It had been imagined throughout Europe, that it would be impossible to move in the streets; that persons would be compelled to sleep in the open air,—not a very agreeable anticipation, considering the opinion generally entertained of the climate and atmosphere. It soon appeared, however, that these were exaggerations. By degrees our fears were removed, and when it was discovered that everything went on in the most quiet and regular manner possible, the visitors commenced their journey; and now, from the shores of the most distant seas, numberless caravans come to plant their tents around this great mart of the universe. It is like the movement of an ocean, one wave following another. The tide has been slow, because its point of departure was distant; but once in motion, it will not cease. This pacific invasion of all nations has changed the aspect of London. In this immense city, which has no barriers, still less fortifications, and which is an aggregation of small towns and villages which have grown into one another, and have at length coalesced, and formed the great metropolis, the presence of foreigners is, in general, rarely observable. At present, however, one's ears never cease to be struck with all dialects, known and unknown. From the Chinese, true and false, to the serfs of

Russia, all races are represented, and are walking about in all costumes, to say nothing of the beards and moustaches, which here in England are still a foreign garbment.

The English have on this occasion abandoned their usual habits. In very truth, I think they are becoming social and familiar. They have always been polite and hospitable to those who bring proper introductions to them, but now one actually meets some who enter into conversation without such preliminary condition. Decidedly, British manners are altered. This exceptional conduct arises, however, from an excellent sentiment,—the English are now offering hospitality to the whole world, and they pique themselves on receiving it graciously. They are desirous, too, that the highest idea should be formed of their national grandeur, and they question you with evident solicitude on the impression produced by the inspection of the Exhibition. This impression, it must be admitted, is very grand. You feel it even before you reach the Crystal Palace. As on a journey you recognise the approach to a great city by the perpetually increasing number of persons you encounter on the road, so in the movement which is accelerated and increased on the road to the Exhibition, you recognise the approach to a great centre of attraction. I here notice only the simple impressions of the spectator or the tourist, but I can easily conceive the effect which the sight of Piccadilly, Hyde Park, and that great road which leads to the Crystal Palace, must produce on strangers. It is an inconceivable bustle, which defies all description. The uninitiated traveller is absolutely bewildered. The passing and repassing of horses and carriages seem like the crossing of several trains on a railway. It is indeed a *mêlée*, which, when seen for the first time, leads one to fear that the result will be collision, and a general upset. We are quite surprised to see nothing overthrown, nothing broken, and that all these carriages make their way out from one another, as if they were of gutta percha. The multiplication of omnibuses, especially, seems fabulous. They may be counted by hundreds in a quarter of an hour. The best method of seeing in this country, and at the same time the most democratic, is to mount the top of an omnibus. From thence you have a view of the whole route, and this astonishing palace of glass may be seen long before reaching it.

Nothing can be more striking than the first view of the transept. Facing you is a large tree, which has been placed, as it were, under a bell, like a plant. Advancing, you make the tour of this immense dome, amidst verdure and flowers, the murmur of waters, and encounter at the other extremity two other large trees, likewise enclosed in this prodigious glass case. Imagine, now, 50,000 men, women, and children, walking about in this vast green-house, without the least tumult or disorder. On the days on which the price of admission is one shilling, about 70,000 persons sometimes visit it. There are two days on which the price is higher; on Friday half-a-crown is paid, and on Saturday five shillings. Saturday is the fashionable day, and as the palace is not closed until seven o'clock, Albion may be seen from four to six in all the *éclat* of her beauty. The shilling days are not less curious. These are the days for country people, who arrive in their rustic dresses, with their wives, their children, and provisions. The railways bring them to London at reduced fares, and at the station they take large waggons, which bring them to the Exhibition. Caravans full of them are thus encountered in the streets. Whole parishes sometimes come, headed by their clergymen. The colonels of regiments send their soldiers, and the admirals their sailors. Not less worthy of observation are the hundreds of charity children, in their blue dress with yellow stockings, that are frequently met, marching in rank and file. About two or three o'clock every one eats, and takes his luncheon. There are several buffets, where there are all kinds of fearful pastry, and horrible creams that would be ices. The prices are fixed by the committee, and marked up. No wine, beer, or spirits are allowed, but

of course there is tea. There are, besides, interspersed in the palace, several fountains of filtered water, ornamented with small drinking cups, at the disposal of the promenaders. Saturday morning, until twelve o'clock, is reserved for the infirm and the invalids, who are drawn in small carriages, and of these there are a great number.

I have seen the Exhibition also under an aspect which is not void of picturesque,—I have seen it on a Sunday. I should have thought this undertaking impracticable, for here the earth is not permitted to turn on its axis on Sundays, whatever Foucault may think proper to assert. I did, however, succeed in entering, thanks to patronage which I will not betray. Silence reigned around; the very clocks were still; I believe there was but one going. The statues, enveloped in wrappers, resembled ghosts, and the most precious articles were also covered up. I was particularly struck at the sight of a policeman, quietly occupied with his Prayer-book, whom our desecration of the Sabbath must have somewhat scandalised. Sixty years were required for building St. Peter's, at Rome. The new Houses of Parliament, at London, were commenced fifteen years ago, and are not yet finished. The Palace of the Exhibition was begun and finished in three months. Will it live like the roses, only for a season? This is the question of the moment. For poetic imaginations, there would be a certain charm in the destruction of this magical work, which would only, as it were, have appeared on the stage as a passing scene. Cleopatra, indeed, caused the most costly pearl in the world to be dissolved in a cup, and gratified herself by drinking a million at a draught. Why may not a great nation indulge in caprices such as that of Cleopatra?

One of the greatest and rarest curiosities that England presents at this moment to foreigners, who come to see the Exhibition, is decidedly the sun. I am not speaking of the famous *Mountain of Light*, but the veritable sun in the sky, which diffuses light and heat. For some days London has had a factitious air of Naples. Piccadilly and Regent-street are as scorching as Santa Lucia and the Chiaja. There is, however, this difference, that in Italy the streets are deserted during the whole day, and that here the movement of the population is never for one moment suspended. Some tourists, who have come with the idea that the sun is never to be seen in London, and that people walk about with torches in mid-day, feel actual disappointment in being able to distinguish the dome of St. Paul's. Some there are, indeed, who wish to falsify the proverb, "*Solem quis dicere falsum*," and who are quite ready to believe that the English have invented some process to warm their climate for this particular occasion. And why not? These Englishmen are so vain, and they have invented so many machines! You may easily imagine that, in such weather, the Crystal Palace somewhat resembles a hot-house. One spends one's time in looking for seats as near as possible to the fountains and basons of filtered water, and in eating those eternal creams, which are something like iced pomatum.

It is more in vogue than ever to go on Saturday morning. I have before said that the forenoons of Saturday are reserved for invalids, who are admitted in their wheeled chairs, in which they are drawn about. There are many real invalids, but there are also some false ones, who, so soon as they have obtained admission, like Sixtus Quintus, get rid of their crutches, a circumstance which gives the Crystal Palace a certain likeness to the Court of Miracles. On Saturdays, one meets regularly her Majesty and suite, and then the organs play spontaneously, "God save the Queen." In this country, all instruments play this air; in the same way as everything is called "Waterloo,"—the streets, the bridges, the omnibuses, the paletots, the boots. Not to be behindhand with the public in politeness, let us leave the queen peaceably to her promenade, and let us continue ours. It is a mere promenade of curiosity, only a little tortuous, that I ask permission to make. If we would proceed regularly, it would be difficult. We should

lose ourselves. The police office is every day encumbered with objects that have been lost, from umbrellas to children. Yesterday, the policemen collected, along with sticks and parasols, half-a-dozen little girls, who had arrived by a "pleasure train." Happily, they were ticketed and numbered as bales of goods, and were marked from "Bristol." After having received lunch, they were taken back to the sheep-fold.

England, as you are aware, reserved half the Crystal Palace for the exhibition of its own products—all the left-hand, on entering by the principal door. This is comprised under the name of the United Kingdom. Nothing can better represent "*penitus toto divisos orbe Britannos.*" With England, Scotland, and Ireland, there are India, Jersey, Guernsey, the Ionian Islands, Africa, Malta, Canada, Nova Scotia, New Zealand, the Bermudas, the Bahamas, Trinidad, Ceylon. The United States of America no longer belong to the mother country. They walk alone, having attained their majority: they are at the extremity of the other nave. On the right side are all the nations who have flocked together to this great rendezvous. France is placed amidst Turkey, Egypt, Italy, Spain, Portugal, China, Switzerland, and the Brazils. To the name of France has been added that of Algiers, a sign that they do not endeavour, as heretofore, to contest our conquest, and that they now regard it as a "*fait accompli.*" The middle of the great nave is occupied by objects of art, disposed with much skill and effect. On the first *coup-d'œil* of this avenue, which is one-third of a mile in length, one may form a philosophic idea of the genius of the different nations who figure at the Exhibition. Thus, while the foreign nave is filled with *objects of art*, properly speaking, the English is principally occupied by *objects of utility*. As I cannot write a catalogue, I pass over the statues and the organs. The capital work of sculpture in this gallery is the *Amazon*, by Kiss, of Berlin. It is an Amazon, who strikes with her javelin a tiger, which has fastened on the neck of her horse, and is a masterly performance. Something less severe, but more pleasing, is the *Greek Slave*, by an American sculptor. It is not, perhaps, an *ideal* type, but is a copy of an admirable figure. The young slave is placed in a niche, in velvet, on a turning joint, and must be a little giddy by the end of the day.

After indulging, contrary to her custom, in a work of art, America exhibits another work, which characterizes her much better. It is an enormous supply of articles in *caouchouc!* It is difficult to conceive anything more ugly, but possibly it is useful. I presume the United States were desirous, by this frightful edifice of india-rubber, to symbolize themselves, and typify the development to which they are destined. Beside this are two of those poor Indians (*Iowas,*) whom we formerly saw at Paris, and with whom I remembered to have breakfasted. I still remember their air of profound sorrow, which betrayed their nostalgia, and the delight which they exhibited when in a large garden. There is something cruel and ostentatious in the exhibition of these two poor red-skins. It is nothing but a trophy. They are the slaves chained to the car of the conqueror; they are the shadow of the old races that the victorious and implacable civilization of the West crushes in its progress. The American exhibition is crowned, at the extremity of the nave, by an immense organ, the pipes of which are ornamented in such a manner, that they resemble great penny trumpets or gigantic sugar-sticks. From American to English art the transition is easy. Both are of the same character, generally prosaic. I should except a very graceful group in marble, representing Venus and Cupid, by Davies; but the rest of the objects which fill the English nave are composed, in general, of works in which the useful is more prominent than the agreeable. We now have before us a trophy, not in caouchouc, but in silk. It is the exhibition of home-made manufactures, at least so called; but wherever you find very beautiful silks, they probably are from Lyons. After this you see another trophy, in Canadian timber, surmounted by a skiff: then another in Sheffield cutlery, consisting of pen-

knives with five or six hundred blades, two hundred and fifty pair of scissors of every kind, one of the triumphs of England. Then enormous glasses; then light-houses and improved teleseopes; then a trophy in furs, exhibited by the Hudson's Bay Company; then models of every kind.

After this excursion in the nave of the Crystal Palace, let us go, if you please, to see the adoration of the relics. On the right, and nearly at the entrance of the foreign nave, you observe a crowd, curious and eager, flocking about a great parrot-cage with gilded bars. Within that is placed on a cushion the *Koh-i-Noor*. This diamond supplies, in the history of Central Asia, the place of the golden fleece, and has occasioned more than one bloody war. It ultimately came into the hands of Runjeet Singh, and when, after his death, England annexed his kingdom to its Indian possessions, the "Mountain of Light" was sent to London. It is now, if not the most curious, at least the most attractive article in the Exhibition. It weighs 186 carats. As to its value, it is necessarily nominal; it may be worth two millions, or nothing. To ordinary eyes it is nothing more than an egg-shaped lump of glass. They may show us what they please, and call it Koh-i-Noor. On ordinary days, that is, the shilling days, it is exposed in its great cage, ornamented with a policeman, and they rely on the sun to cause it to sparkle; but on the Friday and Saturday it puts on its best dress; it is arrayed in a tent of red cloth, and the interior is supplied with a dozen little jets of gas, which throw their light on the god of the temple. Unhappily, the Koh-i-Noor does not sparkle even then. Thus the most curious thing is not the divinity, but the worshippers. I have seen a pretty considerable number of relics adored, from the *Bambino* in wood of the *Ara cœli* at Rome, to the blood of St. Januarius at Naples. The adoration of the *Mountain of Light* is quite of the same character. One places one's-self in the file to go in at one side of the niche, looks at the golden calf protected by the impassable policeman, and goes out on the other side. If the organs should chance to play at the same moment, the illusion is complete. There is another thing, also, which has the same effect. It is a fountain of Eau de Cologne of Maria Farina. This is also guarded by a policeman, who takes quietly your handkerchief, passes it across the *jet d'eau*, and returns it perfumed. The Koh-i-Noor is well secured; it is placed on a machine which causes it, on the slightest touch, to enter an iron box. It is thus put to bed every evening, and does not get up till towards noon. The procession of the faithful then commences, and only finishes at seven o'clock.

We shall here, for the present, take leave of our lively and intelligent correspondent, with the intention, however, of renewing our acquaintance with him at a fitting opportunity.

CHAPTER XXIV.

THE POTTER'S ART—STAFFORDSHIRE POTTERIES—SEVRES PORCELAIN—DRESDEN PORCELAIN—MEISSEN PORCELAIN—VIENNA PORCELAIN—ENGLISH PORCELAIN—STATUARY PORCELAIN—VARIOUS SPECIMENS OF STATUARY PORCELAIN—ORNAMENTAL PORCELAIN—NEW USES OF PORCELAIN.

We shall again, in this chapter, occasionally avail ourselves of the assistance of our learned friend, Dr. Lardner, and present our readers with the substance of a portion of his lucubrations respecting "The Potter's Art," as connected with the Great Exhibition.

No department of the great museum of industrial products presented to the attention of the intelligent visitor, attraction stronger and more peculiar than that which was devoted to the ceramic manufactures, including porcelain in all its varieties, Oriental and European, earthenware, stoneware, flintware, faïence, delft, ironstoneware, terra-cotta, bricks, tiles, and in general every form of baked earth used in the arts and sciences. In no branch of the useful arts do the ultimate results differ so immeasurably from the original materials as in this. What can more powerfully excite our wonder and admiration at the value which labour and art can confer on the basest materials, than to reflect that the beautiful portraits in Sèvres porcelain of the Queen and Prince Albert, after Winterhalter, and the magnificent vases which were seen both in the British and foreign collections, are composed of nothing more than so many lumps of a whitish clay, and a collection of the rusts (oxides) of certain metals, all beyond this being the work of art? Another circumstance which conferred peculiar interest on this section of the Exhibition was the extraordinary rivalry which it developed among different countries, and the unequal conditions under which British industry entered into this competition. Seven imperial and royal establishments for the manufacture of porcelain, supported by state subsidies, and encouraged by state patronage, sent their choicest productions to be displayed beside those of the unpatronised, unsubsidised enterprise of Staffordshire and Worcestershire. Thus we had, in the French department, a magnificent collection of the finest pieces of porcelain from the National (late Royal) manufactory of Sèvres. A similar collection was sent from the celebrated Royal porcelain manufactory of Berlin, and the Imperial porcelain manufactory of Vienna also sent a rich collection of its productions. Besides these, the Royal manufactories of porcelain at Copenhagen and Nymphenburg, near Munich; and, in fine, the Imperial porcelain works of St. Petersburgh, severally unfurnished their museums, and transferred their richest treasures to the Crystal Palace.

The fabrication of ornamental porcelain in these several national establishments is conducted irrespectively of commercial profit. If any expedient for the improvement of the art be proposed to the British manufacturer, he must necessarily consider the probable cost of trying it, and the probable loss in case of its failure. These considerations are, however, disregarded in establishments supported by the state, and every expedient for the improvement of the art, presenting the slightest probability of a successful result, is tried. All that is most eminent in science, in each of the countries above-mentioned, is brought to bear upon the improvement of the ceramic art. Besides pecuniary emolument, personal honours and rewards are lavished on all who contribute to its advancement. Thus, we find at the head of each of these establishments, as well as at the head of each of their departments respectively, individuals who have attained the greatest eminence in those sciences which are more immediately connected with this branch of manufacture, and personal honours and distinctions, such as orders of knighthood, decorations, crosses, &c., lavished upon them as a farther stimulus to exertion. The antiquity of the ceramic art renders it an object of special interest. Everybody is familiar with the allusions to the potter's wheel in the Old Testament, and indications of the prevalence of the manufacture at an early epoch in the history of the human race are abundantly confirmed by the annals of Oriental nations, and by the material evidence of vases of baked earth which have been found in ancient tombs, and which are preserved in the national collections.

Among the objects exhibited in the Chinese department was included a complete collection of the various materials employed at the great porcelain works of Kiang Tiht'Chin, as it was named in the catalogue; otherwise, according to better authorities, King Te Tching. This collection consisted of specimens of the plastic clay of which the

Chinese porcelain is formed, and of the various colouring matters with which it is decorated. The place from which these specimens were sent is the seat of a very ancient manufactory of porcelain. Father Entrecolles, a French missionary, resided there in the beginning of the last century, and he states in his letters, that there were in operation at this place, in 1712, not less than 3,000 ovens, which gave the town, during the night, the aspect of a vast furnace with a multitude of chimneys. It is impossible, in reading his description, not to be reminded of the appearance of certain parts of Staffordshire at night. Ancient pottery, in his time, was in great demand in China, and extremely dear. Many vessels of great antiquity were obtained from tombs and other ruins. Vases were said to have been discovered of the times of the Emperors Yao and Chun, who flourished above two thousand years before the Christian era. In the ancient tombs at Thebes also several vases of Chinese origin were found, which, by their inscriptions, appeared to have been fabricated eighteen centuries before Christ. The fine porcelain, however, was not known before the year 900, A.D. In Europe the first collection of fine porcelain was imported in the year 1518, by the Portuguese, and for 200 years after that period Europe derived its entire supply of that article of luxury from China. About the middle of the seventeenth century, a small factory for the manufacture of pottery was established at Burslem, in Staffordshire, which, in the year 1690, owed considerable improvements to the Messrs. Elers, who had immigrated there from Holland, and to their exertions may be ascribed the origin of the celebrated Staffordshire Potteries, now an absolute hive of industry, employing 70,000 operatives. It is there we find the splendid establishments of Messrs. Copeland, Minton, Wedgwood, Alcock, Pratt, and others, whose productions enriched the gallery of the northern transept of the Exhibition. Among amateurs in porcelain there prevails a notion, that the art of fabricating the tender porcelain of Sèvres has been lost, and that, since it is impossible to reproduce the articles, they must necessarily have a high value in the market. This is, however, erroneous. All the materials and processes for the fabrication of this description of artificial porcelain are preserved at Sèvres, and the manufacture can be re-established whenever it is desirous to do so. Indeed, we are informed at this moment that the administration entertains an intention of recommencing the fabrication of this description of porcelain for articles of ornament, such as vases, pictures, &c., the imperfections incidental to it not affecting such objects. All the Sèvres porcelain sent to the Exhibition was of the kind called *hard*, that being the only description fabricated for the last fifty years. The portraits of the Queen and Prince Albert, in the great aisle of the Crystal Palace, are fine specimens of the largest porcelain painting which has been produced at Sèvres. These portraits, after Winterhalter, were executed by command of Louis Philippe, and presented to the Queen. They were commenced before the revolution of February, but not finished till afterwards. Louis Philippe claimed them as his private property, and they were surrendered to him by the Republican Government; but the portrait of Prince Albert had met with an accident by which it was broken. Louis Philippe desired to have another made, but the Queen would not hear of this expense being incurred, and the fracture being repaired at Sèvres, the portraits were sent to England, and delivered to her Majesty. The portrait of her Majesty was by Ducluzeau, and that of Prince Albert by Bezanget.

Among the most splendid collection of paintings and vases exhibited by the National manufactory of Sèvres, the most valuable and most worthy of attention and examination, were the following:—The picture of the Virgin, known as the *Vierge au Voile*, by Madame Ducluzeau, copied after Raffaelle in the Louvre. The porcelain was of the same size as the original, and was valued at £1,000. Another, after Tintoretto, by Madame Ducluzeau, at £880. A flower subject, 40 inches high, by M. Jacober, £800. A large cup,

45 inches diameter and 34 inches high, porcelain biscuit; the three principal figures upon the cup represented Industry in the fields and the workshop, and Education; the three corresponding medallions represented Ceres, Vulcan, and Minerva; around the foot of the cup were grouped three figures representing the Fates. Several vases of rich design and elaborate execution; a pair, in particular, with landscapes representing the Seasons, valued at £216. Various cups, also of splendid workmanship, after Benvenuto, Cellini, and others. The style of the Dresden porcelain is familiar to all amateurs, and, whatever difference of opinion may prevail as to its taste, there can be none as to the admirable excellence of its execution. All who have visited the collection at Dresden, will be familiar with the series of animals, represented on a scale approaching to the natural size, including bears, rhinoceroses, vultures, peacocks, &c., made for the grand staircase which conducts to the electoral library. These were fabricated as early as 1730. At a later period, when the manufacture had undergone improvements, large ornamental pieces of porcelain were made, such as the slabs of consoles and tables some of which measure from 45 to 50 inches by 25, and are richly decorated with flowers.

Among the objects exhibited, the most conspicuous were two magnificent vases, one after a design by Semper, decorated with painted medallions and gilding, and another ornamented with painted figures and flowers after Watteau. The frame of a mirror, richly decorated with coloured flowers in relief and girandoles, was also much admired. The grotesque figures and groups of Dresden porcelain have always been admired for their execution, if not for their style. The costumes are especially admirable, and the representation of fine work, such as lace, truly wonderful. Some specimens of this were seen in the Exhibition. One of the grotesque pieces which obtained most celebrity, and was familiar to all amateurs, was the famous tailor of the Count de Bruhl, a figure which was remarkable for the difficulty of its execution, owing to the numerous accessories it included. The figure of the tailor was represented riding on a goat surrounded with all the implements and appendages of his trade, and was about 20 inches in height. A beautiful specimen of flowers was also exhibited, consisting of a *camellia japonica*, with leaves and white flowers in porcelain, in a gilt pot, on a stand of white and gold porcelain. This article was priced at £90.

The Royal manufactory at Meissen exhibited two vases of light blue, with portraits of the Queen and Prince Albert, adorned with escutcheons filled with flowers and rich gilding; a girl playing on a guitar, with laces; a fluteplayer; an *étagere* with girandoles in flowers in relief; a picture of a lacemaker, after Slingeslandt, price 50 guineas; a picture of a Ganymede, after Thorwaldson; and statuary porcelain. Besides the ornamental porcelain exhibited by the Royal manufactory, two collections of painting on China after classical pictures, were exhibited by the well-known artists of Dresden, Bucker and Walther. The former exhibited eleven paintings, in gilt frames, from Correggio, Carlo Dolce, Titian, Murillo, Gessi, Guido, Raffaelle, &c.; also eighteen paintings of larger size, including specimens from Ruysdael, Claude Lorraine, &c. The latter also exhibited a variety of subjects.

The Imperial porcelain manufactory of Vienna was established in the year 1744. One of the foremen of Meissen, named Stobzel, had deserted from that establishment about the year 1718, and escaped to Vienna, where, aided by a Belgian, named Pasquier, and favoured by a privilege, or a sort of monopoly for twenty-five years, granted to him by the Emperor Charles VI., he established, in 1720, a small porcelain manufactory. Not, however, having sufficient capital to carry it on, it declined, and was finally purchased by the Empress Maria Theresa, in 1744, and erected into a Royal manufactory. It was, in like manner, by means of information brought by deserters and runaways from factory to factory, that the fabrication of porcelain came to be established successively

in the Royal manufactories of Louisberg, near Stuttgard, at Berlin, Copenhagen, Brunswick, and St. Petersburgh.

The first English porcelain was manufactured at Bow and Chelsea, the paste being composed of a mixture of sand from Alum Bay, in the Isle of Wight, with a plastic clay and powdered flint glass; this was covered with a leaden glaze. This manufactory had considerable success. In 1748, the manufactory was transferred to Derby; and in 1751, Dr. Wale established at Worcester a manufacture of tender porcelain, called the "Worcester Porcelain Company," which still exists, though in other hands. If the British manufacturer have not attained the high excellence in the ornamental department of the manufacture of porcelain, and cannot produce paintings after the great masters, enamelled on large slabs of porcelain, to rival those of Sèvres and Meissen, he has proved by the late Exhibition, that the day is not far distant when even those productions may be executed in Staffordshire, and that meanwhile, he has outstripped altogether, all rivals in the production of articles fitted for the common use, not only of the middle, but of the most affluent classes, at a price which sets all foreign competition at complete defiance. We must not omit, in recording these advances in ornamental pottery, to make honourable mention of the name of Josiah Wedgewood, who introduced into the Staffordshire potteries all the improvements of science, and the elegance of art, both with respect to form and material; and the effect of his exertions has been, that the wares of that district are not only brought into general use in England, to the exclusion of all foreign manufactures of the same kind, but English earthenware is sought for and celebrated all over the world, and nowhere more than in those places where foreign porcelain has been previously in use.

Many eminent foreigners have borne testimony of this, especially M. Faujas de St. Fond, who says:—"The excellent workmanship of English porcelain, its solidity, the advantage which it possesses of sustaining the action of fire, its fine glaze, impenetrable to acids, the beauty and convenience of its form, and the cheapness of its price, have given rise to a commerce so active and universal, that the traveller from Paris to St. Petersburgh, from Amsterdam to the farthest part of Sweden, or from Dunkirk to the extremity of the south of France, is served at every inn with English ware. Spain, Portugal, and Italy are supplied with it, and vessels are loaded with it for both the Indies, and the continent of America." One of the branches of the manufacture of porcelain, in which British industry and art has of late years had the start of the Continent, is statuary porcelain. This has been lately introduced by the Staffordshire manufacturers, and numerous specimens of it were seen in the Exhibition. The Duchess of Sutherland, to whose munificent patronage the local manufacture of Staffordshire is so greatly indebted, was one of the first to perceive the capabilities of this material, and to encourage its extension and use. Gibson, the sculptor, having his attention attracted to it by her Grace, admitted that it was the next best material to marble, and was desirous to see some of his own works reproduced in it. By permission of the Council of the Royal Academy, a reduced copy of his "Narcissus" was accordingly made at the manufactory of Alderman Copeland.

The process of producing this imitation of sculpture is extremely interesting. Since its first introduction it has undergone great changes and improvements; it is now composed of one homogeneous mass of statuary porcelain, whereas at first a thin superficial coating was laid over a coarser material, which produced a far inferior article than the present mode. The process, however, is much more difficult and liable to fracture, in consequence of the great contraction it undergoes in the oven. The linear contraction in the process of baking is about one-fourth; a figure four feet high, on coming out of the oven, being only three feet. The actual contraction of bulk cor-

responding to this linear contraction is more than one-half. When a figure or a group is to be cast, a considerable number of separate moulds are required, each separate part of the figure or group being separately and independently cast. Sometimes as many as fifty moulds are required for a single group. The cast taken from each of these moulds is first retouched, the seams produced by the junctions of the mould being cleaned off by scraping with a knife. The several parts are then united,—a difficult process, and requiring the most consummate dexterity in the operator. The parts are united by applying slips to the surfaces in contact, but the clay being in this state extremely tender and friable, the weight of the projecting parts would be more than the cement used in joining them is capable of resisting. After being well dried in the air, the figure is placed on "saggers," a name given to the props which are placed under every part, so that the whole is well and evenly sustained.

The difficulties attending this fabrication may be imagined by following the several stages through which the article passes before the baking is completed. Assuming the height of the object to be 24 inches, the shrinkage in leaving the mould, before exposure to heat, will be an inch and-a-half. After the several parts, which, as we have just stated, are moulded separately, and are separately subject to a like shrinkage, have been put together, and the seams produced by their junction cleaned off by the "figure-maker," the article is thoroughly dried in the air without exposure to heat. This process is necessary, because the quantity of moisture incorporated in this state is such that the expansion occasioned by exposure to an elevated temperature would produce fracture. In this process of air-drying, a further linear shrinkage of an inch and-a-half takes place; so that, before being placed in the oven, the linear dimensions, from 24 inches are reduced to 21. And, lastly, when it is "fired" in the bisque oven, it is contracted to 18 inches. In the entire process, therefore, it loses one-fourth of its linear dimensions, and consequently nearly one-half of its actual cubical bulk. The consummate skill, however, that is brought to bear upon this beautiful manufacture is such, that not the slightest defect of form or outline is to be discovered. Nothing, indeed, could be finer than many of the groups that were exhibited; such, for example, as the Ino and Bacchus, after Foley; or the Narcissus and Venus, after Gibson. Indeed the objects exhibited in this department were so numerous that it is difficult to specify such as were most worthy of notice. The figure of Sappho, three feet high, from the original marble of Theed, was entitled to attention, were it only for its extraordinary magnitude, a circumstance which greatly enhanced the difficulties and hazards of its execution. The original statue is the property of Prince Albert. The following were also worthy of examination:—The Indian Girl and the Nubian, by Cumberworth; the Prodigal's Return, and Rebecca, by Theed; a Venus by Gibson; a bust of Juno from the antique; a Goat-herd by Hyatt; Sabrina, by Marshall; Innocence, by Foley; and Narcissus, by Gibson; Godiva, by M'Bride, executed for the Art Union of Liverpool; an equestrian statuette of Emanuel Philibert, Duke of Savoy, by the Baron Marochetti; her Royal Highness the Princess Alice as Spring, the Princess Royal as Summer, the Prince Alfred as Autumn, and the Prince of Wales as Winter, from the original models by Mrs. Thorneycroft, executed for her Majesty. It was impossible to contemplate this collection of imitation of statuary without being impressed with an idea of its utility in disseminating copies of the great works of ancient and modern art to an extent hitherto unknown, with a fidelity, too, as to colour and texture, unattainable by any other process.

The British department of the Exhibition was extremely rich in ornamental porcelain. A dessert service was exhibited by Messrs. Minton and Co., original in its design, and novel in its principal features of ornamentation. The combination of statuary porcelain, which is the hard species, with the coloured and gilded porcelain, which is the tender

species, was here attempted, and gilding on the statuary porcelain was also successfully accomplished. The turquoise ground on this service was scarcely inferior to that of the old Sèvres, and it is capable of resisting the strongest vegetable and most of the mineral acids. It consisted of 116 pieces, the most remarkable of which were two flower-stands with figures representing the Four Seasons, two wine coolers, with hunting groups, and two oval baskets, with oriental figures. Several of the pieces were supported by figures with fanciful designs, and the plates, 72 in number, were perforated and richly ornamented. This service was purchased by Her Majesty, to be presented, it was said, to the Emperor of Austria. Many articles in statuary porcelain were purchased by Her Majesty in the Exhibition. Among others were the equestrian figures of the Amazon, after Faichères, and Theseus, Flora, and Temperance, from bronzes in the collection of the Duchess of Sutherland, and Love restraining Wrath, an original group.

The Parnassus Vase was another striking example of the combination of statuary with painted porcelain, the *bas-relief* illustrating Apollo and the Muses. Several vases in the Copeland collection were very beautiful and of novel design, in coloured enamel, with imitation of pearls and gems, inlaid in gold. A large copy of the Warwick vase was also well worthy of attention. One remarkable feature in the collection of porcelain exhibited by British industry, was the various and unexpected uses to which it had been applied—uses which will doubtless be more and more extended and various, as the art progresses. An example of this was presented in a chimney-piece of statuary porcelain by Messrs. Minton, an extremely advantageous application of the material, not being liable to stains from smoke, or other causes, to which marble is subject. There were also porcelain panels, plateaux, and slabs for the covings of fire-places, tops of consoles, toilet and chess tables, panels of doors, and window shutters. We observed panels executed by order of Prince Albert for Osborne House; furniture panels and toilet table, with porcelain slab, and porcelain panels in the door and drawers, painted with wreaths of japonica on a rustic trellis, for the Duchess of Sutherland.

A large variety of slabs for wash-stands and tables of every description were exhibited, displaying the admirable qualities of this durable material, which is capable of any style of decoration, easily kept clean, and in no ways affected either by the action of soap or acids. In Pugin's mediæval court were exhibited specimens of porcelain tiles, slabs, and other objects illustrative of the variety of purposes to which this material may be applied, and the variety of ornamentation of which it is susceptible.

In the basement were exhibited by Minton and Co., two of the largest terra-cotta vases ever made in this country in plastic material; they were modelled by the Baron Marochetti. There were also two enormous garden pots in stoneware, with medallions in statuary porcelain, after the classic Thorwaldson, the first sculptor of his day, representing the Four Seasons, and the four stages of human life. These attracted great attention. Specimens of encaustic Venetian, and other ornamental tiles for flooring, were also exhibited. This branch of earthenware manufacture has recently acquired great importance; a large quantity is annually exported. The palace of the Sultan at Constantinople is paved with these porcelain tiles, as are also the House of Lords, Osborne House, and St. George's Hall, Liverpool; and they are getting into general use in churches, private houses, and conservatories, being equally durable as marble, less liable to stains, and capable of being decorated. The largest piece of pottery ever produced in a single piece, was a figure of Galatea, seven feet high. We understand that attempts are being made, and with likelihood of success, to execute it in statuary porcelain. Before we conclude our observations on the subject of "Pottery," we will take a glance at the estimated value of this branch of our manufactures, and see to what an extent the simple material of "clay" is rendered productive by the addition of

human ingenuity and labour. At the potteries alone the value of the earthenware annually produced is about £1,700,000; and that of the manufactures of Worcester, Derby, and other parts of the country, about £750,000; making a total annual value of £2,450,000.

We shall now close our remarks on this beautiful and important branch of artistic manufacture, and in a fresh chapter, renew our acquaintance with our agreeable French correspondent.

CHAPTER XXV.

SECOND LETTER OF M. J. LEMOINNE: INCREASING TIDE OF VISITORS—ELECTRIC TELEGRAPH—THE TWO SOSIAS, OR THE TRUE AND THE FALSE KOH-I-NOOR—THE GREAT MASS OF COAL, THE REAL DIAMOND—ENGLISH JEWELLERY—FRENCH SILKS—SEVRES AND THE GOBELINS—RUSSIAN DISPLAY—THE ZOLLVEREIN—A HINT TO TAILORS. THIRD LETTER: FRENCH COMPLACENCY—PARISIAN BELLES—ENGLISH MACHINERY—ENGLISH INDUSTRY AND FRENCH TASTE—FRENCH FREEDOM AND ENGLISH ORDER—AMERICA—PRODUCTIONS IN INDIA-RUBBER AND CAOUCHOUC—FASHIONS—CARRIAGES—GO A-HEAD—APOSTROPHE TO THE FAR WEST.

Let us continue our ramble among the curiosities of the Exhibition. We go to the Crystal Palace on a common day, Monday, for example, at ten o'clock, when you will see the arrivals of the country folk and the schools. Four-horse coaches, such as were used before the establishment of railways, carrying four inside and about twenty outside passengers, are again brought into requisition for this occasion. From these elevated vehicles descend multitudes of females in very gay toilettes. Being safely landed, they leisurely arrange their dresses, and readjust that prodigious development which betrays the use of "crinoline." It is much to be regretted that, in this instance, the efforts of art should not be better directed than in spoiling nature. After these arrive large waggons, with a series of seats, bringing the young folks from the boarding or charity schools. I could never have conceived that so many living beings could be packed into so small a space without being suffocated. Out they come, fifty at a time, and when you imagine the vehicle has delivered all its load, out pours a new batch; in sooth, this beats Robert Houdin.

But let us enter. One of the principal advantages of the Crystal Palace is the great number of avenues; there is no necessity of twice treading the same ground. If, by chance, you have left your carriage at one of the extremities, and you find yourself at another, don't be uneasy, you have at command a rapid and intelligent slave, more prompt than any footman. In passing along the galleries, you may have perceived several little boys twelve or fourteen years old. These are the keys which govern the wires of the electric telegraph. In a moment you may have your carriage called from one end of the building and sent to any entrance you may desire. The telegraph is, moreover, at your service for communication with all the principal railway stations, and thence with all the principal towns in the kingdom. From the Exhibition you may send any messages you please to Dover, Bristol, Edinburgh—everywhere. The tariff is 1*s.* for twenty words, increasing, of course, in proportion to the distance. A despatch of twenty words sent to York or Edinburgh costs 8*s.* 6*d.* In addition to this, you may write your letters at the Exhibition, and in the transept you will find a branch post-office.

We will not now stop at the Koh-i-Noor, which is still offered to the worship of the faithful. A very good imitation of this jewel, in pure crystal, has just been made. The original and the imitation resemble each other as closely as two drops of the clearest

water. The two Sosias were not more like. It is said that the Koh-i-Noor is only half its original size, the other half being in its native country, where it has been found in the possession of an honest "proletaire," who made use of it as a flint to strike a light. This anecdote, which was related the other day at a meeting of *savans*, appears to me full of philosophy. I am no less interested by a drawing which represents coalheavers contemplating the huge block of coal which decorates one of the entrances to the Exhibition, and exclaiming, "This is the real diamond!" It is, in truth, the real diamond of England; and, after all, it seems that the other itself is but a species of coal. Never mind, however, all the philosophy in the world will not prevent the diamond being the loadstone of the fair sex. Wherever the ladies obstruct the circulation, and crowd one on the other, you may be sure there are jewels exhibited. It is the hardest service of the poor policeman, who dares not behave rudely to the fairer half of the creation, and who, from time to time, exclaims, in a voice somewhat severe, sometimes in despondency, "Pass on, ladies—pass on." I have told you that wherever there were jewels you would be sure to find a policeman; he is the body-guard of the diamonds and pearls. There is one stationed near the blue diamond, for there is a blue diamond, as there must be, somewhere, a white blackbird. This curiosity forms part of the collection of Mr. Hope, and has no marketable value, being unique. M. Bapst, of Paris, has also a phenomenon of this kind, the black diamond. Mr. Hope shows, also, as an amateur, the largest known pearl in the world, which is in shape like a small pear. In valuables of this kind the Indian exhibition is unrivalled. It contains the Durria-i-Noor, or Sea of Light, a large diamond, estimated at £320,000; a girdle of superb emeralds, and necklaces of two hundred fine pearls, surpassing all that have heretofore been seen in Europe; a costume of an Indian prince, with two epaulettes in fine pearls; thrones and palanquins in ivory; saddles, mounted with diamonds, rubies, and emeralds; and sandals ornamented with precious stones. There are also some *chefs-d'œuvre* of human industry, a collection of shawls, scarfs, and carpets of incomparable richness and beauty. Whole days may be spent in inspecting this division. It is a dangerous place for the rich—they may ruin themselves there. We should walk through it with the consciousness of an empty purse, and then there would be freedom from temptation. This East is still the country of the Arabian Nights, the region of Aladdin and the Wonderful Lamp.

The English jewellery is very beautiful, although it cannot, I think, be properly said to be English, since it is principally the production of foreign workmen. The great superiority in this division of English manufacture is found in the plate, and that description of ornaments which consists in silver vases and statuettes. These latter are, in England, peculiarly national. *Testimonials* are much in vogue here. They are given as racing and hunting cups, for speeches in parliament, the construction of a railway, or the building of a bridge. They are family furniture, the ornaments of the sideboard and the table; they are a species of art and manufacture developed by the taste for horses, and the habit of horse exercise, hunting, and what is called *sport*. It is in works of taste that France excels, and in this category may be classed the silks and lace. The Lyons manufacturers have made a collective exhibition; they have glass cases containing the choicest articles, and which are thus, of their kind, somewhat like the Tribune of Florence, or the "Salon Carre" in the Louvre, a collection of *chefs-d'œuvre*. This comparison is induced by the magnificence of the design and of the colours; they are real pictures; and there are some silks in imitation of Chinese, which may be compared to beautiful landscapes. But here are Sèvres and the Gobelins! Here we are incontestably masters. This division is a little kingdom, of which no nation can dispute with us the sovereignty. Crowds of foreigners congregate here to admire and purchase our productions, and almost everything here has been long since sold.

Russia also has a sumptuous display. It would be necessary to build a palace expressly for the enormous doors and vast vases in malachite which fill this division. They are a little heavy, but still truly magnificent. Prince Demidoff exhibits pieces of malachite and gold from his mines. But here are again some policemen on guard; there must be some jewels. In fact, Russia exhibits the most beautiful diamond ornaments, very delicately mounted, and a jewel-case in black marble, with bunches of grapes in amethyst, and cherries in coral. In general there is, in this Russian division, a certain air of grandeur and rude luxury—riches, as it were, fresh wrested from nature, and torn from the bowels of the earth.

Let us give our eyes a little repose, by going to see the stuffed animals in the department of the Zollverein; they are among the most amusing and "spirituel" objects of the Exhibition. There is a series of scenes in caricature imitation of life, in which small animals are introduced with a most ludicrous fidelity. There is a rabbit-hunt by weasels; a fox who seduces an innocent little cat; a party of little animals drinking tea; others who are seated at the piano and singing; and several other scenes, in which the perfect imitation prevents them from being caricatures. I prefer this imitation of animals to that of man, such as may be seen in the English division under the form of a mannikin. This is an Apollo Belvidere in mechanism, for the use of tailors, that may be lengthened or shortened at pleasure. It seems that the anatomy of this movable doll is very curious, and contains about 7,000 pieces. Whilst we are on the subject of tailors, I would direct your attention to the waterproof paletots, to which they have given the name of *pinma*, and which are so light, that they may be put in a small case, and carried in the pocket. I really think they might be enclosed in a cigar-case. As a contrast to this, go and look at the immense sheet of paper exhibited in the English nave, and which is not less than 2,500 yards long. When we imagine that this endless paper may, perhaps, be filled with the prosaic effusion of some dull writer, we begin to feel some scruples, and find it necessary to allay the apprehensions of our readers, and close this letter.

LETTER III.

A Frenchman may, I think, look at the Crystal Palace with pride. In this festival of nations, in this pacific and glorious competition of human industry, France stands pre-eminent in the products of art, taste, and imagination. To her, as to her daughters, is accorded, in all times and in every clime, the palm of grace and elegance. We are told that when the fairies, in the dispensation of beauty, distributed their gifts to the women of the various nations of the world, they gave to one regularity of feature, to another symmetry of form, to this the lustre of the eye or the luxurious richness of the hair, to that the complexion of the lily and the rose, but that it happened that in this distribution, the fair one of France, or rather the "Parisienne," was overlooked. The other daughters of the earth, to repair the injustice of chance, and to afford consolation to their sister, deprived themselves for her sake of a part of their attributes, and each plucked from her crown or her girdle a flower, wherewith to form for the neglected fair a bouquet. Thus the "Parisienne," instead of one gift, participated in all, and of these varying fragments she formed that inimitable and indefinable whole which bears her name. Like to this, it would seem, is the character of the products of France; the industry of France is now, as ever, that of art. Look at her silks, her carpets, her porcelain, her jewellery; they are the work of the veritable artist, and their taste is always superior to their material. It may aptly be said that France produces the flowers, and England bears the fruits of civilization.

The department where England shines in all her splendour, is that of machinery. It is indicated by its deep and heavy murmur, like the distant roar of the torrent. There

the ebullition of the steam-boiler, the cataract of the centrifugal pump, the groan of the press, and the whirl of the spindle, combine in acknowledging the supremacy of science. Fire, air, water, steam, electricity, are all exerting their agency, and may, without much figure of speech, be said to be monsters of nature chained to the triumphal car of the human will, and venting their impotent rage in groans and imprecations. Beware how you approach them in their fury. Extend to them but a finger, they will seize the hand, and powerless in their grasp, you will become a victim to your imprudence. When unenlightened by practical science, as I confess myself to be, we are perhaps more forcibly struck by the mysterious grandeur of this spectacle. Here thousands of threads, little sticks, and bits of steel, are engaged in incomprehensible warfare, and resemble so many demons under the influence of some occult power. A few delicate hands, the slight finger of a woman or child, can regulate and direct these myriads of movements. Machinery gradually supplies the place of handicraft, and we may venture to foresee an epoch at which man will have no occupation, and may sit beside it, viewing its occupations with folded arms. And one may say with the poet:—"Thou art black but comely, O city of man! Thou hast a soul, the fatal and glorious creation of our hands. Thy thousand intelligent arms leave us to inaction; and man is left with nought to do but to think, and inebriate himself with thinking till death."

There is in the Exhibition one thing which particularly attracted my attention, albeit though modestly placed in a retired position,—a small glass case, containing copies of the Bible in all languages, with this motto, "*Multæ terricolis linguæ, cœlestibus una.*" This collection of Bibles forcibly exhibits the ardent propagandism of the English, one of the grandest and finest aspects in which this nation can be viewed. With steam and the Bible, the English traverse the globe. One of the great results of the Exhibition will be, that all nations will improve by means of mutual example and comparison. If the English give us lessons in industry, they may, on their part, learn from us to assign to art, properly speaking, a higher position. Taste is perfected in proportion as the level of equality ascends; inferior products are no longer in demand, superfluities have become necessaries, and the beautiful is as requisite as the good. I have always thought, that if the English are not real artists, the reason is to be found in their indisposition to lose their time. Works of imagination are the offspring of repose and leisure. The poetic spirit is naturally free and spontaneous, and will not endure coercion. There are some people who seek all means of killing time. The English, on the contrary, seek all means of saving it. It is sometimes fatiguing. You must be always on the alert; even the double knock of the postman, which warns you from the other end of the street not to keep him waiting, at last irritates you. This is a country in which it is impossible to be otherwise than punctual. And then everything in it is so well regulated. After observing that people walking in the same direction keep the same side of the foot-path,—after observing the policeman, so well dressed, and so perfectly buttoned, walking before houses which resemble each other exactly, one feels occasionally the imperious necessity of irregularity. * * *

Let us turn to America; it is there we shall find works of art! The Americans have invented, for instance, a piano which plays violin; 'tis original, and economical to boot —it saves one man's time; it is one artist the less in the republic, and Plato was opposed to having any. The anticipations of the Americans were more "grandiose" than their display. They complained that they had not had sufficient space assigned to them; a concession was made of as much as they desired, and it was comparatively empty. To conceal the nakedness of their walls, they sent quantities of india-rubber. They exhibited gigantic boots in caoutchouc—really seven-league boots—fitting emblems of Jonathan, who, when he walks a step, necessarily makes the stride of a giant. They

were seized with a mania, too, for exhibiting ladies' bonnets! 'Tis true, gentle reader; yes, actually, fashions from America! Now, what the "fashions" of England are to "the modes" of France, the "just the thing" of America is to the fashions of England. Carriages form another curious specimen of American exhibition. There is one so light, it may be moved with the finger; you may imagine it to be made of paper, and the wheels have not the breadth of a quarter of an inch. It reminds me of the bailiff of Ferrette, whose legs were so thin, that Talleyrand called him the most courageous man in the world for venturing to stand. With this break-neck affair, the American traverses space like an arrow. It is not idly he takes for device "Go ahead!" He is ever going, and he will go further still. A model is exhibited in this division of the large steamboats which descend the rivers of the New World, carrying whole houses, in which you may hire apartments! * * * * *

Oh, America! America! with thy "*far west*,"—thy prairies without limit,—thy forests, compared with which ours are but as clusters of trees,—thy rivers, near which ours would diminish to brooks,—thy lakes, vast as our seas,—thy cataracts and abysses —America! with thy growing industry, with thy indomitable spirit of enterprise, and the superb and insolent daring of thy children —oh! there is in thee, in thy new race, and thine adolescence of nature, something which attracts as the sun, as the future and the mysterious! From the over-populated shores of the Old World, what thousands of desires are directed to thee, thou land boundless and free! I picture thee, America, opening thine arms to the hungry, the outcast, the hopeless, and the wretched of all nations, and exclaiming—Come ye! Come ye! I have space for ye—I have land and sea, woods and rivers! I have iron and lead! I have work, I have bread, I have air, and ye may breathe! I have gold, and ye may be enriched! Cast off your shoes, shake off the dust of the Old World; come and refresh yourselves in the living waters of nature! "*Ad nos, ad salutarem undam, venite, populi.*"——

Such are the remarks of our lively Gallic neighbour; strongly tinctured with nationality, but not the less valuable on that account; indeed rather more so, for what an interesting volume might have been formed of the various aspects under which the Crystal Palace and its contents were viewed by individuals of the countries that contributed to its treasures, could their impressions, as they wandered through its different departments, have been preserved by any process of mental daguerreotype, in all their genuineness and originality! In what opposite lights should we find the same objects regarded by inhabitants of opposite latitudes! Those who pant under the equator would cast an eye of indifference upon the furs of Russia and North America, however they might admire the "webs of woven air" produced by the Arachne like fingers of Hindoo women; nor can we imagine the gallant Captain Ommaney, the Arctic voyager, and his Esquimaux attendant, envying the silken robes of the Orientals, glittering with gold and silver, though we may allow the possibility of their fixing their attention on the yarns and the woollens, the doe-skins and gutta percha, all the impervious and impermeable articles, in short, that bid defiance to St. Swithin and Cape Horn. Certainly,

> "The turban'd Turk, with his alcoran,
> And the stately Don, with his whiskers on,"

would view very differently the same things; the Roman from the banks of the Tiber, the Croat from those of the Drave, the Hindoo from those of the Ganges, the Fleming from Brabant, the Walloon from Luxembourg and Hainault, the Prussian from Westphalia and the Rhenish provinces, the Swiss from his snow-capped mountains, the Austrian from a hundred regions, the hydra-headed Russians, the Swedes, the Danes, the bearded Poles, the smug Chinese, our brother Jonathan;—all, in short, of the vast

family of the human race that sent their representatives to us at the call of peace and science, and brotherly love, must have seen the objects around them according to their own national tastes, habits, and associations. Then, again, in those national peculiarities how many individual peculiarities must also exist! What two persons ever think exactly alike, or are equally interested by any one object whatsoever! The sculptor gazes with delight upon the "storied urn, or animated bust," whilst he scarcely glances at the ponderous iron masses that represent the wonders of machinery; and the engineer turns away from the breathing marble, to contemplate utility and strength in a rougher material, and luxuriates in images of power and steam.

The philosopher exclaims, with Diogenes, "How many things are here that I do not want!"—the poor man, "how many things that I wish I could have!"—the rich one, "how many things that I have already! how many more that I will have!" The military man handles the blades of Toledo, the sabres of Damascus, the Highland dirk and claymore, the guns, pistols, and rifles—single and double barrelled, self-priming, self-loading, revolving. The lover of peace turns to the pruning-hooks, the ploughs, the spades, the hoes, and the garden-rollers. The philanthropist looks round for suggestions that may benefit the human race; the missionary for the means of evangelizing it, casting a longing eye towards the Holy Bible in its hundred and fifty different languages. Those who "go down to the sea in ships," examine the models of vessels, and life-boats, light-houses, harbours, and breakwaters—but the ladies are all unanimous in their raptures with the treasures of dress and decoration expressly framed for the heightening of their attractions, and consequent extension of the empire of their charms.

What a variety of thoughts, sentiments, comparisons, and calculations, must have passed through the minds of the motley crowd that daily congregated under that crystal canopy! numerous as the motes in the sunbeam, rapid as the movements of the gnat-fly's wings—which wings, be it known to you, gentle reader, have been ingeniously ascertained to flap at the rate of fifteen thousand times per second. The Crystal Palace, with all its wonders, could never have produced a wonder like that little insect, even had it stood for a million of years.

CHAPTER XXVI.

THE APPLICATION OF SCIENCE TO THE PURPOSES OF HUMANITY—SMITH'S YIELDING BREAKWATER—NATURE'S SIMPLE BARRIER, THE TRUMPET-MOUTHED WEED—HINTS ON PHILANTHROPY AND ECONOMY—LOCOMOTIVES—THE VILLAGE OF REDRUTH—THE LORD OF THE ISLES—THE CORNWALL—THE LIVERPOOL, ETC. ETC.

"PAULÒ MAJORA CANAMUS," was the exclamation of the Mantuan bard, when he meditated a loftier theme than his bucolic muse was accustomed to inspire. "*Paulò majora canamus*," we repeat, as, somewhat reluctantly, we confess, we turn from the flowery fields of poesy, the beautiful and graceful forms, in ever-changing variety, that art, with lavish hand, so profusely scattered through the various mazes of the Crystal Palace, "to please and sate the curious taste." But we feel we should not be doing justice to our subject, were we to confine our lucubrations solely to what relates to the gratification of taste, however pure and refined that taste may be. Other objects there were within those memorable walls, which tended to excite even loftier emotions than could be awakened by the proudest display of imitative art. Science unfolded her

wonders before the astonished gaze of the bewildered spectator; her gigantic powers, and almost illimitable resources, were exemplified in innumerable inventions, in the subjugation of the elements of air, water, and fire, and in the adaptation of a vast variety of means, which even the Marquis of Worcester, in his celebrated *Century of Inventions*, never dreamed of, to advance the well-being and prosperity of mankind.

It has been judiciously remarked by an able writer, that "the influence which machinery is destined to exert over the fortunes of mankind, is but little understood even by the most enlightened amongst us; and though the day has past—or is quickly passing—when the operative looked with gloomy jealousy on the introduction of every new mechanical invention, as being likely to deprive him of a portion of his hard-earned bread; though the majority of thinking men have long ago come to the conclusion that steam and iron ought to, and eventually will, do the positive labour of the world—the lifting, carrying, driving, and toiling—yet we have not altogether overcome our prejudice to whirring wheels and hissing boilers. If it be a good thing to get rid of some of these narrow notions; if it be well to put off, not for a time, but for ever, something more of those popular feelings and nationalities which see danger in the increase of mechanical contrivances; if we discover in the march of education, a surer and a better road to greatness than we have been accustomed to travel—a road less dusty with the evidences of manual labour, and less crowded with old-world prejudices and exclusive ideas; if we recognise the upward tendency which machinery has in the world—then is the peaceable reunion of the nations in Hyde Park a glorious thing to contemplate, and the iron and wood of giant enginery a sort of triumph of which this little island of ours may well be proud." It is, however, when the resources of science are more particularly directed to the purpose of benefiting mankind; when her efforts are guided by the promptings of humanity, that they especially recommend themselves to our attention. And it is under this aspect that we propose, in our present chapter, to consider the subject.

On proceeding to the western end of the edifice, in the central nave, the visitor found himself surrounded by an infinity of models, and all the leviathan appliances of marine engineering. Bridges, harbours, docks, breakwaters, lighthouses, &c. &c., were on every side contending for superiority. And first and foremost among them was the Breakwater of Mr. William Henry Smith, civil engineer, applying most happily to mechanical action, one of the most beautiful, and, we may add, if rightly understood, instructive principles in nature, namely, the *yielding* one. A principle, indeed, the efficacy of which nature herself has beautifully illustrated in various situations on the coast of Africa, where, with the trumpet-mouthed weed of the Cape of Good Hope, the *Laminaria buccinalis*, growing to the height of twenty or thirty feet, she has formed an imperishable breakwater, which, alternately yielding to and opposing the force of the waves, serves as a complete barrier to their destructive fury; and likewise on our own canals and river-banks, where the pliant resistance of common reeds and bulrushes is found to be more effectual in protecting them from being undermined and washed away, than walls of solid masonry, exemplifying the sagacity of the old Scottish motto, "You may bend me, but you cannot break me." The ingenious inventor of this most admirable means of promoting the security of commerce, and the protection of human life, affords in his own character an encouraging illustration of his own scientific principles. To the conflicting opinions and interested oppositions with which he, like all men of original genius, has had to contend, one anxious year after another, in the commencement of his career, he knew how to bend; but he defied the power of any, or all of these opinions and oppositions, jointly or separately, to break his spirit of determination to go through with an object, which he felt to be as valuable to the

interests of humanity as to his own, personally considered. For ten years he bowed before the waves of prejudice and interested opposition—opposition even from those high quarters which ought to have been the first to uphold his efforts, and, like Antæus, rose with renewed strength after every hostile attack. What lover of science, what philanthropist, but must sympathize in such enduring, such noble perseverance, and wish it all the success it deserves? It only remains with us to describe the principle on which the plan is founded. The harbour is formed of a series of independent frames or gratings, each about fifty feet long, and rising from the bed of the sea about ten feet above high water mark; each, though separated, forming a continuous line, and being free to play beneath the roadway, which is, by a very simple means, rendered immoveable above. The frames are secured at the bottom of each extremity to pile-heads, and by braces with counterbalance weights and screw piles, or other holdfasts attached. As waves in succession strike, and, according to their size and force, drive forward the framework, the weights are uplifted. The greater the elevation of the weights, the greater is the resistance of the frame to the waves. But all is equable; no jerk or shock is suffered; for while the impetus of each wave exists, the frame still yields to it. After the wave has become disseminated through the gratings, the weights in turn prevail, and sinking, draw back the frame, again to yield before and subdue each wave in succession; for as there are no two hills without a valley, so there are no two waves without an interval; and as every separate wave in a gale can only impel even a solid drifting body ten feet, it stands to reason that this open frame can never be driven that distance; and even were it so, at ten feet the strain on the iron braces or other part of the fabric, would be only one-twelfth of what they can bear, for the elasticity may be produced to any length or degree. In all except actually stormy weather, the braces are sufficient to act as tension rods, and keep it perfectly taut and quiescent; thus altogether avoiding the wear and tear to which the cables of lightships are subject, owing to the gravity of the counterbalance weights, which then rest upon the bottom. The moment any strain or pressure comes upon the frame-work, about one-tenth of its force must always press downwards, instead of having an upward tendency, as in all structures, giving rise to the term, uptearing gales. Exclusively, therefore, of the elasticity of the braces, it is stronger than piling, depending merely upon the water-tight nature or tenacity of the bottom. The framing being open, with a greater or less space beneath, admits of a free tidal current and scour of the sea; and thus avoids bars and deposits, so invariable with stone structures, when the littoral currents are suspended. The durability of prepared timber in sea-water is very great; that of wrought iron is an historical fact. In the event of the bottom deepening or filling up, or the harbour otherwise requiring improvement, the structure can, by the facilities afforded by the well-known screw pile, be readily fixed from the surface at any depth, or raised, lowered, or removed.

The principle of Mr. Smith's Lighthouse and Asylum is the same as that of the breakwater; the yield, even in a gale of wind, will be almost imperceptible, like the springing of the trunk of a tree. There is no other way of erecting a lighthouse in deep water, or in bad and quicksand bottoms, as a safe and permanent structure. Lightships have therefore been employed at a considerable expense, with a number of men as a crew, sufficient to manage them when they go adrift. In case of accident, there is not the loss of the lightship and crew alone to be apprehended, but possibly of vessels in the same gale, misled by not seeing their accustomed beacons, and often in hazy weather from missing their lights, as nothing but a lighthouse will admit of the requisite size, height and power. This Lighthouse presents the greatest strength of wrought iron in the direction of the strain, that is the line of tension, and the minimum of surface resis-

tance to the wind, draft, and blow of the wave. The Lighthouse as well as the Breakwater is thus not only applicable to every situation, but it is at the same time applicable with great economy and ample strength. The system has met with the medals and approbation of all the scientific boards and societies before whom it has been discussed, as well as the concurrent favourable notices of all the morning papers, and most of the scientific and general press; and in no one instance have such discussions and reviews, shown otherwise than the great beauty and economy of the principle. Indeed, one great point in this invention is its cheapness; in fact, a single year's interest of the cost of the breakwater at Plymouth would be amply sufficient for the construction of a harbour on the plan proposed by Mr. Smith. This, moreover, is a quality which would enable its advantages to be extended to all parts of our coasts; and the time may not be far distant when the storm-tossed mariner shall no longer look with dread upon the shores of his own native land, which having long desired to revisit, now too frequently greet him only to be his grave.

We offer no apology for dwelling upon this subject at some length, since, to a country like England, surrounded on all sides by the waves, commanding the commerce of the world, and boasting herself of her unconquered navy, there is scarcely a question pregnant with such important consequences as that of the best and simplest means of overcoming the impetuous and disastrous power of the ocean on our coasts, and affording harbours of refuge for the storm-tossed vessel. Every year adds a long list of shipwrecks, with an appalling sacrifice of human life, the greater portion of which could have been prevented had there existed harbours of refuge in sufficient number on our coasts. Many have been the plans proposed, and the experiments tried, to accomplish this desirable end, but, as yet, in every case failure to a greater or less degree has resulted. Some have endeavoured to breast the roaring billow with a perpendicular wall, after nature's pattern on the rocky coasts, while others would use the more persuasive resistance of a gentle slope, or incline, suggested by the beach of sand, or shingle. To imitate either, however, is a matter of no small difficulty, and is attended with enormous labour and expense, added to which, should the position chosen fail to effect its purpose properly, the huge mass of materials thrown together *must* remain, to the injury, if not the complete destruction, of the part it was intended to improve.

We will now take our leave of Mr. Smith, and pursue our investigations among the important discoveries that human genius has achieved for the service of mankind. The genius of Great Britain is peculiarly mechanical, and the steam-engine and the loom divide between them the glory of her industrial triumphs; for, to relieve the sons of labour from their severest toil, and to substitute iron and steam for bone and muscle, is the peculiar office of machinery. Stand we in the department devoted to machines in motion. Do the immense collection of contrivances to lighten toil convey no moral—the interesting objects there shown read us no lesson? "In the Crystal Palace we discover," says an eloquent writer, "how mechanism is extending her dominion over the whole empire of labour; how she rises in textile fabrics to the manufacture of the most delicate and intricate lace; how from wood she aspires to fashion iron into the most exact proportions; how, with steam as her handmaid, she works the printing-press and navigates the ocean, and outruns the swiftest animal in her course. Turn into the agricultural implement department, and we find everything now done by machinery. By it the farmer not only sows and reaps, but he manures and hoes. By it he threshes out and grinds his corn, and prepares the food for his cattle. He can even drain by machinery, and it is difficult now to find a branch of his business into which it does not largely enter. In our manufactures the mechanical genius of the country reigns supreme. Those beautiful fabrics are nearly all the evidences of its power. Soft goods and hardware are

equally indebted to it, and in its presence the unaided efforts of handicraftsmen appear small and insignificant indeed. It travels everywhere, and invades every compartment, even that of the fine arts, in the court dedicated to which some of the most conspicuous contributions are specimens of printing in oil, and attempts to reproduce by mechanical means the sentiment and inspiration of the painter."

But let us turn to another phase of the subject. A few years since—so few indeed as to come within the recollection of most living fathers—and the stage-coach was the swiftest vehicle we possessed; *now*, the locomotive carries its hundreds of passengers at the rate of sixty miles an hour. Is there not cause for gratulation in this fact? Our fathers were content to travel from London to Liverpool in twenty-four hours, and thought they had achieved wonders; we go the same distance in a fourth of the time, and grumble at the tedious length of the journey. It is not our province to speak of the rise and progress of the railway system—other pens have been busy with that theme; but it may not be out of place to contrast the present with the past, in drawing the attention of our readers to the locomotives that were gathered together in the north-west angle. From generalities to particulars is an easy descent. Here we had a picture of the LORD OF THE ISLES, one of the largest class of locomotive engines, a leviathan of the first class. This, it will be remembered, was one of the ordinary class of engines constructed by the Great Western Company since 1847. It is capable of taking a passenger train of 120 tons, at an average speed of sixty miles an hour upon easy gradients. The evaporation of the boiler, when in full work, is equal to 1,000-horse power. The weight of the engine, in working order, is 35 tons, which does not include the tender, which, under similar circumstances, weighs 17 tons 13 cwts. The diameter of cylinder, 18 inches; length of stroke, 24 inches; diameter of driving-wheel, 8 feet; and the maximum pressure of steam, 120 lbs. The stately proportions of this engine were seen to great advantage in the Crystal Palace, and, contrasted with the light locomotives of Messrs. Adams and England, seemed quite a giant of power and capability. To see this engine, however, in its full glory, the spectator should be at its side when it stops, after a heavy run at express speed—when the furnace is too white with heat for the naked eye to look upon without pain, and the steam, blowing off like thunder, shakes the very ground. One of these engines was nicknamed by the men, "The Emperor of Russia," on account of its extraordinary appetite for oil and tallow. In order to distribute the weight more equally over the rails, it will be observed that the engine alone has eight wheels. The cylinders were laid horizontally under the front end of the boiler, and could in this case be very conveniently inspected, together with the rest of the working parts, by going down into the pit provided for that purpose under the engine.

It may, perhaps, serve to amuse our readers, if we describe at length the peculiarities of this giant example of the travelling propensities of modern Englishmen. One dark night, in the year 1784, the venerable clergyman of Redruth was taking an evening walk in a long and lonely lane leading to his church, when his ears were suddenly assailed by a most unearthly noise, and, to his horror, he beheld approaching him, at a furious speed, an indescribable creature of legs, arms, and wheels, whose body seemed glowing with internal fire, and whose rapid gasps for breath appeared to denote some deadly struggle within. His cries for help brought to his assistance a gentleman of the name of Murdoch, who, no doubt to his infinite relief, explained to him that this terrific apparition, which he had taken for the Evil One himself, was a runaway locomotive, which he, Mr. Murdoch, the inventor and proprietor, had incautiously allowed to escape from its leading strings. In this way was the FIRST LOCOMOTIVE, which was ultimately to exercise so important an influence on the progress of civilization, introduced into the world; but the world

was not yet prepared to receive it, and for nearly twenty years nothing was done towards the practical application of Mr. Murdoch's idea. It was not until the year 1801, that Messrs. Trevithick and Vivian, of Camborne, near Redruth, patented and constructed the first actually useful locomotive.

An extraordinary misconception for a long period obstructed the use of locomotives. It was gravely alleged that the wheels would turn round without the engine advancing; and this notion having once got abroad, people would hardly be persuaded to the contrary, even when they saw it with their own eyes. Much money and ingenuity were expended in making steam walking machines, in which legs and feet pushed the engine along. It was not till 1814, when the truly illustrious George Stephenson constructed a locomotive for the Killingworth Colliery, that all these crude ideas were swept away, and from that time we may date the introduction of the locomotive system. From that date to 1823, when the Liverpool and Manchester Railway was projected, Mr. Stephenson and others spent large sums of money in improving the details of the engine; so that on the opening of that railway, a very excellent performance was at once attained, and the benefits of the railway system began to be appreciated. The great superiority of the engines used on this line over that just described, arose from the use of a boiler containing a number of tubes or small flues, through which the flame passed, and which generated steam much more rapidly than the former boiler with a large single tube through it.

The specimens of the light locomotive carriage exhibited by Messrs. Adams and England, while possessing all the advantages which experience and skill have worked out in the heavy engines, are not more than one-third of the weight and half the cost. Mr. Adams' plan consists in combining the engine and carriage in one, so that there is no superfluous weight; the stoker can act as guard and take the tickets. The boiler is a cylinder full of tubes placed vertically; but this plan, in subsequent engines, has been given up in favour of the ordinary horizontal construction, as shown in the locomotive carriage in the Exhibition. Mr. England, on the other hand, combines the engine and tender only in one frame, thus adapting it to carriages of the ordinary description. Both these plans have been satisfactorily tested in practice, and bear out the views of the projectors, carrying a moderate load at a high speed, with a small consumption of fuel, and a diminished destruction of the permanent way. In addition to these, we had specimens from numerous other eminent engineers. Mr. Trevithick, of the London and North Western Company, sent his express engine, the "Cornwall," in which the boiler is placed very low, and the driving wheels are obtained of large size, by allowing the shaft on which they are fixed to pass through the boiler. Mr. Crampton's patent narrow-gauge engine "Liverpool," is said to be the most powerful engine in the world, being equal to 1140-horse power. The peculiarity of this engine consists in the position of the axle of the driving wheels, which is placed behind the fire-box. Mr. Fairbairn, of Manchester; Messrs. Wilson, of Leeds; and Messrs. Kitson, Thompson, and Hewitson, of the same town, exhibited specimens of the combined engine and tender variety, or "tank engines," as they are technically termed. We must not omit a very beautiful specimen of the first class engine by Messrs. Hawthorn and Co., of Newcastle. The visitor might assure himself, in dwelling on this collection of fire-steeds, that in this respect at least his country has no competitor to fear. A traveller tells, with pardonable exultation, how comforted and at home he felt at an Italian railway station by seeing on the name-plate of the engine the familiar words, "Sharp, Roberts, and Co., Atlas Works, Manchester," and hearing a genuine English "All right!" given, before the train was allowed to move from the platform.

CHAPTER XXVII.

SCULPTURE *continued*.—FLORENCE.

COMPARISON BETWEEN MARBLE AND BRONZE—GOLD AND SILVER—A PEEP INTO THE MAIN AVENUE—THE BAVARIAN LION—KING AND QUEEN OF BOHEMIA—THE EAGLE SLAYER—GROUP OF QUEEN MARGARET AND HER SON—SAPPHO—WAR OF THE TITANS, BY VECHTE—MAGNIFICENT SHIELD BY THE SAME—SPLENDID OVALS—CHANGARNIER'S SWORD—CONVERSION OF ST. HUBERT—DANCING FAWN—GROUP OF FRENCH BRONZES—PRINCE OF WALES'S SHIELD—DIFFICULTIES OF THE ART—BENVENUTO, CELLINI, ETC. ETC.

In our former remarks on the Plastic Art, it was chiefly towards productions in marble that we directed the attention of our readers. We have still, for the field is by no means exhausted, many rare specimens of the same class to hold up to observation, but for the present we shall, for a while, quit the "breathing marble," and proceed to examine the no less imposing display of talent that was manifested in the Great Exhibition, in bronze, that imperishable material which, defying all the rigour of the elements, and the rude hand of time, has preserved to us such abundant proof of the talent and genius of former ages, in so many parts of the civilized world, and more especially on the classic shores of gifted Italy. In Florence, for example, we can scarcely stir a step without feeling ourselves accompanied by the shade of some illustrious one among the dead. The presence of Michael Angelo seems to haunt us as we wander among the battlemented palaces, and rare old Benvenuto comes athwart our "mind's eye" as we visit the precincts made glorious by his art. John of Bologna points to his living form of the Messenger of Jove; and the sculptured gates of the renowned Baptistry recall to us the times when wars were waged for their possession, and which still, in undiminished excellence, invite the admiration of the stranger as models of perfection in art.

Before entering upon any individual examination of the objects we have selected for description in our present chapter, we shall lay before our readers a few judicious remarks by an eminent lecturer on the sculptor's art, as exemplified in the different materials in marble, metal, or bronze. "The peculiar refinements of form and texture which fall within the especial province of the sculptor to carry to their highest pitch of perfection, he constantly heightens by availing himself of the effect on the senses of the simultaneous contrast of form. Thus he exaggerates the roughness of the hair, and the coarse texture of every object coming in contact with his flesh, in order to give to it the exquisite smoothness of nature; he introduces straight lines, equally balanced folds, and angular breaks into his draperies, in order to bring out the tender sweeping curves of the outlines of the limbs he so gracefully disposes. His is, of a truth, the happy art which begins by collecting all that is most sweet and fresh, and then by one additional touch, one further artful contrast, he 'throws a perfume on the violet.' In sculpture, as in every other of the decorative arts, changing circumstances bring ever-changing conventionalities; and, as supreme arbiters over the propriety of one and all, still preside our original great principles—*variety, fitness, simplicity*, and *contrast*.

"In turning to those departments of practical art into which Sculpture enters as a predominant ingredient, metal-work first presents itself to our notice. Nothing can be more apparent than the variety of properties and qualities of the several metals, nothing more consistent than to prescribe a different mode of treatment to each. Sculpture in metal, partly on account of the much greater ductility and tenacity of the material, and partly on account of its peculiar colour and power of reflecting light, can rarely,

however highly its degree of finish may be carried, be mistaken for that which it professes to imitate. Hence it arises that elaborate execution of details may, and indeed should, be carried in metal to the most minute perfection. Works in gold or silver should, as a general rule (except in instances where an overpowering display of wealth is intended, in which case art does not much signify), be confined to small dimensions, and those relatively correspondent to the associations of idea connected with the rarity and value of each. It was from inattention to these conditions that many of the largest pieces of plate in the Exhibition failed to interest us, and that the eye dwelt with much greater complacency upon the smaller than upon the larger objects." Among the exhibitors of specimens of gold work, Messrs. Morel, Watherston and Brogden, and Froment Meurice, held the most distinguished place in point of excellence and appropriateness of design; among those who contributed silver work, Messrs. Hunt and Roskell, Wagner, Froment Meurice, Lebrun, Rudolphi, Garrard, Morel, &c.

We will now proceed to examine some of the chief specimens in bronze and metal that in various parts of the building attracted the observation of the curious visitor. Of the group of the Amazon attacked by a Tiger, we have already made honourable mention. In our daguerreotype of the Main Avenue, looking west, our readers will find in the immediate foreground its fac-simile in miniature, as it stood on its rocky base, surrounded by so many sculptured forms of grace and loveliness, and backed by its long perspective, while the busy moving crowd of delighted spectators are represented thronging about each favourite object of attraction. Next in size and importance, about the middle of the nave, stood, open-mouthed on his pedestal, the Bavarian Lion, of colossal proportions, measuring 15 feet in length, by 9 in height, belonging, as we are told, to a group of four intended to be attached to a car, destined to adorn the triumphal arch at Munich. It is after the design of Halbig. It appeared in the same state as when it left the founders, being raw-cast in bronze, and, together with another of the group or "team" referred to, was cast at the same time out of one furnace, showing the possibility of executing casts in one piece of almost any weight and size. "It was exhibited also as a specimen of the new method of the founder to preserve the pure natural colour of the cast, without being obliged to use the chisel." This extensive production will long be remembered by all frequenters of the Crystal Palace, as the veritable "lion" of the Great Exhibition. For the lion itself, apart from the mechanical difficulties which have been overcome in the casting, it is, after all, but a so-so affair, as lions go with us. We have many a lion of pure British metal before whom this foreign monster of the forest—coming all the way from Munich—is not fit to wag his tail. The noble beast at the top of Northumberland House, for instance, and another, of minor growth, which stands, or stood, at the corner of Berners-street, are old familiar friends whom we would match against the world.

Near to his lionship two noble figures in bronze reared their stately forms—Libusa, Queen of the Bohemians, anno 700; and George of Padiebrad, a king of the same people; the latter in armour, with chain-mail shirt and fur-lined cloak. These statues were modelled by Schwanthaler, and cast by Müller, of Munich, the artist of the famous Lion. Separating them was a fine group of a Boy and Swan in bronze, by Th. Kalide, of Berlin, and the property of his majesty the king of Prussia. Close at hand was an admirable work of art in a large font surrounded with semi-nude sculptures representing domestic scenes, children playing, &c., by Professor F. Drake, of Berlin.

The Eagle Slayer, designed by John Bell, and cast in bronze by the Coalbrookdale Company, attracted much attention from its grand and imposing character. Two statuettes also, designed by the same hand, and executed in bronze by Messrs. Messenger and Sons, of Birmingham, were exceedingly admired. The first of these formed a

most interesting group, representing Queen Margaret and her son interceding with the robbers after the disastrous battle of Hexham. She was presenting her infant boy to the daring robber, with the words, "My friend, to your care I commit the safety of your king's son;" and it is pleasant to recollect that poetical justice resulted from so romantic an incident; the fierce man of blood was touched by her appeal, and not only defended the queen and her son from further insult, but concealed them in the forest till they were enabled to escape to Flanders. Of a truth, nobility of mind is not confined to the wearers of court dresses. The second of these statuettes, a figure of Sappho, was also exceedingly graceful and imaginative. Neither by any means second to them in elegance or beauty, was Foley's much admired "Boy at the Stream," executed in bronze by Hatfield.

We will now, however, turn to our Gallic neighbours, and it is with equal delight and admiration that we do so. Among the numerous competitors for fame, who stood nobly forward in this department of art, first and foremost we place M. Vechte, whose rare talent was eminently displayed in the magnificent vase representing the War of the Titans against Jupiter, which, for its elegance, spirit, and pure classic taste, was truly unrivalled, and worthy of the most renowned master-pieces of antiquity. On the summit of the vase, seated on the wings of the imperial bird, the Thunderer, with frowning and awful aspect, was launching his destructive and irresistible bolt upon the heads of the rebellious crew, who, in their senseless fury "piling Pelion upon Ossa," were endeavouring to scale the celestial seats. At the base were lying, in the agonies of death, several of the bodies of the discomfited host. The drawing of the figures in this noble performance was equally correct and powerful, and altogether the whole composition breathed the true spirit of poetry and Homeric fire. By the same master-hand we also noticed an unfinished shield, worthy of the arm of the great Pelides himself, divided into various compartments, full of poetic fancy and graceful design. France also had to boast of a number of admirable designs from the hands of Collas, Barbedienne, Vittoz, Matifat, Susse, and other excellent artists; some of them, indeed, produced works of such rare, beautiful, and minute details, as, in the words of our great poet, *mutatis mutandis*,

"Would have made *Cellini* stare and gasp."

We more particularly allude to two oval designs representing, in high and most intricate relief, military and gorgeous processions in some old Norman town, whose antique roofs and gable-ends aptly designate the locality of the scene. Among a variety of smaller articles, the sword of the redoubtable Changarnier, with which we suppose he intended to lay waste our peaceful shores, lay quietly sleeping in its scabbard, and gave us full leisure to examine its rich and elaborate workmanship. But the pride of all weapons was a superb *couteau de chasse*, or hunting-knife, which reminded us of the old stag and boar-hunts of the *ancien regime*, so charmingly illustrated in the time of Louis Quatorze by Vander Meulen. This magnificent knife was composed from the legend of St. Hubert, of Albert Durer celebrity. The figure, in *ronde bosse*, surrounded by the hounds, formed the handle. The mouth of the sheath was ornamented with a large bas-relief, representing the moment when the hunt was interrupted by the vision of St. Hubert; that is, the apparition of the cross on the stag's head. The rich ornamentation and figures were first composed and modelled in wax, then sculptured in plaster, and finally moulded in metal and chiselled. The blade was of the finest steel, forged with steel hammers, and the moulding creased or hollowed by the hand with a graver. This work, which was from the studio of Marrel Frères, was thus eulogized by the jury in their report:—"The jury would further mention a very beautiful silver hunting-knife,

the hilt of which represents St. Hubert standing within a niche; the cross is ornamented with a fox at bay, defending itself against several dogs. Upon the chape of the sheath is a handsome bas-relief, representing the conversion of St. Hubert, and lower down is a hunting trophy. The execution of this hunting-knife leaves nothing to be desired."

M. Lequesne exhibited a Dancing Faun, which, for spirit and motion, was well deserving of praise. This subject has always been a favourite one both with painters and sculptors, and excited a good deal of attention. We shall lastly notice a remarkable group of French bronzes, taken from the contributions of MM. Vittoz and Matifat, both of which manufacturers also contributed various artistic ornaments, clocks, chandeliers, cups, lustres, vases, and different articles of *virtu*. The male figure of this group represented Benvenuto Cellini, the celebrated sculptor, and would seem to have been designed with a view to associate the grand with the beautiful. The attitude was not without spirit, whilst the expression of the countenance would seem to be that of a noble character conscious of the inherent power of his own genius. The vase he carried in his arm was, no doubt, intended to emblemize the profession he so successfully pursued. Cellini, as our readers are aware, was an eminent sculptor, jeweller, and goldsmith, contemporary with Michael Angelo and Julio Romano, and was employed by popes, kings, and other princely patrons of science and art, in the time of Leo X. and Charles V. His productions are exquisite in design and execution. He lived to a considerable age, and his life almost to the last was a series of adventures, persecutions, and misfortunes. He wrote the history of his own life, which has been well translated by Roscoe. The column and fountain in the same group were the productions of Matifat; the former was intended as a gas candelabrum, and the latter for a garden ornament. They were both beautiful specimens of art of that mixed kind, which aims at combining the fanciful with the useful. The female figure was one of those classic productions so frequently to be found emanating from the prolific ideality of our Gallic neighbours, possessing the usual pure and graceful outline which characterizes the *beautiful* in sculpture; it was not, however, of that *dignified* beauty which marks so many of the productions of the ancients, but rather of that subordinate kind, known as the *attractive* among the various styles. Altogether, this group may be said to have exhibited a useful combination of the artistic and the utilitarian—an end of no small importance in these iron times.

We must not omit to notice a complimentary tribute from the King of Prussia to his Royal Highness the Prince of Wales,—a splendid shield, presented in commemoration of the baptism of the infant Prince, for whom his Majesty acted as sponsor. The pictorial embellishments of the shield were designed by Doctor Peter Von Cornelius, and the architectural ornaments by Counsellor Stüller. The execution of the goldsmith's work, enamel, &c., was performed by M. G. Hossauer; the modelling by M. A. Fischer; the chasing by M. A. Mertens; and the lapidary work by M. Calandrelli. In the centre of the shield was a head of our Saviour. The middle compartment, surrounded by a double line of ornamental work, was divided by a cross into four smaller compartments, which contained emblematic representations of the two Sacraments, Baptism and the Lord's Supper, with their Old Testament types—the opening of the rocky fountain by Moses, and the fall of manna. At the extremities of the arms of the cross were represented the Evangelists, noting down what they have seen and heard in the Gospels, which are to communicate to all futurity the plan of man's salvation. On the extreme points of the arabesques that rose above the Evangelists were representations of Faith, Hope, Charity, and Christian Righteousness. Around the entire centre stood the Twelve Apostles. Peter was seen under Faith, represented in the arabesque; on the

right and left of him were Philip and Andrew; under Hope was James; on either side were Bartholomew and Simon; John was placed beneath the figure of Charity; on either side were James the younger and Thomas; under Righteousness was Paul; on the right and left were Matthew and Judas Thaddeus, going forth into the world to propagate the kingdom of the Redeemer. The relievo which surrounded the edge of the shield represented the Betrayal, the redeeming Atonement of Christ, and his Resurrection. Another portion represented our Lord's triumphant Entry into Jerusalem; a third portion the Descent of the Holy Ghost, the Preaching of the Gospel, and the Formation of the Church. The fourth compartment contained an allegorical representation of the Birth of the Prince of Wales, and of the Visit of the King of Prussia, accompanied by Baron Humboldt, General Von Natzmer, and the Count Von Stolberg, welcomed by his Royal Highness Prince Albert and the Duke of Wellington: a Knight of St. George being represented on the beach, standing on the Dragon. The shield has been denominated the Buckler of Faith. The inscription on the shield ran thus:—

"FRIDERICUS GULIELMUS REX BORUSSORUM,
ALBERTO EDUARDO, PRINCIPI WALLIÆ,
IN MEMORIAM DIEI BAPT. XXV. JAN. A. MDCCCXLII."

Before we conclude our present chapter, it may not be uninteresting to our readers to be made acquainted with some of the difficulties that occasionally beset an artist in the prosecution of his labours. We will therefore give in Benvenuto Cellini's own words, his account of the casting of his celebrated Perseus, which we have already alluded to. "As I had been particularly successful in casting my Medusa," says Cellini, "I made a model of my Perseus in wax, and flattered myself that I should have the same success in casting the latter in bronze, as I had had with the former. Upon its appearing to such advantage, and looking so beautiful in wax, the duke, whether somebody put it into his head, or whether it was a notion of his own, as he came to my house oftener than usual, once took occasion to say to me, 'Benvenuto, this statue cannot be cast in bronze; it is not in the power of your art to compass it.'" Our gifted Florentine was naturally annoyed at this remark, and endeavoured to convince the duke that the affair, in spite of its exceeding difficulty, (which all those having any knowledge of the art, and who have seen the noble figure where it stands, before the ducal palace at Florence, must readily admit,) was not beyond his skill; but the self-opinionated prince refused to listen to him, and sceptically shaking his head, left the artist to his own inventions. But Benvenuto, whose courage always rose in proportion to the obstacles he had to encounter, after his vexation at losing his royal patronage had subsided, set about the work with a cheerful and undaunted spirit. "I still flattered myself," says he, "that if I could but finish my statue of Perseus, all my labours would be converted to delight, and meet with a glorious and happy reward. Thus, having recovered my vigour of mind, I, with the utmost strength of body and of purse (though, indeed, I had but little money left), began to purchase several loads of pine-wood from the pine-grove of the Serristori, hard by Mont Lupo; and whilst I was waiting for it, I covered my Perseus with the earth which I had prepared several months beforehand, that it might have its proper seasoning. After I had made its coat of earth, covered it well, and bound it properly with irons, I began by means of a slow fire to draw off the wax, which melted away by many vent-holes—for the more of these are made the better the moulds are filled—and when I had entirely stripped off the wax, I made a sort of fence round my Perseus, that is, round the mould above-mentioned, of bricks, piling them one upon another, and leaving several vacuities for the fire to exhale at. I next began to put on the wood, and kept a constant fire for two days and two nights, till the wax being quite off, and the mould

well baked, I began to dig a hole to bury my mould in, and observed all those fine methods of proceeding which are prescribed by our art. When I had completely dug my hole, I took my mould, and by means of levers and strong cables directed it with care, and suspended it a cubit above the level of the furnace, so that it hung exactly in the middle of the hole. I then let it gently down to the very bottom of the furnace, and placed it with all the care and exactness I possibly could. After I had finished this part of my task, I began to make a covering of the very earth I had taken off, and in proportion as I raised the earth I made vents for it, which are a sort of tubes of baked earth, generally used for conduits, and other things of a similar nature. As soon as I saw that I had placed it properly, and that this manner of covering it, by putting on these small tubes in their proper places, was likely to answer, as also that my journeymen thoroughly understood my plan, which was very different from that of all other masters, and I was sure that I could depend upon them, I turned my thoughts to the furnace. I had caused it to be filled with several pieces of brass and bronze, and heaped them one upon another, in the manner taught us by our art, taking particular care to leave a passage for the flames, that the metal might the sooner assume its colour and dissolve into a fluid. Thus I, with great alacrity, excited my men to lay on the pine-wood, which, because of the oiliness of the resinous matter that oozes from the pine-tree, and that my furnace was admirably well made, burned at such a rate, that I was continually obliged to run to and fro, which greatly fatigued me. I, however, bore the hardship; but, to add to my misfortune, the shop took fire, and we were all very much afraid that the roof would fall in and crush us; from another quarter, that is, the garden, the sky poured in so much rain and wind that it cooled my furnace.

"Thus did I continue to struggle with these cross accidents for several hours, and exerted myself to such a degree, that my constitution, though robust, could no longer bear such severe hardship, and I was suddenly attacked by a most violent intermitting fever; in short, I was so ill that I found myself under a necessity of lying down upon my bed. This gave me great concern, but it was unavoidable. I thereupon addressed myself to my assistants, who were about ten in number, consisting of masters who melted bronze, helpers, men from the country, and the journeymen that worked in the shop, among whom was Bernardino Manellini di Mugello, who had lived with me several years. After having recommended it to them all to take proper care of my business, I said to Bernardino, 'My friend, be careful to observe the method which I have shown you, and use all possible expedition, for the metal will soon be ready. You cannot mistake; these two worthy men will quickly make the tubes; with two such directors you can certainly contrive to pour out the hot metal, and I have no doubt my mould will be filled completely. I at present find myself extremely ill, and really believe that in a few hours this severe disorder will put an end to my life.' Thus I left them in great sorrow, and went to bed."

His fever, meanwhile, continued to increase, he could get no rest, his faithful housekeeper endeavoured in vain to console him, and in the midst of all this affliction a man suddenly entered the room, like him who

> "Waked Priam, in the dead of night,
> And would have told him half his Troy was burned."

"This man," to resume Cellini's own language, "who in his person appeared to be as crooked as the letter S, began to express himself in these terms, with a tone of voice as dismal and melancholy as those who exhort and pray with persons who are going to be executed: 'Alas! poor Benvenuto, your work is spoiled, and the misfortune admits of no remedy.' No sooner," continues our poor artist, "had I heard the words uttered by

this messenger of evil, but I cried out so loud that my voice might be heard to the skies, and got out of bed." Dressing himself with all possible speed, and bestowing sundry cuffs and kicks on his surrounding attendants, he hastens to his workmen, who, one and all, confirm the evil report of the messenger. "Whereupon," continues the excited and irascible Benvenuto, "I turned round in such a passion, and seemed so bent on mischief, that they all cried out to me, 'Give your orders, and we will all second you in whatever you command; we will assist you as long as we have breath in our bodies.' These kind and affectionate words they uttered, as I firmly believe, in a persuasion that I was upon the point of expiring."

Rallying all his energies, increased no doubt by his fever, he now bent his ardent mind to the work. Fresh wood was procured, old dry oak in abundance was heaped upon the furnace, so that the concreted metal again began to brighten and glitter; where the wind and rain entered a screen was constructed, and, encouraged by the example of their master, all his hands obeyed him with such zeal and alacrity, that every man did work enough for three. "Then," says he, to continue the spirited narrative, "I caused a mass of pewter, weighing about sixty pounds, to be thrown upon the metal in the furnace, which, with the other helps, as the brisk wood fire, and stirring it sometimes with iron, and sometimes with long poles, soon became completely dissolved. Finding that I had effected what seemed as difficult as to raise the dead, I recovered my vigour to such a degree, that I no longer perceived whether I had any fever, nor had I the least apprehension of death." But the climax had not yet arrived. "Suddenly a loud noise was heard, and a glittering of fire flashed before our eyes, as if it had been the darting of a thunderbolt. Upon the appearance of this phenomenon, terror seized on all present, and on none more than myself. This tremendous noise being over, we began to stare at each other, and perceived that the cover of the furnace had burst and flown off, so that the bronze began to run. I immediately caused the mouths of my mould to be opened, but finding that the metal did not run with its usual velocity, and apprehending that the cause of it was that the quality of the metal was consumed by the violence of the fire, I ordered all my dishes and porringers, which were in number about two hundred, to be placed one by one before my tubes, and part of them to be thrown into the furnace, so that all present perceiving that my bronze was completely dissolved, and that my mould was filling, with joy and alacrity assisted and obeyed me." Filled with gratitude and thankfulness at the success of his work, and with a piety that throws an additional lustre on his character, the first impulse of our hero, for he is worthy of the appellation, was to throw himself on his knees in the presence of all his workmen, and return thanks to Almighty God for his success. After which, his fever having completely left him, he ate and drank with a good appetite, and returned joyful and in good health to his bed. The duke, on learning the issue of the affair, received him in the most gracious manner, and took him into high favour, although his enemies endeavoured to persuade him that it was owing to infernal agency that success had been obtained, since he had compassed that which was not, according to their views, in the power of art to effect.

Of the antiquity of the art of working in metal, and producing graven images, we have early testimony in Scripture. Profane writers also make mention of early specimens of the same species of sculpture. Herodotus visited Babylon while it was in a state of tolerable preservation, and in describing the temple of Jupiter Belus, he says, "In a chapel which stands below, within the temple, is a large image of gold, representing Jupiter sitting upon a throne of gold, by a table of the same metal;" he alludes also to another statue of solid gold, twelve cubits high, which, he says, was not seen by him but described to him by the Chaldeans. According to Diodorus Siculus, the

weight of the statues and decorations in and about the temple amounted to five thousand talents in gold; and their value has been estimated at about one hundred million of dollars. The vessels and ornaments are supposed to have been those which Nebuchadnezzar had brought to Babylon from Jernsalem; for he is said to have dedicated in this temple the spoils of that expedition. Semiramis, the wife of Ninus, finished the stupendous walls of Babylon, which were reckoned among the seven wonders of the world, and her palace is celebrated by historians for the emblematical sculptures with which the walls were covered, and for the colossal statues of bronze and gold of Jupiter Belus, of Nimrod, and of herself, with her principal warriors and officers of state.

CHAPTER XXVIII.

CONTRIBUTIONS FROM THE HIGHLANDS.

GENERAL CHARACTER OF THE COUNTRY—MR. MACDOUGALL—THE HIGHLAND STALL—TARTAN PLAIDS—HIGHLAND BONNETS—WOOLLEN HOSE—HIGHLAND SHOES—HIGHLAND ORNAMENTS AND PRECIOUS STONES—DIRKS AND QUAIGHS—DEER HORNS—DEER STALKING—CLOTH AND GLOVES FROM ST. KILDA.

When we take into consideration the state of the rude and thinly scattered population of the northern extremity of our island, and reflect upon the toil they have to undergo to win from an ungrateful soil their scanty means of subsistence; when we look upon their barren mountains, their pathless moors, their lonely isles, "placed far amid the melancholy main," devoid in many instances of either "herb, tree, fruit, or flower"—when we bring before our imagination the forlorn and desolate nature of their country, so beautifully summed up by Collins, when, speaking of those sterile districts, he says—

"Nor ever vernal bee is heard to murmur there,"

when we see all this, and acknowledge the poverty of the neglected highlander, and his utter destitution of all the means and appliances which more fortunate England so abundantly enjoys, we are not surprised that he contributed so little towards the national display, but rather wonder that out of so slender and inappropriate means he should have been able to furnish the respectable quota, his stall, for he did not claim the honour of a department—in the Crystal Palace—presented before the eyes of the gratified spectators.

With the exception of the home manufacture of a few coarse articles of attire, the industry of the Celt is confined to the rude and insufficient tillage bestowed upon his "croft" of stunted oats or barley; or, if he be located near the sea, to a clumsy and inefficient system of fishery, carried on without proper boats or tackle, and seldom or never succeeding in rearing really bold or skilful mariners. The Celt, indeed, seldom makes anything but at most a freshwater sailor. He is accustomed to set at nought the wildest wintry storms on the high hillside, searching with his faithful "colleys" for the sheep smothering in the snow-drift, but the sea always daunts him. If anything can induce him to change his landward habits for a time, and fairly take to the brine, it is the herring; and those wondrous shoals of dainty fishes luckily come upon the coast during the summer and early autumnal season, when the weather is settled, and the harvest moon round and bright. Destitute then, in a great measure, of that pushing energy, and hard and keen spirit of industry and enterprise which have made England and

the south of Scotland what they are, the poor highlanders of the north and west have very seldom any leaders or teachers who might pioneer the way to a better and a busier state of things. Capitalists pass them over, and their own lairds and native dignitaries are very much the same stuff as themselves. Good, hospitable, easy-going gentlemen, tolerably well skilled in black cattle and Cheviot wedders; hunters and fishers, to a man; great upholders of the bagpipes, and great connoisseurs of whiskey; they are still not the race of magnates who are the best suited to promote the true interests of the poor people among whom they dwell. They have been accustomed for ages to think of the poverty and idleness about them as the normal and natural state of things, and the poor cottar entertains precisely the same views. He has had nobody to put other ideas in his head. A little oatmeal, a herring in the season, a few potatoes, perhaps a little dairy produce, particularly goat's or ewe milk, and he is abundantly satisfied. His hut is chimneyless, sometimes windowless—a mere hovel of piled-up turf, with a smouldering peat fire in the centre, over which hangs the one pot which performs all culinary operations, and round which are tolerably sure to be stretched a ring of shaggy colleys; but leave him this—leave him his native atmosphere of peat smoke, and he is ready cheerfully to rough out any of its incidental hardships as the merest matter of course. In these respects the Scotch Celt is very much akin to his Irish brother. Both of them appear lazy; rather, however, because they have been brought up in idleness, than because they have any natural horror of work. Connemara and the Isle of Mull both get capitally ahead when the muscles and sinews they send forth are used in conjunction with those of England and Lowland Scotland. Donald and Pat trot cheerfully in the team, and pull with the rest of their compeers; but leave them together with a couple of spades and a couple of wheelbarrows, and short and scanty will be the day's work achieved. A main point of difference between the two races, or rather the two branches of the same race, is the sober and serious-mindedness of the Scot, and his invincible respect for the sacredness of human life. No one ever heard of a highland evicting landlord or his agent being shot from behind a hedge. The Irishman always cries out when he is hurt, and in a score of ways lets the world know his grievances; sometimes, indeed, he proclaims them through musket-barrels. Not so the Scotch highlander. In no part of the west of Scotland have the people suffered more than in some of the poorer islands of the Hebrides. There have been comparatively as many evictions, as many "fires quenched upon the hearth," in the wild islands and portions of the mainland of the west, as in Cork, or Roscommon, or Tipperary; but not one-tenth so much noise has been made about them. There has been no tumult, no agrarian outrages, no private and cowardly assassinations. The people have died or gone away to America, and made no sign. Highland grievances are scarcely ever heard of, but they are not one whit behind the woes and the wrongs of Ireland in number or intensity.

Life in the highlands, then, so far as national industry is concerned, is little better than passive vegetation. The yearly irruption of English tourists and sportsmen into the country furnishes, no doubt, a certain amount of employment, and distributes an important sum of money. The energies of no inconsiderable portion of the population are called into action as guides, boatmen, game-keepers, and the whole tribe of rural supernumeraries, who hang upon the skirts of a pleasure and sporting-seeking community who come abroad to spend money and amuse themselves. But the facilities thus afforded for labour can hardly be said to amount to a national industry. The working season extends only over three or four months, with, generally speaking, unnaturally exaggerated prices paid for the services performed. Holiday work, indeed, as it is rare and uncertain, ordinarily releases exceptional prices, a fact of which the population of watering-places, and bathing-places, for example, are amply aware. In the

highlands, then, the people are destitute of the faculty which carves out profitable employment for itself. They are energetic to the utmost as sportsmen, lazy to a degree as labourers; just, in fact, because sporting in some shape or other is the labour to which they have been taught to consider themselves devoted. Above the class of the peasantry there is as little enterprise or desire for change as lower down; the only social revolution favoured by the lairds being the removal, either to the south or across the Atlantic, of as many poor and half-starved "crofters" as possible, in order that their vacant patches of land may be flung together into huge expanses of grazing ground for lowland sheep farmers. Under these circumstances, we repeat, we hardly expected to have seen the highlands represented in the Crystal Palace at all; and we probably should not have been so agreeably disappointed as we were, had it not been for the manful and single-handed exertions of one singularly enterprising, active, and indefatigable tradesman of Inverness. The name of this individual, Mr. Macdougall, has now attained something like a European reputation as a dealer in all textile and other productions manufactured in, or characteristic of, the highlands. From Inverness, the capital of the highlands, and the centre, judicial and commercial, of a large district of interesting country, it was to be expected that a comparatively large and characteristic collection—illustrative, not indeed, of a commercial industry—but of those domestic pursuits and household works which every people, however rude, must in some degree practise—would be sent. Nothing of the kind however. The enlightened Invernessians declined to form any local committee, or to take the slightest trouble about the matter; and Mr. Macdougall, after in vain trying to inspire his townsmen with a spark of his own spirit and energy, was actually obliged to put himself in communication with a committee formed in the small and rising little town of Elgin, in order to have the means of forwarding to the Crystal Palace a collection of highland manufactured stuffs, in the original production of which he himself had no mean share. In the gallery above China stood the stall which alone represented the industrial condition of the Scottish highlands. We shall select a few of the objects exhibited, and string them together by a slight thread of personal highland reminiscences and remarks.

The various tartans of the clans naturally formed a conspicuous object among the textile stuffs exhibited. The several checks were stated to have been arranged upon the very highest authority; for, be it known to our readers, there are formidable differences of opinion among the authorities relative to the exact and orthodox plan and colour of the checks of more than one tartan. You shall have a couple of fiery highland antiquarians disputing the shade of a red, or the proper breadth of a stripe of green, as if the fate of the world rested upon the issue. But if you wish to see both gentlemen roused to the pitch of the most appalling indignation, hint Dr. Johnson's theory, that the origin of tartan was rags, and that the different colours are counterfeit presentments of the variously hued shreds and patches with which the Doctor maintained that his highland friends used to clothe themselves. Recent investigations, we believe, however, give a higher antiquity to the tartan than it is generally believed to possess. Down to the reign of the sixth James, tartan is now said to have been a common wear, both in the lowlands and highlands; and recent discoveries in ancient costume seem to prove that a chequered species of garment, woven of many colours, was a favourite with a large body of semi-civilized men, the ancient stuffs disappearing from the more busy and changeful parts of the world, but still lingering in such nooks and corners as the until recently almost inaccessible highland hills. The Scotch lowlanders never seem, however, to have worn the kilt. At one time, no doubt, the kilt and plaid were simply one piece of cloth, folded at once over the shoulders and the loins. The separation of the whole into two distinct garments was a decided improvement, as the plaid for mountain countries,

and for the use of a pedestrian, is one of the handiest garments which can be conceived. He can use it as a scarf, or a cloak, or a hood; rolled up and disposed round the body, it offers no impediment to walking; in wet and stormy weather the wearer can wrap at least half a dozen folds around his person, from the throat to the thighs; while, however the cloth may be disposed, the effect is almost uniformly picturesque. At the present day, the gorgeous clan colours formerly worn in the highlands are very generally superseded by the dull uniform grey of the shepherd plaid, a species of stuff which Lord Brougham has fairly immortalized. Everybody who has seen his lordship for the last fifteen years or so, has seen the famous black and white trowsers in which he delights. The fact as to these monotonously succeeding garments, we believe, from good authority, to be this: when Lord Brougham, then holder of the Great Seal, was in Inverness,—when, indeed, he made the celebrated declaration at a public meeting, that he would write to the King by that night's post, he purchased from Mr. Macdougall cloth for no less than forty pairs of shepherd tartan trowsers, and in this ample supply he has been going on ever since. The tendency of greyish stuff, however, to take the place of the ancient clan colours, would not have been less marked had Lord Brougham never worn anything but broad-cloth. The simple web of uniform hue is more easily produced than the kaleidoscopic coat of many colours, and, in case of damage, is more easily and effectively repaired. It was, however, the mean sumptuary law, passed in 1747 by the legislature, which gave the death-blow to the tartan, the kilt, and the plaid. Upon the people being permitted, in 1782, to return to the garb of the Gael, the general use and wont of the country was found to have worked out for itself another channel; and the philabeg is now, to all intents and purposes, a fancy costume. In Mr. Macdougall's stall, all the adjuncts of this dress were shown, constructed after the most orthodox fashion. There were several bonnets characteristic of the highlands, all neat, small, and fitting close to the head. The dreadful monstrosity of ostrich feathers, which our unhappy highland regiments are obliged to wear as head-gear, and which look exactly as if the men had adorned themselves with the spoils of an undertaker's warehouse, have nothing to do with the original highland bonnet, and we should be glad to see them scouted from the army. Slaves as we are, in some way, to the tyranny of all sorts of abominable hats, there is nothing worse in Britain than the heavy cylinder of feathers worn by the highland regiments. How much smarter all the men would look, each with a neat Glengarry bonnet, light and warm; jaunty and gay when worn with a cock over the front of the head, and cosey and comfortable if pulled over the ears, and made to do duty for a nightcap. The broad blue bonnet is essentially lowland, as its common Scotch name, the "Tam O'Shanter," testifies; but the mountain head-gear is infinitely the smartest and the most picturesque. There was a good show of hose, mostly woollen, in the stall, and in a great measure knitted by hand. These coverings for the feet, strong, elastic, firm of fabric, yet fleecy and warm, are capitally adapted for hard pedestrian work upon the mountain side, preventing the skin from being chafed, and absorbing and removing the perspiration from the limb. The hose, according to old use and wont, are always manufactured on a pattern larger and simpler than ordinary tartans, but, of course, harmonizing with the general colour of the dress which they are intended to complete.

Some interesting specimens of the old brogue were shown. The wondrous peculiarity to an English eye in the highland school of shoe-making, is that the upper leathers are pierced with rows and arches of holes arranged in fanciful combinations, and interspersed with little scolloped and jagged edges of leather, designed to ornament the shoe. "Well now, if I ever saw the like of that—making holes in their shoes to let the wet come through! they must never be without colds in the head," was the purport of a not

unnatural remark we heard made, in different words, more than once while examining Mr. Macdougall's stall. But the speaker was not aware that wet feet is a bugbear unknown in the highlands. Shoes without holes may do capitally well for the *pavé* or the turnpike, but transfer the scene of operations to a mossy hill-side or a wild ravine, down which scores of tiny brooks come foaming to join the torrent at the bottom, and the wearer will shortly find that no holes are no protection against the water getting in, but a great hindrance to its getting out, and so will go hobbling along with an uncomfortable quantity of fluid splashing between his toes; while his brogued guide, on every dry bit of ground, squirts the superfluous moisture about with every step. Shoes intended for hard work among the heather are peculiarly made, in being double-toed. One or two strongly and firmly made specimens were exhibited. The stem of the heather plant is very rough, and nearly as hard as wire, so that the toes of the sportsman's shoes who forces his way amongst it, are speedily, unless they be thus doubly armed, reduced to a pitiful condition of thinness and whiteness. In these brogue-shoes, the nails which fortify the soles, are driven in diagonal lines across, the arrangement giving a surer footing to the wearer, when scrambling among slippery rocks, or making his way amid the green and slimy pebbles of a highland burn, with the fierce stream shaking him on his legs; for highland sporting, and especially highland fishing, requires that the adept shall be no more afraid of water than a kelpie or a merman. Mr. Briggs goes out a-fishing in the quiet southern streams with a pair of patent waterproof india-rubber goloshes, to keep his precious feet dry; but if he adventures on a foaming, rattling highland river, and essays the noble salmon instead of the contemptible pike, he must make up his mind to many a plunge, waist deep or deeper, in the stream, if he have the luck not to flounder over the slippery stones, and get carried off altogether by a current running like a mill-sluice down into the next deep swirling pool.

The highland ornaments displayed were few, but in correct taste, and of the orthodox old fashion. The principle of the ancient brooch, used either as an ornament, or for fastening the drapery of the plaid, is a very simple one. A number of silver spokes, springing more or less up from a circular rim, support a cairngorm pebble in the centre. Sometimes a set of small pins rise from the circumference of the ornament, each topped by a small cairngorm, arranged like moons around the centre stone. The cairngorm is indeed the national precious, or, at all events, ornamental, stone of Scotland: specimens are not uncommon of as bright a sparkle and as pure a crystalline splendour as are to be found in emeralds. The search amongst the wildest Grampian hills for these beautiful rock crystals, has lately, we learn, been prosecuted with uncommon enterprise and perseverance, and a deposit of splintered and disintegrated rock has been discovered, in which abundant pebbles have been found, formed in six-sided prisms, terminated by six-sided pyramids, extending from one inch to six or eight in length. Some of these lumps have weighed as much as ten pounds, and they have been discovered of several colours. Mr. Macdougall furnished his stall with some remarkable specimens, of a dark port wine hue, fully six inches in length, and we should think double as many in circumference. The pyramidal tops had been wrought, and exhibited a lustrous polish. These stones, we believe, were part of the produce of the labours of a party of upwards of forty people, who a couple of years ago proceeded from various parts of the highlands, in a regular caravan, to the remote district in which the mineral wealth lies thickest, pitched their tents or erected bothies on the heath, and after a search extending over several weeks, returned to their homes loaded with the rough crystals of the hills. The remaining accoutrements of the highland dress were shown in specimens of the dirk, to be worn by the side; the *skean dhu*, or "black knife," frequently carried in the garter; the naked blade resting against the leg, and which was used by the

highland sportsmen to cut the throat of the wounded deer, and afterwards, in all probability, to carve and help the smoking haunch; the powder-horn, generally set jauntily off with cairngorm and silver mountings, and hung by a silver chain, although we suspect that in most of these little matters, a smirking spirit of small dandyism has encroached upon the veritable simplicity of the garb of old Gael. A whiskey flask was seldom, however, left out of the list of the mountaineer's equipments. We observed that the present fashion of disposing of the mountain dew for a day's trudge among the hills, is to place it in a miniature barrel, very much like that carried by Continental *vivandières*, and certainly, to our minds, neither elegant nor likely to be convenient. The spirit, however, thus provided for, you imbibe by means of the *quaigh*, or wooden drinking-cup, a handy little vessel, neatly scooped out of a block of hard wood, and sometimes carved with taste and ingenuity round the rim. The quaigh is occasionally made very ornamental, and we have seen them with very large and brilliant cairngorms let in at the bottom. The contents of an ordinary sized quaigh must be equal to at least two wine glasses and-a-half; but hardy and strong-headed Donald will fill it to the brim with whiskey, perhaps eleven over proof, and turn it coolly over without a muscle wincing, or a pulse beating the faster for the exploit. In some of the more unfrequented parts of the country about the highland line, where these wooden implements of festivity have found their way without bringing their Gaelic names along with them, we have heard a quaigh called a *tass*, the word being one of many hundreds of corrupted French expressions, which still live in old-fashioned neighbourhoods, to demonstrate the ancient social, as well as political alliance of Scotland and France against our "auld enemies of England." Above the stall, and forming a central top ornament, was a magnificent red deer's head, with no less than fourteen tynes or branches to his horns—an uncommon quantity, "a stag of ten" being generally reckoned to have a very liberal allowance of antlers. Beneath this was ranged a curious collection of very coarsely woven and peculiarly tinted stuffs, expressly intended for the use of the deer-stalker, and dyed so as to resemble the most common patches of hue which prevail upon the dun mountain-side. Englishmen, who form their notion of deer from the delicate little creatures, no bigger than goats, but as graceful as Italian greyhounds, which gambol upon the smooth shaven turf and the woodland vistas of our parks, have little idea of the fierce, powerful, majestic, and thoroughly savage animal known as the red deer. It is but seldom that the ordinary traveller in the highlands gets a glimpse of him. He must be sought for in his own haunts—in the wildest, most rugged, and inaccessible recesses of the hills—and his vigilance must be evaded by the most careful and experienced manœuvring. The red deer has an eye like an eagle's, and a nose like a bloodhound's, or even more delicate still, as a human being passing him to windward a mile off, communicates a subtle taint to the keen air, which his moist and quivering nostrils—a perfect ball of acute nerves—catch in a moment, and which is almost certain to produce a rapid flight, the animal running perhaps a dozen of miles ere it couches down again into the heather and fern. At some seasons, however, the red deer shows no such timidity or instinctive desire to take refuge in flight. Unwary wanderers in the hills have been suddenly startled at finding themselves confronted in a moment with a magnificent stag, who, emerging from his cover, stands, all save his gleaming eyes and dilated nostrils, as rigid as a stag of bronze, gazing in grim silence upon the profaners of his temple of the wilderness. Occasionally we have heard of large herds of deer, the hinds led by their magnificently antlered lords and masters, surrounding the astonished wayfarer, and after gazing for an uncomfortable number of very long minutes at the intruder, as if giving him to understand, by the silence and solemnity of the ceremony, the dreadful sacrilege of which he had been guilty in penetrating their enchanted

domains—in an instant, upon a toss of the head of the ancient leader of the herd, leaping round, and in a moment disappearing in the cover of the surrounding copse. The reader can conceive the difference between these thoroughly wild creatures of the wilderness, as perfectly savage in their nature, as when the boar and the Caledonian bull were their compeers in the waste, and the half-tamed roes, which form picturesque groups in English parks; or the carted stag—Nelson or Billy—which is turned out of a waggon and chased like a hare across stubble and clover fields. All other game may be shot, but the red deer must be stalked. You walk coolly over the stubbles or over the heath, and bid the luncheon be ready by one o'clock, under such a tree or at the side of such a spring, and there you empty your bag and count the partridges or grouse, as the case may be. Not so with the red deer; you start rifle in hand and telescope slung across your back, upon an indeterminate expedition, perhaps of days; you walk as many miles over moss and moor, up vast sloping mountain sides, or down wild and rugged mountain ravines, as would suffice for many a tolerable pedestrian in the south over a turnpike road; you examine, hour after hour, with the glass the great dun slope of the opposite side of the glen. Then perhaps you have to make half-a-score miles circuit to "wind" the game, or to get to a ford in a deep river, or a ferry over a narrow loch. Then, approaching the slumbering herd, perhaps you have to crawl a mile or so upon all-fours, painfully dragging your rifle with you, and hardly daring to breathe, far less to speak; or you have to wade, waist-deep, double the distance down some roaring stream, or up it, which is worse; and after all it may chance, after fifteen good hours' work of walking, running, climbing, creeping, crawling, and wading, that some unexplained alarm is taken, and that, in thorough anguish of heart, you see the coveted antlers still beyond rifle reach, moving gaily off above the cover. No help for it—dash yourself down among the heather, execrate the whole race of stags, deers, roes, hinds, and does, but bid Donald prepare the "braxy" and the kebbuck; unsling your flask or little "anchor" of mountain dew; make your supper (it will be sure to be a good one); speculate with the faithful gillie about the likely whereabouts of the herd to-morrow, and then, rolling yourself from head to foot in as many folds of the tartan plaid as the web will admit of, fix your eyes for a space upon the dark mountain tops cutting rounded or peaked slices out of the clear blue sky, all twinkling with stars, and bidding bold defiance to a distinct chilliness in the atmosphere, nay, perchance, even to a touch of early frost, go soundly to sleep amid the deer's-foot and the bracken, to be on foot next morning before the dew-drops, lit by the sun, are gemming with diamonds the purple of the heather.

The proper style of costume for this class of sporting is peculiar. It is essential that it be very strong, very light, warm and fleecy; not too easily soiled; and that the colour or the prevailing colour harmonize with the most frequent shades of clustered vegetation upon the mountain side. All these essentials were fulfilled by the specimens of fabrics exhibited in the highland stall, and all these fabrics were manufactured from the native productions of the hills—the wool, in some cases, undyed, the coat of the black-faced highland sheep; the tinctures in other cases applied to it, extracted from highland herbs, barks, and mosses, so as to impart to the stuff the exact hue of the original plant or lichen; the thread spun upon the distaff by old highland crones and buxom highland lasses; the warp and the woof crossed by means of a hand-loom of the oldest fashion; the entire work, indeed, done in the hills from the productions of the hills, and by the natives of the hills. The cloth thus produced is well worthy of attention, from its stoutness, elasticity, evenness of fabric, and honesty of manufacture. You certainly might be looked at askance were you to sport the stuff in Regent-street or the Boulevards; but for the hill, the loch, and the moor, it is the *beau ideal* of

apparel. The cloth was shown of several colours, each produced by a native dye: some of these dyes have been long known in the highlands; others were new, particularly one from a species of moss locally called "crotach," and the colouring matter extracted from deer's-foot, one of the most beautiful herbs of the North. Clad, then, in such garments, the sportsman has the best chance of escaping the vigilant eye of the red deer, which may range over the hill-side without being able to separate him from the heather or the lichen in which he may be lying. The cloth, is of course, excellent for sporting and country purposes in general as well as for deer-stalking; and as such we should be glad to see its use made a fashion by English sportsmen on their annual visit to the moors. Handloom weaving of coarse stuff is certainly not a very exalted or economically profitable industry for a country. But, at all events, it is better than no industry at all; and it may be very well combined with the small agricultural operations to which the greater number of the weavers devote a portion of their time. We shall rejoice, then, to hear that the manufacture of home-made sporting stuffs flourishes in the North, convinced that it will bring along with it useful habits of industry, of course accompanied by the produce of industry to many a humble highland home. Mr. Macdougall has been attempting, not only to get up new native dyes, but new native materials for cloths. He exhibited two stuffs which were great curiosities in their way. One was a cloth made out of the down of the bog cotton, and the other a fabric manufactured from the fur of the white or alpine hare. Both of these products, however, may be considered of a fancy nature, as it is out of the question that the raw material should ever be supplied in sufficient abundance to make its spinning and weaving a regular means of employment. Knitting is another species of textile industry which is being extensively introduced in the north by the proprietor of the late highland stall, and also, we believe, by Mrs. Mackenzie, of Gairloch, who takes measures for the transmission of the domestic labours with the knitting-needle of the people over a vast district of the north-westerly coast to Glasgow, where the stuffs, admirably warm, fleecy, and honestly made, command good prices. Mr. Macdougall has 600 or 700 women employed in the production of similar articles, and copious specimens were exhibited in his stall. The fleecy hosiery of the Shetland Islands, entirely wrought by the hand, has long enjoyed a very well-merited pre-eminence, and is known as an article of commerce. The manufacture now appears likely to spread to the mainland, and the knitting-needle, in company with the hand-loom, will, no doubt, be found capable of materially increasing the scanty comforts of many a smoky bothy. One very rough piece of woollen was stated to be from St. Kilda, the furthest from the shore of the British subsidiary isles, and to have been worked in a rude machine constructed in the island; and some mits and warm gloves were shown, which also came from that locality.

Altogether, then, the highland stall was, to a great extent, satisfactory. It presented us with favourable specimens of certain infant local industries, and afforded samples not only of new materials of textile manufacture, but of new ways of combining and colouring them. We could have wished for a collection of highland agricultural and fishing implements, and of specimens of the ordinary furniture of the bothies, to show the low and degraded condition in which, as regards physical comfort, the people are living; but, in the absence throughout the North of that public spirit which, in other districts of the island, is so strong, we can only so far congratulate ourselves, that a single individual came forward to exhibit at least one phase of the industrial highlands, composed, indeed, almost wholly of infant efforts at production, but which were so excellent of their kind, and so promising for the future, that we can only hope that an extensive and extending demand will reward the efforts of the promoter, and the labours of these work-people of the far north, in their new and experimental career.

CHAPTER XXIX.

FOREIGN AND COLONIAL DEPARTMENTS—*continued.*

TURKEY—BRASS LAMPS—MANGALS OR BRAZIERS—BASINS, EWERS, AND SHERBET CUPS, CAMP EQUIPAGE—BEADS—WATER-PIPES—COSTLY SPOONS—GOLD EMBROIDERED SHIRT—MOLDAVIAN SLEDGE—FIRE-ARMS, SILKS, ETC. ETC.—VARIOUS ARTICLES FROM TUNIS.

The contributions from Turkey were exhibited in a bay at the north-east angle of the transept, where by their gorgeous variety of bright colours and embroidery, they produced a very striking effect in the general *coup-d'œil* on entering the building. Apart altogether from its intrinsic worth, is, moreover, the interest naturally attaching to the industry and productions of an empire the condition of which must always be regarded by the Englishman as of vital importance. Turkey justly looks to Great Britain as one of the foremost, the sincerest, and the most potent of her allies and friends; while Great Britain cannot feel indifferent to all that illustrates the internal condition of an empire that fills up so much of the vast space intervening between our Indian dominions and the central countries of Europe—an empire which includes within her territory the mouths of the Euphrates and the shores of the Persian Gulf on the one hand, and on the other divides with Austria the kingdom of Croatia.

In many of the products of Turkish industry we distinctly recognise a close analogy to what the ancients have left behind us of their domestic manners; much of the ancient forms found by the Moslems in the countries which they conquered have been left with little alteration. Of this no one can doubt who paid attention to the collection in question, from the brass lamp with its scissors, pincers, and bodkin, still used in many parts of Italy, to the arabesque plaster moulding and other slightly altered traditions of the world, of which the excavations of Pompeii have given us such interesting glimpses. But it is not the conquerors of the empire of the East that entwine themselves with our modern sympathies. Gibbon, with all his rhetorical splendour, illumines, but does not vivify the Amrus, the Saladins, and the Amuraths. Uhland, in one of his most exquisite sonnets ("Kaiser und Dichter") contrasts the duration of the conquests of princes and bards; and all must agree with him, who visited this collection, and think less of those who trod over great monarchies than of those who depicted the manners and superstitions of the Orientals. Not one in a hundred of those who visited these interesting collections, remembers that three centuries ago all Europe quaked with terror at the name of the Grand Turk, and that Solyman the Magnificent was an even more powerful sovereign than Charles V.; but all remember, and none ever will forget, the heroes and heroines of the "Arabian Nights Entertainments." The Ottoman empire is now an essential part of the "grand tour;" and, therefore, many who paced the Crystal Palace may have had comparatively little new to see in the Turkish department; but these few form, after all, an insignificant portion of the hundreds of thousands who have never seen either the Black Sea or the White Sea, the desert, or the palm grove; but are, nevertheless, familiar with the sayings and doings of the guarded city of Bagdad, from the street porter with his weary burthen, to the caliph himself, attended by Jaifar the Barmecide and the redoubtable Mesroua-el-Siaf. It is, therefore, the latter portion of our fellow-countrymen that we invite to accompany us in a tour through the objects that appeared on the tables and in the stalls contributed by all parts of the Ottoman empire.

Prominent in the centre of the tables stood a large machine of glittering brass and of elegant form, which looked like a huge tea-urn. This was a mangal or brazier, for

charcoal, with which apartments are heated in winter. People in England may abuse our climate as they choose, but they may rest assured that in many respects it is not easy to find a better, for we are neither roasted in summer, nor frozen in winter; and at Christmas time recommend us to the sun of Wall's-End or Newcastle-upon-Tyne, which blazes in every snugly carpeted English parlour, in preference to the charcoal of the most elegant mangal that ever was constructed. The mangal stands in the centre of the room, and a coverlet being thrown over it, the ladies of the harem sit around it in a circle, and thus warm themselves in a manner not the most healthy or improving to the complexion. Beside the mangals were the basins and ewers, such as are used for washing before and after food—the servant holding the former in his left hand, while the water is poured out with his right. Here, too, were sherbet cups, the Bohemian practice of gilding stained glass having been originally borrowed from the East; and we need scarcely say that the European offspring excels by a long way the Oriental parent. But those shown at the Exhibition were creditable to the manufactory of Ingekyoi. It is climate that suggests the quality of diluents; and while the North is cunning in the distillation of strong liquors, the South is equally remarkable for the ingenuity with which cooling drinks are compounded, from the choice lemonade and orgeat, to the delicious chopped-ice sherbet with the orange flower flavour. Let it not be supposed that it is only in idleness and in the arts of pleasing that the ladies of the East pass their time; here, to be sure, were ingenious cosmetic boxes, with various compartments for the different dyes used in adornment: they are equally skilled in the useful and domestic arts, and the ladies of the highest rank are acquainted with the art of preparing such drinks. In that of preparing fruits they even excel our own housewives, and a very large mother-of-pearl frame for embroidery reminds us that the most beautiful dresses of the wealthier classes are the product not of the professed milliner, but of the domestic hareem.

The military character of the Turks was sufficiently recognisable in the collection; many objects showed them to be essentially a nation that mounts much on horse-back, lives much under tents, and has adapted its habits to military locomotion. It would take too much space to enumerate the articles illustrative of this part of our subject: their camp dishes fitting into each other and easily portable, their lanterns that shut up and open out like magic, and many other articles, showed that with the Orientals there is not, as with the Europeans, that broad line of distinction between the habits of residence and the habits of locomotion that exists in the West. It is not merely the aboriginal and nomade habits that account for this; there is a political reason: the constant fear of the great dignitaries of the empire acquiring a formidable local influence, causes a perpetual circle of recalls and nominations in order to maintain in efficiency the functions of the central government; this produces a great deal of movement from one end of the empire to the other on the part of those dignitaries, military and civil, who in the Ottoman empire stand in the place of a hereditary aristocracy. Thus, whatever is portable, whether diamonds, carpets, or shawls, is prized; hence, too, the expensive velvet, and gold embroidery bestowed on their saddles. And instead of such ponderous fixtures as the European writing desk, the pianoforte, and the organ, there is the diminutive cocoa-nut, or brass inkstand and pens for the hours of business; or for the hours of diversion there is the light reed *nay* or flute, the lute, or the violin, of the most primitive construction, such as one sees in the productions of the very early Italian painters. But we are getting into a tangled web of philosophy, instead of proceeding with our catalogue *raisonné* of the different objects. An examination of the collection of beads repaid trouble—the habit of passing beads through the fingers being as inveterate with many Turks as the perpetual wood-whittling of a Kentucky man; we have even

known an individual who weaned himself from this practice, and who yet never met another person with beads without being unable to resist the old temptation, and beg for them to pass through his fingers.

Fezes from Tunis and Egypt there were in abundance, and also plenty of stuffs for wrapping round them hanging in various parts of the collection, from simple cotton to fine shawl; but we saw no regularly wound and made up turban, such as is worn in the East, although we observed a not uninteresting substitute in one of stone or plaster, such as usually adorn the cemeteries of the Turks. The water-pipes were uncommonly beautiful; we mean those in which Bagdad timback is smoked through snake-formed tubes, and which, from the noise produced by the passage of the air through the water is commonly called the hubble-bubble. In those vases and in the snakes were found a skilful attention to effects of colour; and if we pass to other objects, such as dresses, shawls, scarfs, girdles, we may remark that the suitableness of very bright and contrasted colours to these warmer climates, springs from the semi-obscurity of apartments partially darkened to exclude the heat and light of the sun. It was the Venetians that most fully understood this phase of the beautiful. Hence, in consequence of the limpid depth of his shadows, the boldest colours of Paul Veronese never shock us, which is certainly more than can be said of Rubens, with all his genius and facility; and this peculiar quality of the Venetian school could never be attained by northern painters living in climates where every effort is made to get as much of the sun as possible, nor by any set of men whose eyes are not educated to the effect of brilliant colours in every variety of sombre shadow. From tracing the connexion of Venice with the manufactures of the Levant, so frequently introduced into the Venetian pictures, the observation of the relation of the Levant to the arts of Italy cannot be considered as a *baroque* transition, and those who took an interest in the old pottery of Faenza might remark the prevalence of that Faenza-like green and yellow in the rude pottery of Tunis.

Such observations are made for the many who paid their shilling, and not for the season-ticket holders, who have lounged up and down the Levant, and may have made such remarks for themselves; but even to the *homme blasé*, in relation to Oriental life, there was much to fix attention. A jar of dates is a jar of dates, but certainly a common jar of Barbary dates has not the same interest for us as one from Medina, grown under the aëronautical sarcophagus of the prophet himself. One jar of curdled milk is like another; but when we know that the one before us is that of an African ostrich, it ceases to be common milk. "Would you like to give a guinea for one of those spoons?" said a friend who conducted us through this portion of the Exhibition. "We should be very sorry." "Well, there is one that you cannot have for less than £30 sterling." We saw that it was not of tortoise-shell nor of ivory, but something of excessively fine texture, between the two, and learned that it was a beak of the spoonbill heron, a bird now so rare that it promises to become at no distant date as extinct as the *Megatherium* or the *Ichthyosaurus*. Even the specimens of ingenuity degenerating into the *baroque* were not without interest: here was a wooden chain, each link perfect without a joining, and cut out of one piece of wood, a piece of laborious handicraft. On seeing a shirt almost stiff with gold lace, we were reminded of the quaint pages of Southey's *Doctor*, who on reading of some man who had a shirt of gold and a shirt of silver-thread, declared his preference for the perhaps unkingly but more comfortable nether garment of Flanders linen. And much as we have praised the Turkish aptitude for the portable, it was scarcely without a smile that we passed the odd combination of a chibouque and the crutch of an invalid.

But it was not merely the gratification of a fastidious curiosity that rendered a visit to the Turkish collection attractive; it was in fact the best and most interesting lesson

in physical and commercial geography, in relation to so large a part of the world, that has hitherto been offered in this metropolis. Turkey has neither the scattered colonies, such as the British empire, nor has she the vast extent of territory possessed by Russia; but no state in the world is, to use a German phrase, so many-sided, or presents such contrasts of productions and manners in consequence of the diversities of her nations and climates; and her vast contiguous territory is rather ruled by Turks than quickly settled by them, for they are rather the conquerors than the colonists of the wide territories stretching from the Caucasus to Algeria, from the Adriatic to the Persian Gulf. Most travellers dilate very largely on the vices and corruptions of the Turkish administration of the various departments of government; but it cannot be denied, that although the march of government is less regular than in Europe, the state itself is without the burthen of a national debt; that the internal taxation, although somewhat arbitrary in application, is, upon the whole, very light. The principal cause of this is the very large revenue which she derives from a scale of customs duties fixed upon solely with a view to revenue, and not adapted to produce an artificial scarcity favourable to the few who have to sell a particular commodity, and injurious to the general interests.

We usually associate the Ottoman dominions with heat rather than with cold; but there was exhibited an elegant sledge from Jassy, the capital of Moldavia, which showed not only the love of luxury in the boyars of that principality, but reminded us that Russian vicinity has imprinted Russian manners on a part of the Ottoman empire, which, from its level plains and severe winter, in no way belongs to the East as sung by the Byrons, Goëthes, and Moores, and which, if it has not the azure skies of summer climes, has, throughout the length and breadth of its territory, the thick rich alluvial soil which makes the plains of the north of the Black Sea a granary of all Europe, and procures for the boyars of those principalities incomes far exceeding those of the average of the impoverished *noblesse* of the continent of Europe. We therefore see that the manufactures of those parts spring from their economical circumstances; they have neither silks nor velvets, but their wax-lights, and other modifications of native productions, surprise by their cheapness.

On crossing, in imagination, the Danube into Turkey in Europe, we found in this exposition comparatively little to remind us that Ternovo, a city of Bulgaria, was, at the end of last century, one of the most active manufacturing towns in Europe. But in Turkey much the same phenomenon is to be found as in India—the immensity of British capital and machinery has swallowed up the smaller industries, as the large fishes eat the small, and the two thousand looms of Ternovo have fallen down to a mere remnant. The Turkish Exposition was, therefore, less remarkable for its manufactures than for those articles in which patient and ingenious handicraft was exercised upon manufactures, such as the embroidery of female articles of dress; among which we may specify gold upon a light-blue ground, silk of various colours worked upon white muslin, and the winter dresses, remarkable for their elegance, the best combination of which was black silk upon a chocolate ground. In Albania, that land of mountain warfare, it were vain to expect the results of either capital or machinery. The turbulent character of the population was brought to observation by the excessive elaborateness of their rifles and pistols, which are as much an object with a wealthy Albanian as a horse to an Arab, or a carriage and a box at the French theatre to the boyar of the principalities. In the vast plains of Roumelia, we observed signs of a climate more genial than that of the principalities, and of a population less turbulent than that of Albania. The sight of the cotton and tobacco of Macedonia was pleasantly relieved by the fragant odour of otto of roses from Kasanlik. The heavy articles of export were not so much from the capital itself as from Salonika, Smyrna, and other ports. The capital is the receptacle of a large

mass of British, French, and Austrian manufactures, annually exported to Turkey, but it is at these other ports that vessels seek their return cargoes. As a place of manufacture, Constantinople itself is a sort of Paris to the eastern world, and productive rather of the diversified objects of luxuriant convenience adapted to eastern usages than of articles of first necessity, which recommend themselves by cheapness and general use. For instance, the cymbals of our military bands were originally introduced from the East, which is shown by the habit of the cymbal players in various European armies still wearing an oriental costume; and we were amused on seeing an English inscription, rudely engraved on a pair, which runs as follows:—"This sort of zich was invented by Mr. Kevork, A.D. 1730; and the present has been manufactured by his grandson's grandson, Mr. Kirkov, A.D. 1851.—Psamatia, Constantinople."

After contemplating the very neat model of a Bosphorus kaïk, and having taken our readers across the marvellous and beautiful river of salt-water, flowing between its umbrageous banks to the Sea of Marmora, let us occupy ourselves with the Asiatic portion of the Ottoman contributions, which is still more highly favoured by climate, richer in classical associations, not less remarkable for natural capabilities, having mineral and agricultural wealth—much of it, alas, too dormant considering its advantages!—being bordered with most excellent ports from Trebizond and Samsoun round to Marmorice, and other ports on her southern coast, which everywhere present themselves to facilitate communication. Here was the copper of the mines of Tokat; here was the excellent sword cutlery of Adana; here was the wealth of the waters of the Archipelago, the sponge torn up from the depths of the Mediterranean by the boldness and ingenuity of the diver, with the still adhering oyster; here was the large black wheat of Konieh, the ancient capital of Turkish power, long before the sons of Orchan became the terror of Europe; and here, too, were those large and excellent Turkey carpets, which stand their ground so successfully against the skill and capital of our own Kidderminster.

Let us now make haste to cross the Taurus, and get into Syria, which has much to interest both in the way of natural productions and manufactures. Latakia exhibited tobacco, beyond all comparison the best either of the New or the Old World; for no American tobacco is in delicacy of flavour equal to that grown in the mountains between Tripoli and this place. The silks of Mount Lebanon and of Broussa, in Asia Minor, were also put together, and were well worthy of an examination. The silk of Syria has been until lately unsuited for exportation to England, in consequence of its being long reel; but, latterly, by the exertions of M. Portalis, a French merchant in Beyrout, and of the active and ingenious Messrs. Barker, of Aleppo, sons of our late well-known Consul-general in Egypt, manufactories, with improved machinery, have been established by the former firm in Mount Lebanon, and by the latter gentlemen at Suedia, near the mouths of the Orontes, with such results as to leave no doubt of the advantages likely to accrue from an extension of British capital in this direction. On passing from the coast to the interior, the great cities of Damascus and Aleppo arrested our attention by their manufactures of mixed silk, cotton, and gold thread, equally remarkable for their richness, their elegance, and their substantial strength, being universally used for the holiday dresses of the inhabitants of those countries; the ingenuity and machinery of France and England having produced no successful imitation, these native manufactures, along with those of silk sashes for turbans and girdles at Tripoli (Syria), still continue to vegetate, although certainly in a decayed condition. Of other manufactures, the saddle from Damascus was characteristic of the country, but did not give a favourable idea of the ingenuity of the Damascenes. What a European most prizes is their excellent preserved fruit, the whole territory that surrounds the town being one vast orchard, intersected by the seven-armed Barrada; while the principal art and handicraft

of the place—which is that of mosaic pavements, the beauty of which strikes all strangers —is not of a nature offering capability of being shown in an Exhibition such as we are describing. As for Arabia—that waterless land of stones, sand, camels, and starved shrubs—so lacking in corn, wine, and oil—so contrasting to Egypt with her flesh-pots, and fertile rather in rhymes and metaphysics than in the good things of this world—it certainly had very little to show; but, as a natural production, the coffee of Mocha was not to be despised.

In a department of the building near the south end of the transept were to be found the Tunisian contributions to the Exhibition, guarded by persons whose attire instantly recalled many a tale of Turkish or Corsair life, and almost rendered one dubious as to the reality of a scene in which such mentally and traditionally fearful individuals were playing the part of competitors in the peaceful arts. When a few glances had reassured the spectator, and he had time rapidly to draw a favourable comparison between the present and the still recent past, he might begin to examine some of the objects presented to his view. In a glass-case of huge dimensions were to be seen an assemblage of curious articles of dress, all heaped together in not unpicturesque confusion. Conspicuous amongst them were several riding-hats, circular in form, not very unlike a parasol, minus the handle, and of a girth which put to shame the broadest brimmed straws seen in this country in the hottest summer; the materials of which they were composed were feathers, figured satin, &c. In the same case was a lady's dress of figured satin, of smock fashion, the breast decorated with rich gilt embroidery. A gentleman's cloak was similarly adorned, and some striped figured bed-hangings also invited inspection. In ledges round this case were contained various ornaments for female use, consisting chiefly of gold and silver bracelets and necklaces, and of what, for want of a better term, we must call silver anklets—these last being silver ornaments for feminine ankles, yet of so massive a description, that it would be difficult for the uninitiated to conceive how they could be worn, except indeed in a state of complete repose. The little boxes which bordered the case contained also handkerchiefs and neckerchiefs, slippers, gilt pouches or wallets, and other slight articles of personal application. The steed of the wealthy inhabitant of northern Africa has often been pourtrayed as the object of lavish adornment; and of this kind of display the people of Tunis afforded some interesting specimens. The most prominent equestrian article exhibited was a gorgeously gilt saddle, so large as to form what are commonly described as the trappings of the animal, as well as a seat for the rider. This article had an extremly rich appearance. The decorative work, if it did not appear particularly delicate on a minute inspection, produced a dazzling effect at a short distance. The back portion of the seat rose perpendicularly in front; a pistol holster was attached to either side of the fore part of the saddle, and the stirrups, of highly polished brass, were shaped like a shovel or flat scale. Every provision was made for the safety and ease of the rider. There was another saddle of blue velvet, destined for female use, richly embossed and gilt, having polished silver spurs. Amongst the personal attire there was one article which, though small, deserves a brief notice. It was a cap of ordinary Turkish fashion, but of very rich materials, designed to be worn by either male or female in the juvenile period of life; it had depending from it a rich sweep of gold fringe terminated or fastened at the extremity with small circular ornaments. Amongst a mass of objects on one side of the department were morocco boots and slippers, in great variety and abundance; knives in cases, straw hats of vast circumference; and baskets of dates in such numbers as to justify a suspicion that they were brought by the exhibitors for use as well as display. There was also a lofty wooden gate, having two folds and several panels, the latter laced with bamboo. The productions of the country were deposited in glass jars. They were of a very miscellaneous character,

comprising pomegranates, almonds, raisins, corn, butter, and many other equally familiar and equally useful articles.

CHAPTER XXX.

STAINED AND PAINTED GLASS—*continued.*

GENERAL RULES TO BE OBSERVED—COMPARISON OF DIFFERENT STYLES—ANCIENT AND MODERN WORKS—ERRORS IN MODERN IMITATORS—LARGE PAINTED WINDOW BY BERTINI OF MILAN, "DANTE AND HIS THOUGHTS"—CAPRONNIER OF BRUSSELS.

Of the glass paintings, displayed in the Exhibition, there were some whose subject was a picture, a pattern, an heraldic device, or an intermixture of these three; and some of the pictures, and of the pattern glass paintings, appeared to have been designed and executed in a particular style of their own. The various works thus presented so many different points for consideration as to render it impossible to lay down any one general rule for deciding on their pretensions; but by stating as concisely as we can the principles by which we have been guided in making the following observations, an opportunity is afforded of ascertaining their correctness or incorrectness; and the exhibitors may be enabled to draw their own conclusions as to the opinions which we entertain of the merits of their works.

It is hardly necessary to observe that glass painting must be judged by a different standard from that which is applied to other kinds of painting. The material employed imposes upon the artist an obedience to certain conditions in the design and execution of the work. His object should be, not to produce the best possible picture, but the best brilliant and transparent picture. Among the excellences which are equally essential to a good glass painting, and to an oil or fresco painting, may be mentioned,—a design which is pleasing in itself, and which is composed with reference to the effect sought to be produced at the distance from which it is intended to be viewed, correct drawing (which includes the course of the shadows as well as the outlines), and harmony of colour. But such a composition must be chosen, and such a mode of colouring must be adopted, as are calculated, among other things, to display to the best advantage the brilliancy and transpareney of the material, and to accord best with the mechanical construction of glass painting, which, unless it is of very moderate dimensions, must necessarily consist of several pieces of glass, connected together with lead or other metal, and supported with iron bars. As a general rule, the best, because the most effective, composition for a glass painting (not being a mere pattern), is a single figure, or a group consisting of foreground figures, with either a landscape, an architectural, or a plain coloured background; the landscape, if any, being treated as a mere accessory to the group. And the mode of execution, which appears to display to the best advantage the brilliancy and transpareney of the material, is, where the colouring is chiefly produced by means of glass coloured in the manufacture; where the shadows are transparent, but have hard and sharp edges; and, above all, where a large proportion of the lights are left clear and unencumbered with enamel paint.

Of the correctness of this view, so far as it relates to the sort of composition, and to the mode of colouring best suited for a glass window, we have less doubt, since nearly all the exhibitors have acted consistently with it; but we also find that our opinion of hard-edged shadows and clear lights is opposed to the practice of nearly all the exhibitors,

including those most distinguished by their works. To their authority we can only oppose that of the glass painters of the first half of the sixteenth century, when, owing to the similarity of the material, the conditions of glass painting very closely resembled the conditions of modern glass painting; and we would invite a comparison of such works, as for instance, the window of the chapel of the Miraculous Sacrament, on the north side of the choir of St. Gudule's Cathedral, Brussels, and the two transept windows of that cathedral, with the windows of Gouda Church, Holland, and of Amsterdam Cathedral, both which are of the last half of the sixteenth century, with any of the works now exhibited; and if it appears that the Brussels and Lichfield windows are more brilliant, more glass-like, and (allowance being made for modern improvements in drawing) as pictorially effective as any of the other works to which we have referred, then we are justified in considering that the limit to which the obscuration of the glass may be carried was reached at the end of the first half of the sixteenth century, and, consequently, in regarding the works of that period as standards of true glass painting by which other works of similar nature may be judged. The question, however, must ever be matter of opinion, and must ultimately resolve itself into a question of taste, which can only be determined by actually making the comparison suggested, and inspecting the windows themselves. In estimating, then, the merits of a glass painting, we have to consider, first, to what extent the conditions of the art have been observed; secondly, its artistic merit as a picture or painting. According to these principles, a work in which the composition and drawing are indifferent, but which displays vivid and powerful colouring, or is brilliant in effect, is preferable, as a glass painting, to one which is dark and dull, but in which the drawing and composition are good. Of this we have a striking example in the ante-chapel of New College, Oxford. Sir Joshua Reynolds' window, with all its excellencies of drawing and composition, is not to be compared in effect with the rude windows of Wykeham's time that surround it. Still, though a due regard to the conditions of the art is of such preponderating weight in the merits of a glass painting, other artistic qualities, as has been said before, are not to be overlooked; and, consequently, of two glass paintings in which the conditions of the art have been equally observed or equally violated, that is to preferred which displays the highest merit in composition, drawing, and other qualities of a good picture.

But besides the two points of view just mentioned, in which a glass painting is to be considered, it is necessary, in order to estimate the quality of a work professing to be executed in imitation of any ancient style, to judge of it with reference to the standard which its author has himself chosen. To condemn it, on the one hand, if it falls short of the model which it professes to follow, and fails in the effect which it professes to produce; and, on the other hand, perhaps to make some allowance for peculiarities which would be objected to as faults, if they were not excused by the necessity of adhering to some characteristic feature of the adopted style. On examining an original specimen of any ancient style of glass painting, we cannot fail to be struck with the general harmony of its features. Not only does a strict consistency exist between the character of the figures and of the ornamental details, but these agree with the nature of the design and mode of execution, which again seem to be adopted and formed with reference to the nature and quality of the material used. The changes effected in process of time in the composition and texture of the glass appear to have involved, in the opinion of the ancient artists, corresponding changes in the very condition of glass painting.

In all the glass paintings of earlier date than the last quarter of the fourteenth century —until which period the material commonly in use was not over clear, substantial in appearance, or intense in colour—the articles seem to have relied for effect principally on the richness and depth of the colouring. In these works the means of representation

may be said to have been reduced almost to the lowest degree. Even the picture glass paintings are little else than exceedingly powerful and brilliant mosaics. The figures are hardly distinguishable from each other, nor from the back-ground of the composition, otherwise than by their outlines and local colouring. The style of the painting is simple, bold, and forcible, as if the artists apprehended that softness of finish and nice gradations of light and shade would be useless and ineffective, and deemed those qualities to be alike incompatible with the simplicity of the composition, the positive character of the colouring, and the general brilliancy of the work. The drawing is effected by thick black outlines, which always strengthen and sometimes even supply the place of broader shadows, and these shadows, when compared with those of later times, are weak, and are in great measure lost in the depth of the local colouring; which circumstance, however, renders their hardness the less perceptible. The same style of execution is extended to patterns as well as to pictures. The design is traced on the glass with firm and strong outlines; and it is hardly necessary to remark—for this is observable in every original work—that the harmony in form and character between the figures and the ornamental details, proclaims them to be the production of the same hand, and the conception of the same mind. In all subsequent glass paintings, until the revival of the more ancient styles, which took place about twenty-five years ago, we may observe that in proportion as the glass became more pellucid, more flimsy in substance and appearance, and less powerful and intense in colour, a less mosaic and an increased pictorial effect was aimed at. The weakness of the individual colours was in a great measure compensated by their employment in larger masses, by judicious contrasts, and by harmonious arrangement. Their depth was increased by means of broader and more powerful shadowing, and a certain degree of richness was imparted by the more liberal use of diaper patterns and other minute embellishments. The drawing became more delicate, nicely graduated and highly-wrought shadows were to a great extent substituted for stiff black outlines, and in many instances considerable attention was paid to perspective and to atmospheric effects. In short, it would seem that the artists considered that the more refined nature of the material demanded as well as favoured a more refined pictorial treatment, and sought to compensate for its comparative thinness and weakness by the introduction of beauties of another description. The new system, it is true, was not fully developed until the middle of the sixteenth century; but its commencement may be easily traced as far back as the end of the fourteenth, by which time the principal change in the nature of the material had taken place.

Many persons, and among them some whose opinions are entitled to consideration, differ from the opinion that the material used previous to 1380 has not hitherto been successfully imitated; but on a point of so much importance we are bound to retain our opinion until convinced of its fallacy. That there is a visible difference in the appearance of modern glass and of that belonging to these early periods is admitted; but it is attempted to be accounted for by the supposition that it is solely due to the effect of age and exposure to the weather, and that the ancient glass, when first put up, must have appeared as weak and flimsy as our own. But as it is evident, on breaking a piece of ancient glass, that the effect of antiquity is confined to its surface, the above supposition is destroyed by the observation, that modern glass whose surfaces have, by artificial means, been reduced as nearly as possible to the same condition as that of the old glass, fails, nevertheless, in its resemblance to the old. One of the most favourable examples of the closeness to which imitation of the thirteenth century glass can be carried by splashing the glass with enamel brown and other expedients, is afforded by a window recently put up in Mans Cathedral (the third clerestory window from the west on the south side of the choir). We are unable to say by whom it was painted. But

although the design, owing to the breadth of its colouring, is favourable to modern glass, the deception is decidedly incomplete. Equally unsuccessful are the admirable restorations of the earlier thirteenth century windows in some of the apsidal chapels of Bourges Cathedral, executed, we believe, by M. Lusson. The modern glass may here be easily distinguished from the old by its want of crispness and its thinness, although it has been obscured in imitation of the effect produced by age and long exposure to the atmosphere. We are strongly impressed with the opinion, that the difference in effect between such ancient and modern glass does not depend on the state of the surface, but on the composition of the material; and this opinion has been much strengthened by the result of some chemical experiments recently made, by which the very great difference in the composition of modern glass, and that of glass of the thirteenth century, is clearly demonstrated. Assuming the truth of the foregoing observations, it is obvious how important a bearing they have on modern imitations of the ancient style of glass painting. Those of the periods earlier than the last quarter of the fourth century having to be worked out in a mode of execution adapted to, and formed with reference to, a material very different from that of the present day, and therefore labouring under a disadvantage which hardly any skill or ingenuity can overcome; whilst, on the other hand, the glass of the present day resembling that of the fourteenth, or still more closely that of the sixteenth century, there is proportionably less difficulty, as far as material is concerned, in the way of the successful execution of works in the style of these periods.

The defects which appear to us to prevail the most generally are—First, the misapplication of the materials, so that works which would have possessed merits as enamel paintings on china or any other opaque body, are, as glass paintings, weak in colour and deficient in transparency. The ill effect of thus confounding the principles of painting on an opaque surface with principles of painting upon a transparent body, like glass, are strikingly exemplified by observing, in the works of this description in the Exhibition, the difficulties the artist has had to contend with in the management of his material, notwithstanding the dexterity of his handling. The vividness of effect produced is barely superior to that of an oil painting, and in tone, transparency of shadow, and general harmony, the glass is very inferior to a painting in oil. The metallic framework which, in every well-contrived glass painting, is conducive to the good effect of the work, is here an eyesore, imparting to those outlines which it follows a harshness which does not accord with the elaborate softness which many of our modern artists have adopted in lieu of the severer style of their predecessors.

Secondly. Non-adherence to the style, which has been selected by an artist for imitation in any particular work. For instance, we have sometimes found associated together, in the same glass painting, borders in the style of the fourteenth century, canopies of the fifteenth, and figures of the sixteenth. In others, though the ornamentation is drawn and executed in the style of an early period, the figures are either wholly in the style of a later one, or else accord with the ornamentation only in the drawing or composition; the elaborate softness of their execution having been borrowed from a considerably later period. Others, in which the drawing, mode of execution, and composition of an early period are scrupulously observed, both in the figures and ornamental details, are executed in a material, which, owing to its greater pellucidness, is essentially different from that in use at the period chosen for imitation; so that sometimes the different portions of the design itself are incongruous; sometimes the design is of such a character as to be unsuitable to the nature of the material in which it is worked; and we may add that the various attempts which have been made to imitate the richness and depth of the ancient material, by coating the glass with enamel paint, have produced no other effect than that of depriving it of its brilliancy, and consequently the glass paintings,

in which this expedient has been resorted to, of one of their chief and distinguishing merits. These observations apply, in our opinion, very generally to the modern style of imitating ancient glass paintings. Improvement in the style of drawing, and many other beauties, were to be met with in the objects exhibited in Hyde Park, but these beauties were too often neutralised by the defects to which we have ventured to allude. The works were not original compositions, nor were they correct copies of the various styles which they professed to imitate.

Bertini, of Milan. "Dante and his thoughts."—In point of size, harmony of design, and beauty of drawing, this window was certainly entitled to claim a first-rate place; nor was there any work in the Exhibition, which, taken as a whole, was so superior to it as a glass painting, as to prevent its merit as a work of art preponderating. Its defect was certainly the want of general brilliancy. Except in the Queen's glory, in letters of the inscription over Dante's head, in the shields below, and the wreath surrounding his name (all which were true specimens of glass painting), and in the border of the windows, there were no sharp clear lights; and although pot-metal or flashed glass was used in places, as in Dante's robe, in the steps of the seat, in the sky to Domenico and Francisco, and in the robe of the figure in No. 4, it had been reduced to the same opacity as that of the enamel colouring employed in other parts of the window. The subjects taken from the infernal regions, Nos. 1, 2, 3, 4, were scarcely fitted for a glass painting, which is not suited for dark effects. The whole work was executed with so much softness, and was so highly finished, that the metallic fastenings had a harsh effect, and formed black lines, which did not harmonize with the delicacy of the painting: and though in general they were concealed with wonderful skill, yet they appeared in places, and riveted the attention the more the window was looked at. It may seem presumptuous thus to criticise one of the best works of the day; but the admiration which we felt for it, has led us to compare it more rigidly with the windows at Brussels, and to arrive at the conclusion that it would suffer by comparison in point of general effect, though it would doubtless be superior to them in artistic refinement and drawing. Compared, however, with the more modern works, it appeared to advantage; for the quantity of white light introduced in the upper part of the design, in the Madonna, and in the tracery above, the angels, the crockets, and above all, in the ornamental bands or fillets which served at once to connect together and to frame the different subjects, imparted to the window a silvery or glass-like effect, which none of the others possessed, and which completely rescued the work from the imputation of being like a fresco painting. The execution of the crockets and of the foliaged ornaments round the shield was quite perfect; but perhaps the greatest display of skill is the manner in which Dante's head was made to stand free from the chair's back. The representation of one of the ladies' silk dresses and of the lining of Dante's cloak was a wonderful achievement in painted glass, and perhaps could not be accomplished in a work in which clear lights were considered indispensable. In conclusion, we have only further to observe, that the defects which we have ventured to notice are those which prevail very generally in the works of the present day; but the beauties exhibited by M. Bertini in this production greatly preponderate, and are his own.

Capronnier, J. B., Brussels.—The conditions of the art of glass painting appeared to have been complied with, on the whole, in this work more fully than in any other of equal or superior size in the Exhibition: for not only was the drawing good, the composition simple, and calculated for distinctness of effect at a distance, but the angular character of the draperies, and the fineness and decision of the entire execution, were admirably suited to the nature of painted glass. The style principally followed was that of the first half of the sixteenth century. The absence of clear light, and over-painting

of the head of the principal figure, were to be regretted as deviations from what we consider to be a correct observance of the style adopted. Still it is impossible to refuse to this composition a first-rate place.

CHAPTER XXXI.

EDINBURGH REVIEW—LETTERS FROM M. BLANQUI—FIRST IMPRESSIONS — CLASSIFICATION—WEALTH OF ENGLAND—MR. PAXTON—INAUGURAL DAY, ETC. ETC.—LETTER II., GRANDEUR OF THE EXHIBITION—ENGLISH HOSPITALITY — REFRESHMENTS—FRENCH DISPLAY — ENGLISH MACHINERY—BOHEMIAN GLASS, ETC. ETC.

With a prescient glance, savouring of vaticination, an able writer in the *Edinburgh Review,* descanting on the great theme of the day, the topic of all hearths, the chosen subject of Fame—after detailing the enormous extent of labour and research, the unheard-of expenditure of materials employed in the composition and printing of the mighty catalogue, whose myriads of copies flowed in so vast a stream through all parts of the civilized world,—gives promise of future still more elaborate works on the inexhaustible treasures of the Great Exhibition.

With the fact before our eyes, exclaims our writer, that the average number of volumes in ten of the largest libraries of the world* exceeds but by one half the volumes thus pushed into circulation, we cannot feel much surprise that this catalogue should, like Aaron's rod, have swallowed up the whole literary activity of the last twelve months, and that the ordinary book trade of the country should have been almost altogether suspended. Nor should it be forgotten that much of the knowledge and information—forming the staple of the book trade in ordinary times—has been forced into new and unaccustomed channels by the necessity for its rapid dissemination within the limited period of the illustrations remaining accessible. In almost all of our leading political journals the new facts of science and art, dressed up with all the attractiveness of news, were related in a form that admitted of easy modification in their statement, and discussion in their bearing. That this lull is but the prelude to animated gales we feel confident. The past few months have been a period of patient suspense or critical examination. We have had the things themselves before us. A knowledge of their qualities must precede any theoretic analysis. It is also a most important fact, which seems to have been little regarded, that the leading scientific minds of Europe have been hitherto in a measure bound to silence and secrecy, from being included in the lists of the juries. But let this seal be once removed—let the critical reports of thirty sections, and at least one hundred and twenty sub-sections—giving the history of what has been, and is, and guesses at what ought and will be in every department of knowledge—and we have little doubt that a goodly array of commentaries, theories, systems, in the old established form of full developed tomes—besides all the lighter skirmishing of pamphlets—will soon make their appearance. It is scarcely too much to predict that for every three lines in this catalogue (the average length of a description) we shall soon see at least one or two works issue from the press,

* Number of volumes in Bibliothèque du Roi, at Paris, 650,000; Munich, 500,000; Copenhagen, 400,000; St. Petersburgh, 400,000; Berlin, 320,000; Vienna, 300,000; British Museum, 270,000; Dresden, 250,000; Milan, 200,000; Gottingen, 200,000; Bodleian, 160,000; Trinity College, Dublin, 100,000.

either questioning or discussing the merits there claimed, or the abstract principles involved in their statement. The wrongs, hardships, and injustice which have been hitherto tamely endured, by all whose contributions have been placed by the jurors in any other than the highest category of merit, will find a vent when these violations of all truth and reason become known. To this prediction might have been added, with equal certainty, the foretelling of the appearance of a variety of works, on which all the industry and talent of our best artists would be employed to illustrate and perpetuate the recollection of the Great Wonder of the Age. Our spirited and liberal publishers have done their best to ensure a high station for the present work among the numerous competitors with which it is surrounded, and we trust, from the success and the praise it has already met with, as well as from our anticipations for the future, he will be able to exclaim with the poet—

"Opus exegi ære perennius."

Foremost among those writers, who rushed to the literary field to bear testimony to the grandeur and excellence of our magnificent Exhibition, were the French, who, with their usual generous and chivalrous feeling, accorded their full meed of praise to a rival nation. We have already noticed the observations of M. le Moinne, and now turn to those of M. Blanqui, a member of the Institute of France, which, from time to time, we propose to lay before our readers, and which we hope will equally serve for their instruction and gratification.

LETTER I.

The first impression created upon the mind of the spectator on beholding this magnificent structure, erected with almost miraculous rapidity, is that of marvel at its grandeur, simplicity, and elegance. All the proportions are maintained with consummate art, and with mathematical precision. The horizontal measure of 24 English feet was taken as the unit of the building, every horizontal dimension of which is either a certain number of times or divisions of 24 feet. For instance, were it required to elevate any part, two pieces of 24 feet were placed one on the other, and thus a height of 48 feet was obtained; and in the same manner a height of 72 feet is reached by the addition of another piece of 24 feet. The same as to length or breadth, which is always a multiple of 24. The result has been the formation of a symmetrical palace, constructed of pieces of cast-iron of equal length, fastened together with iron bolts, and nearly all cast after the same pattern, or, as we should say in political economy, of the same standard. Should it be found necessary some day to pull down this edifice, it may be taken to pieces, and rebuilt elsewhere without any change. The building consists of an immense nave, transversely intersected by a shorter one, called the transept, of a height sufficient to enclose trees of venerable growth in perfect preservation, producing a most charming effect. An upper gallery, approached by numerous and commodious staircases, runs along the whole of the building. From this point I was enabled fully to enjoy the magnificent spectacle of the opening ceremony, at which there were present more than 20,000 persons, most of whom were arrayed in the most elegant attire. The English papers will not fail to give you the details of this splendid solemnity, to the *éclat* of which our organs and organists greatly contributed. It was truly a noble and most imposing spectacle.

Previous to entering upon my feeble labours with regard to this great Exhibition, I must give you a general outline of the manner in which the different nations are classed in the respective places allotted to them. England has retained for herself half of the ground—the entire of the western part of the Crystal Palace; and it must be acknow-

ledged that she has so well filled it that she cannot be blamed for having appropriated to herself the lion's share. The space in the eastern side is divided—it must be confessed somewhat unequally—among all the other nations, and in this portion France bears the palm. The transept is like the equator of this industrial world. China, Tunis, Brazil, Persia, Arabia, Turkey, and Egypt, are grouped near to it like a kind of torrid zone. Conspicuous among the colder regions stands Switzerland, whose exhibitors have distinguished themselves by their promptitude, and the happy arrangement of their contributions. There they are united like the children of one family, with exquisite taste and the most pleasing harmony. Be assured they will create an impression. Spain, and even Portugal, Italy and its different states, have sent products, doubtless insufficient to exhibit their agricultural and manufacturing position; but these second-rate states have contributed works of art or raw materials of a somewhat original character.

France was really not ready, and a few hours before the opening, a crowd of exhibitors, in their shirt-sleeves, might be seen hurriedly arranging their most beautiful wares. As regards taste, art, and elegance, nothing was wanting; and I may say that the general impression was, that France was pre-eminent in its artistic superiority over all other nations. If I might venture to hazard an expression without wounding any one, I would add, that all the products, from whatever part they have come, have a common and provincial apppearance, when compared with those of France. The French articles alone bear that stamp of elegance which is due to the talent of our designers, and to the incomparable skill of our artists. To execute anything to equal them, other nations must deprive us of these, and, unfortunately, the revolution of February has lost us more than one. The United States, which occupy the eastern extremity of the large nave, and whose Eagle, with outstretched wings, soars over the whole Exhibition, have sent mostly raw materials, and few manufactures. It is said that they have sulked, and it would be unjust to judge of their industrial power from the specimens—moreover very remarkable—which they have exhibited. Austria and the Zollverein of Germany are the nations which, together with Belgium, occupy the most distinguished rank after France.

Austria exhibits products sufficiently remarkable to astonish the most competent judges, and those best acquainted with the country, from having made it their especial study. Russia is still behindhand; but it is generally understood that the contributions from that country, impatiently looked for, will manifest a progress not less astonishing than that of Austria. That which struck at the first glance the most practised judges, were the truly novel and curious raw materials from India, Australia, and the American colonies; among the contributions of England, the carriages, the machinery, and above all, the chemical products, which are admirable—prodigious; in Austria the glass-works, shawls, and carved work; in Belgium, the lace and fire-arms; in Switzerland, the muslins and ribbons; in France, the works in precious metals of Oudiot, the bronzes, the shawls, the carpets, the cloths, and the woven goods of Alsace. When you cast your eye upon this panorama of the industrial world, your attention is so much divided that the sense aches at it. But, be assured, that from henceforward the English have inaugurated a new era. The whole world will receive a lesson in that country, where the peaceful struggle of nations is proceeding with so much *éclat*.

In order to draw as much instruction as possible from this inexhaustible field of study, it behoves us to omit nothing essential. Everything here is so different from what we are accustomed to see, and all has succeeded so well, that we may find plenty of matter of useful information, if we will lay aside, for the nonce, our national pride. Thus, first, to speak only of the idea itself, the mere enunciation of it was sufficient to excite the

enthusiasm of all the leading men of this country. They assembled; they calculated the cost of an immense edifice, worthy of the undertaking; they appealed to the most distinguished architectural talent of all countries; and when it became necessary to find the requisite pecuniary resources, the Bank of England opened its treasures, upon the sole condition of obtaining security for the sums it might advance. Immediately the highest and wealthiest of the land hastened to co-operate in this great national work, by offering the guarantee of their fortunes. Noblemen came forward, some to become security for £8,000, some for £20,000, others for £40,000 pounds. One private individual is said to have subscribed to the guarantee fund for £50,000. Whilst this significant proof of the confidence of the wealth of England was given, the subscribers for the season-tickets added their guarantee to that of their munificent countrymen, who so spiritedly had come forward to carry out this grand project, which originated in France, but, like many others, with such barren results for our country. It is now almost placed beyond doubt that the undertaking will not only be most advantageous to England, but that there will be a large pecuniary surplus. Mr. Paxton, the able designer of the Crystal Palace, itself unquestionably the most wonderful specimen of English industry, on the opening day headed the royal procession. It was at the express desire of Prince Albert that this public honour was paid to the architect who had erected a marvel to enshrine so many other marvels. Thus England, after bringing to an auspicious termination the project of an universal Exhibition, did not forget worthily to honour those who so much contributed to its success. Could there be a more popular sight, I would ask, than that of this humble architect, this builder of hot-houses, walking at the head of the royal procession of the Queen of England on such a day? The interior order of arrangement of the building is also beyond all praise. The nations are arranged in order, according to the importance of their contributions, and are distinguished from each other, either by having the names or the flags of their respective countries displayed over their compartments. The approach to all the stalls is perfectly easy, the circulation everywhere free and commodious. The articles are exhibited in classes—machinery, carriages, and woven goods, of the same kind, being pretty generally placed together. Each nation has had perfect liberty to fit up and arrange, according to its own peculiar taste and fancy, the bays and glass cases for the display of its goods. Hence a diversity has resulted, not less interesting than the goods themselves, and which, in a somewhat original fashion, represents the characteristics of the various nations enlisted in peaceful struggle. England, which, as I have said before, has appropriated to itself one-half of the entire space, had to provide, besides, the best means of insuring the comfort of the visitors, and the embellishments which should make the great building worthy of its destination. These results have been most happily achieved by the distribution in the middle of the principal nave of all the large casts or pieces of sculpture contributed by Prussia, France, and Belgium, but particularly Prussia. At intervals several gushing fountains, one of which is a magnificent crystal one, spread freshness and animation over this vast space, through which reverberate the sounds of three organs erected in the most original and picturesque fashion. Lastly, some venerable trees, preserved as a kind of scale by the aid of which the height of the immense fabric may be measured without effort, add the charm of their rapid vegetation to this graceful and imposing *ensemble*. Such is, in its simple grandeur, the general aspect of the Exhibition of all Nations. On the inaugural day there were upwards of 25,000 persons present, and yet the extremes of the building appeared like a desert. The hum of these thousands of voices was hardly to be distinguished, and was really lost in this aërial fabric, from which an azure glimmer, like that of the firmament, was shed upon the multitude, producing a most singular and unexpected effect. Nothing, also, can be more striking than

this buzzing of so many different languages and the chequered array of the many grotesque costumes of all these foreigners.

Each nation occupies an unequal space at the universal Exhibition; and it is but just to remark, that several among them—foremost of which is our own—are only represented in a very imperfect manner. It is evident that the North Americans have only sent to this great gathering some indifferent goods, and they have had to give up to neighbouring exhibitors a portion of the space which was useless to them. A few ploughs, some canoes, some very inferior maps; such is the actual stock of the North American portion of the Exhibition; but every one acquainted with the industrial skill and laborious energy of that great people must admit that its productive powers are not represented by these few sorry specimens. Spain has furnished little beyond raw materials, some wool, a few silks, and scarcely any woven goods. Catalonia, the last haunt of the protectionists of that country, has not exhibited anything. It feared, not without reason, being crushed by the comparison of its wretched cotton cloths with those of the whole world, and being called to account by the Spanish people for the tribute which it levies upon them, almost without profit to itself. But the experience will not be the less decisive; and, by allowing judgment to go by default, the ashamed protectionists will not be the less condemned—some for their impotence, as in the case of Spain, others in consequence of their inferiority, denied by themselves, and from motives of cupidity, as in France. At every turn in this Exhibition the truth strikes every one. Only look at the Sheffield cutlery! what admirable variety! what richness! what amazing cheapness! as the English say, with pride and with reason. And we have also reason to say—"When our manufacturers shall have iron and steel at more reasonable prices, they will manufacture equally well." But our iron-masters will not have it thus. Look, again, at the English carriage department, exhibiting such variety, richness, and elegance; yet the importation of carriages is prohibited in France, and France is thereby deprived of the means of comparison and imitation, which would greatly benefit the coachmakers themselves. And so to the end of the chapter. We shall demonstrate, beyond the shadow of doubt, that there would be no want of superiority in our manufactures from the day when France, exempted from the tribute which is levied upon her under the guise of protection, shall, in the plenitude of her liberty, exert herself without undergoing or imposing the yoke of restriction.

This fact is especially striking on examining the Swiss department of the Exhibition. Switzerland occupies in the building a limited space. It is a land of free trade, mountainous, and without facility of communication, and, nevertheless, it has acquired a very distinguished rank in European industry. It is really wonderful to see the elegance of its Bâsle and Zurich ribbons, its embroidered muslins, its taffetas, and its velvets, worthy to vie with the school of Lyons, whence, doubtless, they derive their origin. Austria, although it leaves much to be desired on the score of taste, even in its Bohemian glass, and although exhibiting a great want of design in its exquisitely-carved furniture, still merits an honourable place by the side of the Zollverein and of Russia, which seem to exhibit more life and progress.

I will not at this stage venture to hazard a premature judgment. It is only after an attentive and comparative study of all these innumerable products, that it will be possible to attempt expressing a serious and profound opinion on so many *chefs-d'œuvre*, and on the relative value of each country. Suffice it to say, that, as regards France, our manufacturers of Lyons, of Mulhouse, of Tarare, and of Roubaix, had scarcely commenced the arrangement of their goods, notwithstanding the zeal and diligence of the commissioner-general, M. Sallandronze, whose attention and courtesy are above all praise. It certainly was not his fault that goods left at Dunkirk, or at the railway station at Paris,

were not displayed sooner. But we shall have lost nothing by waiting; and I dare to assert that, in spite of numerous gaps, the French exhibition will ever be what it ever has been in our own country, as elsewhere, unique for good taste, gracefulness, and elegance in every department.

LETTER II.

Before giving any definite opinion upon the ultimate results of the Exhibition, I shall have much to say with regard to it as a whole, its grandeur seeming to increase the more minutely it is examined. The observer is, as it were, carried away by magic from country to country, from east to west, from iron to cotton, from silk to wool, from machines to manufactures, from implements to produce. You wander to and fro, your eyes perpetually dazzled by a kind of mirage, scarcely being able to cast even a glance at the visitors from all countries of the world, who are, nevertheless, not the least curious articles of the Exhibition; for, if there is a vast quantity of goods in all the galleries, there is also a crowd of Englishmen, of Germans, of Frenchmen, of Turks, of Italians, of Spaniards, of Indians, whose motley costumes deserve the attention which is still withheld from them, in consequence of its being diverted in a thousand directions by the all-powerful fascination produced by the magnificent spectacle of so many *chefs-d'œuvres* of human industry. I cannot too strongly recommend to my fellow-countrymen to come and visit this marvellous Exhibition at all hazards. They may be assured that, during the course of their lives, they will not look upon its like again. But, first, we must warn them against the spirit of depreciation which has distorted the truth in several of the French papers. It is not true, as it has been unscrupulously asserted, that no exhibitor has been admitted without paying three guineas for a season ticket; all exhibitors, on the contrary, have free admission on presenting a ticket issued at the office of the commissary-general. Neither is it true that apartments are enormously dear; they are not let higher than usual, and they are not all occupied. All classes in this country manifest eagerness to show hospitality to strangers. To whatever rank they may belong—for here there is rank—strangers are sure to find, among their equals in position, friendliness and cordiality. There is nothing talked about but friendly soirées. To commence with the scientific. The president of the Royal Society is this month to give three routs to the *savans* of all nations. Lord Granville has thrown open his mansion, and the queen will give several balls. All the corporations are making preparations worthily to entertain their guests. The lord mayor is to give a splendid entertainment at Guildhall, to the principal manufacturers who have contributed to the success of the great undertaking. Were I at liberty to quote names, besides those of official persons, I could furnish you with a really curious list of the most eminent men in various walks, who have deemed it a duty to do the honours of their country to the entire world summoned to this great federation. But, above all, those whom I would desire to see arrive in crowds at the Universal Exposition, are the French artisans. Our great manufacturing towns and manufacturers cannot make too great sacrifices to send over the largest possible number. A special agency should have been established in London, with the view of facilitating to them the study of those questions which interest them most, and to initiate them into those marvels of art, the bare sight of which elevates the mind above our miserable pothouse politics. French workmen stir abroad too seldom, and even then rarely beyond France. In coming to London they would, with very little effort and at a trifling expense, make the tour of the world—they would learn more in a week's visit to London than ever they learned—excuse me saying so—in clubs, when clubs were in existence.

It is here, in fact, that we must come to learn what industrial trophies the spirit of

order and the genius of man, bent to industrial discipline, can achieve. Only think that this immense Crystal Palace has been cast, piecemeal, and put together in less than six months: cast is literally the word, for there was not so much as one piece of glass and iron of the myriads of pieces which compose it, in existence in the month of September last. And when within its precincts even now we observe the admirable order which reigns throughout, when we behold thousands of labourers assembled in silence in small groups at meal times, under the direction of their foreman, with an almost military discipline, afterwards leaving through the small exit-doors, without confusion or hindrance to the public, we can better understand this wisely-regulated power, master of itself, which forms so striking a contrast to what we behold in our country. Permit me to add some details which, I think, will not be without interest to the visitors from our country, and which may, perhaps, induce others to come to this great gathering. The arrangements for the disposal of the space have been so well made throughout the whole of the building, that even on the most crowded days there has never been the slightest obstruction. Sixty thousand persons can walk about with ease, and at the same time without being in the least incommoded. A large number of easy seats are distributed along the entire length of the galleries for those who are fatigued. Three large refreshment-rooms, where everything is sold at moderate prices, according to a tariff conspicuously displayed, afford visitors the opportunity of spending the whole day in the building without being obliged to leave to take their meals. The price of an immense catalogue, by the aid of which anything may be found with the greatest facility, is limited to one shilling.

Nevertheless, our countrymen do not as yet arrive in large numbers, and notwithstanding the activity which they display, the French expositors are still behindhand, without a pretext for excuse like Russia, whose goods were detained by the ice of the Baltic. As these magnificent goods are opened to the view, and are displayed in the places allotted to them, the influx of visitors commences. Already the English ladies may be seen gazing with rapt admiration at our gallery of shawls, at the jewellery of Froment Meurice, or the works in precious metal of Odiot. What will it be when Lyons and Mulhouse will have displayed their unrivalled productions? Our cabinet-makers of the Faubourg St. Antoine have been greeted with a general burst of admiration. They alone, up to the present moment, are completely established in the gallery which has been apportioned to them, and their works immeasurably surpass anything that has hitherto been attempted in this branch. Oh, matchless workmen! why do you not make more furniture and fewer revolutions. That great branch of English industry, machinery, is now also beginning to work. You know that the English have conceived the happy idea of erecting outside the building a steam-engine, conveying by means of subterranean pipes the motive power throughout the building. It has been so cold during the last few days that the steam, being condensed on its way, did not reach its destination; but since it has, a vast number of spinning, weaving, and other machines, may be seen at work side by side, directed by workmen in the costumes of their countries and calling. One of our men who had the charge of a spinning machine, having the other day tied a broken thread, "Bravo, Frenchman!" exclaimed a number of voices, and overwhelmed him with applause. Everywhere the principals exhibit their machinery to the public with the utmost readiness. Pumps, of which there are several, of novel and powerful effects, throw out veritable cataracts. It is in this department that the English shine and are pre-eminent above all other nations. Their immense display of machinery resembles an artillery park. There are engines for steamers, of 700 horse-power, of incomparable perfection; gigantic eight-wheeled locomotives of novel construction, Crampton's patent said to be capable of running seventy-two miles an

hour with perfect ease. Their hydraulic presses surpass all proportions hitherto known. They have exhibited the one used in raising the Britannia Tubular-bridge, that vast tube suspended in the air through which runs a railway, and under which a ship of the line can pass at full sail. Besides these huge specimens of engineering art, there are on all sides hundreds of small machines, executing before the public the most ingenious tricks, from the manufacture of knife-handles to that of letter envelopes. In the different processes employed by the English, it is easy for an attentive observer to discover the distinctive character of the nation in point of political economy. They work particularly by means of their capital, and in everything they have recourse to mechanical means. Their Crystal Palace is composed of three or four different models of cast-metal, of which they have worked off some hundred thousand of copies, of which they might, in case of demand, immediately publish five or six editions. Their printed calicoes, which are not equal to ours in taste, surpass them in cheapness, thanks to their mechanical power, which enables them to produce millions of pieces, and thus almost reduces to nothing their general expenses. The bold reform which they have made in their tariff and navigation laws has been an actual increase in the wages of their workmen, the interests of whom the government takes to heart, and for whom it acts more efficaciously than our government, without a perpetually heaping of stale and fulsome compliments upon them. But it is, above all, in the lower qualities of the raw materials that the English shine. This department of the Exhibition will be visited with care by reflecting minds, who know the real source of national wealth, and where an enlightened people should go in search of it. The English Exhibition offers in this respect a spectacle worthy of the liveliest interest. They have exhibited with a proud simplicity, the most varied samples of their subterranean produce. Among these may be enumerated, within and even outside of the building, enormous masses of coal from all their mines, with small models of the works of the mineralogic sections, and all the accessories of this curious industry. They have likewise exhibited specimens of all their building-stone, their slates, their chalks, their plasters and their mill-stones. Their iron, coal, lead, tin, and copper mines, are represented by the richest collection of minerals, in every stage of preparation and on an immense scale. Everything is explained by drawings, models, tools, forges, and furnaces, and the whole is worked by little figures similar to children's toys.

It is evident that few of the English producers have failed to answer the summons to the general gathering, and the more carefully the great gallery is visited—that is to say, half of the entire space occupied by the English—the more one is struck with the display of power and riches of this great people. The struggle, in fact, is only between them and us. Belgium and Germany, no doubt, deserve particular attention; but the real competition is between France and England. All the other nations will only, in this strife for the palm, play the part of supernumeraries. They themselves admit the inimitable superiority of the two great industrial powers of our time. It by no means follows that therefore the efforts of Austria, Russia, the Zollverein, and even of Switzerland, can be spoken lightly of; but all these united would be unable, for the present at least, to enter the lists with the two first manufacturing nations of Europe. It is by studying in detail the respective merits of all the people invited to concur in this great assemblage of nations, that we shall be able to award to each the degree of merit to which it is entitled. Saxony, for instance, has sent topographical maps of such rare perfection, that, in point of engraving, they immeasurably outstrip the most wonderful things of the kind that have been attempted by France, England, or even the ordnance of Austria, so justly renowned in Europe. There is a map of the environs of Dresden, which is a real *chef-d'œuvre* of its kind, and well worthy the attention of our officers. The advancement of more than one art may be judged of by such specimens.

which honour the nation capable of producing them. The glass work of Bohemia has upheld its old reputation, which our protectionist manufacturers have not dared to compete against. But protection, gentlemen, has had its day, and ere long, like feudalism, it will only be an insolence of the past.

We shall at length penetrate the mysteries of the cost price system, and we shall know what tribute France pays to a few manufacturers who have hitherto levied a downright poor-rate upon her. Those who have refused to exhibit have impliedly acknowledged the futility and uselessness of the protective system. They feared the exposure in all its nakedness of a system which henceforth can have no other possible result than that of raising the price of things, and condemning France to dearth, whilst everywhere else nations labour to achieve cheapness. After international exhibitions, prohibition will become simply an absurdity. Is it to make us suffer the torments of Tantalus that we have been summoned to this grand spectacle? What! we shall not be able to receive at our domestic hearth a wadded sheepskin, a knife, a razor, a glass tumbler, a cast-metal chimney-piece, merely because there happen to be in France a few private individuals who imagine it to be to their interest that these things should be prohibited!

No, no; this scandalous state of things cannot last long. France, I hope, will soon be tired of the reign of ignorant declaimers, and will profit by the unmistakable lessons which spring from the spectacle before our eyes. When the whole world shall know that the Almighty, and the genius of man, His noblest work, have created throughout the earth the elements of well-being by means of labour, and that a little commercial freedom would suffice to diffuse these blessings, it will no longer be possible to maintain the restrictions which lower us to the rank of nations still in their swaddling-clothes. All that we behold here cannot be a mere theatrical representation, calculated to amuse idlers, but a decisive inquest, at the issue of which the old Chinese brick-wall of the insulation of nations shall crumble away under the public scorn.

CHAPTER XXXII.

THE FINE ARTS COURT—ARMITAGE'S SYBIL OF PEACE—WOOD WHITTLING, ETC.—AMBER—ITALIAN PAPER—WINSOR AND NEWTON—ROBERTSON, ROWNEY, AND MILLER—BAXTER, AND KRONHEIM—ENAMELS BY ESSEX—WOOD CARVINGS—MECHI'S FARM—TESSERAN AND ENCAUSTIC TILES—LITHOGRAPHS—WYON'S SEALS—PRINCE ALBERT'S MODEL LODGING HOUSES FOR FAMILIES.

If, according to the philosophic axiom, "things are known by their opposites," then the pretentious title given to this portion of the Great Exhibition, of The Fine Arts Court, was most wise and judicious, aptly illustrating the truth of the oft-repeated line of the poet, "Lucus a non lucendi." Every one more or less deeply versed in the cheerful subject of criminal statistics, has seen those strange foreign maps, in which the different degrees of moral culpability of a whole nation are rendered visible at a glance. Thus while some departments are made to assume an unenviable hue of black, others appear on the contrary quite fair, with of course numberless shades between, denoting clearly the average depravity of these provinces. If an industrial map of this description had been made out of the contents of the Great Exhibition, we know of no compartment which would have come out of a more unmitigated black than the Fine Arts Court. It is quite incredible what an agglomeration of artistic delinquencies were there offered

to mortal vision, thinly scattered with perhaps a dozen works of real merit and sterling character. Foremost amongst the latter we would place Mr. Armitage's "Sybil of Peace," whose attitude and expression seemed to indicate a doubtful sense of the honour or possibility of mixing in such company. Her glances seemed less directed to the smouldering implements of war at her feet, than at the dubious carvings, would-be new inventions, and the thousand knick-knacks, which would just have passed muster in some provincial museum. Perhaps one of the most deplorable symptoms to be met with in the Fine Arts Court was the boast of self-tuition; and the egregious complacency with which this was announced, not to claim leniency for such efforts, but as it were calling for superior admiration at the results. Every man who could whittle at wood, who could handle card-board with a pen-knife, or design with a hot poker, at once fancied himself a prodigy; cork, elder-pith, bog-wood, and leather, were made to alternate in the abominable mimicry of nature.

Before noticing more particularly the few good specimens of decorative manufacture, the raw materials of art collected here and elsewhere call for notice. At one of the nave entrances of the Zollverein department was an unpretending little box, containing, besides numerous fragmentary specimens of amber, different solutions of this material, which have attracted the attention of the artistic community. In three small glass vials might be seen that problem to the ancients, the "magisterium succini"—a solution of amber, by means of alcohol or volatile oils. The "succinic acid" was here in a state as clear as it has hitherto been turbid. An ample account of this vehicle is to be found in Sir Charles Eastlake's able work. Merely indicating the subjects to those more immediately concerned therein, and pointing to the numerous specimens of amber, rough or ready, dug out of pits, or washed on the shores of the Baltic, we pass on. Whilst every one must easily comprehend that Dantzic must always have the command of the amber trade, owing to natural or antediluvian laws, which cause the material to be blown on its coast, it becomes just as difficult to understand why in Italy the manufacture of paper has remained stationary. Strange as it may seem, the drawing paper still in use is now made at the same place, and we believe by the descendants of the same firm which furnished Italy's greatest draughtsmen with materials; the watermark clearly indicating Fabriano, between Ancona and Perugia. While thus seemingly digressing, we now arrive at the driven point. Both the northern amber-varnish and the southern paper are allowed to be the best for their several purposes; and yet neither are to be had, except of course in the gross. Neither were to be found, for instance, in Winsor and Newton's splendidly got up case of artistic materials, in the gallery allotted to the chemical compounds. Here might be found in tempting array every vehicle from poppy to mastic, from copal to linseed, but no label pointed to the mixture exhibited by a Dantzic apothecary. Messrs. Winsor and Newton, of Rathbone-place, exhibited cobalts and cochineals, chromes and cinnabars, emeralds and ochres, canvasses and panels, brushes and badger tools, which even a Gerard Dow or a Mieris would in vain have called for. In the Fine Arts Court, Messrs. Robertson, Rowney, and Miller, erected stands of artistic manufacture. Whilst Messrs. Robertson had successfully solved the problem of blending copal and varnish into what is known as their medium, Mr. Miller had taken out a patent for having rendered colours vitrifiable, and in consequence more durable. Silica is the name of the substance, which is employed alike in oil and water colour. While, however, bearing ungrudging witness to the decided superiority manifested in the method of preparing and grinding colours, it is impossible not to perceive the glaring errors into which that very perfection may have led us; and it is not going too far to assert, that all the schemes for producing paintings by mechanical processes, have ended in the utter discomfiture of the system.

Messrs. Baxter and Khronheim can never be conceived to be even art's journeymen, as long as they imitate painting so abominably. Blocks, in the heads of these gentlemen, assume all the virtues of brains. If Mr. Baxter crams an incredible number of tones into a very limited space, Mr. Kronheim, on the other hand, offers some compensation, negativing his scale of harmony as far as possible. Both are supremely painful for two reasons—first, because they annihilate all sense of form and light and shade; secondly, because the colours as put on are essentially false and inharmonious. This statement of plain fact is only warrantable by the strange infatuation with which these paintings are held up as miracles of power and invention; they are as paltry in power as others by hand are the reverse. Nevertheless, as inducements to a more general love and study of art, they may be useful, inasmuch as to the uncultivated eye the display of crude and gaudy effects of colour, are more attractive than the sober and chaste realities of truth and nature. As a contrast to these puerilities, we need scarcely point to the enamels of Essex, in which surprising fidelity in reproduction is united to imperishable execution. Though Mr. Carrick does not lay much stress on intrinsic durability, it is but too evident that the relatives of those he has delineated on white marble, in preference to the usual ivory, will be anxious to combat with care, the effects of time on the too-fleeting colours. Other miniatures of royal ceremonies may possibly in time acquire that interest with which their execution as yet fails to invest them. By far the pleasantest features of this compartment were the wood-carvings executed by Wallis and Rogers. We shall, however, be brief in our notice of these objects, as we have already devoted a chapter to the subject in an earlier portion of this work. The first of these gentlemen, perhaps, followed a little too closely on the heels of Grinling Gibbons, in the way of composition, though perhaps he is superior in other respects. Mr. Rogers appeared to have nursed his reputation in his Cradle,—a most dainty and delicate piece of workmanship: he must, however, be on his guard against his finikin tendencies: the lime-tree and boxwood, doubtless, invite detail, but the British oak is not to be tickled with penknives. Larger tools were evidently employed on the Kenilworth buffet, exhibited by Cooke and Sons, of Warwick. It is massively constructed, and not over-elaborated with figures, and these skilfully executed; nevertheless, a more decidedly Elizabethan character would have been desirable. There was Elizabeth in one of her progresses; there were courtiers and poets; and, more conspicuous still, dancing bears. Though sometimes, it is said, still to be met with on occasions of festivity, this animal has hitherto been confined, as a decorative member, to Bernese monuments. Pleasant associations, however, and difficulties vanquished, served to render the piece of furniture unusually interesting. The same could scarcely be said of the Irish bog-yew carving, which was made the medium of compositions of "Harpers in Tara Hall," Cormac and Brian Borohme. It is difficult to decide whether these, or the Edinburgh pier-table carvings, bid more defiance to an invisible foe than to the commonest rules of design. In comparison with these, the rough carpentry of the Victoria shiphead almost elicited admiration. One could fancy this figure already mounted on the prow of a vessel, and steering clear of the obstacles of an over-crowded harbour. The spectator might well wish to follow her example. Here to the right we fell foul of a three-decker, 120 guns; to be sure, its substance was only cork, but cork of as inferior a description as the handicraft bestowed upon it. Turning away from this, and a little way off, you came in collision with the Dundee Anglo-Saxon arch, which manifestly bore off the palm of ugliness, only equalled by its originality. It would require the whole vocabulary of tracery to distinguish one after the other five orders superinduced. It would seem as if the architect was anxious to collect all the fragments of Saxon architecture into one composition, just as another gentleman thought fit to gather the valuable morsels of the shattered Portland Vase.

Flying from the frigid "Altar of Minerva" by Pidgley, one found pleasant shelter in Mr. Mechi's farm close by. While occupied with this charming model of rural agriculture, the eye was insensibly attracted to certain azure combinations, tesserae and encaustic tiles; at once the mental vision wandered from the precincts of Tiptree Hall to the Hall of the Lateran.

The lithographic ventures, as might have been expected, were highly creditable to us in the several branches of landscape, architecture, and their components. But it is lamentable to reflect that not the slightest hope was held out of mitigating that pictorial nuisance, the vast annual influx of foreign studies of heads and figures. Admirable as are the productions of Hullmandel and Walton, whose prints from Cattermole are only next best to originals: also the works of Haghe and D. Roberts, printed by Day and Son, &c., these either cannot or will not compete with Lemercier, Jullien, and Company. The fact is, that peculiar branch to which attention is more particularly directed on the continent, is with us entirely left to ticket embellishers. To the man through whose agency the world is made acquainted with certain incomparable pickles and pomade, soap and salad oil, &c. (samples of which illuminated proclamations were most unaccountably found in the Fine Arts Court), to him, as the supreme arbiter of taste, was left the care of producing the most refined subjects. The consequence obviously served to deter the skilful artist from encountering his rough treatment. The seals executed by Wyon need no recommendation of ours. That proposed as a prize medal for the Great Exhibition promised to be a handsome reward, as well as a token of superiority.

With these remarks, which we regret we cannot render more commendatory, we now dismiss the Fine Arts Court, and to refresh our readers by a complete change of scene and subject, invite them to a stroll outside the Crystal Palace, where, at the side of the drive, a little west of the barracks, stands a small block of neat, cheerful-looking, newly erected houses. These were the philanthropic work of the Prince Consort, who, in the midst of the splendid attractions of a court, and the pursuits of science and art in their higher branches, did not disdain to give a careful consideration to the condition of the hardworking artisan, in the humbler fields of industry. It was an intervention which was much wanted, which humanity had loudly called out for in vain, as all know who have inspected the abodes of the industrious and poorer classes, not only in the crowded city, but in the rural village; for neglect for the sufferings of others, and a niggardly denial of the essentials of health, cleanliness, and comfort, have been equally manifested in the town and provincial districts throughout the country. This has long been a crying evil, but too long only heard as the wail of the lowly and defenceless, and dependent classes, which found no way into the ears, much less into the hearts of those who should have heard their complaints, and solaced their rugged course of life by all means reasonably within their power. It was not until half-a-dozen years ago that the sanitary condition of the poorer classes was forced upon the attention of the legislature and the government, as a matter worthy of public consideration; and the pleadings of the humane and the warnings of the wise having been fearfully supported and confirmed by that providential scourge, the cholera, a board of health was appointed with certain powers, which have already been put in course of carrying into operation in nearly two hundred populous districts, with already very important and salutary results. The disclosures made by the inspectors appointed by this board, as to the wretched home accommodation of the poorer classes, which existed as a rule, with scarcely any exception, throughout the kingdom; the utter want of drainage, of water supply, of the ordinary precautions for the means of personal cleanliness, and the denial of the breath of life, through a wholesale and almost wilful neglect of ventilation, were such as to startle many even of those inhabitants of the very towns in which these flagrant evils existed.

The consequences upon the health of communities were also shown to be most serious, excessive mortality existing in some places to the extent of being *two* and *three-fold* what, with ordinary sanitary precaution, it might fairly be expected to be; two and three-fold what it actually was in some other districts more happily circumstanced. Added to this, the charge upon the public purse in the cases of sickness, of widows and orphans left to burthen the parish, of labour lost by temporary incapacity during illness; and a case was made out which convinced all cool and dispassionate individuals that it was the wealthy who had a direct pecuniary interest in the health of the poor; and that as regarded health itself, they were not altogether exempt from participation in the sufferings of their fellows—the parting breath of the dying pauper not unfrequently poisoning the atmosphere of his richer neighbour. Upon this subject, also, contemporaneously with the inspections of the board of health, the correspondents of some of the morning papers—more particularly the *Morning Chronicle*—lent their useful aid, and brought in a vast mass of corroborative evidence, thus giving increased publicity to facts already too well established in professional and official quarters. The journal last mentioned states, in a recent article:—"A couple of years ago our correspondents in the metropolitan, agricultural, and manufacturing districts, painted a succession of the most melancholy pictures of the wretched and degrading tenements in which the poor are lodged, both in town and country—in London alleys and manufacturing suburbs, and in rural lanes. The dens of lodging-houses in the great towns—the cellars and garrets where thousands of unhappy creatures are penned, sometimes three and four in a bed, and very often without distinction of sex—have been amply described in letters portraying the east end of London and the huge and swarming towns of Lancashire; while the hovels and dilapidated cottages which stud the agricultural districts, particularly in the south and west of England, have been sketched in colours just as dismal. Turning back to our files of a couple of seasons ago, we find column after column, and letter after letter, devoted to the exposition of the miserable, the worse than savage condition of the dwelling accommodation of a great portion of the peasantry of England. We read again and again of cottages crumbling into ruins—the cold wind blowing in at every chink and cranny—the rain sopping the mud flooring—the dunghill overflowing and sending its fœtid juice in streams across the threshold. We read of bed-rooms immediately beneath the putrid and leaking thatch—of bed-rooms in which a whole family, father, mother, adult and infant children, young men and young women, all slept together like so many pigs in a sty; of cottage accommodation, in fact, which made us wonder how there was any natural decency and feeling, or human restraint of behaviour left amidst a great proportion of our rural population. In many parts of England it is perfectly clear that the people are not better, perhaps they are worse lodged, than they were under the Plantagenets and the Tudors. No dwelling can by possibility be worse than a ricketty cottage, open to every wind of heaven, admitting rain through the roof and wall, a dunghill piled before the door, and men and women, children and parents, lying down to sleep together on ragged mattresses and straw in the same fœtid, unventilated room. Indeed we suspect that in many cases the condition of our rural population is even worse than it was in the days of the most despotic of our early Norman kings, because a greater proportional amount of rent is squeezed out for accommodation in nowise better than that possessed by the 'villains' and the 'varlets' of the good old times. Rents have risen, in fact, while cottages have not improved; and, worse even than that, as our agricultural correspondents have proved, population has in many districts increased enormously, and cottages not at all. It is to be earnestly hoped that a change in this respect is now at hand, nay, that it has already begun. The conveniently arranged and substantially constructed model cottages in

Hyde-park, to say nothing of the model lodging-houses in various parts of London, prove that good houses can now be erected as cheaply as bad ones, and that the building of such dwellings may be made to form at once one of the safest, most profitable, and most philanthropic means of investing money. Those who would be inclined to sneer at the juxtaposition of philanthropy and profit in the same sentence, know very little of human motive. Men naturally like to get as much for their capital as they can—society would not hold together unless such were the case; and men also—the monetary advantages being equal—just as naturally prefer realising these advantages through supplying the means of comfort and contributing to the well-being, rather than through a bare and insufficient ministering to the actual physical requirements of their fellow-creatures. The new houses erected in Hyde-park are calculated to pay seven per cent. on the outlay—a very handsome return—and they are calculated, at the same time, to rear a population brought up in decent household comforts, adapted alike to their physical and moral well-being."

The model house in Hyde-park consists of four dwellings, compactly put together—two on the ground, two on the first floor; the latter attained by an outside staircase, which gives a feature of architectural beauty to the elevation. Each dwelling (they are all *fac-similes*) contains a general sitting-room and kitchen, entered by a lobby (an essential requisite), two small bed-rooms for the male and female branches of the family, a large bed-room for the parents and the younger children, a scullery, and a decent water-closet. The whole of the rooms are full of cupboards and such conveniences; the building is fire-proof, there being no particle of wood in the whole structure; water is laid on; a passage to a general dust-hole communicates with all the sculleries; the kitchen ranges are models of economical neatness; ventilation has been carefully attended to on the most scientific principles; the walls are built of a peculiar species of hollow bricks, which are cheaper than the old ones, and have another most important requisite, that of deadening sound—and altogether the cottages are models of the most ingenious compactness and simple comfort.

CHAPTER XXXIII.

COMPREHENSIVE NATURE OF THE GREAT EXHIBITION—WALKING STICKS—PILGRIMS' STAVES—SWORD, DIRK, AND SPEAR STICKS—ALPENSTOCKS—FERULAS—BAMBOO AND ORIENTAL STICKS—STAVES OF OFFICE AND SCEPTRE STAVES—EARLY ENGLISH STAVES—STICKS OF THE TIME OF QUEEN ANNE—CLOUDED CANES, ETC.—GROTESQUE STICKS—PROCESS OF THE MANUFACTURE OF STICKS—CONTRIBUTIONS FROM DIFFERENT COUNTRIES.

One of the distinguishing characteristics of the Great Exhibition was its vast comprehensiveness. Nothing was too stupendous, too rare, or too costly for its acquisition; nothing too minute or apparently too insignificant for its consideration. Every possible invention and appliance for the service of man found a place within its all embracing limits; every realization of human genius, every effort of human industry might be contemplated therein, from the most consummate elaboration of the profoundest intellect, to the simplest contrivance of uneducated thought. The philosopher and the savage stood side by side; the accomplished artist and the rude boor alike were free to choose, "a local habitation," and might each with equal advantage, hope to acquire "a name;" from the wondrous calculating machine, down to the simplest toy, there was "ample

space and verge enough" to display whatever might be deemed worthy of public attention. All therefore might find abundant matter for wonder and delight.

We were led into these reflections after contemplating one of those great masterpieces of human genius with which the Crystal Palace abounded, by casually wandering into a department wherein was arranged every possible form, shape, and variety of "walking sticks;" yes, gentle reader, we repeat, of every specimen and description of walking-sticks, from the plain and unadorned shepherd's staff, to that of gold and ivory, fit for the hand of royalty itself. We shall select for the amusement and gratification of our readers, a few remarks, on this apparently insignificant subject, from the "Juries' Reports." "Whensoever," they observe, "the heroic period may be supposed to have existed, the staff, as employed for the support of old age, was then well known, since it is referred to in the enigma, put forth by the Sphynx, and solved by Œdipus." "There is a Being," said the questioner, "which has four feet, and it has also three feet, with only one voice; but its feet vary, and when it has the most it is the weakest." "This is man," was the hero's answer, "who when he is an infant, crawls upon his hands and knees; when he is a man, he walks uprightly, and when he is old he totters with a stick." The use of the staff for support in walking appears to be so natural and unartificial as not to require any illustration; and yet the Pilgrim's staff of the middle ages, and the *Alpenstock* of the present time, have a certain amount of historical interest. The *Bourdon*, or Pilgrim's staff, was a strong and stout stick, apparently about five feet in length, armed at the lower end with an iron spike, and intended to supply a support and balance to the body, when the traveller was climbing up slippery paths, or steep acclivities. About a foot from the top of the staff was generally found a large protuberance, either artificially or naturally formed around the staff, on which the pilgrim's hand securely rested, without danger of sliding downwards. The lower part of the staff was altogether solid, but the upper joint was a hollow tube, capable of containing small articles, like a long hollow box. It is probable that these articles were originally reliques of saints, or the "signs," as those emblematical figures were usually termed, which were commonly sold at the shrines to which pilgrims travelled, as proofs that they had really visited those sacred parts. In the latter ages of pilgrimage, however, this part of the staff was sometimes converted into some kind of pipe or musical instrument, such as sticks have frequently contained in modern times. Above the tube, the staff was surmounted by a small hollow globe, and it was also furnished near the top, on the outside, with a kind of crook, for the purpose of safely sustaining a gourd-bottle of water. After the pilgrim had completed his votive journey, and returned from Palestine, he commonly brought with him a branch of palm, fastened into the top of his staff, as a proof of his travel into Palestine or Egypt. It is, however, unquestionable that the pilgrim's staff frequently became the receptacle of secular articles. It is recorded by Holinshed, that in the hollow part of a pilgrim's staff the first head of saffron, afterwards so successfully cultivated at Saffron Walden, was secretly brought over from Greece, at a period when it was death to take the living plant out of the country. The silkworm also found its way to Europe in the hollow of a pilgrim's staff. So late also as the time of Cervantes, certain Spanish pilgrims existed, who had collected upwards of an hundred crowns in alms, which, being changed into gold, they concealed in the hollow of their staves, or the patches of their clothing. It seems to be a natural observation in this place, that the ancient contrivance of making a repository in the hollow of a walking-stick, is not yet obsolete. In the Great Exhibition, Dr. Gray, of Perth, displayed a medical walking staff, containing a variety of instruments and medicines; and the same principle has also been frequently employed for the portable conveyance of telescopes, and other important articles.

Several varieties of sticks were also exhibited, inclosing in them swords, dirks, and spring-spears: the principle of the construction of the sticks last-mentioned being, that they required a heavy blow to be given with the armed end before the strong spring could be overcome which held back the spear-head. Sword-sticks, and dagger or tuck-sticks, are of a more recent period; but this kind of weapon walking-staves is not of later invention than the last century, though that which contained fire-arms existed in the early part of the reign of Henry VIII. The *Alpenstock* is another ordinary walking staff requiring to be noticed, of modern use, though of great antiquity. It is a stout pole of about six feet in length, provided with an iron spike at the lower end, and surmounted with a chamois' horn as an ornament. It is almost indispensable in mountain journeys, and may be procured for two francs throughout Switzerland. Another order of walking-sticks comprises those light wands to which the name is now exclusively attributed; and these also are descended from a time of considerable antiquity. The stem of the giant-fennel, the *Ferula* of Pliny, is the chief progenitor of this family, and he derives the origin of the name of the plant either from *fero,* from the stock being employed in walking, or from *ferio,* because schoolmasters used it for striking boys on the hand. It would seem as if the latter interpretation had become established at an early period, since Martial terms the ferula *sceptrum pedagogorum;* and even down to the present day the word popularly conveys no other meaning. The tough lightness of the fennel-wood rendered it especially fitted for a support to aged persons, while the imposing length of the staff gave an air of importance to those who carried it. Hence it became the prototype of those lighter wands, which have continued as a sign of seniority or gentility to the present time.

In oriental countries the substitute of the ferula was naturally some kind of native reed; and the employment of such a plant as a support, and also as an emblem of Egypt, is noticed, in probably a proverbial form, by the Assyrian general Rabshakeh, in his speech to the servants of Hezekiah, in the eighth century, B.C. "Now, behold," says he, "thou trustest upon the staff of this bruised reed, even upon Egypt; on which if a man lean, it will go into his hand and pierce it."—2 *Kings,* xviii. 21. The supposition that the ferula was supplied by some local plant, must be also equally true concerning other regions, and especially in those in which the bamboo was indigenous. This was probably the first kind of the cane tube introduced into Europe, since the word *cane,* in all its original forms, appears intended to express a hollow tube or channel, for which purpose the bamboo is still extensively and constantly employed. Although the generic name of cane has long since supplanted all others for ordinary walking-sticks, yet at different periods they have been made of a great variety of materials. A slight glance may be taken at some of the substances employed, and some of the peculiarities of the common walking-sticks of other times. In the Egyptian sculptures, persons of importance or official rank are represented walking with tall slender staves, having the lotus-flower on the top. Several ancient specimens of these sticks have been discovered in Egypt, made of cherry-wood and other substances, measuring from three to four feet in length, some being surmounted by a small knob, or a flower, and others having a curved projection standing out on one side, like the tusk of a boar, as if it had been intended for the hand to rest upon. At a very early period of the sacred history, the distinctive character of the staff carried by an individual, is indicated from his immediate recognition simply by the production of it with his signet and his bracelets—*Genesis,* xxxviii. 18—25. Homer has commemorated the "sceptre-bearing princes" of the Greeks, and especially the sceptre-staff of Achilles, adorned with golden studs: "I will swear a great oath," says the hero, "even by this sceptre, which shall never again bear leaves or shoots, nor bud again from the time it left its trunk upon the mountains, when the axe stripped it of all its

leaves and bark." These sceptres, although they were indisputably the insignia of rank and authority, were also evidently the usual walking-sticks of persons of the highest class. Agamemnon, it is stated, never went forth without bearing with him his paternal staff of royalty.

In the portraits of many of the noble personages of English history, painted in the sixteenth century, may be seen instances of the richness of the superior walking-sticks carried at that period, when they appear to have been tall, stout, and mounted and adorned with gold. In 1531 a cane-staff and a stone-bow were brought as a present to Henry VIII., by a certain fletcher, or arrow-maker, whom the king rewarded with forty shillings. Some far more curious instances of canes belonging to the same sovereign are, however, described in the manuscript inventory of the contents of the royal palace at Greenwich, in the following entries:—"A cane garnished with sylver and gilte, with Astronomie upon it. A cane garnished with golde, having a perfume in the toppe; under that a diall, with a pair of twitchers, and a pair of compasses of golde; and a foot-rule of golde, a knife and a file of golde, with a whetstone tipped with golde." From the middle of the seventeenth century, walking-sticks appear to have increased in luxury, both in regard of the mountings, and also of the materials of which they were manufactured, the improvements being derived principally from France. In the early part of the following century, the most fashionable sorts were made of certain fine marbles and agates, exhibiting either a splendid variety of colour, or a rich semi-opaque plain tint, which was most expressively described by the English term "clouded." These wands were made of the most slender proportions, both on account of their specific gravity and the quality of the persons by whom they were to be carried; and they were often richly mounted with silver, gold, amber, or precious stones. Such were the "clouded canes" of the age of Pope and Gay, which were frequently so greatly valued, as to be preserved in cases of shagreen or sheaths of leather. Every reader of the *Rape of the Lock* will remember—

> "Sir Plume, of amber snuff-box justly vain,
> And the nice conduct of a clouded cane,"

as well as Gay's commemoration of the same kind of walking-stick in *The Fan*—

> "Here clouded canes, 'midst heaps of toys are found,
> And inlaid tweezer-cases strew the ground."

The most curious account of the walking-sticks of this period, is, however, contained in the *Tatler*, No. 103, written by Addison and Steele, and published on Thursday the 6th of November, 1709. In that paper, Isaac Bickerstaff represents himself as issuing licences and regulations for the beaux of the time, as to the carrying of "canes, perspective glasses, orange-flower waters, and the like ornaments of life." The first part of the essay is intended to ridicule and abolish the prevailing absurd, though fashionable practices connected with walking-sticks; hence the respective parties were licensed to carry them, provided they did not walk with them under the arm, nor brandish them in the air, nor hang them on a button. One of the petitioners desires permission to retain his cane, because it had become as indispensable to him "as any other of his limbs," and because "the knocking of it on his shoe, leaning one leg upon it, or whistling upon it with his mouth, are such great reliefs to him in conversation, that he does not know how he could be good company without it." The cane of this person being produced, it is described to be "very curiously clouded, with a transparent amber head, and a blue riband to hang it on his wrist!" In the second half of the last century, there was one peculiar form of walking-stick prevailing, which was generally used by females advanced in life. The sticks referred to were between five and six feet in height, taper and slender in

substance, turned over at the upper end, in the manner of a shepherd's crook, and twisted throughout the whole extent of the wand. The materials were either wood, ivory, or whalebone, mounted with silver or gold, and sometimes they were formed entirely of a clear pale green glass. The length of the most fashionable walking-stick of this period, is noticed in a number of *The London Chronicle*, published in 1762, wherein the writer says, "Do not some of us strut about with walking-sticks as long as hickory poles, or else with a yard of varnished cane, scraped taper, and bound at one end with waxed thread, and the other tipped with a neat ivory head, as big as a silver penny." Towards the close of the eighteenth century, two peculiar forms of walking-sticks were commonly carried by the most gay of the young men of the period, one being a very short and strong bamboo-cane, bent over at the top, and the other a stout knotted stick, in which the grotesque natural growth of the wood was frequently regarded as its greatest excellence.

Another kind of walking-sticks comprises those grotesque staves, which have been devised or adopted by individual fancy or eccentricity. It is possible that this peculiar humour may be of considerable antiquity, since the knotted walking-staff and wallet were the distinctive attributes of the Greek and Roman philosophers, and especially of the cynics. The chief peculiarity of this class of staves, however, consists in an ingenious adaptation of the excrescences of the wood of which they were made, into grotesque human heads and faces, of which the Exhibition contained many curious and remarkable instances. The old English form of these staves may perhaps be referred to the baubles carried by the fools and jesters, who were retained by sovereigns and noblemen of the sixteenth and seventeenth centuries. The jester's bauble consisted of a short stout staff, surmounted by the carved figure of a puppet or a fool's head; and the modern practice of carrying sticks decorated with humorous faces appears to have existed early in the eighteenth century. About 1730, *The Universal Spectator* states, that at the court end of the town, instead of swords, many polite young gentlemen "carry large oak sticks, with great heads and ugly faces carved thereon." Perhaps some of the most remarkable instances of these carved sticks ever exhibited, were those executed and carried about by James Robertson, of Kincraigie, otherwise called "the daft highland laird," of whom Kay published an etching in 1784. In the latter part of his life he adopted the amusement of carving, for which he had some talent, and sculptured in wood the effigies of such persons as attracted his imagination, whether friends or enemies; the latter, however, being executed in caricature. These small figures he mounted on the upper end of a walking-stick, sometimes one above another; and as it was reported that he produced a new one every day, he was commonly accosted with the inquiry, "wha hae ye up the day, laird?" to which he would readily answer by naming the individual, and the reason for selecting him.

It might be supposed that the manufacture of walking-sticks could not form a large branch of commerce, and yet a vast quantity and great variety of materials are annually consumed in it. There is scarcely a grass or a tree of sufficient elasticity or strength, which has not at times furnished the material for a staff or walking-stick. The stick-maker, however, gives a decided preference to some few kinds out of the almost infinite variety offered to him by Nature. Amongst European woods, the blackthorn, the crab, especially the warted-crab, the maple, the ash, the oak, especially the young, or sapling oak, the beech, the orange tree, the cherry tree, the furze bush, the cork tree, and the Spanish reed (a grass called *Arundo donax*), are those principally used; and these woods are most generally cut towards the latter end of autumn, especially when it is wished to preserve the bark. The West Indies furnish a copious supply of the most approved materials for walking-sticks, in supple jacks (vine stems,) pimentos, cabbage stalks, orange

and lemon-tree sticks, and the coffee shrub and Indian briars. Numberless canes, the product of climbing palms and gigantic grasses, are also largely used by the stick-maker. The principal of these are the following:—ratans, dragons, and Penang lawyers, which are the stems of a species of calamus, or climbing-palm, and are obtained from India, Singapore, Java, and China; white and black bamboos, fluted bamboos, wangees, jambees, and dog-head canes, which are the stems of various species of bambusa or grasses, attaining a height of from fifty to sixty feet, and are exported from China; ground ratans, large ground ratans, malaccas, and dragons from Singapore. There are also the bamboo and jungle-bamboo, imported from Calcutta; and lastly, canes from Manilla. It must not be supposed that these various materials in the unwrought state, present an appearance at all resembling the finished sticks. Indeed, the copious examples in the north-east gallery, fully confirmed this statement; but the truth is much more strongly impressed on the mind, after an inspection of the immense warehouses of Mr. B. Meyers, who contributed them. Those repositories appear, at first sight, to contain stores of little value above that of fire-wood; yet many thousands of pounds have thus to be locked up for a time, in order that the various woods may become properly seasoned. It is only, indeed, after having passed about twenty times through the hand, that even the commonest walking-stick assumes a saleable appearance: the better descriptions require more operations. The principal processes of this manufacture deserve to be described.

1. *Peeling off the bark.*—From most of the forest-woods, the bark has to be removed before the separated boughs can be made into polished sticks; but in some cases it is left on. One of the most difficult articles to manipulate is the warted-crab, the excrescences of which are produced by an abnormal growth of the tree, resulting from the puncture of an insect. As a halfpenny is the payment for peeling one of the most complicated kind, it will be readily concluded that there must be some simple means of facilitating this operation; and, accordingly, the sticks are boiled for a couple of hours; the bark then yields to the incision of the finger nail, and may be stripped off without difficulty.

2. *Forming the crook and straightening the stick.*—Few limbs of trees, or even canes, are sufficiently straight, in their natural condition, to answer the purpose of a walking-stick, and very few present those conformations which can be readily fashioned into handles; hence the necessity for these two operations, which claim our admiration for their ingenious simplicity. The handle is formed by softening the wood or cane in hot *damp* sand, when it becomes pliable and non-elastic, and readily assumes and retains any curvature or bend that may be given to it. Minute attention, however, is required with regard to the temperature for each description of wood; hence the precise degree which is proper for each can only be learned by long experience; and in some cases, where a new variety of material is imported, some experimenting becomes necessary. The straightening is performed in a similar manner, excepting that the previous softening is effected in *dry* sand, heated on an iron plate, that is, in the ordinary sand-bath. When the stick has become sufficiently pliable, it is inserted into a deep notch cut in the edge of a strong plank, and is strained first in one direction and then in another, until it has become straight. The stick, when softened, takes any form, much as a piece of red-hot iron would do. The straightening-plank is three inches thick, about six feet long, and one foot wide, and is inclined away from the workman at an angle of about thirty degrees from the perpendicular, it being firmly secured to the floor at the lower end.

3. *Fashioning the stick.*—In this operation some sticks are wrought to assume a twisted or spiral form, and others the knotted appearance of a bamboo or whangee; these characteristics are imparted chiefly by rasping and filing. Heads or hoofs of

various animals very commonly adorn stick heads, and grotesque human heads frequently display proofs of considerable skill and surprising humour in the artisans employed. Examples of this latter description were exhibited in Class xxix., by most of the German and Austrian exhibitors.

4. *Staining.*—After straightening or carving, the sticks are in many instances brought to a very smooth surface, by means of emery or glass-paper, and finished off with fish-skin; and they are then, previously to the varnishing, made to assume so many different hues by means of dyes, that the uninitiated would conclude that each was a perfectly distinct variety. The surface is sometimes likewise charred, and the charred portions scraped off partially here and there, so as to produce a very ornamental appearance. Sticks are also embellished with lithographic transfers, but not in England, as hand-labour is too expensive. Malacca canes, when not sufficiently long between the joints to form a straight stick, are made to appear continuous, by reducing the larger part to correspond to the smaller, and tapering it gradually from the point of juncture. It then becomes necessary to colour that portion which has been reduced in size, and this is done with so much skill, that the stained and natural surfaces are not distinguishable.

Hitherto, mention has been chiefly made of sticks of vegetable origin. Of such as are made of animal substances may be instanced whalebone, tortoise-shell, ram's horn, rhinoceros' horn and hide, as commonly employed for sticks; and occasionally the real bone of the whale, the spine of the shark, the horn of the narwhal, and ivory. The horns of animals, under particular treatment with heat, and by mechanical appliances, are drawn out into long cylinders; and tortoise-shell raspings are easily conglomerated by heat and pressure, and in the soft state formed into elongated rods, applicable to the manufacture of sticks. The hide of the rhinoceros forms a very transparent horn-like substance, and is very elastic and tough. The feet of fawns, which are frequently used for stick-handles, are made to retain the required form by merely baking them. Ivory, horn, and bone, are also largely used for stick and umbrella handles, and give, in their preparation for these purposes, employment to a considerable number of workmen.

Before proceeding with the review of the contributions of the several nations, attention is claimed to the fact that London, Hamburgh, Berlin, and Vienna, are the chief seats of the manufacture under consideration, and that by a curious coincidence the principal makers in three of those cities bear the name of Meyer or Meyers. Two of them, namely those residing in London and Hamburgh, were present by their works in the Great Exhibition, but the third of Vienna, did not exhibit. The manufacture of sticks in England is in an exceedingly flourishing condition. The principal London maker alone sells annually above 500,000 sticks of various descriptions. The specimens exhibited by English manufacturers comprised many instances of the employment of walking sticks for containing various implements alluded to in the introductory matter. Besides which, were to be found a walking stick which served the purpose of a miniature wine cellar and larder; one which contained a voltaic battery which continually subjects the owner to an electric current; one to contain guide maps, and two or three others convertible into seats, umbrellas, and other instruments. The British colonies exhibited a vast variety of specimens. From Western Africa was a stick, or rather staff of honour usually carried before the African chiefs. The Indian courts displayed their accustomed profusion of gold, ivory, and ornamental work in every variety of decorated sticks sent by various rajahs, besides many beautiful articles that were purchased by the Company expressly for exhibition. The island of St. Vincent sent its supple-jacks; while Van Diemen's Land chiefly confined its contributions to specimens of sticks made with the hard portion of the bone of the whale, with heads carved out of the whale's tooth.

France, as usual, exhibited her wonted elegance. The chief specimens sent from this

country consisted of articles made of elongated ram's horn, and conglomerated tortoise-shell. In 1847 there were in Paris one hundred and sixty-five manufacturers of walking sticks, and riding and driving whips, employing nine hundred and sixty-two workpeople, who produced goods valued at £140,320. About nine-tenths of these articles are exported. The most important display of walking-sticks was, however, unquestionably that in the Hamburgh department, contributed by H. C. Meyer, jun., who it appears is the most extensive stick-maker in the world. His collection contained about five hundred varieties, comprising most of the known materials. The Austrian collection was also very extensive, and exceedingly good in point of workmanship. Belgium offered a small but neat display, as did also the Grand Duchy of Hesse, and Wurtemburg. Sardinia and Tuscany were also represented, as well as Switzerland, and Prussia; a few specimens of stick manufacture being supplied by each of these countries. China was more magnificent, contributing curiously carved bamboos, elaborate sceptres, and other ingeniously wrought specimens, exceedingly rare and interesting. But it is in the raw material that the commerce of the country is more particularly represented, large quantities of which are annually exported. From Canton alone 1,200,000 sticks of various kinds were exported in 1846, consisting chiefly of different kinds of canes and bamboos, but comprising also laurel-sticks, stems of the tea-plant, and the root of the fig-tree of the Pagodas.

The United States were represented by one solitary contributor, who exhibited a gold-headed walking-stick, made from the curled hickory. We shall conclude with remarking, that though the Jury, with the impartiality which marked all their proceedings, allowed that whalebone sticks are made cheaper and better in Germany, and that the continental makers were more proficient in making stieks from the hide of the rhinoceros, they pronounced England unrivalled with regard to the chased, gilt, and silver handles, and that its ferules and metal works, generally, were unsurpassed. Five prize medals were given, one being to Mr. Meyers, of Crutched-friars, and honourable mention made of three other candidates for fame in this apparently trifling, but really important department.

CHAPTER XXXIV.

THE FAN—ITS HIGH ANTIQUITY—ITS VARIOUS USES, MILITARY, AGRICULTURAL, AND DOMESTIC—USED IN ANCIENT GREECE AND ROME—ITALIAN FANS—GENERAL USE OF THE FAN IN ENGLAND IN THE LAST CENTURY—CHINESE FANS—FRENCH FANS—FANS FROM THE BRITISH COLONIES—EGYPTIAN FANS—SPANISH FANS, ETC. ETC.

As in our preceding chapter we have dwelt at some length upon that most important addition to the toilet of the beau, videlicet, the cane or walking-stick, so we feel ourselves called upon to devote a few pages to the description of a no less important appendage to that of the belle, in whose hands, as Addison playfully remarks, the Fan has perhaps achieved as many victories as the sword. We shall hasten therefore, to present to our fair readers, for their especial gratification, a full account of

> "That graceful toy, whose waving play
> With gentle gales relieves the sultry day."

In short, to exhibit before their delighted vision, the gay and wondrous variety that, in various parts of the Crystal Palace, the simple manufacture of the fan called forth

from every quarter of the civilized globe. A display so bright and alluring, that we could almost fancy that Queensbury's favourite bard had penned his celebrated description in anticipation of it—

> "The Fan shall flutter in all female hands,
> And various fashions learn from various lands.
> For this shall elephants their ivory shed;
> And polished sticks the waving engine spread;
> His clouded mail the tortoise shall resign,
> And round the rivet pearly circles shine.
> On this shall Indians all their art employ,
> And with bright colours stain the gaudy toy,
> Their paint shall here in wildest fancies flow,
> Their dress, their customs, their religions show:
> So shall the British Fair their minds improve,
> And on the Fan to distant climates rove."—*Gay.*

We shall now again take the liberty of turning to the pages of the "Juries' Reports," and select from their learned lucubrations, with all due acknowledgment, our materials for the present chapter. "Upwards of three thousand years ago," observes our classical investigator, "the artist of ancient Egypt painted the fan on the walls of the tombs at Thebes. There the Pharaoh sits surrounded by his fan-bearers, each in his due rank; and there is seen an investiture of a fan-bearer, which realises the description in Genesis of the honours paid by Pharaoh to Joseph. The office of fan-bearer must have been honourable, and the insignia of office were long, slender, vividly-coloured fans on variegated or twisted handles. In war the same officers acted as generals, using their fans as standards; and in peace they assisted in the temple, and waved their variegated fans, both to produce a cooling breeze, and to guard the sacred offerings from the contamination of noxious insects. The fan is mentioned by Euripides, and its origin from "barbarous countries;" its use in Greece was similar to that in Egypt, but its forms were far more beautiful. The wings of a bird joined laterally and attached to a slender handle, formed the simple yet graceful fan of the Priest of Isis, when Isis became a Grecian deity; but it had not this form alone, for the Greek vases of Sir William Hamilton show that feathers of different lengths were taken and spread out somewhat in the form of a semicircle, but pointed at the top; a thread connected the feathers at the base, and another near their summit, and the fan thus made was fixed in a handle. This fan, the precise type of the state-fan of India and China of the present day, was waved by a female slave.

The fan, according to Virgil and Apuleius, was sacred to Bacchus, and the "*mystica Vannus Jacchi*" was carried in procession in the feast of that deity, as well as in the Eleusinian Mysteries. Its appellations multiplied, though its office remained the same, and it was termed indifferently "Flabellum," or "Muscarium." The modern Greek church is careful to place a fan in the hands of its deacons, to guard the officiating priest and the elements from desecration. The Roman ladies certainly enjoyed the luxury of the fan, which, gorgeous with peacock's feathers, or delicate with the tinted plumes of the ostrich, could not yet be folded, and rendered the services of an attendant necessary.

In the works of the middle ages references are made to the two forms of the fan: to that employed in winnowing the grain, and that used in the service of the church, alternately to court the breeze or wave away the flies, till we hear of the fan as brought to France by Catherine de Medicis, when it was no longer stiff and unyielding, but light and pliable. In the early part of the seventeenth century, it was so constructed that it could be folded in the manner of those used in the present day. Formed of paper and perfumed leather, it became the delight of the French court; and attracting the attention of artists, fans, in the luxurious reigns of Louis XIV. and Louis XV. (in the latter under

the name of "Pompadours") shone with gilding and gems, and at length glowed with the pictures of Boucher and Watteau, until at length no toilet was esteemed complete without a fan, the cost of which was frequently in those days as high as from £12 to £15 sterling. In Italy, on the contrary, in the early part of the seventeenth century, even painted fans were of a very moderate price, and of universal use. "The first fans," says Coryat, in his *Travels in* 1608, "that I saw in Italy, I did observe in this space between Pizighiton and Cremona; but afterwards I observed them common in most places where I travelled. These fans both men and women of the country do carry to cool themselves with in the time of heat by often fanning of their faces. Most of them are very elegant and pretty things. For whereas the frame consisteth of a painted piece of paper and a little wooden handle, the paper which is fastened into the tops is on both sides most curiously adorned with excellent pictures, either of amorous things, having some witty Italian verses or fine emblems written under them, or of some notable Italian city, with a brief description thereof added thereto. These fans are of a mean price, for a man may buy one of the fairest of them for so much money as countervaileth an English groat." England must have been a great buyer of fans in the last century, as a lady of that period would have felt as awkward without her fan as a gentleman without his sword. Indeed Addison makes the comparison, and in the *Spectator* he describes an academy where the use of the fan is taught. "In the flutter of the fan," he observes, "there is the angry flutter, the modest flutter, the timorous flutter, the confused flutter, the merry flutter, and the amorous flutter." He says, "I have seen a fan so very angry, that it would have been dangerous for the absent lover who provoked it to have come within the wind of it." Gay, again, gives the fan as a present from Venus to a despairing lover, in order to soften his mistress, and describes in verse the hint which the peacock's tail presents for its construction.

CHINA.

In fan-making the Chinese and French are the great rivals, and may be said to monopolise the supply of the whole world. In the lacquered fans the superiority of the natives of China is fully admitted. They are unrivalled, especially when price is taken into consideration, in the sculpturing and piercing of the wood, bone, ivory, or mother-of-pearl framework. Even their commonest fans are remarkable for boldness and originality of design, brilliancy of colouring, sharpness of drawing, and solidity and correctness of workmanship. The manufacture of fans is carried on almost exclusively at Canton, Sontchou, Hangtchou, and Nankin. The fans of ivory and bone and of feathers, are made exclusively for exportation to Europe or America; those used by the Chinese are of bamboo polished or japanned, and covered with paper. They are sold at from 10*d.* to 14*s.* 6*d.* per dozen, according to the quality of the frame and the design of the leaf. The examples which were in the Great Exhibition did not, however, come direct from any Chinese maker, but were contributed by three English exhibitors, viz. Messrs. C. T. Braine, J. Daniell, and Hewett and Co. The examples exhibited comprised fans of painted and embroidered feathers; a feather-fan painted with silver outlines, representing groups of Chinese figures, the feathers being alternately blue and white; an ivory fan elaborately carved and pierced, and, considering the amount of work, very cheap, its price being only 20*s.* There were also several very common paper-fans, ornamented either with rude delineations of landscapes, or besprinkled with gold-spangle.

FRANCE.

Fan-making has arrived at a high degree of perfection in France, and presents a remarkable instance of the subdivision of labour, as may be gleaned from the statement

that about twenty different operations, performed by as many pairs of hands, are necessary to the production of a fan which sells for less than one halfpenny; and that these various processes are not all carried on in a single manufactory, but, on the contrary, form four distinct branches of trade, directed by masters employing the various artisans, who, for the most part, work at their own homes, and who are frequently assisted by their wives and children. A fan consists of the frame of solid material, called a "*pied*," which is composed of the inner ribs, or "*brins*," and the two outer ribs, or "*panaches*," and likewise of the flexible leaf, or "*feuille*." The frame is made of wood, bone, ivory, tortoise-shell, or mother-of-pearl. The first operation is performed by sawing the material into the required form for the inner and outer ribs. These ribs then pass into the hands of another workman, who shapes them with a file, and they are then taken up successively by the polisher, the piercer, the sculptor, the gilder, and the workman who fixes on them the spangles and pins of gold, silver, and steel. The frame is now sent to the manufactory which furnishes the necessary drawings for the series of operations, where it is riveted, the rivet being frequently ornamented with a precious stone. The leaf, or feuille, is sometimes single, but more often double, and it is usually made of paper lined with silk or calico, but also of parchment, lamb's skin, satin, and silk gauze. The richer kinds of feuilles are painted in water-colours on vellum, by artists known as *feuillistes;* and the highest and most expensive class by artists of celebrity, since Boucher and Watteau, Camille Roqueplan, Gavari, Clement Boulanger, and Dupré, have affixed their signatures to fans which they have decorated. The devices on the more ordinary descriptions of fans are printed from copperplates, and coloured by hand, and the most common sorts are ornamented by the process of chromo-lithography. The feuille is folded in a mould of strong paper, and is then mounted on the frame and glued to the prolongations, or "*bouts*" of the inner ribs. The feuille of the best fans is after this painted on the edge with gold size, and gilt with leaf-gold; but the feuille of the common fans is printed in Dutch metal previous to its being cemented on the frame. The decorator now ornaments the frame with gold or coloured ornaments, and the fan lastly passes into the hands of the overlooker, who attaches the tassels, and selects the proper sized sheath, into which she places it. The frame, or "*pied*," is made in the parishes of Andeville, the Deluge, Boisière, Corbeil-Cerf, and St. Geneviève. In the district situated between Méru and Beauvais, in the department of the Oise, 2,000 workpeople, men, women, and children, are employed in the fan-trade. The woods used are the beam-tree, the plum-tree, ebony, sandal, and the lime-tree. The dexterity and sureness of hand of the peasant workman are said to be quite wonderful. Considering his want of knowledge of the principles of drawing, his facility in engraving, sculpturing, and gilding, is certainly remarkable. The piercing is performed by means of minute saws, which the workman makes for himself with pieces of watch-spring. A remarkable piece of saw-piercing, in the shape of a mother-of-pearl fan, was exhibited in the French Section, No. 119; it contained no less than 1,600 holes in the square inch. This *tour-de-force* was the production of one of these peasant artisans, named Désiré Henry. The printing, the colouring, and the mounting of the feuille, and the final embellishment of the fan, are usually performed at Paris, under the direction of the fan-maker, called, *par excellence*, "Eventailliste," though he has really but little to do with the manufacture of the fan, and must be regarded rather as the collector into one focus, and arranger of the produce of others; yet his labours are not the less essential. The mounting of the feuille, its ornamentation with feathers, and final decoration, are the operations usually performed by a small number of work-people in his own establishment; besides which he furnishes the drawings to the peasant in the Oise; for the framework to suit the constant changes in fashion, he instructs his feuilliste as to

the style of ornament; he groups together the frames and feuilles; and, finally, he overlooks the whole, to see that the workmanship has been well executed. Except the mountings of the feuille, and the final adorning of the fan, the other operations are usually performed by workmen at their own houses. The number of fan-makers, or *Eventaillistes*, in Paris, in 1827, was 15, who employed 1,010 workpeople (344 men, 500 women, and 166 children), and sold about £40,420 worth of fans. According to the *Statisque sur l'Industrie à Paris*, drawn up by our colleagues, M. Natalis Rondot and M. Say, it appears that in 1847 there were 122 fan-makers, comprising chamber-masters as mounters, feuillistes, painters, and colourers. The value of the fans made was £110,000. These masters employed 575 workpeople (262 men, 264 women, 29 youths, and 20 girls.) The workmen, on the average, earn 3*s.* and the women 1*s.* 8*d.* per day. The men were, for the most part, copperplate engravers and printers, lithographic draughtsmen and printers, painters, colourers, and overlookers. Thus in twenty years it appears that the produce in fans had increased in value nearly threefold, whilst the number of workpeople had diminished to one-half. This change is to be attributed to the employment of machinery, especially of the fly-press in stamping out and embossing the ribs, and the extensive employment of chromo-lithography, an art not practised at the former period. By these means the French have been enabled greatly to increase their exports by the production of cheap fans, to compete with those made by the Chinese. P. Duvelleroy exhibited some small fans, the price of which was as low as 5*d.* per dozen.

The collection of fans in the French department was most complete, and contained several specially decorated in honour of the Exhibition, and of her Majesty and Prince Albert. Among these the "Royal Fan," by Duvelleroy, attracted general admiration. It comprised a pleasing group of the whole of the royal family, with a rich emblazonment of the arms of England. Besides these and others painted by first-rate artists, it also comprised most of the descriptions manufactured for exportation, and which possessed distinctive characters, according to the market for which they were destined. For instance, some displayed great differences in the length of the ribs and the portion of the circle occupied by the fan when open; other fans, intended for Turkey and Morocco, were composed entirely of feathers, and, in conformity with the Mohammedan doctrine, no living object was painted on them. The principal foreign market for fans made in France are the South American States. In the decoration of such fans as were intended for Buenos Ayres, blue and green were carefully omitted, these colours having political significance, and being prohibited from use on pain of death. All the exhibitors were of the class called "*Eventaillistes*," as none of the manufacturers of the department of l'Oise sent their productions.

BRITISH COLONIES.

The colonial dependencies of Great Britain contributed many examples of fans, some of which were interesting on account of their simplicity, whilst, on the other hand, those from India presented most striking proofs of the luxurious splendour of the Indian princes. There were, for example, two fans contributed by H. H. the Rajah of Kota, one with an ivory handle, the other with a gold handle; but as the names of the various manufacturers were unfortunately not ascertainable at the time the Jury examined these specimens, no prizes were awarded in their favour. The Indian fan differs from that of Europe and China in not closing, and likewise in its form, and it is usually kept in motion by an attendant. Beside the fans affixed to central handles, all of which were most gorgeously enriched with embroidery and jewels, there were exhibited others resembling a curtain suspended from a silver rod, which is held horizontally by the attendant, and waved backwards and forwards over the head of the wealthy Hindoo:

and there was also the circular standard-fan; the handle being a silver staff, crooked at the top, to which the fan is attached on the opposite side to the crook. The attendant stands by the side of his master, and placing the end against his foot, inclines it away from his body, and slowly swings it to and fro. There was also a beautiful peacock-feather fan from Assam, and a fan, or *punkah*, composed of China beads and pearls, and made in the city of Delhi. The most simple, however, were those made of the entire or the divided leaf of the *Borassus flabelliformis*, manufactured at Calcutta, and commonly used both by natives and Europeans. The other examples comprised a punkah made of khuskhus grass (*Andropogon muricatus*) which, when wetted, emits a fragrant perfume; fans made of sandal-wood, from Calcutta; a fan made of bamboo, from Moorshedabad, and several of a similar description, from other parts of India; and lastly, from Bengal, large hand-fans, made of the palmyra-leaf. The inspection of these beautiful productions of Indian workmen, naturally suggested the idea that their skill and remarkable taste might be turned to profitable account, if directed to the production of fans suitable to the European and American markets. *Nova Scotia* sent an example of a very simple Indian fan. From *Trinidad*, Lord Harris, the governor, sent examples of fans for ladies. And from *Western Africa*, Mr. R. Jameson, of Liverpool, exhibited several fans from the banks of the Niger, one of which was made of a species of grass. A few specimens were exhibited in the collection from Egypt, to which much interest was attached, as coming from a country in which, possibly, the fan was first devised.

SPAIN.

There were two exhibitors of fans in the Spanish Court, one of whom contributed painted, and also printed "Feuilles" and the other both feuilles and complete fans, some of which were copies from French models. The examples, although they bore no comparison in point of taste or execution with the splendid fans from France, were good of their kind; and it would appear that the attention of their exhibitors had been directed rather to the manufacture for an article of general sale, than to the production of works of art. But it is remarkable, that no finer specimens should have been sent from a country, in which the use of fans is so prevalent, that they are commonly offered for sale outside the arena of the bull-fights, and other places of amusement. The fans in the Tunisian Court were ten in number, and in some cases ornamented with rich embroidery. From Turkey, the only specimen was an embroidered fan, made at Constantinople. Wurtemberg contributed several bone and ivory fans, reasonable in price, but very inferior to the ivory fans exhibited by the French makers. The number of exhibitors of fans was twenty-three; of these two received a prize medal, and one obtained honourable mention.

M. Duvelleroy and M. Felix, both of Paris, were the holders of the prize medals; the former for a display of fans, ornamented with artistic paintings, and remarkable for the beauty of the inlaying and the piereed ivory and mother-of-pearl frames. The most elegant fan in this collection was one painted by Roqueplan; the ribs were of richly-piereed, and sculptured, mother-of-pearl, inlaid with gold; it was valued at £40. Besides the above, others intended for foreign markets were exhibited, the prices of which varied from 5*d*. to 40*s*. per dozen. M. Felix obtained his for a collection of fans, for the most part copies of the best examples of ancient fans: these were such remarkably beautiful specimens of vellum-painting, that they fully entitled this manufacturer to the award, and were moreover the richest of any exhibited.

CHAPTER XXXV.

BOOKBINDING—BRITISH WORKMANSHIP—REMNANT AND EDMONDS, BARRITT AND CO., WRIGHT, MACOMIE AND CO., EVANS, BATTEN, ORR AND CO., LEIGHTON, CHURTON, LEWIS, TARRANT, RIVIERE, WESTLEY, ROGERS, ETC. ETC.—FOREIGN BOOKBINDERS—M. GRUEL, NIEDREE, MAME AND CO., HANICQ, LEISTLER, ETC. ETC.—STATIONERY—VARIOUS CONTRIBUTORS—GREAT BRITAIN—FRANCE—SWITZERLAND—BELGIUM—ETC. ETC.

THE various specimens of bookbinding exhibited both on the British and foreign side, afforded evidence that an animated struggle is going on for pre-eminence in the ornamentation of the outer parts of books; and many ingenious and gaudy devices are the result. But upon the whole, we cannot approve of the taste which lavishes so much upon the externals of our literature; it is neither in harmony with the calm spirit of intelligence which should preside over the hours of study, nor, to speak upon decorative points, do we think that so much laboured and far-fetched vanity, improves the appearance of the shelves of the library. Besides, where the exterior is so much cared for and attended to, it frequently happens that the interior is but slightly regarded. Pope, in one of his moral essays, has presented us with an amusing account of a book collector of this description, in Lord Timon:—

> "His study! with what authors is it stored?
> In books, not authors, curious is my lord;
> To all their dated backs he turns you round;
> These Aldus printed, those Du Suël has bound!
> Lo, some are vellum, and the rest as good,
> For all his lordship knows, but they are wood."

Waiving, however, further discussion, let us proceed to examine some of the numerous specimens that were exhibited for public admiration; and, first, we will enter the British department, in which Remnant and Edmonds contributed a good selection of bindings, including Owen Jones's stamped leather covers, and a pleasing specimen or two of "classie" books in calf. Barritt and Co. next showed the wonders of their workshop. Their huge bibles, with the sunk panels, gilt metal ornaments, and profuse embellishment, cannot please any one with good taste. Wright, of Noel-street, sent a copy of "Sylvestre," in morocco, very finely tooled; and "Das Niebelungen Lied," in white vellum, inlaid with lines of orange and purple leathers, making a tasteful pattern. Let us here, once for all, protest against the absurdity of decorating the edges of books with pictures. Macomie and Co. contributed a large bible, bound in morocco, with a bronze ornament running round the side; another bible, in buhl-work, and a "Boccacio," in white vellum, inlaid with colour. Mr. Macomie seems fond of the raised panels, a style we cannot admire. Evans, of Berwick-street, "the inventor of English illuminated binding," as he calls himself, filled a case with examples of this wonderful art, and of the "Victorian" style of binding. Here we had a copy of one of the book covers in the British Museum, very well executed in coloured leathers: the rest was mere "fancy stationers' work." Batten, of Clapham, had a case containing some richly-tooled bindings for the "Song of the Bell," "Moore's Melodies," and a "Shakspeare;" but Gothic church windows are not fit ornaments for the bookbinder's use, even on bibles and prayer-books. Orr and Co. showed books published and bound by them: some of them with good gilt ornaments. Josiah Westley had a case chiefly filled with publishers' bindings, that are certainly a great advance in style on the productions of even two years since. Binns and Goodwin, of Bath, showed one specimen elaborate enough, but

not to be praised beyond the execution; and then we come to the large show made by Leighton, of Brewer-street. There was a great deal of pretence about this case, which we cannot say was particularly well carried out. In one compartment we noticed manuscript copies of old printing and old engravings marvellously executed, and there were some unostentatious examples of excellent binding; but who will admire the decorations of a bible, which, because it is called "King William's Bible," mixes up things sacred with things profane, and has the clasps formed of cables and anchors "in *honour* of the Sailor King?" Who cares to see "Burnet on Colour," with a painter's palette on the side—mind, not a conventional ornament, but the verisimilitude of a palette, dabs of colour and all? Then there was "Rasselas," bound in oriental stripes; but this was so richly and well done, that we will not quarrel with it; we protest, however, against such barbarous wit in "binding," such clumsy punning, as "Bacon's works" in hog-skin! Nor can we admire Vernit's "Life of Napoleon," bound in tri-coloured morocco, the edges diapered with bees ascending and *fleur-de-lis* reversed, "typifying the rise of Napoleon and the fall of the Bourbons." Thomson's Seasons," in somewhat better taste, was illustrated with the twelve signs of the Zodiac; and "Horatius" and "Macaulay's Lays" appeared in classically ornamented calf.

There were also some books with painting on the side on sunk panels—good enough as far as the painting is concerned—but is it not a poor idea thus to ornament a binding? But if Messrs. Leighton's conceits are somewhat absurd (their workmanship is excellent), what shall we say to Mr. Churton, who is blessed with "a plan for ornamenting books by era or subject?" A work on railways has what is meant to be a tunnel, elaborately worked on the side with gold lines. The Pirate and Three Cutters is decorated with cable ornament; and Shakspeare with an Elizabethan architectural scroll. Surely these puerilities can hardly find patrons. Mrs. Lewis had a case of well-bound books—one on heraldry, appropriately enough ornamented with small coats of arms at the corners; Cundall and Addy showed some examples of the morocco bindings of Mr. Hayday (who, unfortunately, did not himself exhibit), and an elaborate pierced metal cover, executed by Burtt and Sons, for choice examples of art workmanship. The design of this ornament—copied from an old Venetian binding of the seventeenth century—is very beautiful. Leighton and Son next exhibited some clever designs for bindings by Luke Limner; two bibles very creditably bound, and an elaborate cover for a small bible in stamped gilt metal. One of the best and most honest-looking bindings in the show was contributed by Mr. Tarrant, a copy of Sir Thomas Lawrence's works in orange-coloured morocco, richly gilt, and with a little inlaying of other leathers. Clarke, of Frith-street, showed a variety of good, substantial volumes, in the old "tree-marbled" calf, and regular library bindings—his green and purple stainings were more curious than admirable. Mr. Bridden and Mr. Wiseman, from Cambridge, each exhibited large bibles, elaborate and creditable; and our Scotch friends sent us a bible bound in white morocco, inlaid with coloured roses, and ornamented in the centre with a gilt fountain and flowers! From other specimens from the north country we are only able to gather that good taste has not yet been introduced to the Scotch bookbinders. Mr. Parker, of Oxford, sent a case hardly commensurate with his reputation. Mr. Riviere, of Great Queen-street, had, perhaps, the choicest collection of all. He contributed but four books, and all were excellently well bound. Spenser's Works, in morocco, elegantly tooled with lines, somewhat in the Grolier style, among which the letters V. R. are just traceable. A Common Prayer, in morocco, of an old style; Virgil, in white vellum, rather too much inlaid with colours; and a good example of "tree-marbled" calf. Bone and Son had a case containing some of the best designs for cloth bindings, well carried out in all their detail. Westley and Co. had a large display; among some very good cloth

and morocco examples, we found a huge bible, ornamented on the inside of the cover (which was shown to the spectator) with a Gothic church window, elaborated with a profusion of detail, all tending to prove what excellent workmen, but what wretched artists, in this instance, Messrs. Westley have employed. In the Fine Arts Court was a bible, contributed by Messrs. Nisbet, but bound by Mr. Hayday, each side exquisitely ornamented with a richly carved panel, in boxwood, designed by Harry Rogers, and carved by his father, Mr. W. G. Rogers. This was the only binding worthy of great admiration contributed by English exhibitors.

We will now take our readers to the Foreign side, and enter the division appropriated for the reception of the contributions of the French bookbinders. M. Gruel has the first claim on our attention, for his two large volumes bound in morocco, inlaid with coloured leathers, forming very bold and good designs; and for a missal in velvet, richly ornamented with gilt metal and jewels. But of still "more attractive metal" were some smaller books of "Hours," one in carved ebony, one in velvet covered with a tracery of ivory, another in bright velvet, with a beautiful design in carved boxwood. Two or three other volumes claimed admiration, in Russia and velvet, slightly ornamented with metal hinges and clasps of exceedingly graceful ecclesiastical design, very different from the ill-formed and heavy Gothic patterns to be found on our English bibles. In the adjoining case M. Niedrée exhibited the perfection of workmanship in delicate gilding. There were two tiny volumes of this collection that might challenge the world for their superior. M. Niedrée seems to prefer spending his chief talent on the inside of his covers; and on one of these little volumes especially there was the most exquisite design most ably executed. For honest bookbinding, without the factitious aid of metal-work, carving, or inlaying, M. Niedrée clearly, in our opinion, bears the palm; and a refined taste would, perhaps, be better pleased with this little show of volumes, than with all the glories of their more magnificent-looking brethren. M. Simier sent a "Don Quixote" bound in light calf, with a good ornamental design darkened upon it, and as a centre the celebrated windmill; and a "Molière" decorated with a Grolier pattern: his other specimens were not to be praised. Mame and Co., the great publishers, of Tours, exhibited a variety of cloth and morocco bindings, which we are sorry we cannot commend. In general the ornamentation was gaudy and ill-designed. Parisian taste does not seem to extend much through the French provinces.

In the Northern Gallery, over the courts appropriated to Belgium, M. Hanicq, of Mechlin, exhibited a trophy, as it were, of liturgies in various languages and all sizes, some of them illustrated and illuminated, and nearly all bound in a showy way with stamped metal corners, clasps, and ornaments. The first impression promised something worthy of praise, but we were sorry to find that a closer inspection dispelled the illusion. In the room in which MM. Leistler, of Vienna, displayed their beautiful bookcases, there were some marvellous examples of Austrian work by Habenicht and Girardet.

Commencing at the left-hand side of the Gothic bookcase, we first admired a folio volume, bound in blue velvet, ornamented with silver tracery of a rich Gothic design. In the centre was a figure of Christ, and at the four corners was the symbol of the Evangelists—an angel, a lion, a bull, and an eagle—all in silver. The next was an album, likewise in blue velvet, ornamented with gilt metal and tracery of ebony (beautiful in design); the centre was a bronze medallion, set round with a string of pearls. The third was a large volume in green morocco, inlaid with red and buff leather, ornamented with gilt metal-work, enclosing ten medallions, painted like bas-reliefs, in metal. Next came a large and beautiful book, entitled "Landschaften," bound in purple velvet, exquisitely ornamented with pierced ivory of most elaborate pattern. Then there was a volume of "National Music," covered with metal-work and carved ivory. In the

centre were the arms of Austria; and, surrounding them, fourteen little oil-paintings, mostly of rural costume, descriptive, we imagine, of the national songs. Next was a book in morocco, inlaid with ivory and a light blue enamel, beautifully ornamented with gold; and, behind it, a volume bound in tortoise-shell, with gilt and silver ornaments of Gothic design, and three female allegorical figures in metal. These books claim admiration for the elaborate and costly ornament upon them. They were, with the Gothic bookcase that held them, a present from the Emperor of Austria to her Majesty. We have our doubts, however, as to whether all the credit is due to Vienna; (with respect to sculpture, we have already seen how Austria has laid claim to the genius of Italy, as if it were her own;) more especially as some plain morocco books in the same case did not exhibit the same amount of taste or excellence of workmanship. Among the minor volumes we noticed a peculiarity not unpleasing; the titles of the books were lettered in raised metal letters, chased or burnished on the surface.

Let us not, however, be dazzled with all this show—"Splendour in the binding of books," observes an able writer in the Juries' reports, "is a taste which dates back from remote times. The rarity of manuscripts, and the ornaments of every kind with which they were enriched, rendered them so precious, that they were exhibited upon desks for the purpose of gratifying the sight and the pride of their possessors. Seneca said of them, 'Plerisque libri non studiorum instrumenta sunt, ad ædum ornamenta.' But if these rich bindings, some beautiful models of which still exist in public libraries, were suitable before or soon after the invention of printing, when books were almost as scarce as manuscripts, they are an anachronism, when we are compelled to heap them so closely in our libraries. These magnificent covers, executed for the greater part by jewellers, who enriched them with reliefs in gold, silver, steel, and ivory, with precious stones, with enamels, and with decorations of every kind, could only be suitable for the missals, and the antiphoners placed in churches. On seeing at the Exhibition, enclosed in the beautiful articles of furniture from Austria, the superb bindings in ivory, carved with so much art, or in gold and silver inlaid with gems, and enamels still more precious, it might be supposed that these were shrines enclosing sacred relics, or even the casket of Darius, in which Alexander deposited the poems of Homer.

"Between simple bindings, and those in which costliness is carried to extreme, a medium may be found which lovers of books delight in, combining elegance with solidity and simplicity, qualities preferable to richness of gilding. At the period of the *Renaissance*, artists of great taste executed admirable bindings for kings, princes, and a few rich and learned amateurs, whose names are preserved in the recollection of bibliopoles, who maintained in their houses, binders, whose taste they directed. Some chose the Byzantine style; but the greater portion adopted the style called the *Renaissance*. After them the binders confined themselves to imitation, applying this style of ornament indiscriminately to every species of book. Some attempts have been made to submit bookbinding to general principles, and to adopt the binding either to the period in which the books were written, or according to the subjects of which they treat; and a variety of ornaments have been devised in consequence. The idea, though a happy one, is not new, but has not generally been adopted. We have seen the cap of liberty, the owl, and the wand of Æsculapius applied to bindings with respect to the contents of the works. The Egyptian, Grecian, and Roman ornamental emblems have been resorted to, as well as the Gothic, borrowed from monuments. Others have thought it desirable that bookbinders, departing from the beaten track, should endeavour to give a more peculiar character which should mark our era; and that thus the choice of colours, more or less sombre, or more or less bright—might always be in accordance with the nature of the subject treated of in the books. They contend that this system would at once afford, in

a large library, the advantage of facilitating the search for books, by immediately striking the eye: that it is also to be desired that certain styles of ornament should indicate whether such a work, on Egypt for example, belonged to the Pharaonic, the Arabic, the French, or the Turkish era; and that it should be the same with ancient Greece, Byzantine Greece, or modern Greece, the Rome of the Cæsars, or the Rome of the Popes."

These suggestions are not altogether to be disregarded. Whatever facilitates the ready attainment of the intellectual wealth that our libraries contain, is worth consideration. In concluding these observations, we may perhaps be allowed to remark, that books are made to be handled and to be read; in providing them, therefore, with decent and respectable binding, if we avoid on the one hand the homely parsimony observed with respect to those neglected shelves, where, as the author of the *Dunciad* has recorded,—

> "—— Caxton sleeps, with Wynkyn by his side,
> One clasped in wood, and one in strong cow-hide."

So it is equally desirable that we should not clothe our books, our intellectual companions, in such gay and costly liveries, as to render them too fine for every-day use; too splendid and pretentious for the philosopher and the student.

STATIONERY.

From bookbinding to stationery is a very natural transition. We shall, accordingly, before we conclude our chapter, present our readers with a few observations upon the subject, which we extract from the pages of an able contemporary.

On the north side of the western nave, near the Fine Arts Court, was the modest space occupied by this important group of manufactures, which, but for the attractive folding-machine of Messrs. De la Rue and Co., placed at its portal, might have escaped the scrutiny of all but the systematic visitor. Bookbinding occupied the lion's share of the allotted ground, and paper but a very small portion. It is to be regretted that our paper manufacturers did not contribute more generally, for, undoubtedly, in many descriptions of paper we stand unrivalled. The number of contributors was in reality so small, that, had it not been for the energy of Messrs. Venables in collecting papers of many varieties, and from all sources, Great Britain would have made but little show in comparison with the productions of our continental neighbours. Whilst on this subject, we must advert to the advantage which would have resulted from the display of a paper machine in operation, with all the modern improvements, instead of the model exhibited by the Messrs. Donkin—a name, however, which must always be mentioned in honourable connexion with the paper-making automaton. Here our French brethren had the start of us, for, instead of a model, they exhibited the paper-making machine of Varrall, Middleton, and Elwell—a small one, it is true, and not at work. Had the Messrs. Donkin availed themselves of the opportunity of showing one of their paper machines in full work, the public would have better appreciated the importance of that art, which transforms rags and refuse into a tablet on which all the results of human knowledge are stored, and but for which the dependent art of printing would be useless.

In Great Britain alone, about one hundred and thirty million pounds weight of paper are annually manufactured—estimated as worth upwards of three million pounds sterling, and yielding to the revenue £870,000. Nine-tenths of this quantity are consumed in this country, the exports not amounting to more than £300,000; yet this noble art was represented by only some half dozen British exhibitors. Mr. Joynson, of St. Mary Cray, and the Messrs. Spicer, exhibited a roll of paper 2,500 yards in length; thus proving the perfection of the machinery which converts the water-suspended pulp, flowing

continuously at one end of the machine, into an unbroken sheet of well-sized writing paper, which comes out dried and ready for use at the other end. They also displayed a sheet of brown paper, 93 inches in width, and 120 feet in length, besides mill-boards of a new kind, and specimen reams of writing paper. Mr. Fourdrinier exhibited a sheet of pottery paper, two miles and-a-half in length. This paper is employed in the potteries as a vehicle to receive the impressions from the engraved plates, to be transferred therefrom by the burnishers to the unglazed ware. This class of paper is of great strength, and, in illustration of this, we may mention an anecdote which occurs to us. With this paper, twisted into a rope, the proprietor of one of our potteries repaired, rapidly and efficiently, the broken traces of a carriage, which had conveyed a party of friends over the rough road leading to his works. Mr. Fourdrinier's name must not be passed without paying a tribute to the memory of his spirited and energetic relatives, to whom is mainly due the perfecting of the first crude thought of the continuous paper-making machine. There were likewise specimens of pottery paper exhibited by Mr. Lamb, in connexion with the rope used in its manufacture, and the pottery ware with the transferred designs; and some were also contributed by Mr. Saunders, of Dartford, who illustrated the strength before alluded to, by suspending four half-hundred weights to a sheet only twenty inches in width. We here found Dewdney's well-known blue paper, which is used by the starch maker to wrap up his goods, and which must sustain the ordeal of a good baking in contact with the moist starch without losing its colour. Glazed boards, used in pressing cloths, were exhibited by Mr. Hamer, of Horseforth; also by Messrs. Hastings and Miller, who likewise displayed gun-wadding and brown papers. There were also brown papers from E. Smith, of Fellingshore. We have now enumerated the principal objects in the plain paper section, with the exception of those sent by Messrs. Cowan, of Edinburgh, and the excellent and well-arranged selection of Messrs. Venables—which comprised, besides papers of their own make, most of the varieties manufactured in Great Britain, with the name of each maker prominently stated. Amongst them we noticed the universally-celebrated drawing papers of Mr. J. Whatman and those of Mr. George Wilmot. There were also brown papers, in which the most highly polished steel goods may be safely packed without fear of rust; together with the unrivalled plate papers of Mr. Charles Venables, and the hand papers by his relative, George Venables.

Of highly-glazed and tastefully packeted writing papers, Messrs. De La Rue and Co. were the principal exhibitors. Some of the novel papers with water-marks, invented by Mr. Oldham, and manufactured by Mr. Saunders, were placed against the glass partition which divides off the machinery, and they produced effects very similar to the celebrated porcelain pictures, and received ample patronage from the public. Among the water-marks shown in the paper were some illustrations of sculpture from Nineveh, some Roman heads, the Madonna and Child, rural scenery, a medallion of her Majesty, the Exhibition building, with portraits of her Majesty and Prince Albert, a view of York Minster, and various others. The invention appears to be admirably adapted for paper for bank-notes, and other descriptions in which security from fraud or forgery is desired.

Switzerland contributed well-made music-papers, writing papers of tolerable quality, and white and tinted tissues, which are very inferior to those made in England. Rome sent remarkably good drawing papers, made by M. Millani; and Tuscany, good machine writing papers, pelure of good quality, and laid papers, in which there is still room for improvement. France came out well in plain papers. The well-known Mongolfier sent excellent tinted drawing papers, tinted and white printed papers, and a very remarkable description called "*parchemin animal*," possessing surprising tenacity—so much so, that it is difficult to believe in its being only ordinary paper. Some of the specimens of

this artificial skin are prepared with a kind of oil varnish, which adapts it for the preservation of artillery cartridges, especially during the long period of peace which it is our happiness to live in. The Société Anonyme du Marais (Seine et Marne) sent specimens of writing and printing papers, coarse papers used for the manufacture of pasteboard, and likewise a fine sort of millboard employed as a substitute for pasted cardboard, but not possessing its strength and firmness. The Société Anonyme Souelc (Vosges) sent tinted writing papers, and tinted tissues, which would bear comparison with the best of our English manufactures—especially the pink, which surpassed in beauty of colour any other that we have seen. The French have always been famous for their tracing papers, especially those made transparent without the use of varnishes, and the examples here exhibited maintained their reputation. We now pause to examine more closely the splendid writing papers of Lacroix, whose thin post surpassed every thing which we had seen. The influence which local circumstances, especially the postal arrangements of different countries, have on this branch of art, cannot be more forcibly exemplified than in the paper productions of France, as compared with our own. In England the aim is generally to produce a stout paper, that the writing may not show through on the opposite side. We certainly surpass all other countries in the beautiful laid or ribbed papers, which the French are only now attempting; whilst, on the contrary, we are far behind them in their writing papers, as exemplified in M. Lacroix's beautiful and almost spotless pelure adapted to the postal laws of France.

Belgium sustained her reputation in this manufacture by a single, yet excellent, contribution from Godin and Son. It was most extensive, containing rolls of packing and printing papers, machine-made drawing papers, and pelure writing papers, which are very excellent, but which do not equal the specimens of M. Lacroix. In the northern gallery, Russia exhibited some packing, printing, and writing papers, which show that that country is advancing, although their manufacture is still behind the western states of Europe. Holland sent laid papers for account books, and likewise writing papers by Honig and Son, all good of their various kinds; and Van Gelder and Sons exhibited paper, blue on one side and white on the other, for the use of sugar refiners. There were several exhibitors from the different states of the Zollverein. We particularly noticed the productions of the mill of Dilligen, in Prussia. They contained, among other matters, specimens of the papers produced at these works from 1760 to 1850, showing at a glance the various improvements which have taken place; likewise a group of raw materials, and the papers produced from them. We also noticed straw papers of excellent quality. A short time back a mill was started in England for manufacturing paper from straw, but the speculation does not appear to have answered commercially. In the section of Sweden and Norway we searched in vain for the filtering paper so valuable to the experimental chemist, which is made with the water resulting from the melting of the mountain snows, and is said to be the purest of all papers. Denmark sent some vellum post of good quality, and likewise machine drawing papers. India exhibited some curious specimens of native manufacture; that contributed from Nepaul being remarkable for its extreme thinness and lightness.

CHAPTER XXXVI.

THE MEDIÆVAL COURT.

STOVE—OAK NICHE—GREAT ROOD—STONE CARVING—THE NICHE—THE TABERNACLE—TOMB OF DR. WALSH—HIGH ALTAR—CHIMNEY-PIECE—THE FONT—PAINTED GLASS—FURNITURE—CHURCH ORNAMENTS—METAL WORK, ETC. ETC.

Among all the numerous attractions of the Great Exhibition, perhaps, on the whole, the Mediæval Court, as a department, excited the most general interest. Its contents were of great variety, consisting of furniture, and church decorations after the fashion of the mediæval period, presenting a rich combination of stained glass, hardware, wood-carving, hangings, encaustic tiles, &c., perhaps a little too theatric in effect, but still harmonious and suggestive. In making these remarks, and in proceeding to enter into a detailed account of this remarkable apartment, we by no means would wish to imply that we are among the votaries of mediæval models: far from it. We entirely agree with an acute and learned contemporary, who says, "we consider that they have served their time, and in their time satisfied the general purposes of feeling and convenience then existing; the attempt to revive them now, however, is a mistake; the sentiments which dictated many a pious, but often mistaken act of laborious decoration, exist no longer. Truer principles of art and rules of taste have begun to influence society; and the decorative fancies which in real mediæval works become curious to us as matters of comparative history, are lifeless, tame—not to say absurd—when copied in a more enlightened age. We object to all backward movements when once we have arrived at a safe ground to stand upon; and considering that the classic models, which reached us at the period of the revival, are to all intents and purposes preferable to the barbarism and clumsy contrivances of the middle ages, we object to abandon them until something better is offered to us in their stead. At any rate, we must strenuously resist retracing our steps from the revival to the mediæval; which, to speak plainly, we look upon as the culminating point of barbarism. Nevertheless, as we said before, the Mediæval Court, tricked out in gaudy-coloured draperies, in coloured glass, and glittering brass, and cold monumental stone effigies, presented a striking *coup-d'œil*, and deserves analytical description. The credit of the general arrangements, we understand, was due to the late Mr. Pugin, well known as a devotee to this style of art and contrivance. The principal objects may be described as follows,—in the language, as will be perceived, of a veritable enthusiastic mediævalism:—

Stove.—On the north side of the court was a large square stove of remarkable character: it was composed of glazed tiles in relief, of various colours, of which a considerable number were pierced to permit the exit of the hot air. These were fixed in an iron frame, with angle shafts terminating in coronals, and small vanes of gilt metal painted with heraldic bearings. The whole was enclosed with a wrought-iron grille of ingenious construction, all the enrichments being produced by hand, after the manner of the ancient Flemish smiths, and not cast. The crockets and finials were all bent up and twisted out of thin metal, and the general effect was most striking, reminding the spectator of the ancient stoves in the castle of Nuremberg, and converting what is generally an unsightly object into a highly decorative adjunct to an entrance hall or gallery.

Oak Niche.—Immediately over the south-east door was a wooden niche, containing a finely carved image of St. John the Baptist; the great peculiarity of this niche consisted in its being designed after the old principle, to suit the material in which it was executed. All the enrichments were sunk out of the thickness of the stuff; there was neither

mitering nor lateral projection: the cross pieces were terminated and keyed with wedges, which effectually held the work together without glue; the canopy was also carved out of three pieces, with sunk enrichments, and crocketed with continuous foliage.

Great Rood.—In the south-east angle stood the Great Rood, intended for the loft of St. Edmund's College, near Ware. The whole was richly crocketed and foliated. At the four extremities were emblems of the Evangelists, surrounded by rich foliage-work, and on the reverse the Four Doctors. Attached to the lower portion of the framing were two pedestals for the images of the Blessed Virgin and St. John. The intermediate panels were filled with rich perforated tracing; and metal branches for lights were affixed to the stanchions.

Stone-Carving—Altar and Reredos—East Side.—This altar was intended for the lady chapel of a country church. The subject was that of the Annunciation. The whole reredos was divided into five compartments. The two outer ones contained images of the Virgin and the angel Gabriel; and in the centre the pot of lilies, most delicately relieved in the carving, and interwoven with a label inscribed with the angelic salutation. The whole was surmounted by a very rich bratishing of quatrefoils and crocketed work.

The Niche.—Adjoining the reredos was a niche, surmounted by a rich and lofty stone canopy, for the same chapel. This niche contained an image of the Virgin holding our Lord in her arms. The dignity of the Divinity was expressed in the countenance of the infant, and in his hand he bore the orb and cross. The Virgin was attired in a long tunic, and a mantle, with an enriched border, gathered gracefully into long folds; a silver parcel gilt crown, enriched with stones, was placed on the head. The image rested on a high pedestal, with highly relieved foliage, and the angle pinnacles of the canopy rested on two angle corbels issuing from the sides.

Tabernacle.—Immediately opposite the high altar was a stone tabernacle intended for the reservation of the holy sacrament. It was quadrangular at bottom, with four crocketed gablets, three of which were filled with rich tracery, and the fourth was the door, of perforated brass. From the four angles rose buttresses and pinnacles, terminated by angels with musical instruments. From this point the canopy became octagonal, and was connected to the square base by crocketed flying buttresses. It was terminated by a cluster of pinnacles, and niches filled with angels of most elaborate design and exquisite workmanship. Its entire height was upwards of twenty feet.

Stone-Carving.—West Side.—Tomb of the late Rev. Dr. Walsh.—This monument, intended to be erected in St. Chad's Cathedral, Birmingham, in memory of the late Dr. Walsh, was designed in the third printed or decorated style, and executed in a very perfect manner. The effigy was recumbent, the head supported by two angels; it was attired in full episcopal vestments of the ancient graceful form, and the pastoral staff was borne in the right hand. The minutest details of the embroidery were most carefully carved in the stone, and the whole was a *fac simile* of the actual vestments used by the deceased prelate. The effigy had a striking resemblance to those venerable and dignified effigies still remaining in our ancient churches. A richly crocketed canopy surmounted the recess, flanked by two buttresses and pinnacles; the back of the recess was diapered, and the centre, within a quatrefoil, was a bas-relief, representing the Doctor, attired as a Bishop, kneeling, and offering the church of which he was the founder. The base of the tomb contained five quatrefoils, floriated and studded with wallflowers, with enamelled shields of family and ecclesiastical bearings; and along the upper edge was the following inscription, engraved in brass:—

Orate pro anima illustrissimi Reverendissimi Dom. Thomae Walsh, Ep. Cambysop., in dist. centralis per annos 25 Vic. Ap., et hujus ecclesiæ Cathedralis fundatoris. Obit. Vic. ap. Londinen. xviii. Feb. MDCCCXLIX.

High Altar.—The centre of the east side was occupied by a stone altar, intended for the chancel of a parish church; the front was supported by four marble pillars, with sculptured cups. These stood some distance in advance of the block part of the altar, which contained three deeply-mounted quatrefoils, surrounded by wallflowers, with three subjects in bas-relief—the "Agony in the Garden," "Our Lord bearing the Cross," and the "Crucifixion:" these groups were sculptured with great severity and truth, and possessed a most devotional character. The space between the marble pillars and these sculptures will eventually contain reliquaries like small shrines.

Chimney-piece.—On the west side of the court was a richly-carved fire-place, worked in Caen stone; it was intended for the mansion of F. Barchard, Esq. The whole of the ornaments were heraldic, and the crockets were formed by birds encircled with foliage. The centre panel contained the Barchard arms, and the initials of the family filled the lateral quatrefoils. The recess for the grate was lined with tiles, charged with the crest and initials F. B. alternately. The grate was solidly formed of wrought iron, standing on two dogs of the same material, surmounted by brass birds, and enriched with metal badges of beaten work; a stone fender enclosed the hearth, which was composed of red and yellow tiles. The whole of the stone-work in this court was executed by Mr. Myers, of Belvidere-road, Lambeth, London, inventor of the machine for cutting Gothic tracery and mouldings: specimens of the work executed by it were deposited in the court, close to the bishop's tomb. There was a smaller fire-place at the north-east angle, also executed in Caen stone: it was square-headed; the hollows of the mouldings were filled with running foliage; the upper part was divided by beads into three panels, filled with Minton's tiles, chastely and elaborately painted with floral and geometrical patterns. The sides of the fire-place were lined by high tiles of a rich and original pattern, and the hearth was encircled by a stone fender. The whole fire-place had a rich and pleasing effect, produced by the combination of carved stone and the enamel painting of the tile-work. There was a small but appropriate grate, supported on dogs, in the fire-place.

The Font.—In the centre of the court was a font and cover raised on octagonal steps, the risers of which were enriched with tracery. The bow was also octagonal, four sides being carved with the following subjects from sacred history:—"The Fall of Man," "St. John Preaching in the Wilderness," "The Baptism of our Lord," and the "Crucifixion." From the four other sides were projecting images of angels, which acted as corbels to support the four principal shafts of the canopy. Round the pedestal were images of the Evangelists, the "Blessed Virgin," "St. John the Baptist," "St. Peter," and "St. Paul."

The canopy, which was entirely of oak, and supported by the angle-shafts, was raised up to a considerable height by a succession of pinnacles and tabernacle-work, and was sufficiently lofty to receive the cover of the font, consisting of an octagonal top, surmounted by open tray panels, the whole of which rose up into the canopy by the action of counterweight when the font was used; and when lifted to its proper elevation, formed a ceiling, with the Holy Dove in the centre. This principle of uncovering the font was a considerable improvement on the old method of opening a compartment of the high covers, and was at once more elegant and convenient.

Painted Glass.—The north side of the court was filled with painted glass. Over the entrance-door was a portion of the south window of the new dining-hall at Alton Towers. The centre light contained an effigy of the Grand Talbot, faithfully delineated from his tomb at Whitchurch. On either side were shields with his various quarterings, supported by Talbots, and interseeted with foliage and branch-work on a quarry guard, surrounded by a neat border of T's and coronals.

There were two long lights of the Decorated period, with compound niches and pinnacles, each containing an image; one of St. Thomas the Apostle, the other St.

Thomas the Martyr, in rich costume, on diapered grounds. These were intended for the court windows of the chantry chapel of the late Dr. Griffiths, in the Collegiate Church of St. Edmunds, near Ware. Over the lower doorway were placed three lights, representing two groups, from the life of St. Andrew, and an effigy of the saint, all under very elaborate canopies. This glass was designed in the style of the fifteenth century, as it is to be fixed in a parochial church of that period. Adjoining the centre pillar were two lights, forming the centre light for the great court window of the same church: the subjects represented were the Transfiguration and Crucifixion of our Lord. At the east end were four lights of grisaille work, each containing two quatrefoils, filled with subjects from the life of the Blessed Virgin. These groups were relieved on rich blue glass, diapered, and the grisaille was intersected with ruby and yellow bands, &c., upon floriated centres of varied colours, and each light was surrounded by a varied border. These windows were to be placed on the south side of the Lady Chapel of St. Augustine's Church, at Ramsgate. At the opposite end was another window of two lights, containing niches and canopies, with images of St. Ethelbert of Kent and his Queen, the blessed Bertha. The richness of the habits of the two principal figures was well relieved by a white ground; and this style of glass, treated on the old principles, has all the advantages of producing a rich effect, without impeding the sufficiency of light from entering the edifice. This window was also for St. Augustine's, Ramsgate, and was presented to that church by J. Herbert, Esq., the celebrated painter and Academician.

There was a very translucent image of the Virgin, in a blue mantle, of a rich, but subdued colour, precisely similar to that so frequently seen in the old windows, and which is most difficult to attain. A decorated canopy surmounted the light, and the groundwork was a white diaper. The whole of the glass was painted in the old manner, and without any attempt at antiquity, but left precisely in the same state as that of the old glass, when originally executed. In all the designs a due proportion of white was introduced, without which it is impossible to attain a brilliant effect.

Furniture.—The centre of the south side was occupied by a carved oak sideboard, of massive construction: the back was raised in panel-work to the height of several feet, and supported an overhanging canopy, richly carved, and divided into arched panels by moulded ribs; these panels were diapered in colour, on gold ground. The centre compartment of the back was hung with scarlet cloth, and served as a background to several large ornamental dishes, parcel gilt, beat up and raised into heraldic devices and bearings, with rich and varied borders, containing crests and mottos, all referring to the house of Talbot, as they are intended for the new dining-hall at Alton Towers. The constructive framing of this sideboard was richly ornamented by carving of vine and hop foliage, boldly executed. The two extreme stanchions were carried up in an octagonal form, and terminated by two clusters of foliated brass branches, supporting lights. The doors of the side recesses were elaborately carved, and fitted with pierced ornamental hinges and lock plates, in the style of those so skilfully made in the fifteenth century. The sideboard was the production of Mr. Crace, of Wigmore-street. The dishes were executed by Mr. Hardman, of Birmingham. Immediately in front of the sideboard was a large octagonal table, executed in walnut-tree. The frame and stand was designed on the strongest constructional principles, and its enrichments were only adjuncts to the necessary framing. The top was elaborately inlaid with woods of various colours, and fully proved the applicability of mediæval designs and decorations to every want of the present age. The general effect had all the richness of marqueterie, with purer forms, and a more pleasing combination of colours.

The next most striking piece of furniture was a long book-case or cabinet. The centre doors were filled with open-wrought brass-work, of intricate foliated design, and

were intended to admit a view of costly objects preserved in this compartment; the two side-doors were panelled with rich flamboyant tracery. The spaces were divided by carved and moulted muntons, and the whole was surmounted by an elaborate foliated bratishing in oak, interspersed with shields, charged with various devices. The locks, fastenings, and hinges, were of brass, and perfectly carved out in character with piercing and chasing.

Adjoining the cabinet was a praying-desk, surrounded by a triptych, intended for a bedchamber or private oratory. On either side of the desk were carved corbels, supporting a pair of gilt candlesticks, ornamented with fleurs-de-lis, and the monagram M.R. The panels of the triptych, when open, displayed two miniature paintings of St. Katherine and St. Margaret, and the centre recess was richly dispersed in gold and colours. This piece of furniture was executed by Mr. Crace, for C. R. Scott Murray, Esq., of Danesfield. On this side of the court were several pieces of furniture, such as tables, some inlaid at top, chairs, with gilt supporters and velvet coverings; others, more simple in form, of oak, and covered with leather, but as commodious in shape as those of ordinary modern use. In the centre was a cheval screen, consisting of a richly-carved frame, decorated with the rose, shamrock, and thistle, supported by the lion and unicorn at either end, with the royal arms,—a combination, however, involving a glaring anachronism. The whole was filled with elaborate needlework, executed by a number of ladies, whose names were inscribed in scroll-work on the reverse. At either end of this side was placed a piano, the cases of which were designed in the same style as the rest of the furniture. A piano is so modern an invention, that it has hitherto been considered almost hopeless to combine its construction with old details suitable for the rooms of an ancient mansion; but the present examples fully show that mediæval detail and design are perfectly applicable to all the requirements and inventions of the day. One of these instruments was executed in oak, and was of simple character; the other was most elaborately carved and gilt, the fall painted with flowing borders, and the keys inlaid. The pianos were made by Messrs. Burns and Lambert, of Portman-street. Interspersed with this furniture was a variety of brass candlesticks, sconces, and branches for lights, either standing or projecting from the wall. They were light in design, and well adapted for their purposes, yet most original in form and effect. In stuffs for hangings there were a great variety of elaborate and most effective old patterns, executed by Mr. Crace, some in tapestry, others in silk and woollen stuffs, which, by their design, perfectly recalled those gorgeous baudekins so often mentioned in the pages of the old historians, and depicted in the works of the ancient painters. There were also several carpets of the same character, full of rich colour and design, and without any attempt at false relief and shadow. Over the stone fire-place a large carpet was suspended, all the details of which, without a single architectural feature, or anything that would be commonly denominated Gothic, by the arrangements of its foliated enrichments and the combination of colours, possessed a most distinct and mediæval character.

Church Ornaments, Metal-work, &c.—A very large portion of the contents of the Mediæval Court came under this head. Immediately in front of the great sideboard hung a chandelier of striking appearance and considerable dimensions. It was constructed on the octagonal principle, and was composed of a number of shafts terminating in pinnacles passing through frames of pierced-work, fixed to a central shaft of tinted brass. From each pinnacle sprung a succession of light foliage in the form of branches, the stems of which terminated in coronals and sockets supporting the candles. Shields charged with the Talbot lion were interspersed among the branches, and by the colour heightened the general richness of effect. The first idea of this chandelier was taken from the celebrated one at Nuremberg; but it was larger in dimensions, and much

lighter and stronger in construction. It was intended to be suspended in the centre of the new dining-hall at Alton Towers. Immediately opposite was a large brass cornice of an early style, executed for a church of Byzantine character. It was composed of segments of circles filled in by rich intersecting open-work, and supporting a deep rim and bratishing. To these were attached the standards which carry the tapers, and were composed of chased stems, with crystal nobs and small coronals. The weight of the lower crown was partly carried by chains of a very ornamental character fastened to an upper crown; and the effect of the whole was extremely rich and striking. Round the high altar on the east side, a set of six brass pillars, about twelve feet in height, was erected. These pillars were highly ornamented in their shafts, with moulded caps and bases, and sustained six angels, also in brass, with outspread wings, bearing standards with tapers: between every pillar was a brass rod with open-work bratishing, and rings from which silk curtains, wove with sacred emblems, were suspended. This kind of inclosure was formerly to be found in the majority of the foreign cathedrals, and occasionally in our own; but a more correct taste and revolutionary changes have completely stripped the ancient churches of these unnecessary arrangements, and they have been now revived for the first time for the chancel of St. Thomas's church at Erdington, for which the whole of this work was designed and executed. In front of the high altar hung a carved beam, similar to those described as having been suspended in Canterbury Cathedral and other churches. It was intended for chapels dedicated to the reservation of the holy sacrament. At the centre and extremities were quatrefoils filled with foliage, and to these the iron-work, by which the whole was suspended, was attached. Along the upper edge was an open cresting of brass-work, supporting bowls and prickets for tapers. To the lower side of the beam were suspended seven silver lamps of the ancient form, several of which were enriched with enamels. The wick burns in a ruby glass dropped into a silver collar hung from the small chains attached to the larger ones, which sustain the chased basins hanging beneath to receive any drippings of oil. These were designed on the real principles of church lamps, and according to the most ancient customs, and they are perfectly consistent in form, and convenient for their purposes; while modern church lamps are usually made like huge bowls full of emptiness, with a glass stuck in the top of them. The beam and its appurtenances are a most satisfactory revival of one of the most beautiful ornaments that formerly decorated the ancient churches. Round the high altar were placed several high-standing candlesticks, terminating in branches and coronals for lights, intended for the elevation or benediction. There were also six silver candlesticks on the altar, of twisted and chased-work rising from octagonal bases, ornamented with crystals and knops. The flowing of this design is particularly well adapted to the metal, as they produce an infinite variety of bright and reflected lights.

The candles themselves are remarkable amongst the revivals of the present age. The large candle, which is called a "Paschal Candle," was intended as symbolical of the glory of Christ's resurrection. It is lighted during the offices of the Romish Church from Easter to the Ascension. It was elaborately painted round the base with various inscriptions and devices. The triple candle, which is composed of three equal parts twisted together, is used on Holy Saturday for the "Lumen Christi," in the procession from the church porch. The twisted torch is a revival of those borne on various occasions in the middle ages, especially at funeral processions and entertainments. The custom of enriching candles for sacred purposes, by painting and gilding, is very ancient; and the same principle was formerly carried out with regard to candles for domestic use in great feasts, these being painted with heraldic devices. On the eastern side of the court were two glass cases filled with silver work and jewellery: that on the north side was devoted to ecclesiastical ornaments, and the opposite one was filled with secular plate, jewels, &c.

In the former there were several richly enamelled chalices of the ancient form, with chased perforated knops of intricate design and hexagonal feet most richly chased and decorated with enamel and precious stones. There were two monstrances of elegant design, but of very different character. The first was a circlet of rich tracery, like a crown supported by a high stem, and surrounded with enamelled quatrefoils representing cherubim in adoration. The second was like an open spire or canopy of octagonal form, springing from four pinnacled shafts, supporting images of angels with scrolls. The execution of this, even to the minutest details of the crockets and pinnacles, would bear comparison with some of the best works of the old silversmiths, and may be considered a great advance in the revival of this art. On one side of the same case was a pastoral staff for a bishop, enamelled, crocketed, and containing several images in the crook under canopied-work. This case also contained some richly enamelled pyxes, candlesticks, crosses, bindings of missals, and a variety of church ornaments most elaborate in detail. The opposite case, devoted to secular plate, contained a variety of specimens of candlesticks, salt-cellars, dessert services, flagons, &c., of simple form, but designed in the metallic feeling which may be discerned in the productions of the ancient silversmiths. The effect is produced by beating-up and engraving. There were no cast ornamaments of heavy foliage, but the nature of the material is well-considered in the designs, and has a great effect in production at a comparatively small cost There were several trays of jewels, the setting of which was according to the old Venetian manner, the stones being almost detached, and held by points, by which a transparent effect is obtained. The specimens consisted of crosses, bracelets, necklaces, brooches, rings, and a girdle. The casket made to contain them was exceedingly elaborate, and of elegant design, with enamelled lock and heraldic devices. On the opposite side of the court were two other cases, containing church vestments, made after the ancient form, which has been recently revived, and presenting a pleasing contrast to the modern stiff and buckram *chasuble* of France. The laces which form the orphreys were adapted from ancient examples, and a great variety of these were exhibited on the sides of the cases. There was also an albe with the ancient apparel as seen in the habits of ecclesiastics on tombs and sepulchral brasses, and two copes, one of which was of white cloth of gold. There was also a variety of stoles, maniples, and chalice-veils, in the same case. Adjoining were three lecterns. The first was designed with two branches, separating from a solid stem (the base), and supporting two kneeling angels, who carry a perforated tracery panel to receive the book. The second was a large eagle, with outspread wings, resting on an orb supported by an hexagonal pedestal of open tracery-work, from whence sprung three flying buttresses, resting on pinnacled shafts, surmounted by half images of angels bearing scrolls. The base was very massive, and rested on three lions couchant. Two large foliated branches were attached to the shafts, and carried tapers, to afford light to the *lector;* these branches were moveable, and might be adjusted at pleasure. This noble lantern was presented to St. George's Church, Southwark, by the Rev. D. Haigh, of Erdington. The third lectern was designed from an ancient example at the Cathedral at Courtrais. The desk was perforated with a device of the holy name spread out into flamboyant tracery; the shaft was terminated by an image of St. John the Evangelist. Opposite these, and in front of the niche, was placed an iron candlestick, of wrought-work, which turned on a centre, and was intended to receive offerings of tapers for the Lady Chapel of St. Augustin's Church. This was a most elaborate piece of iron-work, worthy of the ancient smiths, and was a striking proof that our operations, when under proper directions, are quite capable of representing the most beautiful works of mediæval skill. Near this was a credence-table of wrought brass, with a marble inlaid top, and many other objects all from the workshops of Mr. J. Hardman, of Birmingham.

CHAPTER XXXVII.

LETTERS FROM M. BLANQUI—*continued.*

LETTER III. BRITISH MACHINERY—FRENCH TASTE—AMERICAN PRODUCE—INDIA.—LETTER IV. —LYONS SILKS—SEVRES, BEAUVAIS, AND GOBELINS—FRENCH NATIONALITY—BRITISH INDIA AND CHINA.—LETTER V.—BRITISH INDIA CONTINUED—ITS ANTIQUITY AND ORIGINAL CHARACTER—ITS VAST COMPREHENSIVENESS—CHINA.

LETTER III.

The more we examine in the Crystal Palace the portion devoted to English industry, the more we perceive that the English have neglected nothing to appear to the utmost advantage at this memorable tournament. They are completely equipped, armed at all points. They only, perhaps, amongst all the competitors, are in a position to be judged without appeal, for they have unreservedly put forth all their strength. When the Exhibition had once been determined upon, the fiercest protectionists, who had most strongly opposed it, made every effort to appear to the greatest advantage. They yielded with good grace, and not a manufacturer of any importance failed to respond to the summons: they were all ready on the opening day. They occupy, as we have already stated, one-half of the entire space devoted to the Exhibition, and they have established themselves methodically and in admirable order. All their machines are in operation in a series of bays, to which the steam required to put them in motion is conveyed underground in tubes. Whether from motives of economy, or for the purpose of avoiding the terrible din caused by so much machinery, each machine is only worked at intervals, so that a portion of the machinery is at rest while the other is at work. The overlookers everywhere explain the processes to the public; there is spinning, weaving, embroidering, stocking-weaving, lace, riband, and cloth manufacturing. It is a veritable acting industrial encyclopædia. The steam is conveyed to machines of 20-horse power, and to small models the size of a card-table. Have a care how you pass unheeded these innumerable instruments of production: not one of them but which presents some novel amelioration or some improvement in the details.

There is not an European nation, even among those which excel in the construction of machinery, which offers so brilliant and complete a collection as England. The English are here in truth upon their natural ground: their hydraulic presses, their locomotives, their maritime steam engines, exceed all known proportions. They exhibit rails of 20 metres long in one piece, cranks of forged iron for machines of 800-horse power, spinning frames with 1,200 spindles; that is to say, instruments of gigantic motion and production. Their cranes, their exhausting pumps, their waggons, their models of bridges, are of remarkable daring. The perfection of their agricultural implements, so varied and so different from our own, does not excite less admiration. Were there no other subjects for study, that of these instruments would suffice to prove how much their agriculture is advanced and worthy of their industry. Their superiority is still more strikingly manifested in all their iron works or cutlery. Iron and coal are the principal elements of the wealth of the British people. Enter the smallest village, wherever we use wood the English use iron or brass. The enlightened observer who examines the Exhibition, is particularly struck with the admirable perfection and the variety of their tools—from the axe to the plane, from the boring machines to the most delicately made files. Their locksmiths' work, of excellent workmanship, adapts itself with precision to all description of fastening. Their knives, their scissors, their razors, their pen-knives, these indis-

pensable instruments of everyday life, the imperfection of which in France causes us so many daily annoyances, are here of a solidity above all proof, and of exceedingly moderate price. Their hardware and edge-tools likewise exhibit the effects of the price of the raw material and of mechanical execution. Our superiority commences the moment when taste and objects of art are concerned, and this superiority, entirely French, shines pre-eminent, not only in our struggle with the English, but with all other nations. The form, the elegance, the grace, that indescribable something which gives life and soul to matter, perfume to flowers, colour to objects, this is the incontestable attribute of French genius. In this respect, I dare to say it without national vanity, our exhibition, though incomplete, is absolutely overwhelming. The question of prices, the question of labour, of political economy, will have to be considered hereafter, and we shall discuss it against all men; but the question of art and taste, that great trial which might have been lost, is won without appeal by the avowal of all our rivals. Behold the Austrians, the Belgians, the Spaniards even, and the English, as regards the artistic working in wood in a great and beautiful branch of industry—that of furniture. Assuredly, they have exhibited serious works—tables, sofas, arm-chairs, bookcases; but what absence of taste, what sheer waste of talent and ability, for want of design, of art, and of sentiment. It is the same in respect to bronzes and works in precious metals; although MM. Denière and Thomire —doubtless content with their laurels—have let judgment go by default. They are wrong. Englishmen, Prussians, Saxons, Austrians, all are rapt with admiration before the works of our founders. There is in these works such an extraordinary vigour and spirit, that every one is struck. These are the great artists, the men of taste, the inventors, the men who are imbued with the sacred spark of art. I have visited repeatedly the entire Exhibition with several able foreign manufacturers, who expressed their sincerest admiration for so many *chefs-d'œuvre*.

Everywhere we find this immortal fire of French genius, which is to us what the iron and coal mines are to the English, and more than that, an inexhaustible capital. No sooner have the manufacturers of Mulhouse displayed their printed jaconets, their printed calicoes, their chintzes, their mousselines-de-laine, than the victory is already assured to them. Look at the same articles in the English, Austrian, Belgian, Saxon, Swiss, or Russian compartments; everywhere you will be compelled to admit, with the progress which has been made, the decisive superiority of the French goods. And this time the question of prices excites no doubts—nobody manufactures better and cheaper. Here we have for less than a shilling per yard fabrics for curtains, or rather real masses of roses, lilacs, camelias, which float in the air, on calico grounds, and which M. Jean Dolfus still considers too dear. Jean Dolfus is right. Jean Dolfus is an upright and able manufacturer, who has perfectly understood that cheapness is the great question of the day, and who has thrown himself into the conflict for the triumph of true principles. What says he? A very simple thing. He says this:—"Since we are the first calico printers (and he has a right to say it, for he is one of the ablest), we have only one thing to wish for: it is, that the manufacturers of calico shall furnish us the raw material for our prints at the lowest possible price. Our superiority as printers is only weakened by our inferiority as weavers. Our weavers only sell us the calicoes at such high prices because the spinners are protected by prohibition below certain numbers. Let us abolish prohibition, which is absurd and impertinent in every respect, and the branch of industry of calico-printing will probably be trebled or increased tenfold. We shall purchase grey calico cheaper, and we shall resell it embellished with a thousand colours." Upon this there is a great outcry at Mulhouse, where there are, as elsewhere, many manufacturers ignorant on political economy, less peremptory and intolerable, however, than M.M. Lebeuf, Mimerel, those great proficients in closing the ports and building China walls,

and for whom the whole of France is Creil and Roubaix. These illustrious "representatives of the people" exhibit nothing in London. They have dreaded the comparison of their products. Those who think as they do at Mulhouse, do not desire that our printers, who print so well, should print cheaper, that consequently they should employ more workpeople and create more national labour. This is the trial, be assured, which will be judged at the Exhibition in London from the most irrefutable evidence. Oh! Sir, how I lament to think that for more than twenty-five years my masters and myself have written and taught to demonstrate to this people, that it is better to have a good knife of thirty sous than a bad blade of three francs, and that to make steel, Swedish iron is better than ours. This is very unpatriotic, we are told, and you are the enemies of national labour; as though national labour were not interested in the cheapness of raw materials, and as though there were not in France millions of men who use iron compared with a few thousands who produce it! At this great gathering of the industry of all nations, it is easy to judge of the influence of low prices of the raw materials. The ascendant prosperity of the English is entirely owing to this. Every day they free their raw materials and articles of consumption. Bread, coffee, sugar, meat, tea, articles of food and of clothing, are all brought within reach of the greatest number, and increase at once the revenue of the state and the welfare of the people. When we consider, in this vast bazaar of the Universal Exhibition, what every nation wants, it is easy to see that it is principally the liberty to procure it to itself by the aid of that which it does not want. The United States exhibit varied raw materials in large numbers, and few and very mediocre manufactured articles. It is to their interest to sell us their raw materials and to purchase our products.

Before concluding this rapid sketch of the general facts of the Exhibition, I may allude to the interest which is attached to the countries now behindhand, in times of yore prosperous, of the old civilised world. The products of India and of China represent with sufficient accuracy the state of industry as it was two thousand years ago, when France and England were covered with forests. The Great Exhibition, therefore, does not only present the different industries of nations, but that of centuries; nor is it a spectacle devoid of interest to behold the spoils of animals from all parts of the globe—such as Bengal tigers, African lions, Russian bears, American beavers, and even hides of hippopotami perfectly tanned and bullet-proof.

LETTER IV.

At length France has hoisted her flag amidst the applause of all Europe, and in a few days hence her arts and manufactures may be appreciated at their true value. The city of Lyons has been somewhat behindhand, as this will sometimes happen to ill-tempered potentates; but nobody has lost anything in consequence. The Exhibition could scarcely be said to be opened as long as the marvels produced by that city were wanting. Now that Lyons and Mulhouse have completed their elegant, simple, and synoptical display, myriads of lookers-on crowd the brilliant galleries; it is a perpetual stream of visitors, who come to greet the queen city of our industry. On all hands nothing is heard but the exclamations—"Beautiful! handsome! very nice!"

This is the fitting opportunity, Sir, to reassure our countrymen upon the subject of the reports which have been circulated in Paris relative to our inferiority at the Exhibition. There can only have been some foundation for these reports during the first days, when, in fact, we had scarcely anything unpacked, and when the public, very much astonished, passed by our empty glass cases and our packing cases filled with straw. It was a lamentable spectacle, and the much more to be regretted since first impressions are enduring, and often outlive the reality which ought to modify them. But it was the

fault of the exhibitors, who nearly all waited until the last moment, some to complete, others to send off their goods. Everything now has been set to rights; and previous to entering upon the comparative examination between our various arts and manufactures and those of our rivals, I can confirm, without an overweening patriotism, everything that I had led you to foresee in my first letters, that our triumph is certain in nearly everything, brilliant above all in the department of Lyons. Not that I do not see appearing in the horizon threatening powers: until further information, I shall merely name them to you. Switzerland has ribands, Italy velvets, and Spain silk goods, worthy of the greatest attention. China, of which I will speak presently, has very remarkable crapes and shawls, even as regards the taste of the embroidery. But rest assured that we shall remain the incontestable masters of the initiative and of art. An Englishman, who understands these matters, said to me yesterday: "We have quantity, you have quality." The Englishman was right. It will be easy to prove that we might have both. To achieve this it will suffice to admit the raw materials of labour at the lowest prices in whatever part of the world they are found. That which most usually interferes with the sale of our articles, is their relative dearness; and this dearness arises principally in consequence of the high price of the raw materials. As soon as it will be understood that the national genius gives to our works a greater value than other nations impart to theirs, the only means of not losing our superiority will be not to let the other nations be able to procure the elements of labour cheaper than ourselves. It is a question of customs; for as far as arts and taste are concerned, this is a sacred fire which cannot be purloined; the Universal Exposition sufficiently proves this, and, to me, beyond my most sanguine hopes. It will be as easy to deprive us of this privilege as of the mildness of our climate or the grace of our women. I would ask you whether grace can be taught or purchased?

Thus, Sir, until we reconsider this grave subject, naturally reserved until the end of our studies, I may recapitulate in a few words the position which we occupy at the Universal Exhibition. We are evidently without rivals as regards form, design, and colour in everything: precious metal-work, cabinet-work, bronzes, paper-hangings, printed calicoes, fancy articles, philosophical instruments, guns, &c. We have made no show of pottery or glass. Saint Louis and Baccaret have deserted in the face of England and Bohemia. We have few machines, and it would be a great error to judge of the power of France from what we have exhibited in this department, although what we have shown is very beautiful. Our former royal manufactures—Sèvres, Beauvais, and Gobelins—occupy a room by themselves, which is the admiration of all visitors. Our organs, our pianos, resound pre-eminently all over the Exhibition. Everywhere you behold a multitude of useful articles; you return at all times to the French department to find the real type of the beautiful. Even this morning I had the honour to accompany the duchess of Orleans over the Exhibition, who said to us, with visible satisfaction: "Decidedly, gentlemen, France is ever France; and her greatness shines here anew by the light of comparison!" I shall now conduct your readers over the ground most favourable to comparisons between our European industry and that of the old world. I allude to British India and China, which have displayed at the Universal Exhibition products which are really marvellous in point of make and variety. Manufacturers of every description, and of all countries, will do well to study the articles sent by China and India, for in them they will find precious indications to renew or modify their designs, their forms, and even the arrangement of certain weaving-looms. The collection of products of British India is peculiarly interesting in this respect, inasmuch as it is more novel and less known than the Chinese articles. It is also more complete, and it is easy to see that the orders of the English government have not contributed a little to the

care with which it has been got together. Those who only know India through the medium of books—and there is not a better one on the subject than that of our unfortunate countryman, Jacquemont—may here see that country alive and stirring, without trouble or fatigue; here it is entirely, the climate only is wanting; and I venture to say that this collection of itself presents sufficient interest to attract thousands of visitors in England.

The first thing which strikes the eye is a military and naval collection—that of all the weapons of the country, and of all the ships, large or small, which navigate these distant seas. What means of destruction, what curious shapes of guns, of heavy cannons, of pistols, of arrows, of sabres, of daggers ornamented in every fashion, daggers with straight blades, with bent blades, gilt and enamelled poniards, yataghans—frightful and beautiful instruments of death, and very few of production. You would think that life is too long in that country, and that it is an evil of which you cannot get rid too soon. The ships, likewise, seem rather constructed for the purpose of piracy than for commerce. Behold those of Mindanao, with two rows of oars and square sails; the sampans of Singapore, with lateen sails; the ship serpent of Cochin-China, with small shovels in the shape of oars; and this whole fleet of sea-rovers, which the steam-frigates of England gradually sweep away from this archipelago of thieves;—are not these the image of the old East, which yields every day before the ascendancy of the genius of Europe. The study of this collection is more easy, inasmuch as the English have omitted nothing. There is probably not a single profession which has not been represented by a statuette in the costume proper to it. These costumes are often somewhat light, giving an idea of the climate, and particularly of the condition of the people of that country. When you see these heavy palankins, carried by half-naked men with the gait of beasts of burden, and contrast these with the brilliancy of the trappings, embroidered with gold, that of the golden fabrics inlaid with precious stones—all this Oriental magnificence created by so much indigence—you learn only too much of the lot of humanity in these old starting-points of civilisation. Here you may easily see that if socialism is a chimera, misery is a reality. The works of their industry are nevertheless worthy of the liveliest interest. If our prohibitionists had condescended to appear at the Universal Exhibition, we would have taken the liberty to show them the collection of Indian pottery, the forms of which are contemporaneous with the conquest of Alexander, and which, for their variety and originality, are deserving the attention of all those engaged in the ceramic art. This pottery, fine as well as coarse, forms a veritable museum, of a striking local colouring, and which must be of great value, as I noticed with regret that it was forbidden to take drawings of them *without permission;* but it is not forbidden to carry away the idea. This exhibition is a mine of ideas. The two or three charming little compartments devoted to the woven fabrics of India, from shawls down to the slightest fancy neckerchiefs, appear to me capable of themselves of revolutionising the fashions. Let me entreat of you to send the largest possible number of workmen. Would they could all be sent here! What creations, what riches, would be the fruits of this journey! What new fabrics might we not produce with the aid of these patterns, three thousand years old! Besides, it appears to me that, since the republic of Plato is fashionable in Paris, we ought also to study the contemporaneous industry of Aristotle, whose pupil in days of yore conquered India. There was a great industry in the East in the time of Alexander, just as there was one in Europe in the time of Napoleon. If these two great men could now meet in London, they would both find again the furniture of their closets and the swords of their soldiers; they would only find the heroes wanting. The men of the present day are more ingenious, but they are matter-of-fact. Let us therefore leave them alone, and let us return to our Indians.

The great value of this portion of the English Exhibition is, that it is impossible to find it elsewhere, either on a large or small scale. The greater portions of the Indian articles, not being in conformity with European taste, very few are generally imported into Europe, and we cannot adapt to our use all which would be applicable to it by means of some unimportant modifications. Yesterday, for instance, I was admiring several oriental fabrics brocaded with gold and silver, which the slightest change would suffice to transform in the most original fashion, and render them appropriate to the refined and elegant taste of our ladies. A thread of white silk substituted for the silver, a thread of yellow silk for the gold, and all would be accomplished. Once more, send us workmen by hundreds. Preach this crusade. I dare to assert that not a single good workman can spend a fortnight here without trebling what we political economists call his *moral capital*—the capital that belongs to him, his intrinsic value, that is to say, without becoming richer. The Indian exposition has likewise its philosophical and political point of view for me. I may inform you of a discovery which is connected, through Calcutta, with the Indian exhibition, although the discovery is carried out in Scotland. It is the introduction of a new textile product, which is called here *jute*, which holds a medium between flax and hemp. *Jute* is a species of hemp, which grows abundantly in the plains of Bengal, and which, strange to say, possesses along with the properties of flax, those of cotton, that is to say, of being combed in parallel staple, and of being carded. A distinguished manufacturer, the Chevalier Clausen, has succeeded in bleaching it so perfectly, that there is no silk more glossy than *jute*, after being bleached by a new process, which constitutes the most curious application of chemistry which has ever been made to manufacture—a process, which might be called bleaching by means of distension. The *jute* can be made into parallel threads, like silk, or in wool, like cotton. It mixes equally well with silk, wool, yarn, and cotton. Its mixtures are as curious as its use is isolated. The English exhibit flannels, hosiery, and cloth of various kinds in which it has been introduced. I have found all competent persons much impressed with these important experiments upon a new textile fabric.

LETTER V.

I cannot refrain from bringing your readers back to the exhibition of the products of British India. This is an entire industrial world, new to us even from its antiquity, carrying us back to the heroic ages, and which, from its perfectly original character, resembles no other. The East India Company has expended upwards of £80,000 to appear worthily at this great federation of nations. It desired that its empire of fifty millions of subjects should be fittingly represented, and it has admirably succeeded in so doing. Since the commencement of the Exhibition new products have been added almost daily. Some of these are even more beautiful than those which have gone before, and attract in the highest degree the attention of visitors. Indian art, in truth, is deserving of this preference—it resembles no other. It has not the whimsicalness of Chinese taste, nor Grecian or Roman regularity, nor modern vulgarity: it is a special art, more simple than is generally believed, even in its digressions, and which never appears to have varied nor borrowed anything elsewhere. Applied to ceramic manufacture, it is full of grace and simplicity. The curves are of an undulated kind, supple and flexible, like the forms of the serpent; and as rich and varied in the coarser as in the finer descriptions of earthenware. There are thousands of specimens in the Exhibition which cannot fail to be imitated in France, for the eyes of all manufacturers are upon India. The art of weaving cloth has evidently attained a high degree of perfection in that country. Without mentioning the Cashmere shawls, which have become the beau-ideals of their kind, everything exhibited by the East India Company

appears a collection of *chefs-d'œuvre*. Muslins embroidered with gold, kerchiefs variegated with a thousand colours, gorgeous scarfs of the most exquisite taste, tablecloths enamelled with flowers woven fabrics of every description *inlaid* with emerald green, saddles, cloaks, stuffs for hangings, handkerchiefs for Odalisks, with small plaids of a delicate red embroidered with silver—every tint which nature has lavished on the wing of the butterfly is found in this Indian collection, which a company as powerful as that of the East Indies only could bring together by its sovereign commands. The entire East has hastened to obey its summons.

Nothing is wanting. Every calling of the land is here represented under the guise of those who follow it. Poor people! unclad, fed with a little rice, habitually dwelling beneath the canopy of heaven or of trees, paid none know how! We see them in their attitudes of work, their implements in their hands, their miniature looms before them—they really live before us. The East India Company has not even forgotten the musical instruments which charm them, and which frighten me. Come and see these, my friends; you will probably find some new acoustic resources in this kind of cymbal with twenty dirks strung together in the middle around a large circle a yard in diameter, in these small shrill tom-toms which pass so rapidly from lively to severe, and in these primitive mandolins with gilt copper cords. Behold these elephant saddles—the teams for men—the palanquins to carry you! All this strange civilisation is admirably illustrated by its works: luxury and indigence sum it up in two words. It is here that the ancient and modern history of India may be studied. It is completed by the picture of all the useful arts in which the Oriental mind seems to live its usual strange, heavy, and monotonous round. I do not talk to you of those diamonds before which the crowd of visitors are in rapt admiration. I leave you to guess what value is to be attached to the statements of the appraisers of the famous Koh-i-Noor who reason thus: the diamond cost £40,000 so many years ago; if this sum had been accumulated with interest it would now represent £2,000,000—*ergo*, the diamond is worth £2,000,000. We neither admit this arithmetic nor this political economy. Diamonds have always to me been the most foolish and useless things, although women are said to covet them as the superlative ornament; as far as I am concerned, I prefer the Spanish aphorism: "To youth, love; to age, respect." It is less costly.

I insist greatly upon the particular merit of the Indio-Britannic collection. It has produced a great sensation amongst all connected with art and manufacture; and in the period of transition in which we live it is deserving of the most serious attention. The interest which it excites increases every day at the sight of those marvels which are like a veritable revelation of this ancient and original art. It is, however, to be feared that our industry will not benefit by the samples which the East India Company has got together, for they are nowhere else to be procured. I will not say as much of China. China is more known and less worthy of being imitated. Its whimsical and fantastical taste does not merit so much esteem and attention as the industrial genius of the Indians, though perhaps it has never appeared to greater advantage than at this Exhibition. I have been particularly struck with the abundance of her raw materials, and, above all, with the beauty of her silks. They shine in quantities, and with a brilliancy only equalled by that of her embroidered crape shawls, her classical pottery, and her marvellous works in ivory, horn, and marqueterie. After all, the Chinese are a people very much advanced in industry, although stubborn and almost immovable. All that they have is of ancient date, and they had what we have long before we had conquered it. They invented gunpowder before us; they knew the compass before we had discovered it; and we have seen in London products the manufacture of which dates back 1,753 years before Christ—that is to say, more than 3,500 years ago—and

which are remarkable for their excellent workmanship. The Chinese, however, with all their antiquity, are a stationary people.

The English could scarcely fail to present us with several valuable collections of tea, and there are very fine ones at the Exhibition. But this article presents to the English, only, any serious object of interest.

On taking a temporary leave of these agreeable effusions, we may remark that lively and original as they are, they are by no means deficient in that tone of self-complacency and self-esteem which is rarely wanting in our Gallic neighbour. To use his own phrase, "La France est toujours La France," and we have no doubt she will remain so while she exists as a nation. In the midst of their most reprehensible deeds they boast of their noble qualities. "La France genereuse comme elle est toujours" was the expression we heard from the lips of a young French officer, at the very time the soldiers under his command were bombarding the walls of unfortunate Rome. Proh pudor!

CHAPTER XXXVIII.

COUNCIL MEDALS: KISS, MAROCHETTI, PRADIER, WYATT, GIBSON—PRIZE MEDALS: BAILEY, BELL, BENZONI, DEBAY, DRAKE, ETEX, FOLEY, FRACCAROLI, FRAIKIN, GALLI, GEEFS, HOGAN, JENNINGS, JERICHAU, LAWLOR, LESCHESNE, MACDOWELL, MARSHALL, MONTI, RAMUS, RIETSCHEL, SHARP, SIMONIS, STRAZZA, THRUPP, TUERLINCKX, WATSON, WOLFF—ACCOUNT OF HIS STUDIO AT ROME—SCULPTURE IN BRONZE: JEAN DEBAY, FRATIN, LEQUESNE.

In resuming our notices upon the Sculpture in the Great Exhibition, we must not neglect to draw the attention of our readers to such of the numerous candidates for fame in that department as received honorary distinction from the jury appointed to examine into their respective merits. At a meeting held on the 5th of June, long before the question of individual rewards came under consideration, the jury agreed upon the following resolution:—

"That it is not desirable to assign the council medal to every object of art pre-eminently beautiful or excellent in its kind, whether it be executed in an inferior section of the class or not, but that it should be rather limited to the highest works of the highest class." This resolution, consistent with the view of the Fine Arts taken throughout by this jury, precluded them from awarding the highest honours to any but works of art of the highest class. Their awards, therefore, must not be compared with those of other juries guided by different principles, but must be tested only by the rules which the jurors of Class XXX. have laid down for their own guidance. The holders of the several marks of approbation by which this jury have distinguished merit, ought to appreciate them according to the high value set upon these several marks of approbation by those who conferred them. In forming their judgment upon works in the highest branch of art coming within their jurisdiction, the jury have principally looked for the embodiment of ideas, thought, feeling, and passion; not for the mere imitation of nature, however true in detail, or admirable in execution. They have looked for originality of invention, less or more happily expressed in that style which has for twenty-three centuries been the wonder of every civilised people, and the standard of excellence to which artists of the highest order have endeavoured to attain. Wherever indications of originality, chastened by a successful adaptation of this style, have been met with, the

jury have acknowledged a corresponding amount of merit; and it is this originality of conception, improved by such style, which the jury have recognised by the honours placed at their disposal. They have endeavoured to record, in the most emphatic manner, their anxious wish that artists should study to give their ideas that form and life which spiritualizes every-day nature, and elevates a work of art to the place of a type of nature itself. The jury of Class XXX. would point to the remains of the Parthenon as embodying the result of the great principles which they have been anxious to inculcate, and which they desire to see universally adopted. The limited number of council medals awarded must not, therefore, be regarded as a proof of deficiency of talent in the bulk of the works exhibited, but as evidence of the severity with which the principles adopted by the jury have been applied. It was agreed to recommend that council medals should be awarded to the following works:—

To Professor A. Kiss, of Berlin, for his group cast in zinc, and bronzed by M. Geiss, representing an Amazon on horseback attacked by a Tiger. This work we have already noticed at some length, and shall not therefore offer any further remarks upon it.

To Baron Marochetti, of Turin, now of London, for his colossal equestrian statue, in plaster, of Richard Cœur de Lion. Our readers will recollect this statue, which was placed at some distance from the building at the western end, and looking towards Kensington-gardens. The grace and vigour it displayed were universally admired. The warrior-king bestrode his steed in true chivalric guise, and filled the mind with recollections of many a tough encounter with Paynim knights and ruthless Saracens in the Holy Land, in days of romance and fanaticism long since passed away.

To M. J. Pradier, of Paris, member of the Institute, for his marble statue of Phryne. In this youthful female figure the beauty of feature, the subtle refinement of form, and the sprightly elegance of the attitude, alike corresponded with the name of the celebrated *Hetaira*, which M. Pradier gave to his work. The premature death of this gentleman, which took place a few months ago, has deprived France of one of her ablest sculptors.

The late Mr. Richard Wyatt, also, had he lived, would have received a council medal for his inimitable marble statue of Glycera, exhibited by Captain Leyland, and which we have already eulogised; his representatives, however, have been presented by the jury with this mark of their approbation and distinction of the deceased artist.

It was the unanimous impulse of the jury, on the awards being taken into consideration, to recommend that the same high distinction should be conferred on Mr. Gibson, for his marble group of a Hunter and Dog, exhibited by the Earl of Yarborough. Their intention was defeated by Mr. Gibson himself, who, well knowing that should he accept the office of a juror of Class XXX., he could no longer receive a prize from that jury, preferred serving his brother artists, to his own individual gratification, and thus disqualified himself for receiving the honour which he so well deserved.

The prize medals were more numerous, and were distributed to the following artists, whom we shall proceed to notice alphabetically.

To Mr. E. H. Bailey, for his two plaster statues of a Nymph preparing for bathing, and a Youth resting after the Chase.

To M. J. Bell, for his statue of the Eagle-Slayer, cast in bronze, and also in iron. This figure represented a powerful man in very strong action, at the moment after shooting an arrow into the air. The violence of the exertion had brought the muscles into full play. The artist admirably succeeded in expressing the momentary and transient character of the action, and the form was modelled with a knowledge and truth of detail which are seldom found in the English School. In his statue of Falkland, executed for the new Houses of Parliament, was displayed a mastery rarely attained in

portraiture; the conception was spirited, the treatment throughout strictly plastic, the figure was remarkable for its noble presence, and its attitude of calm and dignified repose.

To Signor Gio Mario Benzoni, of Rome, for two groups of a Little Girl with a Dog. In one of these the child was represented drawing a thorn out of the dog's foot; in the other the dog, after having killed a snake which was threatening an attack, sought to awaken the child thus rescued. The motive of these works was attractive, and they were carefully executed in marble, but they were by no means of sufficient importance to be considered adequate representations of the modern school of sculpture in such a city as Rome. It is to be regretted that the most distinguished artists of that city, and especially Tenerani, the greatest living sculptor of Italy, sent no specimens of their works to the Exhibition.

To M. Auguste Debay, of Paris, for his group in marble representing Eve, with Cain and Abel asleep in her arms, and designated as "Le Premier Berceau." In the form and attitude of Eve there was great beauty, truth, and refinement of feeling, and the countenance admirably expressed the tenderness of a mother. The treatment of the figure, however, was rather too picturesque in character, and the general motive somewhat strained and violent; the forms of the children were not happily composed, and there was a want of style in the hair of Eve, which was gathered together behind in a somewhat clumsy mass.

To Professor F. Drake, of Berlin, for a reduced cast of part of the marble pedestal to the monument of Frederic William III. of Prussia. The statue which this pedestal supports was erected by the inhabitants of Berlin, as a token of their gratitude for the embellishments which this monarch has bestowed on their Thiergarten (Zoological Gardens.) The work exhibited was in plaster, half the size of the original pedestal. In the reliefs with which it was ornamented, the sculptor selected subjects which contained allusions to the local destination of his work. Thus he represented a number of figures, of every age and sex, enjoying themselves in the open air. We observed groups of children looking into a bird's nest or feeding the swans, young maidens weaving garlands, old people leading children to the scene of the sports, or contemplating their youthful gambols with an air of calm enjoyment. There was much beautiful feeling in the treatment of this subject: the heads were full of expression, the movement of the figures very spirited, and the different groups were skilfully connected. The composition was executed in a very good style of alto-relievo, the details finished with the greatest care. On the whole, this work was deserving of the very great and general admiration that was bestowed upon it. It may, however, be noted as a defect, that the artist did not throughout preserve the relative proportions of the figures.

To M. A. Etex, of Paris, for his various works of sculpture in plaster and marble. Of the three groups exhibited by this artist, the most agreeable is that in marble of Hero and Leander, standing mournfully beside each other. In the group of Cain and his Family, the characteristics of a base, abandoned nature, were admirably expressed in the countenance and coarse clumsy limbs of Cain, which were very carefully studied from the life. The allegorical group of the City of Paris imploring Heaven to take away the Plague of the Cholera, was a less agreeable work, on account of the manner in which the subject was treated. The city was represented as a seated female figure, with an old man and a youth expiring of the pestilence, one on each side. In these figures the moment of death was expressed with wonderful truth. This work was a specimen of that class of art which, seeking to act on the feelings through the representation of mere physical suffering, may be called the revolting; a style which appears to be little cultivated or admired except in France, notwithstanding her supreme excellence in point of refinement and taste, which M. Blanqui, in his letters on the Exhibition, so confidently asserts.

To Mr. J. H. Foley, of London, for his statue of a Youth at a Stream; also for his group representing Ino and Bacchus. The former of these works we have already sufficiently noticed, as well as the statue of Hampden by the same artist. The group of Ino and the infant Bacchus exhibited much grace and refinement of form, but altogether was not so generally attractive as the Youth at the Stream.

To Signor M. J. Fraccaroli, of Verona, for his two statues in marble, representing Achilles wounded in the heel, and David in the act of slinging the stone at Goliath. The design of this last-mentioned figure was very spirited, but a little strained; the features had a noble expression. The youthful character of the head, however, did not altogether accord with the rest of the body, in which the muscles were too strongly marked.

To M. C. A. Fraikin, of Schærbeek, near Brussels, for a plaster group of Psyche carrying off Cupid. The motion of this figure was spirited, and the forms were expressed with great tenderness, and from several points of view the group was very attractive. The movement of the head of Psyche, however, struck us as rather affected, and in the style of Canova.

To Signor A. Galli, of Milan, for his statue of Susanna. The forms in this figure were youthful and pleasing, the attitude agreeable, and the execution extremely careful; but without the introduction of the two Elders, the subject would be difficult to recognise.

To M. G. Geefs, of Schærbeek, near Brussels, we have already paid honour due, for his admirable group of the Lion in Love, and we shall therefore direct the attention of our readers to another work by this skilful artist—a bust of his Majesty the King of the Belgians, which was full of spirit, and very carefully executed.

To Mr. J. Hogan, of London, for his reclining figure in plaster, representing a Drunken Fawn. This personification of the sylvan deity, "ripe with the purple grape," and reeling from excess, appeared to be making a last effort to save himself from falling. The work indicated careful study, but the attitude was rather violent and ungraceful.

To Mr. Jennings, of London, for his marble statue of Cupid. Among the few poems of Sappho that have come down to us is her charming lyric of "The Rose," wherein Cupid asserts her right to be made the queen of the flowers. This subject has been treated by the late celebrated Thorwaldsen, with his usual felicity, in a basso-relievo, where Cupid is represented bringing the rose to Jupiter and Juno, who are seated side by side, with the attendant eagle and peacock at their feet. Mr. Jennings presented us with an abridgment, as we may term it, of the story, in the person of Cupid alone. His attitude, as he extended the rose in one hand, and pointed exultingly to it with the other, as if claiming admiration of its beauty, showed to great advantage his finely formed limbs: an air of gaiety and enjoyment befitting the brightness of youth, pervaded the whole figure, which seemed to breathe of spring and blossoms. At his side the trunk of a tree, round which the rejected lily twined her delicate tendrils, along with the rose, showed that her modest charms had been cast into the shade by the glowing attractions of her more brilliant sister.

To M. J. A. Jerichau, of Copenhagen, for a group in plaster, representing a Hunter carrying off the Cub of a Panther. It was for Denmark that the great Thorwaldsen, unquestionably the finest sculptor that has appeared since the time of Phidias and Praxiteles, embodied his spiritual conceptions in such a number of masterpieces of sculpture; and there are not wanting in Denmark at the present day, distinguished sculptors, who follow in his footsteps with greater or less success. Among these, M. Jerichau takes no inferior position. In this able group of a Hunter and Panther, he has exhibited great spirit and fine conception. The execution also is skilful, and the details well attended to.

To Mr. J. Lawlor, of London, for his statue in marble of a Nymph Bathing, a work of considerable merit.

To M. A. Leschesne, of Paris, for his admirable groups in plaster of Dogs and Children. As we have already noticed the productions of this artist in a former chapter, we shall pass on to Mr. Lawrence Macdonald, of Rome, whose studio is crowded with busts and portraits in marble and plaster, of most of the celebrated personages who have passed a season within the walls of the Eternal City. The Iconic figure by this sculptor, for which he received his prize medal, executed in the manner and costume of classical antiquity, showed that the artist has a just perception of style, and sound knowledge.

To Mr. P. Macdowell, of London, for his plaster statue of Eve; also for his statues of Cupid, and of a Girl at Prayer, in marble. The most remarkable work of this sculptor was his Eve, which was modelled with great knowledge, the attitude also was graceful, and the expression of longing curiosity well rendered. His Girl at Prayer was treated with simplicity and depth of feeling, and very carefully executed. His figure of Cupid had also great merit.

To Mr. William Marshall, of London, for his plaster figure of Sabrina. Sabrina is familiar to us from the beautiful invocation of Milton:—

"Sabrina fair,
Listen where thou art sitting
Under the glassie cool translucent wave,
In twisted braids of lilies knitting
The loose train of thy amber-drooping hair,
Listen for dear honour's sake
Goddess of the silver lake,
Listen and save."—*Comus.*

The Sabrina of this artist was remarkable for its feminine grace; the head had a fine character of individuality, and there was great beauty in the form, and in the general expression.

Signor Raffaelle Monti, of Milan, and Mr. Hiram Powers, of the United States, both of whom received a prize medal, have already had their respective performances sufficiently commented on by us in a former part of this work: we shall therefore pass on to M. J. M. Ramus, of Paris, who received the same mark of distinction for his marble group of Cephalus and Procris. Cephalus was represented tenderly supporting in his arms the dying Procris. This group was, in its leading lines, very happily composed, and showed in the forms much knowledge of nature; but the modelling was not in a sufficiently large style, and was not sustained throughout.

To Professor Ernst Rietschel, of Dresden, for his plaster group, designated as *La Pietá*, representing Mary kneeling at the dead body of our Saviour; and for his bas-reliefs in marble. This distinguished artist, one of the ablest pupils of Rauch, exhibited three works, the varied character of which showed the versatility of his talents. 1.—A group of the Virgin weeping over the body of our Saviour, cast in plaster, from a model executed for his Majesty the King of Prussia. In the figure of our Saviour, anatomical truth was combined with nobleness of form; the countenance wore a fine dignified character; its mild transfigured expression proclaimed the triumph over the agonies of death. In the Mary, the countenance and the clasped hands revealed the deepest, but most resigned sorrow of the soul. The drapery was fully worthy of the invention shown in the group. 2.—Angel of Christ, a very noble relief in marble. The Angel was represented in the form of a graceful youth, floating in the air, with the infant Saviour in his arms; two infant angels attended his course. This group had a peculiar charm, from the beauty of the heads and figures, the grace of the action, the suddenness of the movement impressed on the flying drapery, and the masterly, yet

tender handling of the marble. 3.—Love riding on a Panther, whose course he tries to arrest, eagerly grasping his neck with both his hands. This beautiful conception was quite in the spirit of ancient art, and was expressed with great vigour of hand.

To Mr. T. Sharp, of London, for his marble figure, representing a Boy frightened by a Lizard. This was a remarkable work—quite unlike in choice and treatment of subject any we have as yet noticed. The artist did not hesitate to express that dryness and meagreness of form which characterizes the particular stage of boyhood selected for representation; but these details were executed with the utmost accuracy, and with an admirable feeling for nature. The eye of the ordinary observer, habitually accustomed to the specious effect of mere smoothness of surface, may, in some degree, be repelled by this truthfulness of representation; but, like all other truth, it will not the less be ultimately appreciated, and we may regard this figure as in itself a proof how great an effort the English school of sculpture is making in the right direction.

To M. E. Simonis, of Brussels, for his equestrian statue of Godfrey of Bouillon, and other works. A colossal figure of Godfrey of Bouillon on horseback, raising the banner with which he led the crusaders to the Holy Land. Cast in plaster from the original in bronze, which is placed in the Place Royale, at Brussels. In this work the expression of the head is full of life and animation, the action very emphatic, the execution very careful. To compensate for the optical diminution which causes statues placed in the open air to appear meagre and deficient in mass, the artist in this group exaggerated the forms both of the warrior and the horse. This departure from nature was perhaps carried too far. In his group representing Truth trampling on Falsehood, the same artist showed power in the representation of delicate female forms, and the work was carefully executed. Two figures of boys, one of whom is crying over his broken drum, prove that M. Simonis has been successful in that class of subjects called "genre," and which are altogether treated in a realistic manner.

To Signor G. Strazza, of Milan, for his reclining figure in marble, representing Ishmael. We have already noticed this striking and admirable performance with due praise. Perhaps the truthfulness with which the dying youth is represented, renders the subject too painful a one for general approbation. In the treatment of this subject by painters, an angel bringing help to Ishmael is always introduced, and from the absence of this figure, the impression produced by the work of Signor Strazzi is unrelieved by any mitigating circumstance.

To Mr. E. Thrupp, of London, for his statue of Arethusa, a recumbent figure, gracefully enough designed, but rather deficient in life and individuality. A Boy catching a Butterfly, was a very carefully executed and attractive work.

To M. J. Tuerlinckx, of Malines, for a figure in marble, representing the celebrated Giotto when a boy, looking at his first attempt at drawing, with an expression of joyful surprise. The conception of this work was very spirited, and it was carefully executed.

A prize medal was also conferred upon the representatives of the late Mr. L. Watson, of London, for his admirable portrait statue of the celebrated Flaxman, a noble performance, which we have already sufficiently described. As also for the colossal figures of Lord Eldon and Lord Stowell, which showed how greatly this artist excelled in leonic sculpture.

We next turn our attention to M. Albert Wolff, a native of Berlin, who also received a prize medal for his group of a Young Maiden holding a Lamb in her arms. This figure was entitled by the sculptor, Innocence, and its purity and simplicity of character fully expressed such an idea. The drapery was throughout treated in a plastic style, and the execution was exceedingly careful. M. Wolff, though a Prussian by birth,

has long fixed his residence in the Eternal City, and his studio there, in the Via Quattro Fontane, is altogether, perhaps, one of the most interesting in that grand emporium of the Fine Arts; not only from the surpassing elegance, but also from the extraordinary variety of its contents. Let us attempt a brief description. Believing that mythology is the basis of sculpture, and being an enthusiastic admirer of classic story, M. Wolff devotes much of his talent to representations from Greek and Latin fable; as we see in his "Prometheus," in the act of coming stealthily away with the divine fire, which he has stolen and secreted in a reed; "Thetis, seated on a Dolphin," conveying arms to Achilles, the tender anxiety of the mother being happily conjoined with the dignity of the goddess; "Diana, resting from the Chase," in which we see, by her trophies of game, she has been successful; "Cupid clad in the spoils of Hercules"—one of the many delightful ideas which have come down to us from the gems of the ancients; another Cupid sleeping upon his quiver, his bow at his side, and at his feet a dog that seems intent on preventing his repose from being broken in upon; and pity that it should be, for never was repose, profound, innocent, and sweet, more charmingly expressed. Then there is the ever-lovely and poetical character, Psyche, with the vase which tempts her to her second act of disobedience; and another personification of her, extremely beautiful, seated on the ground, her lamp at her side, her dagger in her hand, her lovely features betraying, though without disturbing their symmetry, the vague uneasiness and jealous doubts infused into her bosom by the artful suggestions of her sisters. This production now graces the collection of Lord Yarborough, whose taste is fully commensurate with his liberality in the fine arts.

In smaller compositions M. Wolff is not less happy. "The Seasons as Children," strike us as the very prettiest miniature representations of them that we have ever seen. Spring, a lovely little girl, is crowned with flowers, and scattering them around her. Summer has his sickle in one hand, some ears of wheat in the other, whilst on the ground at his feet a rustic flask, formed out of a gourd, reminds us of the sultry skies under which he is performing his harvest task. Autumn displays her grapes, her vase, and drinking cup. But Winter is still more characteristic. The sly little fellow has wrapped himself up in the skin of a wolf, and so snug and comfortable does he look in it, that we can scarcely feel any concern for his having to face the biting blast, which we almost fancy we hear whistling round his well-defended ears. How well would these pretty figures grace the corners of the entrance-hall in some of those abodes of which so many are to be found in England; particularly in the vicinity of its capital, where every elegance and refinement are frequently introduced on a lesser scale, which more than makes up by the harmony and completeness of its arrangements for all that it may fall short of in magnitude. To us, moreover, they appear to afford happy vehicles for the portraiture of children under such playful disguises, for those parents who may be able to perpetuate them in marble. "Jephthah and his Daughter" belongs to a different style of art, in which M. Wolff has shown himself not less happy. The dignified despair of the father, the touching submission of the daughter, as she clings to him, with an obedient love in which we see, we feel, there is not even the shadow of reproach, are finely expressed. The devoted girl is very graceful, in her bending figure, and drooping head, whilst her father exhibits a regal majesty shrouded under the bitterness of his grief. But of all the productions from M. Wolff's chisel, we see none more to our individual taste than his "Nereid," which he has, indeed, been called upon to repeat more than once, so much has it been admired. She is leaning on her left hand, and raises her right, armed with a spear, in the act of transfixing one of the finny tribe, which her animated countenance shows she beholds in the clear stream, on which we fancy her looks are eagerly bent. The grace, the vivacity, the loveliness of this figure,

are incomparable. How admirably would it adorn some of our suburban villas on the banks of the Thames, or some noble sheet of water in the grounds of our patrician seats, not to be rivalled in the world for their combination of exterior splendours and internal comforts. M. Wolff has also enjoyed the patronage of Her Majesty the Queen, having executed the bust of the Princess Royal during his late visit to this country. He has also had the honour of sculpturing Prince Albert in the costume of a Greek warrior, which well becomes the figure of His Royal Highness, of whom the likeness, individually considered, is true in point of fidelity, and pleasing in that of expression. We take our leave of M. Wolff's studio, asking pardon of our readers for the short digression our visit to it has occasioned, by observing that, besides the highest degree of excellence in the range of classic subjects, he is peculiarly happy in the representation of that individuality of character and expression so necessary for the formation of a good bust; and an opportunity of appreciating his merit, in this most desirable walk of art, is agreeably afforded, to those who may have the opportunity, by the contemplation of many resemblances of eminent and well-known personages who owe the perpetuation of their features to his talent.

To sculptors in bronze the following prize medals were awarded; with a brief account of which we shall conclude our present chapter, reserving for future notice such works as were distinguished by "honorary mention" on the part of the Jury.

To M. Jean Debay, of Paris, for his group of a young Hunter, rushing forward to despatch a Stag, pulled down by a Hound. The Hunter was naked, and the whole subject was conceived in the spirit of ancient art. This group, from the natural manner of the action, formed a very pleasing composition. The hunter and the animals were modelled with great knowledge, and a good style was shewn in the execution.

To M. Fratin, of Paris. This artist, the most celebrated sculptor of animals in France at the present day, contributed to the Exhibition Two Eagles with a wild Goat, which they have slain; a greyhound, another hound, life size, and several animals on a smaller scale, all in bronze. These works were fully worthy of the artist's reputation. The general conception was most spirited, the details of nature were most faithfully rendered; and the treatment throughout, particularly of the plumage and the skins, was most careful, and in very good style.

To M. E. L. Lequesne, of Paris, for a Satyr, cast in bronze, represented after the manner of the ancients, dancing on a wine-skin, in a state of joyous drunkenness. In this figure, the character of the head, and of the strong, hard muscles, quite corresponded with the general satyr type created by the imagination of the ancient artist. The motion was easy and natural, and the carefulness of the execution was maintained throughout.

CHAPTER XXXIX.

DESCRIPTION OF TECHNICAL TERMS — BRYSON — ROSKELL — KRALIK—THE ALPHA CLOCK—BLAYLOCK—DENT—GOURDIN — BAILLY COMPTE—WAGNER — LOWRY — LEVER AND CHRONO METER WATCHES, ETC. ETC.

"We take no note of Time but from its loss,
To give it then a tongue was wise in man."

Such is the observation of the philosophic author of the *Night Thoughts;* and often, indeed, has the world had occasion to be thankful that the skill and ingenuity of

man have endued with a warning voice the otherwise silent progress of Time, reminding us of its continuous and rapid flight, and awakening us to the necessity of employing to advantage that portion of it which is yet before us, and which, once suffered to pass unimproved, can never be recalled. "Tempus fugit nosque fugimus in illo," was a wise remark of the poet, and however trite it may appear, it is one which we cannot too frequently bear in mind. These and similar reflections irresistibly presented themselves to our imagination as we contemplated the profusion of ingenious machinery to mark the revolving hours, with all their minute divisions and subdivisions, that was exhibited to the curious public in the Crystal Palace.

In all ages, in all countries, however barbarous or uncivilised, some division of time, some mode of marking its progress, has been attempted; and science, in lending her aid to the more perfect accomplishment of this endeavour, has also herself derived benefit from the success she has obtained—the determination of the longitude, and the safety of our hardy seamen, in their long and perilous wayfare, greatly depend on the accuracy with which our horological instruments are constructed. As our present article is not designed solely for the information of those who are already well acquainted with the leading features of the construction of horological instruments, we shall probably render the subsequent details more generally intelligible to our readers, if we briefly explain some of the technical terms which must of necessity constantly recur in our descriptions, such as *escapement*, *compensation*, *remontoire*, &c.

By the term *escapement* is meant that portion of the mechanism of a clock or watch, by which the teeth of the last revolving wheel of the train of wheels, commonly called the "scape-wheel," communicate an alternating motion to the balance or pendulum, as the case may be—and by which also the teeth are successively permitted to escape, after giving an impulse to the balance or pendulum. An escapement is called a *detached escapement* when the piece or part that permits the escape of the teeth of the scape-wheel is not attached to the balance or pendulum, but is moved or acted upon by either of these, at some particular point of their swing or *oscillation*. The ordinary clock escapements are the dead beat, and the common or recoil escapements, neither of which is detached. The effect of the recoil escapement will be most easily recognised, in any common clock that has a seconds hand, by a backward jerking motion of that hand; and this is also visible in the minute hand, previous to each advance. It is owing to the form of the pallets and teeth of the scape-wheel, which is necessary for rough work. In the dead beat escapement no such recoil is observed, but the hand remains stationary between its successive forward movements. This, therefore, is a more delicate escapement, and much more easily deranged than the recoil. Another, which is frequently met with in the clocks exhibited, is known as the "pin escapement."

The principal kinds of timepieces which have a balance, and not a pendulum, are watches, carriage timepieces, marine and pocket chronometers. All these are required to keep time under sudden and various changes of position—disturbing causes which are incompatible with the free motion of a pendulum. The more usual escapements applied to this class of timepieces are—(we arrange them in the order of merit)—the chronometer, the duplex, the cylinder, the lever, and the verge, or common vertical escapement; of these the chronometer and the lever are the only detached ones.

A very neatly-finished series of models of watch escapements was exhibited by Bryson, of Edinburgh, and a series of skeleton timepieces, exhibiting the various escapements, by Roskell, of Liverpool. There was another well-executed series of models by S. Kralik, of Pesth, in the Austrian department. This series comprised the chronometer escapement; the duplex—in this the points of the teeth of a second and smaller scape-wheel perform the office of the usual pins; the lever—in this the teeth are terminated by oblique

surfaces, instead of being pointed as usual, an arrangement which probably wears better, but the friction must be greater; the cylinder, and a modification of this—in which a curved tooth on the balance axis performs the office of the cylinder. There was also a model of the pin escapement applied to a balance, and of two unusual vertical escapements. In one, the scape-wheel is like that of a common recoil escapement. There are two circular plates on the balance axis, with a notch in each. A tooth of the scape-wheel, in passing the notch in the first plate, gave an impulse in one direction to the balance, and fell on the second; on the recoil of the balance the tooth is released from the notch in the second plate, and in passing gives an impulse to the balance in a direction opposite to the former. In the other there are two scape-wheels, at a small distance from each other, on the same axis, the teeth of which are placed intermediately to each other. There is a cross bar on the balance axis which releases a tooth of the two scape-wheels alternately, and in passing receives an impulse from each.

By the term *compensation* is meant the action of some mechanism by means of which the balance or pendulum of a timepiece is made to oscillate in very nearly the same time, notwithstanding considerable changes of temperature. As the physical causes which influence the time of oscillation of a balance are in part essentially different from those that affect the pendulum, we shall leave the question of compensation in balances until, in a subsequent article, we give an account of the construction of the various marine and pocket chronometers which were presented to our notice in the Exhibition; and for the present we shall confine our attention to the compensation of pendulums. The time of oscillation of a pendulum depends, not on its entire length, but on the distance between the point of suspension and a point called the centre of oscillation—the point at which, if the whole weight of the pendulum were concentrated, it would still oscillate in exactly the same time. The mathematical consideration of this point need not here be entertained, as it may be found in any standard work on dynamics; we need only further remark, that the *greater* the distance between these points, the centres of suspension and oscillation, the *slower* will be the oscillation of the pendulum, and *vice versa*.

If a pedulum be not compensated, the least variable material of which it can be made is a rod of some tolerably light and porous wood, as deal or Honduras mahogany, the length of which is very slightly affected by changes of temperature and moisture; but the small changes produced by these agents cannot very readily be distinguished from each other. If, however, as is more frequently the case, the rod of a pendulum is of metal (usually iron or steel), it is evident that the weight at the end of the pendulum will be carried further from the centre of suspension by expansion of the rod when the temperature rises, and again brought nearer when the temperature falls, as all metals expand by heat and contract by cold, though in very different degrees.

If, then, to the lower end of the pendulum is attached a certain portion of some metal that expands by heat much more rapidly than steel, the centre of gravity of the added or *compensating* metal may be carried upwards by its own expansion, sufficiently to counteract the descent of the centre of gravity of the remaining portion of the pendulum by the expansion of the steel rod; and thus an invariable distance may be maintained between the centres of suspension and oscillation under all ordinary variations of temperature. One of the oldest forms of compensation consists of a series of brass and steel rods placed alternately, and the adjacent rods connected alternately at the top and bottom, the weight being attached to the outer pair of steel rods. In this arrangement, to which, on account of its shape, the name of "gridiron pendulum" was given, the excess of expansion of the brass rods is sufficient to compensate the expansion of the whole length of the pendulum. In clocks of the best description, such as astronomical clocks and "regulators," the compensation is usually effected by means of a glass or iron cistern

of mercury, attached to the bottom of a steel rod, which supplies the place of the ordinary weight. Owing to the very large expansion of mercury, which is much greater than that of any other metal, a column of about eight or nine inches high is sufficient to compensate by its expansion for the whole length of an ordinary seconds pendulum.

In the turret clock exhibited by Dent, the compensation is effected by a hollow cylinder of zinc, which surrounds the rod of the pendulum; and in several of the French clocks, by a brass rod placed between two steel ones. The brass rod, by its expansion, raises the steel ones and the weight, or the weight only, through a space sufficient to compensate for the expansion of the steel rods; this is effected by means of two levers, which are placed either at the top or bottom of the rod, but more frequently the latter. Some other special modes of compensation must be mentioned hereafter, in speaking of the clocks to which they are applied.

But there is yet another important source of error in the rates of clocks, more particularly affecting those of large clocks. To obviate this, a mechanical arrangement has been devised, which is known by the term *remontoire*. In clocks of large size, the irregular action of the coarse teeth of large wheels, and the ever-varying weight of the portion of the rope by which the clock-weight is suspended, that is brought into action, as it is uncoiled from the barrel, are perpetual sources of irregularity in the impulse given by the scape-wheel to the pendulum. In the best description of turret-clocks these sources of error are now obviated by disconnecting the scape-wheel from the train, which, when released at short intervals (usually of half a minute) raises a small weight or lever, which in its descent communicates to the pendulum, through the medium of the scape-wheel, either uniform impulses, or a series of impulses varying very slightly, but recurring uniformly at each descent of the weight or lever. This, from its being periodically raised up, has been termed *remontoire*. The various mechanical arrangements applied to the clocks exhibited will be more appropriately described when we speak of them individually.

Having thus briefly described the leading features that characterize the construction of first-class clocks, we will now proceed to notice the large or turret clocks that were presented to us in the Exhibition. The English department contained, it must be confessed, but a small amount of variety. On the right of the great organ was a large turret clock, called the Alpha Clock, by Mr. R. Roberts, of Manchester, which unquestionably presents a stronger evidence of original genius than any other clock in the Exhibition; there is, in fact, nothing about it at all that is common-place. The frame was of a quadrangular pyramidal form, which is admirably adapted for solidity; the large wheels being placed near the base of the pyramid, and the smaller parts above them. The teeth of the wheels and pinions were all cast, except those of the scape-wheel; this must, of course, influence considerably the cheapness of construction. The escapement is detached, and of a novel construction; there is a detent with two arms, on an axis which has also a pinion in gear with a wheel on the same axis with the scape-wheel, so that the detent axis makes half a turn to release each tooth of the scape-wheel. The detent is held by a tooth at the end of an arm that hangs from the point of suspension of the pendulum; this arm is moved by a pin projecting from the pendulum near the end of its oscillation, and releases the detent, when the pendulum receives an impulse from an oblique surface of a tooth of the scape-wheel. The scape-wheel is impelled by a remontoire of perfectly uniform action; this consists of a weight attached to an endless chain, which is wound up every half-minute, on the release of the train, by the arm of another two-armed detent. The clock weights themselves also form part of an endless chain; but this seems to be an unnecessary refinement. The construction of the hammer by which the bell is struck is also quite new The head of the hammer is a ball of

gutta percha, by which the tone of the bell is at once brought out, unimpeded by the secondary vibrations that result from the blow of an ordinary metallic hammer. Again, the fly is superseded, and the hammer is made to perform the office of a fly. It revolves at right angles to an axis, and, in making one revolution, acquires sufficient centrifugal force to throw the head outwards, and enable it to reach the bell; after striking, the hammer remains quiescent. Near the end of the south-west gallery, was exhibited an accessory to turret clocks that deserves notice. This was a simple and ingenious mode of self-regulating the supply of gas to illuminated dials, by J. Blaylock, the length of time being daily increased or decreased by the mechanism, as required. The action requires to be reversed on the longest and shortest days. In the western avenue was a turret clock by Mr. Dent. In this the train is released by a detent every half-minute, and winds up a spring contained in a box, through which the scape-wheel axis passes. The end of the spring is attached to the axis, and consequently the spring acts as a remontoire. As the object of a remontoire is to obtain uniformity of impulse on the pendulum, this, of all the contrivances exhibited, appears the least calculated to attain the desired object, owing to the variation in the strength of the spring from change of temperature; especially when we remember that turret clocks are, from their situation, exposed to great vicissitudes of temperature.

In the French department, M. Gourdin exhibited a beautifully finished piece of workmanship, but greatly wanting in solidity. Two ornamented open-work girders, on which the whole weight of the clock rests, were evidently bent by the weight that they were unduly called on to sustain. The remontoire consists of a weight hanging by a thread from an arc at the end of a lever; this renders the action of the weight constant, but the action is not entirely constant, as the short arm of the lever carries an axis on which are two wheels—one in gear with the train, the other with the scape-wheel pinion; the escapement is a dead beat, the teeth of the scape-wheel being obliquely truncated. M. Bailly Compte showed a well-finished clock, with a pin escapement. The remontoire gear is one of which there were several examples amongst the French clocks. The last axis in the train, and the scape-wheel axis, are in a line with each other, and have two bevelled wheels of equal size at their adjacent ends, which are separated by an interval equal to the diameter of the wheels. The remontoire, which consists of a lever with a weight near the end of it, has a bevelled wheel attached to it at right angles to, and in gear with, the two former bevelled wheels. Thus the train, which is periodically released, raises the weight that in its descent impels the scape-wheel. This appears to us, on the whole, the best arrangement of the remontoire. Some little irregularity would of course arise from the variation of the length of the lever by temperature, but we doubt whether this would be sensible in the rate of the clock, and if sensible, it might be very easily compensated. The series of clocks by M. Wagner of Paris, were entitled collectively to more study than the works of any other exhibitor. No. 3, a striking clock, with pin escapement. No. 7, exhibited a novel detached escapement; two jewelled pallets at the ends of short-balanced levers are attached to the pendulum, one above and another below the circumference of the scape-wheel, the axis of which passes through a space cut out of the pendulum. We should suppose the action to be very light, and to have little friction. The next article was a clock with pin escapement, and pallets attached to the pendulum. The remontoire is a weighted lever, which when down, releases a fly, that prevents the weight being raised by a jerk. This, no doubt, would interfere with the sudden jumps of the minute hand, as in Dent's clock; but this advantage we think may very well be sacrificed to the steadiness and uniformity of the movement. An endless screw on the axis of the fly, and a pinion with oblique leaves, are both in gear with a wheel having oblique teeth

on the barrel axis. This clock had few wheels, and its construction appeared very simple. There was also deserving of notice a clock with pin escapement and bevelled wheel remontoire, kept wound up by the continuous motion of the train regulated by a fly, to which a cap, suspended to the short arm of the remontoire lever, acts as a governor. This is a very ingenious contrivance, by which the continuous motion of the train is rendered isochronous with the alternate motion of the pendulum, and may therefore be used to carry an equatorial movement, or a heliostat, or for any other purpose for which a perfectly uniform continuous motion is required. A highly finished clock, with detached pin escapement, compensated pendulum, and bevelled wheel remontoire, also deserved notice. The impulse here was given to the pendulum by a detached bar, the ends of which were alternately raised by two arms fixed on the axis which carried the pallets. Any sudden motion of the remontoire is prevented by a fly. The pendulum is compensated by the brass bar between two of steel, and levers as previously described. There was lastly a clock with a pin escapement—the remontoire and the pendulum the same as the preceding. The pallets were attached to the pendulum, but the friction of the pins on the horizontal surfaces of the pallets was very ingeniously prevented by their being received on pieces projecting from two arms, moving on the same centre as the pendulum, and on which they rested, until they were delivered on to the inclined surfaces of the pallets. This appears to be a great improvement on the ordinary pin escapement, and well worthy the attention of our clock-makers.

Among the watches exhibited, were several novel inventions, displaying considerable ingenuity, and very perfect workmanship: among them was a lever watch by Mr. Samuel Lowry, of Spencer-street, Clerkenwell, which we think deserves especial notice; it was arranged to show dead and complete seconds on the one train only. This watch is so constructed that the seconds hand is made to drop, without recoil, sixty times in the minute, or once in every second of time, thus the seconds are as accurately shown as by an astronomical clock or regulator. The train, or vibration of the balance, is not altered in any way from those of ordinary watch movements, and the price is very little additional to that of an ordinary watch, from one train only being requisite. This principle of the seconds is also applicable to marine chronometers, &c. The importance of this invention in cases where accurate notation of minute portions of time is required, is at once obvious.

CHAPTER XL.

VARIETIES.

ROYAL VISITS — PETTY LARCENIES—GEORGE CRUIKSHANK'S GREAT ETCHING—VISIT OF THE SUSSEX PEASANTRY—ANECDOTE OF THE DUKE OF WELLINGTON—FUTURE DESTINY OF THE CRYSTAL PALACE—THE ATHENÆUM—LORD CAMPBELL—EARLY MORNING VISIT OF M. HECTOR BERLIOZ—THE SOLITARY CHINESE, AND THE SOLITARY SPARROW.

During the "high and palmy state" of the Great Exhibition, while the World's Wonder was new, and its praises in everybody's mouth, all the leading and popular journals of the day delighted to expatiate on the inexhaustible subject, and the events of each passing hour in connection with it, were the constant theme of their eloquent admiration. No topic, however, was more eagerly brought forward, and none was more agreeable to the public consideration, than the frequent visits that were paid by Royalty to the Crystal

Palace. At one time the public were informed that "Her Majesty arrived for her almost daily visit to the Crystal Palace, at a quarter past nine yesterday morning. The royal party consisted of the Queen, Prince Albert, the King of the Belgians, and the Princess Charlotte, attended by the usual suite. Mr. Wentworth Dilke, Colonel Reid, and Mr. Cole, accompanied the illustrious visitors through the building. The Austrian sculpture-room was first inspected, after which her Majesty and friends proceeded to the collection of English marbles, which were subjected to a lengthened examination; Bell's 'Babes in the Wood,' and Gibson's 'Hunter,' receiving warm commendation. The party then promenaded through the fine arts room, and after a glance at the Mexican figures, went on to the foreign nave, where the beautiful Mosaic, newly placed there by Lord Foley, was eagerly examined and much admired. This picture, which is a very large specimen of the art, representing the ruins of Pæstum, has all the variety of light and shade which one would expect in a finished oil painting, with the brilliancy of colour which is peculiar to the material employed. It was surrounded by crowds of visitors during the day, and much admired. Her Majesty's next visit was to the English glass and china, after which the royal party descended to the nave, where the company were drawn up as on her Majesty's previous visit, in double file, and greeted their Sovereign with loyal respect and courtesy as she passed out of the building. All cheering was suppressed from feelings of respect, but her Majesty's gracious acknowledgments of the loyalty of her reception were universally and deeply appreciated. The number of visitors was not much greater than on the previous day, and consequently there was free circulation throughout the building. The various fountains were in active requisition, and, towards the close of the day, exhibited a peculiarity which would be well worthy of investigation by the commissioners of water supply. Any one mingling at that hour with the crowds by which they are surrounded, could not fail to detect a strong odour of brandy, and seeing that spirits are so strictly prohibited in the Crystal Palace, there must be some extraordinary quality in the sources of supply to give rise to so curious a delusion. The number of petty thefts in the Crystal Palace seem rather on the increase, and demand increased vigilance on the part of the police. Another amateur collector was detected yesterday pocketing cigars in the Zollverein section. On his apprehension he stated himself to be a gentleman's servant in Bedfordshire, and urged a curious taste in his smoking as his excuse. He was immediately despatched to reason the matter over with the magistrate. Besides watching the thieves, the police have also a good deal of trouble with lost articles. Upwards of a hundred articles have already accumulated at the station, for which no owners can be found, and people are constantly coming in with parasols, bracelets, and other articles (chiefly female property), which they have found in the course of their perambulations. It is noticed that very little is lost or found on Friday or Saturday."

Then again, after the interval of a few days, the grateful intelligence was made known that "Her Majesty, Prince Albert, the King of the Belgians, the royal children, and the usual suite, visited the Crystal Palace yesterday morning, and inspected the goods in the North Germany, Russian, and Zollvercin compartments. The royal party were conducted through the sections by Mr. Cole, Mr. Belshaw, and Mr. Edgar Bowring. The weather was oppressively hot in the course of the day, and had a perceptible effect in keeping away the ticket-holders."

Several attempts have been made to pourtray the first great day of the Great Exhibition, when the Queen of England, surrounded by some thirty or forty thousand of her most distinguished subjects, inaugurated perhaps the grandest show that was ever presented for the wondering admiration of a civilised nation. The scene in Hyde-park on that day was full of those effects which a painter delights to find. People of all ages and

all nations, habited in the richest and most varied fabrics which the ingenuity of the world's looms and workshops could supply—youth and age—beauty and dignity—assembled under a lofty roof of glass, in which were piled the masterpieces of the workman's skill. Beauty of form, and richness and variety of colour, were mingled in gorgeous profusion, whilst rank, wealth, talent, and dignity thronged a scene in which all were alike charmed to take part. But though these mingled and varied points and excellencies, when assembled, might gladden the eye of an artist, to realize them on canvass, or on paper, was no easy task. The very size of the place and the spreading of its interest over a multitude of actors, presented a source of difficulty to those who desired to delineate it. The group on the royal dais did not include the sentiment and action of the great scene. The story could not be told by a few figures. It was necessary to include the great army of spectators, before a satisfactory idea could be given of the opening of the Crystal Palace, and hence the danger of losing, in a fritter of detail, the sentiment and real grandeur of the occasion. We shall, doubtless, hereafter have many pictures on so attractive a subject more or less successful; but whilst they are in embryo, George Cruikshank has prepared and given us in his views of the affair, "taken on the spot," as he describes it, etched and printed upon a handsome sheet, at a moderate price. This veteran artist's version of the thing is just what might have been anticipated. He gives us the multitude of figures, each made out with curious nicety, and many of them bearing traces of the humour for which he has so long been celebrated, the whole, meanwhile, presenting no semblance of caricature, but, on the contrary, displaying a large amount of the genuine character of the scene. The raised dais for the Queen, her husband, and her two eldest children, the crystal fountain, the acres of human heads and shoulders that thronged the nave, the old elms overhead budding in an early and unexpected summer, the strange tropical plants beneath them, the galleries radiant with colour, and thronged like the ground-floor of the building, with a very host of waiting, wondering, and admiring spectators, are all seen in Cruikshank's etching. Statues, pictures, and draperies, are cleverly managed to make up a picture, without injury to the vraisemblance of the whole; and, indeed, it may be said, that up to this time no representation has been offered to the public at once so artistic and so truthful as this print of the opening of the Great Exhibition of 1851. Those who saw, and those who regret they did not see it, will alike be glad to possess so satisfactory a representation of so remarkable a scene.

Inclemency of weather was no obstacle to the regularity or frequency of these royal visits, and the public likewise were not behindhand in due attendance and respectful demeanour. "Yesterday," says our journalist, "there was a full average attendance at the Crystal Palace, although the weather during the greater part of the day was pertinaciously wet. The first visitors, as usual, were her Majesty and friends. The royal visitors proceeded at once to the Russian section, and curiously examined the various costly products. Her Majesty was particularly struck with the richness and designs of the silks from Moscow, and also spent some time in examining the curiously embroidered leather, and other articles which come from the more Asiatic portion of the great Russian empire. The furs attracted a good deal of notice, the imperial pelisse, in particular, being taken out of its case and minutely inspected by her Majesty. A very interesting episode in the day's proceedings was the arrival of the whole adult population of three parishes in Sussex, headed by their clergyman, who had come up by excursion train early in the morning from Godstone. They had a previously prepared plan of the campaign, according to which they were first mustered in heavy marching order, each having a well-filled basket of provisions slung round his neck, under the transept. The word was then given for every one to go where he or she liked, but all with

strict injunctions to meet at the trysting-place at four o'clock. It was quite amusing to see the punctuality with which they kept the appointment at that hour, and allowed themselves to be regularly marshalled two and two, to the number of 800, by their worthy pastor. They seemed to be mightily pleased with everything they had seen, except the agricultural implements, which they thought might do very well for the Crystal Palace, but would hardly do for the stiff clays of Sussex. The men were all dressed in new smock frocks, and the women most tidily and neatly attired, and did infinite credit to their district, and to the generalship of their worthy leader."

The late illustrious Duke of Wellington was also a not unfrequent visitor to these all-attractive precincts. Indeed his mind appeared to be singularly disposed, considering his great age, to investigate whatever was making progress in science, manufactures, or art. On one occasion, however, an incident occurred which, for a moment, occasioned some little anxiety, not to say alarm, yet from a cause which no effort of prudence could have prevented. When the crowd assembled within the building was at its culminating point, it was suddenly discovered that the Duke of Wellington was present. Instantly the manifestations of public admiration arose. Hats were taken off, and loud cheers burst forth, which were prolonged with immense energy. Those who were at a distance, surprised by an unwonted agitation which they could not understand, fancied that there was something wrong, and rushed towards the doors. The duke also felt the awkwardness of his position, and beat a retreat. His great age did not then permit him to execute such movements with the precision and firmness which in former days were his characteristics, but he made his way, nevertheless, to the south entrance of the transept with surprising alacrity, followed as he went by the most vigorous demonstrations of popular regard. Superintendent Pearce, with great tact, stopped the rush towards the places of exit, and, by his judicious management, the fears of the most timid spectators were in a few minutes effectually quieted.

While all classes of the people were thus passing their time in daily gratification, mingling enjoyment with instruction, a natural anxiety began to pervade the public mind respecting the future destiny of the glorious show that was so liberally spread out before them; of the transcendent edifice itself that, as if by magic, had suddenly arisen upon their astonished sight in full beauty and perfection; was it doomed as suddenly to disappear from their enraptured gaze—

> "And like the baseless fabric of a vision
> Leave not a wreck behind?"

The question "to be or not to be," was agitated on every side, and various opposite and conflicting opinions were advanced and argued. We may, however, assuredly now congratulate ourselves that it was finally determined not to preserve it, beyond the period originally fixed upon, since to that wise measure we shall be indebted for a still more glorious Exhibition, upon a still more advantageous site, where, phœnix-like, it will arise from the destruction of the former one, and to which, if universal report is to be credited, we shall be able to apply the encomium of the prince of Roman poets,—

> "O mater pulcher
> Filia pulchrior."

The *Athenæum* in particular advocated the the preservation of the Palace of Glass. "From the moment," they observed, "when the Crystal Palace rose from the ground in its grace and beauty, for ourselves we never doubted, as our readers well know, about its fate; but even on that auspicious May-day we heard persons, anxious as ourselves for the success of the Exhibition, declare that in less than two years the grass would be

again growing greenly over the area now inclosed within the crystal walls. Day by day, however, these misgivings have been abating, and at the end of three weeks we may assert that the financial success, too, of the great undertaking is assured. To pay the entire expenses of the Exhibition, and to buy the building as a perpetual palace for the people, will require about £300,000. Towards this sum £65,000 have been raised by subscription—£65,486 have been received for the sale of season tickets; and up to Thursday night the amount received at the doors for admission was £37,702; making altogether, at the end of only three weeks, a total of £168,188. As the masses have yet to come in at the reduced rates, the receipts at the doors will probably not fall much below the average of £1,500 a day for the next hundred days:—and if so, we may add to the present total a prospect of £150,000. This, it will be seen, leaves a margin of surplus—though not a large one. Some of our sanguine contemporaries, astonished at a success so far beyond their pre-calculations, indulge in magnificent projects for the investment of a fund which seems to them boundless. There have been divers hints of buying up, not only the Crystal Palace, but all that it contains. Nothing seems impossible in face of the huge facts before them—and even figures would seem to have acquired a new power as applicable to the Great Exhibition. We are sorry to interfere with this calenture of the imagination—but Cocker must have his rights even in the Palace of Glass. The value of its contents has been variously estimated; but we have heard no one appraise them at less than twelve millions, and some calculations go up as high as thirty. Let us assume the lowest figure to be correct, for the sake of a sum to be worked after the venerable shade whom we have invoked. How soon could the Royal Commission raise twelve millions of money, even were they certain to receive from the public at the doors £2,000 daily over and above all the expenses of management? In just six thousand days, after deducting Sundays and other religious days, when the palace must of course be closed,—in exactly twenty years! Look at the question in another point of view. At £5 per cent. per annum, the interest on twelve millions is £600,000 a-year; or, leaving out Sundays and a few other as non-productive days, just £2,000 a day! If the contents of the Exhibition be really worth twenty millions, a daily income of £3,300 would not discharge the mere interest on the capital lying dead in the Crystal Palace. The suggestion, therefore, of purchasing the Exhibition, in order to keep its contents together, is one which merely shows to what wild poetic heights the imagination may climb up to the wonderful shafts of the Palace of Glass.

Yet it is extremely desirable, if any means can be thought of to that end, that the collection should not be again dispersed. Probably no one has ever walked across that marvellous transept, or gazed down that extraordinary nave, without thinking with a pang on the probability of a coming day when the glorious vision is to dissolve—when this prodigious manifestation of the result of thought, genius, industry, and science, is to be resolved into its separate elements, never to be again united in the same mighty and marvellous whole. The world once possessed of an encyclopedia of knowledge like this, who can bear to think that the volume shall ever be closed, and its pages scattered to the distant corners of the earth? We never have, from the first, regarded this collection merely as a bazaar of all nations. We repeat, it is the first University in the large and full meaning of the word that the world has had: of which, Universities like Oxford and Cambridge look merely like affiliated colleges. But what is to be done? Why not this? We will take for granted, at the moment, that the royal commissioners, before laying down the temporary offices which they were appointed by the Queen to discharge, will purchase the Crystal Palace in the name of the English people. Should it then be announced to all the present exhibitors in the first instance, that such of them as have fitted up stalls or obtained spaces, may retain them for, say a year, on the condition of

keeping them filled with their present or other contributions of the same high class of excellence—we think it probable that a great majority of the most useful and beautiful articles would be left on such terms. The workers in silk, wool, worsted, gold, silver, iron, and copper, mahogany and other woods—the makers of musical and scientific instruments, watches, chronometers, carriages, agricultural machines and fountains; the producers of flowers and plants, decorators and stained-glass makers, sculptors and carvers in wood and ivory, printers and hand-workers of most kinds, would in all probability be glad to have such a universal and permanent exhibition-room for their wares, works, and discoveries. Many things of mere curiosity and rarity would no doubt be removed; but the absence of the Koh-i-Noor, the Spanish jewels, the Indian diamonds, and similar articles, if it should be proved to lessen the mere splendour of the Exhibition, would not materially detract either from its moral interest or its practical usefulness. The earnest seeker after knowledge is more attracted by a collection of minerals and metallic ores than by the Russian or the Portuguese diamond valued at millions.

Specimens of the jewellery which borrow their highest value from the genius of the artist would probably be left as examples and advertisements. We do not doubt that it would be worth the while of our most eminent goldsmiths to maintain a show-room in the Great Exhibition, to be from time to time supplied with whatever is new and excellent in their current manufactures. The same may be surmised of our great drapery and silk mercers. What artist would not be glad to have a certain space assigned to him on the walls of the National Gallery on the easy condition of always having a picture hung there? In the Crystal Palace the artist and the artisan in silk, cotton, wool, metal, and so forth, might, under some such arrangement as we are proposing, obtain their National Gallery and Academy. Even in the series of costly and complicated machines in motion, we imagine that not a few of the most beautiful and interesting would be willingly allowed to remain. Most of these machines, we believe, are made in model. They cannot be sold or used in actual factories. If taken away, they will either be broken up or buried in local museums. Their proprietors would naturally prefer that they should remain as their advertisements and representatives in the great centre of observation. There is plenty of room, besides, for a winter garden. Indeed, the place is a garden now; and its beauties in that respect would increase with every year. The contributions of industry leave plenty of space for trees, and shrubs, and flowers. The elm and the palm tree here grow side by side; and there will be room abundant for exotic plant and indigenous parterre. The works of mind and the works of nature already blend here with a harmony of tints and tones beyond the power of imagination to have conceived. There never was an epic thought or an epic poem at once so vast and so full of beauty. The infinite multiplication of the varieties have produced a great unity. The place is even now all that the heart, the senses, and the imagination can desire.

On the other side of the question, Lord Campbell, with all the authority of fur and ermine, speaking of the Palace of Crystal in the House of Lords, observed, that "from Penzance to Inverness and Aberdeen, the people were all called upon to join in sending up petitions, of which the common burden was to be the expediency of having a public promenade in a summer climate at all seasons of the year. He wished to bring under the notice of the house an authority against this project, which was to be found in the *Quarterly Review* just published. He knew not by whom the article was written, but it was evidently written by a gentleman skilful in literature and profound in science. He would only read two sentences from that article, but they should be the following:—"Were the Crystal Palace to be kept up in spite of rather strong pledges, and, as some prophesy, to present us by and by with a wilderness of walks meandering through

bowers of exotic bloom, it would be the most insalubrious promenade in London. If ever our admirable Palace of Glass becomes a showy, steamy, suffocating *jardin d'hiver*, it will be a capital thing for the apothecaries; such a vigorous crop of colds, coughs, and consumptions will be raised that it will be the walk, if not the dance, of death, to frequent it." The writer gave this testimony against the visionary prophecies of Mr. Paxton, who talked of transferring to this country the sunny climate of Southern Italy. He (Lord Campbell) thought that the most useful object to which this building could be converted was that of an enormous shower-bath; for, even now, it was found that, when a heavy shower, or thunder-storm came on, it was necessary for the visitors within it to raise their umbrellas. The present was the last time that their lordships would be troubled with his voice on this subject, for he was about to leave town to administer justice in the country to her majesty's subjects. He left town, however, without anxiety, for he could not suppose that their lordships would assume the prerogative of his holiness the pope, and absolve the government and the royal commissioners from the promises which they had made solemnly and deliberately."

We shall conclude our present chapter with a few extracts from an admirable letter from the able pen of M. Hector Berlioz, on the occasion of an early morning visit to the Crystal Palace.

"You will not, I hope," observes our lively correspondent, "be under the apprehension of receiving from me a hundred-thousandth description of the Crystal Palace and its wonders, an ode to English industry, or an elegy on French indolence, with sundry digressions, in which would be found, more or less literally reproduced, the observations of the host of people who crowd the colossal glass edifice, the murmurs of the fountains which pour their freshness around, and the solemn peal of the organ, concealed amidst the foliage of druidical trees, rising heavenward, as in one incessant prayer, and consecrating human industry. You know my opinion of *impertinent* music; you need not then fear that I will add my impertinent prose to that with which so many pens, eloquent or frivolous, ignorant or 'savantes,' artistical or venal—pens of gold, of silver, of ivory, of goose-quill—have inundated the two hemispheres on this subject.

"No, no. I said '*Hug!*' like a Mohican, the first time I entered the edifice. I uttered an English exclamation that I need not repeat on entering a second time; and I so far forgot myself as to suffer a French 'sacrebleu!' to escape me on my third visit: but to define to you precisely these three celebrated exclamations, I will not venture; besides, I should not succeed in the attempt—the 'hug!' especially is indefinable."

After a lengthy disquisition on instrumental and vocal music, and the description of a visit to the cathedral of St. Paul's, on occasion of the anniversary meeting of the charity children, our worthy critic finds his way to the Crystal Palace, having been appointed one of the Jury. We will give his account of this visit in his own words.

"On leaving St. Paul's, in a state of semi-stupefaction, as you may readily conceive, I took boat on the Thames; and, after almost unconsciously having been drenched to the skin in a transit of some twenty minutes, I landed, half-drowned, at Chelsea, where I had nothing to do, and I had the right to expect to sleep. I heard incessantly re-echoed in my ear that harmonious swell, 'All people that on earth do dwell,' and I saw whirling before my eyes the cathedral of St. Paul. I was in its interior; it was by visionary transformation changed to Pandemonium. I had before me the celebrated picture of Martin; instead of the Archbishop in his pulpit, I saw Satan on his throne; in lieu of thousands of the faithful and children grouped around him, it was peopled with demons and the damned, who darted from the depths of visible darkness their looks of fire; and the amphitheatre of iron, on which these millions were seated, vibrated in a frightful manner, giving out harrowing and discordant sounds.

"At length, weary of the continuance of these hallucinations, I leapt from my bed, though scarcely light, went out, and wandered to the Exhibition, where, a few hours later, I had to attend as one of the Jury. London was still slumbering; neither Sarah, nor Molly, nor Kate, were yet to be seen, mop in hand, washing the doorways. An old Irish crone, somewhat 'aginée,'* smoked her pipe, crouched under the entrance to one of the houses in Manchester-square.

"The listless cows were ruminating, stretched on the turf in Hyde Park. The little ship, this plaything of a maritime people, lay at anchor on the Serpentine; already some luminous 'gerbes' detached themselves from the elevated panes of glass of the palace open to 'all people that on earth do dwell.'

"The guard who kept the door of this Louvre, accustomed to see me at all kinds of unreasonable hours, allowed me to pass, and I entered. It is certainly a spectacle of singular grandeur, the Palace of the Exhibition at seven in the morning; the vast solitude, the silence, the softened light, the *jets-d'eau* motionless, the organs mute, the trees, and the surprising show of rich products brought from all nations of the earth by hundreds of rival peoples, ingenious works, the sons of peace, instruments of destruction which remind one of war,—all these causes of motion and noise seemed at such time to be conversing mysteriously among themselves, in the absence of man, in some unknown language, understood by 'l'oreille de l'esprit.' I felt disposed to listen to their secret dialogue, believing myself alone in the palace; but there were three of us,—a Chinese, a sparrow, and I. The eyes 'bridés' of the Asiatic were open before their time, as it would appear; or, perhaps, like mine, had been but imperfectly closed. With a little feather brush he was dusting his beautiful porcelain vases, his hideous grotesque figures, his varnished goods, and his silks. He then took, in a watering pot, some water from the fountain, and watered tenderly a poor Chinese flower, emaciated, doubtless, from being in an ignoble European vase; after which he went to sit down a few paces from his stall, looked at the tamtams hung there, made a movement as if to strike them, but remembering that he had neither relations nor friends to awaken, he let his hand, in which he held the gong-stick, drop, and sighed. 'Dulces reminiscitur Argos,' I mentally repeated. Assuming, then, my most winning manner, I approached him, and, supposing that he understood English, I addressed him with, 'Good morning, sir.' The only notice I received, however, was his rising, and turning his back on me; he then went to a cupboard, took out some sandwiches, which he began to eat without even honouring me with a look, and with an air of some disgust for this food of 'barbarians.' Then he sighed again. He was, no doubt, thinking of those savoury dishes of shark-fins, fried in castor oil, in which he delighted in his own country, of the soup of swallow nests, and of that famous jelly of caterpillars which they make so exquisitely at Canton. Bah! the cogitations of this rude 'gastronome' disgusted me, and I went away.

"Passing near the large piece of ordnance, the forty-eight, cast in copper in Seville, and which always seems, being placed opposite the stall of Sax, to defy him to make a gun of its calibre, I perceived a sparrow hidden in the mouth of the brutal Spaniard. Poor tiny one! do not be alarmed, I will not denounce thee. On the contrary—here—and drawing from my pocket a bit of biscuit that the steward at St. Paul's had obliged me to accept the evening previous, I crumbled it on the floor.

"When the Palace of the Exhibition was built, a tribe of sparrows had taken up their domicile in one of the great trees which now ornament the transept. They determined to remain there, notwithstanding the menacing progress of the work of the operatives. The poor birds could not imagine that they would have been enclosed in a large glass

* A word cleverly coined by the writer,—*Anglice*, under the influence of gin.

and iron cage. When they found how matters stood, they were a little astonished. They sought an exit right and left. Fearing that they would injure the articles exhibited, it was decided to kill them all, and this was effected with cross-bows, nets, and the perfidious 'nux vomica.' My sparrow, whose hiding place I now know, and whom I will not betray, is the sole survivor.

"As I ruminated on these matters, a noise resembling heavy rain was heard in the vast galleries; it was the *jets-d'eau* and fountains which were set playing. The crystal 'chateaux,' the artificial rocks, vibrated under the fall of their liquid pearls,—the policemen, these 'bons gens-d'armes,' unarmed, which every one respects with so much reason, assumed their posts,—the young apprentice of M. Ducroquet took his seat at the organ of his master, thinking of the new polka with which he would treat us,—the ingenious manufacturers of Lyons were finishing their admirable display,—the diamonds, prudently hidden during the night, reappeared sparkling in their cases,—the great Irish clock, in D flat minor, which surmounts the eastern gallery, struck one, two, three, four, five, six, seven, eight, proud of giving the lie to its sister of the church in Albany-street, which strikes in a major key. Silence had kept me waking, these notes made me drowsy, and the want of sleep became irresistible. I sat down before the grand piano of Erard, that wonder of the Exhibition. I leaned on its rich cover, and was about to take a nap, when Thalberg, tapping me on the shoulder, exclaimed, 'Holloa! *confrere!* the Jury is assembled. Come, wake! we have to-day thirty-two musical boxes, twenty-four accordions, and thirteen 'bombardons' to inspect!'"

CHAPTER XLI.

PERFUMERY.

GREAT ANTIQUITY OF — KNOWN AMONG THE EGYPTIANS—RECORDED IN HOLY WRIT — EMPLOYED IN ANCIENT GREECE AND ROME—VARIOUS PERFUMES, AND ARTIFICIAL ESSENCES. PERFUMERY FROM AMERICA, AUSTRIA, EGYPT, FRANCE, GERMANY, TUNIS, TURKEY, UNITED KINGDOM—A SONNET.

"Now gentle gales,
Fanning their odoriferous wings, dispense
Native perfumes, and whisper whence they stole
Those balmy spoils."—*Milton.*

As the all-bountiful hand of our beneficent Creator has decorated the surface of the earth with flowers innumerable, displaying on every side the richest and most variegated hues to attract and delight the sense of vision, so has He also gifted their graceful and elegant forms with sweet and refreshing odours, to sooth and gratify the sense of smell. We do not, therefore, consider it to be beneath the dignity of our pen to devote a few pages to the subject of perfumery. "From the earliest times of which we have any record," observes an able writer in the Reports of the Juries, upon whose observations we shall draw largely in our present article, "the sense of smell has been gratified with perfumes; the Egyptians applied them as conservative of the bodies of their deceased friends, and as incense before their venerated deities. On the wall of every temple in Egypt, from Meroe to Memphis, the censer is depicted smoking before the presiding deity of the place; on the walls of the tombs glows in bright colours the preparation of the spices and perfumes for the embalming of the mummy; and these very

mummies and the vases of oriental alabaster transported to our museums, tell with eloquence the same tale. From the time of the *Exodus,* throughout the long period of Jewish history, Holy Writ records the use of perfumes. Moses speaks of being directed by the Lord to prepare two perfumes, according to the art of the apothecary or perfumer, one of which was to be offered from the Golden Altar, and the other to be used on the person of the officiating priest. The 'Spouse,' in the Canticles, is enraptured with the spikenard, the cinnamon, the aloe, and the myrrh; and Ezekiel accuses the Jews of diverting the use of perfumes from the holy things to their own persons. In the New Testament, also, are contained frequent references to the use of perfumes, many of which will be in the memory of our readers. Especially, however, they will remember, in chap. xiv. of the Gospel of St. Mark, that when Jesus sat at meat in the house of Simon the Leper, 'There came a woman having an alabaster box of ointment of spikenard, very precious, and she brake the box and poured it on his head.'"

Of the use of these luxuries by the Greeks, and afterwards by the Romans, the detail is more copious. Anacreon makes frequent mention of ointments and odours in his charming lyrics; and we are all, from our school-days, conversant with the celebrated ode of Horace—

"Quis multa gracilis te puer in rosa
Perfusus liquidis urget odoribus,
Grato, Pyrrha, sub antro?"

Pliny also gives much information respecting perfume-drugs, the method of collecting them, and the prices at which they were sold. Oils and powder-perfumes, according to Seneca, were most lavishly used; for even three times a-day did some of these luxurious people whom he describes anoint and scent themselves, carrying their precious perfumes with them to the baths in costly and elegant boxes called *Narthecia.* Hence the elegant reproof of Horace—

"Persicos odi, puer, apparatus."

The trade from the East in these perfume-drugs caused many a vessel to spread its sails to the Red Sea, and many a camel to plod over that track which gave to Greece and Syria their importance as markets, and vitality to the Rock City of Petra. Milton, in the following beautiful lines in his *Paradise Lost,* refers to this trade,—

"As when to them who sail
Beyond the Cape of Hope, and now are past
Mozambic, off at sea north-east winds blow
Sabean odours from the spicy shores
Of Araby the blest; with such delay
Well pleased they slack their course, and many a league
Cheer'd with the grateful smell old Ocean smiles."

And Southern Italy was not long ere it occupied itself in ministering to the luxury of the wealthy by manufacturing unguents or perfumes. So numerous were the "*unguentarii,*" that they are said to have filled the great street of ancient Capua, the Seplasia. In short, whether to regale the nostrils of their deities while sacrificing, or their own while feasting, or to prevent those nostrils from being offended by defunct humanity, or the exhalations from crowded masses of people, the consumption of perfumes by the ancients was enormous. Happily, in modern times, the use of soap has superseded the necessity for their lavish employment. When we consider that there are some persons who appreciate the strong-smelling musk—and we confess ourselves to be among the number—more highly than any other, and another who would

"Die of a rose in aromatic pain,"

the definition of perfume becomes a matter of some difficulty. Notwithstanding, however, the various impressions that volatile substances make upon different constitutions, a few general principles may be determined by which perfumery may be judged. In the first place, it is necessary to distinguish whether the substance is a chemical compound, or whether it is a mechanical combination of various chemicals. In the former case, if carefully prepared, it is independent of the perfume, and its odour, whether agreeable or repulsive, has a determined character of its own. In the latter case, that is, if the scent depends upon a mixture of substances, an opportunity is offered to the manufacturer of exhibiting his skill. Perfumes, on evaporation, should yield no resinous residue, and the various essential oils of which they are made ought to be combined so harmoniously that none of the components is perceptible, not only at first, but even during the progress of evaporation. The less the ingredients differ from one another in odour and volatility, the less difficult it becomes to achieve this desideratum. Hence, well-prepared Eau-de-Cologne is generally considered to be the perfection of perfumery. The constituents of this scent are, so far as is known, the essential oils of the lemon, the citron, and orange, prepared from the fruit in different stages of maturity, and they approximate so closely to one another, as to produce a single aromatic impression. Other oils are added to Eau-de-Cologne, but in so minute a proportion that they scarcely demand any notice in comparison with those mentioned. Eau-de-Cologne that leaves a residuary odour, either of otto of roses, oil of cloves, or oil of cinnamon, after volatilization, however agreeable these oils may be to individuals, must be designated as of inferior quality.

Still much practice is necessary to ascertain differences in the quality of the perfumes, and the task is rendered more difficult if numerous specimens have to be compared; for this reason the Chemical Committee returned repeatedly to the examination of the various specimens before reporting to the Jury, by whom the awards were only fixed after a further investigation. Several of the perfumes, or rather essences, exhibited are of peculiar interest, and deserve an especial notice. We allude to a series of artificial organic compounds possessing qualities which permit of their substitution for natural volatile oils and essences. Most of them are substances belonging to the group of compound-ethers. The fruity odour of these bodies has been long known, but they do not appear to have been used in flavouring until the chemist had shown that many of the oils of vegetable origin resemble in their composition the above-mentioned products of the laboratory. For some years past a scent called winter-green oil has been extensively used in perfumery; it is obtained from an ericaceous plant, the *Gualtheria procumbens*, and is imported from New Jersey, in America, where it is obtained in considerable quantities. Chemical analysis of this oil has yielded the interesting result that it is a true compound-ether, consisting of salicylic acid and pyroxylic spirit, which may be formed by a combination of its proximate constituents, so as to possess all the characters of the natural substance. This observation was not lost upon commercial enterprise, and several of the numerous ethers prepared by the chemist were soon discovered to present the odour of certain fruits in so marked a degree, that it was difficult not to conclude that the fruits in question owed their smell to these ethers. Several artificial essences of this kind were exhibited. Neither the time nor the quantity of material at the command of the reporters permitted them to examine all these products, they were, therefore, obliged to confine themselves to a notice of the following:—

Pear Oil is a spirituous solution of acetite of oxide of amyl. The latter may be obtained with facility and in any amount by distilling equal parts of concentrated sulphuric acid and fusel oil (the oily residue obtained by the rectification of potato or grain spirit) with two parts of acetate of potash. It is remarkable that the ether itself does not possess a very pleasant odour, and that its striking resemblance to that of pears does

not become apparent until properly diluted with spirit. Artificial pear-oil is now prepared in large quantities in England. It is chiefly employed in the manufacture of the lozenges called peardrops, of which the Exhibition presented some specimens, so that the flavour in its applied state may be tested side by side with the perfume.

Apple Oil consists mainly of valerianate of oxide of amyl. It is obtained as a secondary product in the preparation of valerianic acid, by the distillation of fusel oil with bichromate of potash and sulphuric acid. The distillate has to be shaken up with a dilute potash solution, in order to remove the valerianic acid, when the ether floats on the top, and may be removed with a pipette.

Pine-apple Oil was contributed by most of the exhibitors of artificial essences. The specimen analysed was found to consist almost exclusively of butyrate of oxide of ethyl, or common butyric ether. It is easily obtained by boiling butyric acid (obtained from sugar by fermentation with putrid cheese) with strong spirit and a small quantity of concentrated sulphuric acid. It resembles the acetate of oxyde of amyl, in not presenting the characteristic agreeable fruity flavour, in a pure state; it requires to be considerably diluted before the odour appears. This oil is largely manufactured in England, and is employed in the preparation of a beverage called pine-apple ale. The process commonly used for its preparation does not yield perfectly pure butyric ether. It consists in saponifying fresh butter with potash; the soap that forms is separated from the liquor, dissolved in strong alcohol, and distilled with concentrated sulphuric acid. This yields a mixture of butyric ether, and various other ethers, but the liquid obtained is perfectly adapted for the purpose of flavouring.

Cognac Oil and Grape Oil.—Specimens of these oils, especially of the former, were contributed by English, French, and German manufacturers. They seem to be often employed with the view of giving ordinary varieties of brandy the prized flavour of genuine cognac. Unfortunately, the samples exhibited were too small to admit of a careful analysis. A few superficial examinations proved undoubtedly that they are compounds of fusel oil dissolved in a large quantity of alcohol; and it is curious that a substance which is most carefully eliminated from brandy, on account of its offensive flavour, should be introduced in another form, and in minute quantities, in order to render the same beverage aromatic.

Artificial Oil of Bitter-Almonds.—As early as 1834, Professor Mitscherlick, of Berlin, pointed out a peculiar liquid formed by the action of fuming nitric acid upon benzole, and possessing the odour of natural oil of bitter-almonds in a high degree. It was called nitro-benzide, or nitro-benzole. The preparation of this compound was, however, too expensive to admit of its substitution for natural oil of bitter-almonds, as the sole sources of benzole, at that period, were the compression of oil-gas, and the distillation of benzoic acid. In 1844, one of the reporters, Dr. Hoffman, succeeded in demonstrating the presence of this substance in common light coal-tar-oil; and in 1849, C. B. Mansfield showed, by a careful investigation, that benzole may be easily obtained in large quantities from tar oil. In the French department, under the fanciful title of "*Essence de mirbane*," the reporters met with several specimens of oils, which, on examination, proved to be nitro-benzole, of more or less purity; they were, however, unable to obtain any positive information as to the extent of this manufacture; but it does not appear to be very considerable. The method employed in England for its preparation was devised by Mr. Mansfield, and is very simple; his apparatus consists of a large glass tube, in the form of a coil, which at the upper end divides into two tubes, each of which is provided with a funnel. A stream of concentrated nitric acid flows slowly into one of the funnels, and benzole, which for this purpose need not be perfectly pure, into the other. The two substances meet at the point of union of the two tubes, and chemical combination

ensues with the evolution of much heat; but as the newly-formed compound flows down through the coil, it becomes cool, and is collected at the lower extremity. It then merely requires to be washed with water, and lastly, with a dilute solution of carbonate of soda, to render it fit for use. Nitro-benzole is closely allied to oil of bitter-almonds in its physical characters, yet it presents a slight difference of odour, which may be easily detected by an experienced person. It is very useful for perfuming soap, and is probably capable of application in confectionary and cookery, as its flavour resembles that of bitter-almonds, without containing any hydrocyanic (prussic) acid.

We will now proceed to notice the various specimens of perfumery which were sent for exhibition from different parts of the world. We shall proceed alphabetically, and accordingly commence with—

America, whose display in this article was not very imposing, consisting chiefly of spirituous essences, and which were found to be inferior to those exhibited by other countries.

Austria had only one exhibitor, John Maria Farina, whose contribution, however, of Eau-de-Cologne, was upon a very magnificent scale, which nevertheless was so liberally distributed to the public by means of a small fountain, that the supply in charge of the attendant was exhausted before the Jury made the awards, so that only the residue left in the fountain was submitted to them. As the specimen had evidently lost much of its perfume from exposure to the air, the reporters, at the request of the Austrian Commissioner, M. C. Buschek, and with the sanction of the executive, examined, subsequently, a fresh sample, which was taken from a cask of Eau-de-Cologne, which had remained under the care of the customs, and which had been overlooked by the attendant. This sample was found to be equal in quality to the Eau-de-Cologne rewarded with honourable mention.

Egypt furnished a few interesting and excellent specimens of perfumery, comprising rose-water of Fayoum, orange-flower-water, and mint-water of Rosetta.

France.—The Parisian perfumers produced excellent toilet-soap, remarkable for the fragancy of the perfume. Many French people, however, never use soap to their faces, employing as a substitute aromatic vinegar, a few drops of which are added to the water used in washing. Hence the "vinaigre-de-toilette," is an important manufacture, which is chiefly monopolized by Paris, whence it is sent to all parts of France. There were three exhibitors of this aromatic vinegar. Spirituous perfumery is prepared in great perfection by the manufacturers of Paris, some of whom distil their own essential oils; they generally, also, combine with it the manufacture of toilet-soaps, and hence, with a few exceptions, toilet-soaps and perfumery were exhibited together, and were conjointly rewarded. In the preparation of essential oils, the flowers are placed in a still, with water, and distilled. The vapour of the water carries over with it that of the essential oil, and both condense together, the essential oil swimming on the surface of the water, which, however, always retains a minute portion in solution. To recover this, the water is usually returned to the still, and again passed over; M. Piver, one of the French exhibitors, however, instead of so doing, employs the water for the perfuming of pomatum and hair oil, which from their attraction for essential oils, withdraw them from the water. In 1847 there were, it appears, 110 perfumers in Paris, employing 721 workpeople in the manufacture of toilet-soaps, cosmetics, essential oils, and spirituous and aqueous perfumery, the value of whose productions was £389,681. The workmen earned, on the average, 2*s*. 7*d*. per day, the workwomen 1*s*. 4*d*. According to M. Natalis Rondot, 12,042,970 lbs. of soap, valued at £142,012, were exported in 1850 from France, a quantity which, as will be hereafter seen, nearly equals that exported from Great Britain in the same year: besides which, 3,398,930 lbs. of perfumery, in value, £431,638, were also exported from France. There were two exhibitors of artificial

essences in France. One sent simply a series of compound flavourings, intended to imitate the savour of various fruits; the second exhibited two specimens of chemical compounds, namely, artificial essence of bitter-almonds, and artificial essence of pine-apple.

Germany.—The perfumers in Germany were in great force, being eight in number, and reckoning two John Maria Farinas in their ranks, making no less than four Farinas in the Exhibition, all claiming to be the original. It appears that speculation is carried to so high a pitch in Cologne, that any child entitled to the surname of Farina, is bargained for as soon as born, and christened Jean Maria; at times this event is even anticipated. The perfumery of Germany is generally very good.

Tunis.—The Tunisian collection of perfumery consisted of scented waters, without any admixture of alcohol; they are prepared by distilling the flowers with water in a copper still. The ottos of Tunis, which are obtained by repeated distillations, are prized as being more fragrant, and are consequently more costly than those made in Eastern countries, the usual price being from £3 : 15*s.* to £5 per ounce, according to the description of flower from which they are obtained. Perfumery constitutes a most important branch of commerce in Tunis, a great quantity of scented waters being annually exported to France, Genoa, and Malta. There were also specimens of swak, which is used by the Moorish women for whitening their teeth; and perfumed necklaces, noticed in the list of awards.

Turkey sent a great variety of soaps, many of which were perfumed with musk, and ornamented with inscriptions; one kind, from Adrianople, was made up into hollow balls, containing a small bell, similar to those sometimes attached to the collars of horses; the purpose of these, however, could not be ascertained. The perfumery exhibited by this country, consisted of orange-flower-water and rose-water, both very fragrant. Tensouh, or musk-paste; Kouderma, or pastiles, for burning in the Seraglio; Tensough, or musk-paste medallions, purses, and necklaces; and amber Tesbihs or chaplets, made of a paste composed of various perfumes. As the names of the exhibitors of these various articles were not given, and as it appeared that the specimens were bought at the bazaars, they were included in one general award to the Sultan.

United Kingdom.—In no country in the world is the manufacture of soap carried on to so large an extent as in the United Kingdom, in which there are 329 makers, besides 68 soap-remelters (perfumers). Ireland not being subject to a duty on soap, there are no ready means of ascertaining the quantity which is there manufactured; but in Great Britain alone the production amounted in the year 1850 to 204,410,826 lbs., and yielded an excise duty of £1,299,232 : 10*s.* : 6*d.* Of this quantity, 12,555,493 lbs. were exported to foreign parts, the drawback on it being £82,308 : 18*s.* : 9*d.* The total quantity consumed in Great Britain, therefore, amounted to 191,855,333 lbs. In order to obtain toilet-soap, the ordinary soap has to undergo a second process of clarification, and after having been perfumed, has to be made up in some presentable form; it is this which has given rise to the business of the soap-remelter, who buys his soap of the maker, remelts, perfumes, and then makes it into tablets. Two exhibitors of toilet-soap, however, carry on all the operations in their works. In Ireland the perfumer generally makes his own soap by the "cold process," and one exhibitor sent toilet-soap made in this way.

The English toilet-soaps are in no respect inferior to those of other countries, and are generally far superior in their detergent qualities, on account of their being made from soap manufactured exclusively by the "large-boiler-process." The high reputation of the so-called Windsor-soap in all civilised states is an ample testimony of the estimation in which English toilet-soap is held by the makers of other countries, who adopt its name for any sort they wish particularly to recommend. The preparation of toilet-soaps is generally confined to the remelter, who perfumes and ornaments them in various ways.

The marbling is effected by rubbing up the colours, such as vermillion or ultramarine, with a little olive-oil or soap, and taking a small portion on a palette-knife, which is pushed through the melted mass, and moved about according to the fancy of the operator. Many soaps are coloured throughout their mass with mineral colours. Vermillion is used to produce the pink colour of rose-soap, artificial ultramarine to produce blue, and various ochres to produce browns. Tablets are made by placing a soft mass of soap into a mould, fixed in a lever-press, and composed of a top and bottom die, which fit into a loose ring; by a rapid pressure the shapeless mass takes the form of the ring, and is at the same time embossed on the top and bottom of the cake. The ornamenting by means of coloured cameos is effected in a similar manner, but requires two presses, one of which forms the cake, and makes depressions for the reception of a different coloured soap, which is filled in by hand, and the cake is then placed in the second press, which embosses the coloured portion.

No less than 12 out of the 68 soap-remelters of Great Britain exhibited. Most of them sent also perfumery; and eight manufacturers, besides the 12 above-named, exhibited perfumery only. The English perfumery was found in many cases to be very fragrant and agreeable; but in others, the employment of an excess of some strong-smelling essential oil, rendered the compound anything but a desirable article for the toilet. The imports of perfumery into the United Kingdom, in the year 1850, were valued at £1,907, and a duty was paid of £191, but in all probability some spirituous perfumes were included under the head of "oils, chemical, essential, and perfumed," of which 172,139 lbs. were imported, and which yielded a duty of £12,772. Two exhibitors contributed specimens, to which allusion has been made in the preceding pages, and to which a degree of interest attaches, as being among the first attempts at the application of harmless chemical compounds, for the imitation of the flavour of fruits and liqueurs, namely, oil of pears, oil of grapes, oil of apples, oil of pine-apples, oil of cognac, and onion sauce. Prize medals and honourable mention were not wanting to reward various exhibitors of the several articles described above. We had just concluded our dissertations on this subject, so important to the toilet, when we were broken in upon by a literary lady, whose advice we are always glad to take on matters of taste and *virtú*. The foregoing pages were accordingly submitted to her inspection, and her opinion requested. After due perusal of them, and a few minutes' deliberation, my fair monitress, assuming an air of poetic inspiration, expressed herself in the following lines, which struck us as so elegant and appropriate a termination to our chapter on perfumery, that we make no apology for presenting them to our readers.

Take back your "Essence of a thousand flowers,"
The scents compounded by the chemist's art
Suit only crowded rooms and midnight hours;
Give me the native perfumes that impart
Their fragrance to the breath of early morn:
I love "the firstlings of the infant year,"
The pale primrose, the violet steeped in dew,
The "dancing daffodils," to poet dear,
The yellow cowslip, and the hare-bell blue,
The milk-white blossoms of the rugged thorn,
The wild-rose, and the slender eglantine,
The clustering honey-suckles that entwine
Around my lowly cot, and rustic bowers;
Keep then your "Essence of a thousand flowers."

Thus far, gentle reader, have we threaded the mazes of the Crystal Palace, well pleased to examine and comment upon a portion of the various wonders that on every

side solicited attention, and excited admiration. The field, however, is not yet by any means exhausted; new subjects start up for examination, and fresh objects of interest demand our notice and our praise. Like the waves upon the pebbly shore,

"Another, and another still succeeds."

In the mean while, our lucubrations have been most favourably received; public approbation has been liberally bestowed, and we are on every side invited to extend our researches and continue our graphic delineations among the treasures that the rival nations have so abundantly contributed to furnish forth the World's Great Wonder. Our materials crowd upon us,—so much so indeed, that the dimensions of our book would enlarge into undue proportions, were we not to divide it into reasonable sections. We, therefore, here conclude our first volume, and shall proceed to usher in a succeeding one, we hope, under equally favourable auspices.

END OF VOL. I.