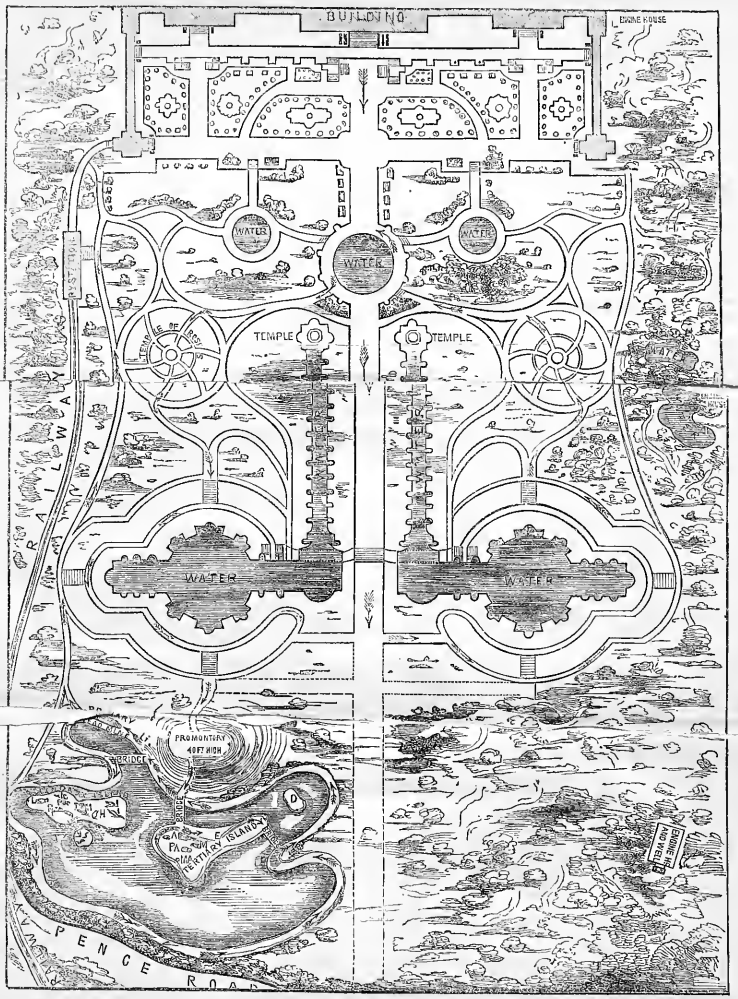

TERTIARY ISLANDS:
A Anoplotherii.
Pa Palæotherii.
D Dinornis (fearfully great bird, not completed).
M Megatherium.
E Irish Elks.
Ma Mastodon (not completed).

SECONDARY ISLAND:
I I Iguanodons.
M Megalosaurus.
H Hylæosaurus.
T T Telæosaurus.
Pt Pteroductyle (flying dragon).
P Plesiosaurus (akin to lizard).
D Dicynodon.
L Labyrinthodon.
Ic Ichyosaurus (fish lizard).

PRIMARY EPOCH:
C Coal Formation.
Li Limestone Strata.

ROUTLEDGE'S GUIDE

TO THE

CRYSTAL PALACE AND PARK AT SYDENHAM:

WITH DESCRIPTIONS OF THE

PRINCIPAL WORKS OF SCIENCE AND ART,

AND OF THE

TERRACES, FOUNTAINS, GEOLOGICAL FORMATIONS,

AND

RESTORATION OF EXTINCT ANIMALS,

THEREIN EXHIBITED.

With Ground Plans of the Courts.

LONDON:
GEORGE ROUTLEDGE & CO., FARRINGDON STREET,
AND 18, BEEKMAN STREET, NEW YORK.
1854.

"I conceive it to be the duty of every educated person closely to watch and study the time in which he lives; and, as far as in him lies, to add his humble mite of individual exertion to further the accomplishment of what he believes Providence to have ordained."—*Prince Albert's Speech at the Mansion House Banquet*, 1849.

"Upon a Roman holiday, hecatombs of wild beasts were slain, and sanguinary conflicts took place of man against man. We propose to gratify the 'people' with other agencies, more in harmony with our civilization and our Christianity."—*Sir Robert Peel, on the same occasion.*

PREFACE.

THE Crystal Palace at Sydenham is the practical development of two ideas, which, however much they may have been degraded into the mere clap-trap of plausible philanthropy, or have served as the cant phrase of designing intrigue, are still the great and distinguishing features of the present age. They are "the dignity of labour," and the "instruction and elevation of the working classes." "What can be nobler than industry and work?" said one of the most eloquent prelates of the Church of England a short time since; "it is surely better to work than to talk. It is better to lie down at night and feel that we have wrought something, if it were but the least article, or the smallest button on any part of our dress." "Heed not," said the lamented Sir Robert Peel, addressing a body of artizans, "the sneers and foolish sarcasm against learning of those who are unwilling that you should rise above the level of their own contented ignorance. Do not believe that the acquisition of scientific knowledge will obstruct your worldly prosperity, or that it is incompatible with your worldly pursuits. Rely upon it, you cannot sharpen your intellectual faculties, you cannot widen the range of your knowledge, without becoming more skilful in the business or profession in which you are engaged."

The rapid progress of industrial science during the present half century, has rendered it imperatively necessary, if this country is to retain its high position among the manufacturing nations of the world, that a higher standard of art education should be aimed at for the intelligent artizan and producer. What the Polytechnic Institution in 1838, and the popular lectures of Dr. Ryan, first accomplished for science—rendering it attractive and intelligible; what the Great Exhibition of 1851 was to have effected for industry—elevating and ennobling the varied occupations of human labour—the Crystal Palace of 1854 is calculated to achieve for various branches of art and science. The teachings of the Crystal Palace are intended to be conveyed through the best of media—the eyes; art is to be taught by means of accurate reproductions of the varied

architectural and monumental works of the past and present ages; natural science, by illustrations of extinct and living specimens; while incentives to emulation in the varied industrial arts will be provided in the choicest productions of the industry of the present day;—the "dignity of labour" will be a lesson inscribed in legible characters upon every choice production of patient toil, of inventive genius, of creative power, or of exuberant fancy.

The object of the present "Guide" is not to catalogue every one of the multitudinous works displayed in this vast collection, but to point out a few of the leading features characteristic of each department. Forsaking the time-honoured and dreary dullness of the inventory, and the curt directions of the "finger-post," this little work attempts to steer a middle course. It aspires to perform not merely the useful offices of a "Guide," but the more pleasing duties of a companion; and in its journeyings with the visitor, it will endeavour to direct attention to those points only most deserving of notice. We seek not the honour usually reserved for more ambitious and illustrious catalogues—that of being cast aside as worthless, when the more immediate occasion for our services has ceased. On the contrary, it is our earnest hope that, after having done duty as "Guide to the Crystal Palace," we may be acknowledged as the welcome guest in the family circle, and the companion at the fireside, ever willing to contribute his little mite towards increasing the stock of knowledge upon subjects of general interest.

Owing to the late period at which many of the articles were finally arranged, some few discrepancies may probably be found to exist in the "Guide:" these will, however, be rectified in succeeding editions. That our labours in attempting to introduce an instructional element into Catalogues and Guide Books will meet with the approval of the visitors to the Crystal Palace, is the hearty wish of

Their obedient servant,

THE AUTHOR.

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ROUTLEDGE'S

GUIDE TO THE CRYSTAL PALACE.

THE GREAT EXHIBITION OF 1851:

ITS FACTS AND RESULTS.

As the idea of permanently establishing a source of amusement and instruction acceptable to the masses of the population, and of so valuable and extensive a character as that of the Crystal Palace at Sydenham, owed its origin, mainly, to the unprecedented success of the Great Exhibition of 1851, it will not be out of place, if the reader is put in possession of a few facts mainly derived from official sources, in connection with the progress and results of that great enterprise. The first great practical step connected with the Great Exhibition was taken on the 3rd of January 1850, when her Majesty, by a Royal Commission, addressed to "Our most dearly beloved consort, his Royal Highness Francis Albert Augustus Charles Emanuel, Duke of Saxony, Prince of Saxe Coburg and Gotha, Knight of our most noble Order of the Garter, Field-Marshal in our Army; our right trusty and right entirely beloved cousin and councillor Walter Francis, Duke of Buccleugh and Queensbury, Knight of our most noble Order of the Garter; our right trusty and right well beloved cousin William, Earl of Rosse, Knight of our most illustrious Order of Saint Patrick; our right-trusty and right well beloved cousin and councillor Granville George, Earl Granville; and Francis, Earl of Ellesmere; our right trusty and well beloved councillors John Russell (commonly called Lord John Russell), Sir Robert Peel, Bart., Henry Labouchere, and William Ewart Gladstone; our trusty and well-beloved Sir Archibald Galloway, Knight Commander of our most honourable Order of the Bath, and Major-General in our army in the East Indies, Chairman of the Court of Directors of the East India Company; Sir Richard Westmacott, Sir Charles Lyell, Thomas Baring, Esq., Charles Barry, Esq., Thomas Bazley, Esq., Richard Cobden, Esq., William Cubitt, Esq., Charles Lock Eastlake, Esq., Thomas Field Gibson, Esq., John Gott, Esq., Samuel Jones Loyd, Esq., Philip Pusey, Esq., and William Thompson, Esq.," stated her

earnest desire to promote the success of the proposed Exhibition, which was calculated to be of great benefit to Arts, Agriculture, Manufactures, and Commerce; and reposing great trust and confidence in their fidelity, discretion, and integrity, authorized and appointed these noblemen and gentlemen "to make full and diligent inquiry into the best mode by which the productions of our Colonies and of Foreign Countries may be introduced into our kingdom; as respects the most suitable site for the said Exhibition, the general conduct of the said Exhibition, and also into the best mode of determining the nature of the prizes, and of securing the most impartial distribution of them." An executive committee was also appointed, to which was intrusted the duty of carrying out the details of the regulations to be decided upon by the Commissioners. The earliest resolutions decided upon by the directing body of Commissioners were, that the Exhibition should be entirely independent of all Government assistance; that it should be a national movement, and should depend for its success upon the voluntary contributions and assistance of the people; that no charge should be made for the admission of goods into the building; and that the task of selecting the articles for exhibition should in the first instance be confided to local committees, a power of revision being vested in the Commissioners. The support of foreign countries was warmly given to the undertaking; and but a few weeks had elapsed before contributions of so varied and so valuable a character were promised from all parts of the world, as fully to justify the application to the proposed scheme of the title of "An Exhibition of the Works of Industry of all Nations." After some ineffectual opposition, a site upon which to erect the building was granted by the Crown, in Hyde Park—the Commissioners stipulating to render up possession of the land within a certain specified time. A Building Committee was in the next instance appointed, for the purpose of deciding upon the general arrangement of the buildings and premises which would be required. The first act of this Committee was a public intimation of its readiness to receive plans, designs, or suggestions for the proposed building. So great was the amount of interest felt on the subject, that within one month from the first announcement, not less than 233 designs were sent in, many of them of an elaborate architectural character. 128 of these designs were received from London and its vicinity, 27 from France, 2 from Belgium, 3 from Holland, 7 from Hanover, 1 from Naples, 2 from Switzerland, 1 from Hamburgh, and 1 from Prussia. The Committee appeared to have been overwhelmed by the task of selecting from the vast quantity of materials submitted to them, and they were unable to select any one design as combining all the requisites which were considered essential; but, freely availing themselves of the suggestions offered in their plans, the Committee prepared a new design for the proposed building. There is a homely adage with respect to the injurious effects, in culinary operations, of the employment of too many professional hands; and the design

for the proposed building furnished a strong confirmatory proof of the mischief caused by "too many cooks," even in the architectural profession. The concentrated wisdom of the Building Committee resulted in the recommendation of an impossible plan, and one wholly unsuited to the circumstances under which it was to be erected, and the temporary character of the edifice. The centre of the building was to be occupied by an immense rotunda, 200 feet in circumference, with a cupola rising to the height of 160 feet, exceeding by 61 feet the span of St. Peter's at Rome, and by 88 feet that of the dome of St. Paul's in London. This colossal dome was to consist of wrought iron ribs, resting upon an immense "drum" of brickwork, raised 60 feet in height. It need not excite surprise that a design of this character met with considerable objection. Some persons supposed that it would be impracticable to complete such an enormous dome as that suggested within the time required—the opening of the Exhibition having been fixed for the 1st of May 1851, and not more than ten months remained to complete the building. Other persons complained that the cost of the erection would be considerably more than would be justified in a temporary building; and that having expended so large a sum on the building, there was a greater probability that it would not be removed within the time appointed. At this moment, the inventive genius of Sir Joseph Paxton came to the rescue, and the *Illustrated News* gave to the world his plan for the proposed building; a plan admirably adapted for the purposes required, and which consisted simply of an extension of the principles recently adopted by Sir Joseph in the construction of a Victoria Regia house at Chatsworth, the princely seat of the Duke of Devonshire, and which have been closely adhered to in the New Crystal Palace.

Owing to the untiring energy of Messrs. Fox, Henderson, and Company, the extensive use of machinery, and the employment of large bodies of workmen, to whose active industry and generous enthusiasm the greatest praise is due, a building was erected within the short space of seven months, entirely novel in its construction, covering a space of nearly 19 acres, measuring 1,848 feet in length, and 456 feet in extreme width, capable of containing at one time upwards of 93,000 persons, and affording a frontage for the exhibition of goods of more than ten miles in extent. In the construction of this extraordinary edifice, 3,800 tons of cast iron, 700 tons of wrought iron, 600,000 cubic feet of timber, 896,000 square feet of glass, weighing 400 tons, were placed within 400 miles of grooves of sash-bars; and the rain which fell upon these nineteen acres of glass was conveyed away by channels and gutters 24 miles in length. The building stood upon 3,300 iron columns, of 19 and 17 feet in height; the galleries and roof were supported, and the columns made rigid, by 2,522 iron girders, of 24, 48, and 72 feet in length, and of 3 and 6 feet in depth. During the short period of seven months, the whole of this immense quantity of material was collected together from all parts of the country; and 136,665 separate pieces

of cast, and 400,417 pieces of wrought iron, were put together and secured in their places with scarcely a single serious accident, and a sum of 58,238*l.* was paid in wages at Hyde Park, exclusive of the large sums which must have been paid in various parts of the country for iron castings, glass-making, and other things. The sum paid by the Commissioners for the erection and use of the building and fittings was 169,998*l.*, the original tender having been 79,000*l.*

On the 1st of May 1851 the Exhibition was opened in state by her Majesty and Prince Albert. The ceremony of opening was imposing in its appearance, and admirably adapted to the character of the occasion. Eight carriages conveyed the illustrious party from Buckingham Palace to the Exhibition Building in Hyde Park. The costly and splendid ivory chair sent by the Rajah of Travancore as a present to her Majesty, and afterwards exhibited in the India courts, placed upon a raised dais, over which was suspended a rich canopy, served as a chair of state for her Majesty. A band of professional singers of the highest talent from her Majesty's Theatre and the Royal Italian Opera, from the Royal Academy, the choirs of St. Paul's, Westminster Abbey, St. George's Chapel, Windsor, and the Chapel Royal, the Sacred Harmonic Society, and two military bands, amounting in all to not less than 829 persons, joined with wonderful effect in the "National Anthem" on the entrance of the Queen into the building. When her Majesty was seated, and the strains of music had ceased, Prince Albert advanced at the head of the Commissioners, and read to her Majesty a report of the proceedings of the Commission, a copy of which he handed to her together with a catalogue of the articles exhibited. Her Majesty replied to the address in the following words:—

"I receive with the greatest satisfaction the address which you have presented to me on the opening of the Exhibition.

"I have observed with a warm and increasing interest the progress of your proceedings in the execution of the duties entrusted to you by the Royal Commission; and it affords me sincere gratification to witness the successful result of your judicious and unremitting exertions in the splendid spectacle by which I am this day surrounded.

"I cordially concur with you in the prayer that, by God's blessing, this undertaking may conduce to the welfare of my people, and to the common interests of the human race, by encouraging the arts of peace and industry, strengthening the bonds of union among the nations of the earth, and promoting friendly and honourable rivalry in the useful exercise of those faculties which have been conferred by a beneficent Providence for the good and the happiness of mankind."

The Archbishop of Canterbury then offered a prayer for the success of the undertaking, and the procession was formed. First came the superintendents of the works, Mr. C. H. Wild and Mr.

Owen Jones; then followed the financial officer, Mr. Carpenter, and Mr. I. K. Brunel as one of the members of the Building Committee; then came the members of the Executive Committee, followed by the foreign acting Commissioners; next, the Royal Commissioners and Foreign Ambassadors; and next, the members of the Government, and high officers of state, immediately preceding her Majesty and Prince Albert, the Prince of Prussia and Duchess of Kent, Prince Henry of the Netherlands and the Princess of Prussia, Prince Frederick William of Prussia and the Princess Mary of Cambridge, Prince Edward of Saxe Weimar and the Duke of Cambridge. After these all the officers of the household of the Queen, and lords and ladies in attendance on the royal personages. The procession made the entire circuit of the building, the large organs playing as the cortége approached. Returning to the centre of the transept her Majesty ascended the dais, and, gracefully waving her hand, declared "the Exhibition open." A flourish of trumpets in the building, and the firing of a royal salute from guns in the Park, told to hundreds of thousands that the august ceremony was concluded, and that a new era in industrial progress had been inaugurated.

On the two subsequent days after the opening, the price of admission was 1*l.*, and 1,042 persons visited the Exhibition upon these terms. For the next eighteen days the price of admission was 5*s.*, and the number of persons who paid that sum for admission was 183,336. Holders of season tickets were admitted on each of the days, and they were the only class of visitors on the day of the opening. 318,000 holders of season tickets had visited the Building by the 24th of May. On the 26th, the *people* were to enter their palace. "King Mob," it was sneeringly said, was to have his opening day. It is amusing to remember the precautions of the Executive Committee to avert all evil consequences of over-crowding, or other injuries. The police force was doubled, and considerable increase made to the strength of the military; huge placards were printed and deposited in all parts of the metropolis, ready on a given signal to be posted over the walls, or carried through the principal streets, bearing the words "THE EXHIBITION IS FULL." To the surprise of all, none but a few orderly persons assembled at the doors prior to the opening of the building, and, during the entire day, only 18,402 persons visited the building, several thousands less than the number of those who on previous days had paid 5*s.* for admission. The number of shilling visitors afterwards increased to a daily average of 55,493, the aggregate number of admissions on payment of one shilling being 4,439,419. During the twenty Mondays that the rate of admission was one shilling, the number of visitors was 1,195,679, or a daily average of 59,783; on twenty Tuesdays, the number was 1,244,014, daily average, 62,200; twenty Wednesdays, 1,101,225, daily average, 55,061; twenty Thursdays, 1,137,665, daily average, 56,883. Tuesdays, therefore, were the days upon which there

was the greatest average number of visitors. The greatest number of persons entering the building on one day, was on Tuesday, 7th of October, four days before the final close to the public, the numbers reaching the extraordinary amount of 109,915. On the Monday and Wednesday of the same week the numbers fell but little short, being on the former day 107,815, and on the latter 109,760. The largest collection of persons present in the building at one time was 93,224, a larger number than have been contained in any one building since the Colosseum at Rome. The total sum received for admission at the doors of the building was 356,808*l.*; a further sum of 67,514*l.* was the produce of the sale of "season tickets"—that for a gentleman being three guineas, and for a lady two guineas. After the payment of all expenses connected with the Exhibition, the Commissioners reported a surplus of 170,000*l.*, the gross receipts from all sources amounting to 506,100*l.* The amount expended by visitors in the building was not less than 75,000*l.*, a sum so enormous that, unless vouched for by the Commissioners, it could scarcely be credited. Among the enumerated articles of refreshment disposed of, were 112,000 loaves of bread; 113 tons of meat; 36 tons of potatoes; 36,130 lbs. of tongues and potted beef; 33 tons of ham; 1,046 gallons of pickles; 14,299 lbs. of coffee; 33,432 quarts of milk; 32,049 quarts of cream; 1,092,337 bottles of soda water, lemonade, and ginger beer; 363 tons of ice; 37 tons of salt; nearly a million of Bath buns (934,691); about the same number of plain buns; 33,456 lbs. of savoury pies; 23,040 pounds of savoury patties; 34,070 Banbury cakes; 28,046 sausage rolls; 73,280 Victoria biscuits; 36,000 of "pastry at 2*d.*;" 2,000 pine apples; 4,840 lbs. of preserved cherries; 37,000 biscuits; 4,836 lbs. of chocolate; and numerous other articles in like quantities, such as macaroons, school cakes, jellies, and other products necessary for the comfort and sustenance of the 6,039,195 persons who visited the Exhibition during the 141 days upon which it remained open to the public. In addition to articles of refreshment purchased by the visitors, 270 gallons of Eau de Cologne and Aqua d'Oro were distributed gratis from small fountains belonging to exhibitors; 500 lbs. of snuff and 250 lbs. of tobacco were consumed in the Portuguese, Turkish, and American departments by persons testing these commodities; 480 lbs. of chocolate drops also disappeared in the same gratuitous manner in Saxony, and 140 lbs. were devoured by the curious visitors anxious to test the difference between Turkish and Saxon chocolate. The average expenditure for refreshments was about 4½*d.* for visitors paying 5*s.* admission fee, 4¾*d.* for those paying 2*s.* 6*d.*, and about 2½*d.* for the class of 1*s.* visitors.

Considerable difficulty was felt in ascertaining the value of the million of articles contributed for exhibition. The task was, however, attempted, and the result showed that the total value of the goods contributed by exhibitors of the United Kingdom, exclusive

of the Koh-i-noor diamond, lent by her Majesty, was 1,031,607*l.* The colonies and dependencies of this country sent articles of the value of 79,901*l.*, and the goods from foreign countries were valued at 670,420*l.*, making together a grand total of 1,781,929*l.*

The space included in the building was nearly equally divided between the exhibitors of the United Kingdom and foreign countries; 544,320 feet being occupied by the former, and 403,776 feet by the latter. The space applied for, however, by intending exhibitors was more than double the quantity available, and their demand was obliged to be reduced from 416,354 feet to 201,480. The juries awarded to the 13,937 exhibitors in the thirty classes into which the articles exhibited were divided, 5,248 awards. Of this number 171 were council medals, 2,954 prize medals, and 2,123 "honourable mention." Of raw materials there were 2,474 exhibitors, who received 22 council, 552 prize medals, and 675 honourable mention. The 3,032 exhibitors of machinery received 88 council medals, 516 prize medals, and 163 honourable mention. Among 3,818 exhibitors of textile fabrics, were distributed 4 council medals, 923 prize medals, and 544 honourable mention. Metal, glass, and china manufactures, numbering altogether 1,705 exhibitors, received 32 council medals, 510 prize medals, and 407 honourable mention. In addition to these there were 14 council, 371 prize medals, and 249 honourable mentions awarded to 1,801 exhibitors of miscellaneous manufactures, and 930 exhibitors of fine art received 4 council medals, 82 prize medals, and 85 honourable mentions. The whole number of awards of all kinds taken by British exhibitors in this contest of the world's industry, was 2,153; the foreign exhibitors took 3,095.

The arrangements made for protecting the revenue and collecting the duties upon foreign articles sold in this country were of the most extensive character. Some idea of the labour required in this department may be judged of by the fact that not less than 11,644 separate packages were received, some of which were of immense size and weight, and not unfrequently contained from ten to twenty distinct packages inside belonging to as many different contributors.

The first foreign package was delivered at the building on the 12th of February 1851, and the constant services of seventeen landing waiters, assisted by a strong body of Sappers and Miners, was continually required from that date up to the very opening of the Exhibition on the 1st of May. The landing and examination of the goods involved nearly 1,700 long room entries, and 842 landing orders. At the close of the Exhibition, the goods taken for home consumption were delivered in more than 2,000 duty-paid warrants and deposit notes, and those to be returned were packed on more than 4,000 "requests," and delivered in eighty removal orders to outports, and the regular bonded warehouses, and in 2,300 direct export entries.

The quantity of water required in the building, for fountains,

for the generation of steam, and other purposes, ranged from 100,000 to 270,000 gallons per day. The total number of catalogues, guide-books, and plans, sold by the contractors, Messrs. Clowes and Spicer, was 473,731, the receipts for which amounted to 19,014*l.* The detail of the expenditure for works of reference connected with the Exhibition shows, that upon the days when the entrance fee was five shillings, 625,161 persons expended 3,399*l.*, or an average of 1.30*d.* per head; 735,451 visitors paying 2*s.* 6*d.* admission, expended on catalogues 3,000*l.*, or rather less than 1*d.* per head; 4,678,583 visitors admitted upon payment of one shilling expended 12,615*l.* equal to an average per head of 0.67*d.* The quantity of paper used in the production of the catalogues, and other works of reference, was 30,365 reams, the weight of which was 758,098 lbs.; the amount of duty paid on the paper 4,738*l.*; the number of types used in printing the works was upwards of fifty-seven and a half millions, the aggregate weight of which was more than one hundred thousand pounds.

OPPOSITION TO THE GREAT EXHIBITION OF 1851.

The success which had attended the Great Exhibition, although anticipated by some persons, was, at first, considered doubtful and unattainable by others. Many of the objections urged, and the predictions of failure launched against the undertaking, now live only in the memory of those who had watched its progress from the earliest commencement, but they afford curious evidence of the fallibility of human judgment, and convey a useful warning against too rashly promulgating opinions founded upon insufficient data. A distinguished member of the House of Lords depicted in glowing colours the anarchy which would ensue, and Colonel Sibthorp trembled when he contemplated the quantity of "foreign trash" with which the country would be deluged. "The rights of property," and the "credit of the country," were about to be undermined and destroyed by "horrid" socialists, and "foreign political refugees," who would make the Crystal Palace their head quarters for issuing their proclamations. Manufacturers were told of the ruinous effects of foreign competition; capitalists and builders shuddered at the unhallowed desecration of the select quarters of Belgravia by the foot of the industrious artizan. Sacred and profane history were ransacked for precedents which would apply to this unique undertaking, and learned commentators at length fell back upon the "Tower of Babel:" its failure was significantly alluded to, and "the confusion of tongues" which followed was held up as a trifling example of the injuries which the "Queen's English" would sustain from the visits of "barbarous hordes of foreigners, each speaking in strange tongues." The example of the Jewish king Hezekiah was seized hold of by a learned writer, and England was warned not to follow the example of that "good king,"

by displaying its treasures; for as in olden times a desire to despoil Jerusalem of its treasures, had brought down Sennacherib and his Assyrian hosts, so it was not improbable that a hostile coalition of other powers might be formed in order to obtain possession of our vaunted treasures. Every evil which the Litany deprecates was literally poured upon the fated undertaking, even to "plague, pestilence, and famine." These last evils were predicted in a contribution called "the mite of a philosopher." *He* did not believe that any nation would so wickedly disregard the tenth commandment, which forbids coveting a neighbour's goods, as did the Assyrian monarch; "the English," he said, "were only going to be visited, and not invaded." But better at once to perish by hostile grape and canister, than by the evils which this philosopher saw looming over the Crystal Palace. "The Black death," "Asiatic cholera," "the plague of Athens," "the miseries of Campania," according to this authority afforded "no adequate parallel of the extent of the pestilential visitation which would inevitably follow the Great Exhibition." The philosophic lucubrations of this writer were embodied in a pamphlet, dedicated to the illustrious Prince at the head of the Royal Commission, with the motto "Forewarned, forearmed," and the warning was as follows:—"And here, Prince, we tremble while hastily flit before our memory, the names of great and good men who were execrated, defamed, nay, worse, murdered!—because a mob will always concentrate their rage on individuals, and stupidly personify the cause of pestilence, instead of tracing it to its origin." No warning could be clearer or more fearful in its character, but it was, however, unheeded. What will it be supposed the warning was founded upon? The enormous mass of foreign visitors, which the philosopher estimated at one million. What were, however, the facts connected with this "great sudden human gathering?" The total number of foreigners who visited England between the 1st of April and the 30th of September, 1851, was 58,427, or an excess over the similiar period of the previous year of 43,913—equal to about one in fifty of the whole population of London. In order to prevent any of those disturbances which were so confidently predicted, several additional regiments of soldiers were quartered in and near London, and an increase of 1,205 men was made in the police force. Two of the most intelligent of the police from the twelve principal towns of England were transferred to London, and thirty-four of the police of Paris, Brussels, New York, and ten other foreign cities, were brought over to this country and specially organized for duty, and a considerable staff of interpreters was attached to each police court, in order to prevent delay, or failure of justice in cases where foreigners were concerned. A constant throng of vehicles and pedestrians filled all the leading thoroughfares of Hyde Park, from nine in the morning till six at night, and about 100,000 persons frequently traversed the same roads twice; yet, with all this tremendous increase

to the traffic, there was a decrease of 12 per cent. in the number of accidents. With respect to crimes and offences committed, the increase in the number of charges of drunkenness in 1851, as compared with 1850, was only 2½ per cent.; while in 1850, as compared with 1849, the increase was 18½ per cent. From the 1st of July to the 30th of September, 1851, there was a decrease of 5½ per cent. in charges of drunkenness as compared with a similar period of 1850; and, what is still more surprising, the number of offences arising out of cab hire showed a decrease in the same period of 15½ per cent. The offences which might be supposed greatly to have increased, were uttering counterfeit coin, picking pockets, frequenting public places with intent to commit felony; but the result showed that while offences connected with counterfeit coin increased 66 per cent., all the other charges increased only 7 per cent. So utterly groundless were all the apprehensions with respect to the conduct of foreign visitors, that the Recorder of London, in his charge to the grand jury, said, "Although so many foreigners have assembled in this country from all parts of the world, there is not the name of a single foreigner in the calendar charged with robbery." The number of visitors to the Great Exhibition, brought up to London by the railways, showed an increase during the months the Exhibition remained open, as compared with the corresponding months of the preceding year, of 1,035,100; and the conduct of these visitors, consisting in the main of the working classes, was such as to win for them that good opinion to which they were, and still are, so justly and honourably entitled. A striking instance of their demeanour, when surrounded by the valuable productions of the Great Exhibition, was afforded by the reply of one of the most intelligent of the police sergeants on duty in the building, to a question put to him with respect to what were called the "shilling visitors." "When," said the policeman, "I beg the shilling people not to touch, they do not answer rudely, as the others do, that if they break anything they are able to pay for it. They do what one tells them." A greater compliment could not have been paid to the character of the industrious classes of this country. The day is surely not far distant when greater facilities will be afforded to the working classes of demonstrating that they are fully as capable of appreciating and respecting works of art, as those who chance to occupy a more elevated position in society. The "people" have now a Palace at Sydenham, worthy of being called their own, and a legislature which professes to feel an interest in promoting the comforts and knowledge of the masses will not long refuse to the "pent up sons of toil," the right to enjoy their crystal home on the only day upon which they can quit the busy hum of the workshop, or their unhealthy and ill-ventilated apartments. The charter granted to the Crystal Palace Company forbids the directors opening their Exhibition to the public on Sundays, on the ground that an old Act of Parliament provides that any house or place of "public amusement and entertainment, or for publicly debating

upon any part of the Lord's day, called Sunday, and to which persons may be admitted by the payment of money, or by tickets sold for money, shall be deemed a disorderly house or place, and the keeper thereof shall forfeit the sum of 200*l.* for every such day he shall so keep open."

THE REMOVAL OF THE EXHIBITION BUILDING FROM HYDE PARK.

For some weeks previous to the close of the Great Exhibition, the question of the propriety of removing the building from Hyde Park, in conformity with the terms of the deed of the Commissioners, was very generally discussed. Many of those who had been loudest in their complaints against granting the use of the site for the purposes of the Exhibition, became strenuous advocates for retaining the edifice in permanence. Every person who had walked through the long aisles of that unique and beautiful structure, and noticed its thousands of light and towering columns, its interminable network of girders, its miles of sash bars, and acres of glass, who had admired the unequalled aërial perspective of its lengthened nave, the noble proportions of its vaulted crystal transept, and the wonderful combination of lightness of appearance with strength and stability, could not but feel regret that a building so capable of being applied to other useful purposes, should be ruthlessly and almost sacrilegiously destroyed. "Shall we keep the Crystal Palace, and have riding and walking in all weathers among flowers, fountains, and sculpture?" was a question ably discussed in a small pamphlet, written under the name of "Denarius." "A medical man" put in his plea for keeping up the building, on the ground that we lived in a city peculiarly unhealthy, and he declared that if the Crystal Palace and the surplus funds were placed at his disposal, he would have, in addition to shrubs, and fountains, and statues, recommended by "Denarius," springs of living water for personal use, he would sink wells in the building and establish a system of baths, which should combine all that was desirable in the Spas of Germany, with all that was decent in the Roman thermæ; he would furnish the building with libraries and reading-rooms, retiring and reclining rooms; couches for repose were to be disposed about the building, hand carriages and Bath chairs of every description should roll luxuriously along on noiseless wheels, and a scale of refreshment so liberal and complete should be provided, as to furnish those who might spend the whole day in the place, with the most ample and convenient means of doing so. A third person proposed to convert the building into a permanent picture gallery; a fourth suggested a winter garden, and a residence for invalids; a fifth thought that an occasional exhibition of manufactures might be held within its crystal walls; a sixth considered that the huge edifice would make a good public reading-room;

a seventh proposed a library for all nations; an eight, an enthusiastic florist, thought that the whole site might be laid out in small and variegated *parterres;* a ninth said that nothing would do but to make it a receptacle for a national collection of fine arts; a tenth believed that the nation ought to hold a supplemental exhibition of the works of art of all nations. Many other proposals of a similar character might be mentioned, many of which were of the wildest and most impracticable nature. It was contended by those who advocated the retention of the building, that the deed of covenant between the Royal Commissioners and the Treasury was entered into before the edifice itself was erected or its plans known, and at a time when it was considered that the maintenance of a brick building in Hyde Park was inconsistent with the public interests, but that having had experience of the existing building, the singularly unanimous approval it had met with, the obvious adaptation of the structure to other public wants when the Exhibition should have closed, its positive adornment to Hyde Park, its suggestiveness of new and improved modes of construction, had so greatly altered the circumstances, as to render it expedient that the doom passed upon an unpopular brick building, should not be carried into effect upon a popular glass palace. An extensive organization was set on foot throughout the country to avert the impending blow, and to give expression to the opinion of the public on the subject; committees were formed, public meetings were held, deputations waited upon the members of the Government, and the question was brought before the notice of the House of Commons. Happily, however, for the interest of all parties, the Government were inflexible, and the then "Shylock" of the Woods and Forests, Lord John Manners, demanded strict compliance with his "bond." A considerable majority of the House of Commons supported his views, on the ground of keeping good faith with the public, and the building was ordered to be removed according to the terms of the covenant. By this decision the friends and promoters of the Exhibition, who had witnessed with satisfaction the successful termination of the great enterprise, were spared the pain and disappointment of seeing the site converted into a mere lounging place, a sanatorium for imbecile dowagers and hypochondriacal patients; or, under colour of advancing, by Government assistance, the interests of art and science, being made the centre for that extended system of jobbery and baneful patronage, which appears ever inseparable from undertakings fostered by the Government of this country.

THE CRYSTAL PALACE IS RESCUED FROM DESTRUCTION.

It was immediately after the decision of the House of Commons requiring the removal of the building, that Mr. Francis Fuller, now the managing director of the Crystal Palace, and who had formerly

been one of the earliest and most energetic promoters of the Great Exhibition, actuated by a noble spirit of enterprise, and an earnest desire to perpetuate and extend the benefits which had been found to result from industrial exhibitions, came forward and offered the sum of 75,000*l.* for the materials of the building. The offer was accepted, and a contract entered into by Messrs. Fox and Henderson, to take down and remove the structure, and re-erect it at Sydenham for a sum of 120,000*l.* Mr. Fuller and the gentlemen with whom he acted, upon finding themselves in possession of the building of the Crystal Palace, felt somewhat in the same position as a person who had received from an absent relative in India, a proof of his continued affection in the shape of a live elephant. What was to be done with the elephant when he was permitted no longer to "graze" in Hyde Park, naturally became a question of great moment. It was at this moment that Mr. Schuster, the owner of Penge Park, Sydenham, came forward and offered to give up his beautiful estate, in order that the "crystal elephant," as it was called, should have suitable pasturage, and the requisite supply of food. "Although," said Mr. Schuster, "I had made up my mind to spend the remainder of my days on the estate, I would rather give it up than you should be without a suitable site, and you shall have the park." All honour to this public spirited gentleman; may his noble self-denial be rewarded by witnessing the complete success of the People's Palace, and by receiving the grateful thanks of the people of England, for having afforded them the means of healthful recreation and intellectual advancement.

A company was soon formed, a body of able and practical gentlemen appointed as directors, and the services of men eminent in their respective professions were engaged to superintend the various departments of the works: a complete list of which is given elsewhere. The Company obtained a royal charter of incorporation, and proceeded to complete the purchase of the necessary land upon which to erect the new Crystal Palace; the principal portion being Mr. Schuster's park, consisting of 171 acres, the owner agreeing to sell it to the Company at its then existing price, as determined by valuation. Mr. Daniel Smith and Mr. Norton, eminent surveyors, with Alderman Sir John Musgrove as umpire, were appointed as valuers, and the price which they set upon the land was 86,661*l.* Other purchases were made of land adjoining Penge Park, comprising 178 acres, at a total cost of 81,000*l.*; the whole quantity of land in possession of the Company being then 349 acres, the cost of which was 167,661*l.* The policy of securing a sufficient quantity of land before its value had been enhanced by the construction of the palace soon became apparent, as a portion of the surplus on the outside of the park was soon disposed of at a large profit. An offer made by Mr. Wythes, a large contractor and builder of Reigate, of the sum of 100,000*l.* for 149 acres of the land was accepted, which, with some other small portions sold, realized to the Company, in a few months, a profit of 51,000*l.*

The Company retained, after the disposal of the surplus, 200 acres of land, all included within a ring fence and of the most valuable character. The necessary space having been secured, the determination of the position which the palace should occupy, became a matter of anxious consideration, and the summit of the hill above Sydenham was the spot selected. The spot selected is probably one of the most commanding to be found in the country; most extensive views may be obtained from it of the vast city of London, the rich valley of the Thames, the windings of the noble river, of Kent, the garden of England, and several other adjacent counties, and for miles round, the "People's Palace," from its elevated position, forms a prominent and attractive feature. In the endeavours to carry out their original plan of creating a palace and a park which should constitute a monument worthy of the nation, the Directors wisely decided that the question of increased expense involved in the construction of the palace on the summit of the hill should not be allowed to interfere with them in their conduct of the enterprise. The public at large owe a deep debt of gratitude to the Directors for the manner in which, at every step taken by them towards realizing the original conception, they were influenced by the desire to make the undertaking worthy of that people of England, for whose recreation and instruction it was designed. The result of their labours is now to be seen in a building far surpassing in magnitude and architectural beauty the original structure in Hyde Park, filled with unrivalled collections of art and of beauty, placed on a commanding site, in the midst of a spacious park, in which the charm of natural scenery is combined with ornamental gardens, terraces, and fountains, on a scale of magnificence rivalling that of the palace itself, and within easy access, not only of the millions of the metropolis, but of the country at large.

THE PEOPLE'S PALACE IS ABOUT TO BE REBUILT AT SYDENHAM.

The first column of the building was raised on the 5th August, 1852, before an assemblage of many thousands of persons. A procession, headed by a body of workmen, bearing an immense white banner, upon which was inscribed in blue letters, "Success to the Palace of the People," proceeded from the temporary buildings of the contractors to the spot upon which the column was to be raised. Then followed the Directors of the Company, the contractors, Sir Charles Fox, Messrs. Henderson and Cochrane, Mr. Owen Jones and Mr. Digby Wyatt, the superintendents of the decorations, a host of noble visitors, celebrated for their sympathies with the working classes, and for their desire to promote their best interests, and a host of scientific men eminent in their respective professions. Among them were Lord Stratford de Redcliffe

(the English Ambassador at Turkey), Lord Bruce, Mr. Monckton Milnes, Mr. Apsley Pellatt, Mr. Cornewall Lewis, Mr. Bernal Osborne, Professors Owen, Ryan, Ansted, Royle, Lindley, Wheatstone, Faraday, Playfair, Dr. Latham, Sir Charles Lyell, Sir Charles Barry, Mr. Dyce, Mr. Stanfield, Mr. Creswick, Mr. Scott Russel, Mr. Fairbairn, and numerous others. The column to be raised was hauled up by a band of workmen above the base-plate and socket, upon which it was finally to rest, when Mr. Laing stepped forward, and deposited in the lower part of the column a glass bottle, containing the coins of the realm, and a paper bearing the following inscription:—

This Column,
The first support of the Crystal Palace,
A building of purely English architecture, destined for the
Recreation and instruction of the million,
Was erected on the 5th day of August, 1852,
In the 16th year of the reign of her Majesty Queen Victoria,
By Samuel Laing, Esq., M.P.
Chairman of the Crystal Palace Company.
The original structure of which this column formed a part
Was built after the design of Sir Joseph Paxton,
By Messrs. Fox, Henderson, and Co., and stood
In Hyde Park, where it received the
Contributions of the Works of Industry of All Nations,
At the World's Exhibition,
In the year of our Lord 1851.

"—— I, your glass,
Will modestly discover to yourself,
That of yourself———
Which yet you know not of."

Mr. Laing, Sir C. Fox, Mr. Henderson, and Mr. Cochrane, next stepped forward, and each taking a winch from a silver salver, screwed the column to the "base-piece," by means of screws and nuts. A royal salute was then fired, the band of the Coldstream Guards struck up the National Anthem, and from old and young, workmen and master, rich and poor, arose one tremendous cheer, which rent the air, for "The Queen and the Palace of the People." When the cheering had ceased, Mr. Laing addressed the assembled thousands in the following words, remarkable alike for their eloquence and the sound and good opinions which they embodied:—

"The duty has devolved upon me of fixing the first column of the new structure, which is intended to embody the glorious recollections of the Great Exhibition of 1851, as a fixed and abiding reality for purposes of national instruction and improvement. The importance of such an object might well have demanded the presence on this occasion of some one who occupies a far more conspicuous position in the public eye than the humble individual

who now addresses you. I believe, however, that it is the very feeling which we all entertain of the deep importance of this great national undertaking, which has led us to the conclusion that, at this stage of the proceedings, the ceremony of inauguration would be most fitly entrusted to the official organ of the Company. Recollecting as we all do that the parent idea which we are now labouring to carry out in new and untried developments, originated with the meritorious Prince whose name is so deservedly and intimately associated with the glories of the Great Exhibition—recollecting, also, that the fairy structure which is about to rise like a phœnix from its ashes, was so often honoured by the presence of our gracious Sovereign—I confess we feel very strongly that any patronage short of the very highest would be unworthy of the objects at which we aim, and of the enterprise which we have undertaken. On all occasions when the interests of art and science are concerned, and above all when the moral and intellectual improvement of the mass of the population are concerned, the country has never lacked—I will not say the patronage, but that which is worth all the patronage in the world—the enlightened action and affectionate solicitude of our Sovereign Lady the Queen and her illustrious consort. At the same time, every one must feel that in order to command such patronage, we must show that we deserve it; and that until we have fully emerged from the chrysolite state of a commercial company, and given actual pledges, not only of our wish, but of our power, to carry out the high and noble objects by which we profess to be animated, it would be premature and disrespectful to venture to solicit such patronage, as we are ambitious enough to say that we hope at some future, and not very distant, day to obtain. In the mean time it only remains that we, the plain men of the people, should do our work quietly, effectively, without parade or ostentation; and truly when we consider the work which has this day been formally commenced, it is no light enterprise which lies before us. Former ages have raised palaces enough, and many of them of surpassing magnificence. We have all read of the hanging gardens of Babylon, the colossal palace temples of Egypt, and the gorgeous structures of Nineveh and Persepolis. Many of us have seen the scattered fragments of Nero's Golden Palace on the Palatine Hill, and the vast ruins which still speak so magnificently of the grandeur of Imperial Rome. But what were all these palaces, and how were they constructed? They were raised by the spoils of captive nations, and the forced labour of myriads of slaves, to gratify the caprice or vanity of some solitary despot. To our own age has been reserved the privilege of raising a palace for the people. Yes, the structure of which the first column has just raised its head into the air, is emphatically and distinctly the possession of the British people, and it is the production of their own unaided and independent enterprise. On us, to whom circumstances have entrusted the direction of this great popular undertaking, devolves the duty of seeing that it is carried out in a

manner worthy of the public spirit of the age in which we live, and of the magnitude of our high mission. I assure you we all feel very deeply the responsibility of our position; and although, for the reasons to which I have already adverted, we have judged if premature and unseemly to make any formal religious ceremonial on the present occasion, we feel not the less profoundly that in carrying out this undertaking, as we hope to do to a successful issue, we are but acting as the instruments of that beneficent and over-ruling Providence which is guiding our great British race along the paths of peaceful progress. I trust that the assurance that we are all deeply and intimately impressed with what I may almost venture to call a religious policy of our duties and responsibilities, will be accepted as a guarantee that to the best of our judgment and ability this great undertaking shall be conducted in a proper spirit and with a view to noble and elevating objects. As regards the material portions of the enterprise, words are but feeble instruments in which to paint the triumphs of art and the beauties of nature. It is better to ask you to look around you and say for yourselves whether the site is worthy of the People's Palace and the People's Park. Figure to yourselves the surrounding area which is now defined by a circle of beauty, converted into a crystal dome, and raised aloft under the blue vault of heaven, and you will form some indistinct image of the new central transept as it exists in the genius of a Paxton, and as it will shortly exist as a tangible reality for the wonder and admiration of millions. But I will not detain you longer by attempting to describe that which no words can adequately represent, and I will conclude by the expression of another sentiment to which I am sure you will heartily respond. In looking so peculiarly and emphatically on the fact that this is to be the palace of the people, the time was when I should have risked calling forth some antagonistic feeling, as if the cause of the people were placed in invidious contradistinction to that of the Crown and the aristocracy. Thank Heaven! the time when such distinctions can be drawn in England has disappeared. It is the grand characteristic of the reign of our present gracious Sovereign to have witnessed the most rapid progress in the material, moral, and intellectual improvement of the mass of the population; and, as a consequence, a corresponding increase in their social importance and political power, not only without any outbreak of democratic passions, but, on the contrary, with an equally marked increase in the attachment of those very classes to the institutions of their country and to the person of their Sovereign. The feeling of loyalty, which had dwindled into a faint *dilettante* speculation or vague historical reminiscence, has in our days been most happily and wonderfully revived, and exists now as a general glow, pervading all classes of society and binding the highest and lowest in the land together by one common and ennobling tie of reasonable and intelligent, yet devoted and affectionate veneration for the character and person of our beloved Queen and her illustrious consort and family. Towards

the creation of this happy feeling I believe no incident has contributed in a more marked degree than the Great Exhibition of 1851. None of us will ever forget to whose comprehensive and philosophic mind we are indebted for the original idea of that transcendant Exhibition, and to whose courage, resolution, and business aptitude, we owe the prosecution of that idea to a successful conclusion amidst all manner of doubts and difficulties. Nor shall we hastily forget the affable and condescending manner in which our gracious Queen, surrounded by her family, mixed there day after day in free and unreserved intercourse with her subjects, setting an example by which all from high to low might profit, of enlightened interest in worthy objects, and unaffected sympathy with the tastes and enjoyments of her people. With these recollections fresh in our minds, I must confess it has been an inspiriting idea with us that in perpetuating an enduring memorial of that great and glorious Exhibition, and in expanding the noble and philanthropic idea of Prince Albert into fresh developments, we should be at the same time rearing a monument, perhaps not altogether inappropriate or unworthy of the reign under which we have the happy privilege to live. I feel that you all respond to this sentiment, and that in calling on you now to join with me in celebrating the act of laying the foundation-stone of the People's Palace, I cannot suggest a better mode of expressing our common feeling than by asking you to unite in one loud and hearty acclamation of 'God save the People's Queen!'"

The ceremony of raising the first column having been thus brought to a completion, the visitors proceeded to share the hospitality of the contractors, Messrs. Fox, Henderson, and Co., who had provided a sumptuous entertainment beneath a large marquee on the summit of the hill. There, in eloquent addresses, many and varied toasts were proposed, and that of "Prosperity to the People's Palace!" was heartily and cordially drunk in flowing goblets of the best and most delicious wines which the extensive stores of Mr. Higginbotham could furnish.

PROGRESS OF THE WORKS.

The works connected with the erection of the building, and laying out the grounds of the Park under the direction of Sir Joseph Paxton, were now pushed forward with as much rapidity as possible; indeed it was expected that they would have been so far advanced as to have enabled the Directors to have opened the Crystal Palace in the month of May, 1853. A continuous succession of rain and unfavourable weather, however, retarded the operations of the contractors. "Still, however," said a writer in the *Times*, humorously describing the progress of the work under these difficulties, "amid a chaos of rain and mud, blown upon by all the winds of heaven, there is slowly rising up a fabric,

which only asks a short respite from the fury of the elements, to be able to defy them for good, but which, very naturally it may be said, does not obtain that brief truce. All the minor miseries inflicted by rain and wind on the whole population of London, are a trifle to those which tax the ingenuity, perseverance, and hardihood of the thoroughly British band of men now engaged at the highest point of the Surrey Hills in rearing the grandest edifice of its kind—we had almost said of any kind—in the world. The centre slope of a lofty hill is being formed and fashioned, excavated, embanked, terraced, walled, stepped, and balustraded into a paradise of gardening far surpassing the architectural grandeur of Versailles, and combining with them the peculiar features of English landscape gardening. Thus far the whole fairy creation, like the monsters said to be engendered by the sun on the banks of the Nile, is struggling to extricate its limbs from elemental mud. Everywhere it is mud—mud, excepting where the mountain of granite has already been reared, a graceful slope already turfed, or a long train of planks bends under processions of wheelbarrows. The uniform of the place, from the labourer floundering at the bottom of a huge tank, to the engineer spanning the sky with an arch of glass, under which the monument of London might stand, with some feet to spare, consists of trousers turned up to the knees, and sleeves to the elbows. Were it not that the wind is alternately sou'-wester and nor'-wester of the most furious description, this adaptation of the dress to the work to be done would doubtless proceed further; but flesh and blood require comfortable clothing at the top of Penge Hill—the southern boundary, as everybody knows, of our London horizon. The sums total of work and material are incredible; more granite than ever was brought into London before, more ironwork than can be produced or delivered, the earthwork of a railway, besides three actual railways from the metropolis to be constructed; miles of public road to be diverted, fountains throwing up two thousand gallons a second, and every kind of poetical extravagance in iron and in water, with a bit of the antediluvian world, with gigantic saurians and plants to the life size—all run up into a bill which it is frightful to think of."

To add to the misfortunes of wind and weather, an unfortunate catastrophe, attended with the loss of fifteen lives, and the risk of destruction to a great part of the building, occurred in the month of September, in consequence of the falling of the scaffolding used in the erection of the great central transept. The erection of a new scaffolding, raised from the ground instead of being constructed upon the same suspension principle as that upon which the previous one was raised, caused a further delay of more than three months in the completion of the works connected with the building.

A TERRIFIC BANQUET IN AN IGUANODON.

At the lower end of the park, in a rude and temporary wooden building, almost inaccessible for deep ruts and acres of swamp and mud—a miniature Serbonian bog—Mr. Waterhouse Hawkins was steadily engaged in the creation or restoration of a series of now extinct animals, which it would appear were destined to roam, as in their native state, through the deep Penge morasses, or bury themselves in the deep excavations of the park. By the close of the last year, Mr. Hawkins had so far succeeded with the formation of some of the members of his monster family, as to be in a position to give effect to a design which he had for some time previously contemplated, of giving a dinner to the Directors and some of his friends within the carcass of one of his antediluvian monsters. The last day of the old year (1853) was selected. Accordingly Professors Owen and Forbes, Mr. Gould, Mr. Francis Fuller, Mr. Belshaw, Mr. Ingram, and a number of other gentlemen, assembled, to do honour to the unique and novel entertainment. Twenty-one of the guests were accommodated with seats ranged on each side of the table, within the sides of the iguanodon. Professor Owen, one of the most eminent geologists of the day, occupied a seat at the head of the table, and within the skull of the monster. Mr. Francis Fuller, the Managing Director, and Professor Forbes, were seated on commodious benches placed in the rear of the beast. An awning of pink and white drapery was raised above the novel banqueting-hall, and small banners bearing the names of Conybeare, Buckland, Forbes, Owen, Mantell, and other well-known geologists, gave character and interest to the scene. When the more substantial viands were disposed of, Professor Owen proposed that the company should drink in silence "The memory of Mantell, the discoverer of the iguanodon," the monster in whose bowels they had just dined.

The Professor paid an eloquent tribute to the value of the labours in the wide field of geology and palæontology of such men as Cuvier, Hunter, and Conybeare. He told the company how the researches of Cuvier in comparative anatomy had provided the means of reconstructing an extinct animal almost from a single fossil-bone, for so perfect was the individuality of each species of animals, and so peculiarly adapted was the construction of their parts, to the purposes for which they were destined, that a skilful observer could tell, with the most perfect accuracy, to what species of animal any particular bone belonged. The researches of Hunter had confirmed the theories of Cuvier, and from a single bone, or a single tooth, Conybeare, Buckland, and others, had succeeded in building up an entire animal. The beast in which he was then speaking, whose original had once roamed through the vast forests of Sussex, had perished there by some great convulsion of nature; a single bone was discovered a few years since by Mantell, and from that fossil-limb the iguanodon had been constructed.

Many other toasts, and many pleasing remarks, beguiled the hours, till approaching midnight suggested the appropriateness of the guests departing to their more congenial homes. Professor Forbes contributed some verses suitable to the occasion. As the thoughts of the learned professor have never yet appeared in print, no apology will be needed for presenting them to the visitor. The poet-geologist having told how the company were indebted to the hospitality of Mr. Waterhouse Hawkins, for the opportunity of spending the last day of the old year in "an antediluvian dragon," proceeded thus to refer to the iguanodon, the "roaring" chorus being taken up by the company in a manner so fierce and enthusiastic, as almost to lead to the belief that a herd of iguanodons were bellowing from some of the numerous pit-falls in Penge Park, in which they had been entrapped:—

"A thousand ages underground
His skeleton had lain;
But now his body's big and round,
And he's himself again!
His bones, like Adam's, wrapped in clay,
His ribs of iron stout,
Where is the brute alive to-day
That dares with him turn out?
Beneath his hide he's got inside
The souls of living men,
Who dare our Saurian now deride
With life in him again?
(Chorus.) The jolly old beast
Is not deceased,
There's life in him again. *(A roar.)*

"In fairy land are fountains gay,
With dragons for their guard:
To keep the *people* from the sight,
The brutes hold watch and ward!
But far more gay our founts shall play,
Our dragons, far more true,
Will bid the nations enter in
And see what skill can do!
For monsters wise our saurians are,
And wisely shall they reign,
To spread sound knowledge near and far
They've come to life again!

"Though savage war her teeth may gnash,
And human blood may flow,
And foul ambition, fierce and rash,
Would plunge the world in woe.

Each column of this palace fair
That heavenward soars on high,
A flag of hope shall on it bear,
Proclaiming strife must die!
And art and science far shall spread
Around this fair domain,
The People's Palace rears its head
With life in it again."

THE DIRECTORS REPORT PROGRESS, AND ASK FOR MORE FUNDS.

At length, however, apparently insuperable difficulties began to yield to the energy and perseverance of contractors and artists, and by the 28th of February 1854, such progress had been made as to warrant the Directors in stating publicly that the building would be opened in the month of May. Confidence in the success of the undertaking appeared to grow with the difficulties with which the Directors had to contend, and a demand was made upon the shareholders for further subscriptions to the amount of a quarter of a million. The Directors attributed the necessity of this increased expenditure, amounting, with the previous call, to more than double the sum first estimated, to the great delay and difficulty caused by the unseasonable weather and accidents, which had occasioned large extra expense, not only in themselves, but also in the exertions to make up for lost time, so as to ensure the opening in May—to the extraordinary rise in wages and the prices of materials, which had affected those portions of the work which did not admit of being let by contract, and the necessity which had arisen for embracing in the scheme objects not contemplated in the original estimate, such as the widening of roads, and the construction of new approaches and carriage stands. Among other items of increased expenditure incurred was that of taking on lease, for eighty-four years, Dulwich Wood, immediately opposite the building, at an annual rental of 3,000*l.*, a portion of which property was made use of in the construction of a magnificent road in front of the building of nearly 100 feet in width. The elaborate and highly finished manner also in which the various fine arts and industrial courts had been carried out, also caused a greatly increased expenditure. The Pompeian House had expanded under the able direction of Mr. Wyatt, from a refreshment-room, as originally intended, to a complete and accurate representation of a house in Pompeii. The total cost at which the entire scheme, up to the present time, has been carried out has been one million, and certainly never was a million of money better expended, or more magnificent results obtained from the outlay of such a sum.

Of the various items of expenditure, up to the 28th of February, there were—for purchase of land, after deducting the sum received for re-sales, 50,240*l.*; purchase and removal of the original building, 95,000*l.*; construction of the main building, 135,000*l.*; tunnel and heating apparatus, 24,536*l.*; wings of the Crystal Palace, and

water towers, 34,090*l.*; hydraulic works, fountains, lakes, Artesian wells, &c., 93,670*l.*; park, terraces, gardens, 98,214*l.*; new roads and approaches, 4,350*l.*; interior of building, plants, garden works, fountains inside the palace, 6,450*l.*; natural history illustrations, 11,176*l.*; fine arts' courts, Pompeian, Alhambra, Assyrian, Greek, Roman, Egyptian, Mediæval, Renaissance, Italian, and Byzantine, 52,500*l.*; collection of sculpture, 32,000*l.*; sundry fittings, 7,000*l.*; general expenses, 35,314*l.* The further sum of 250,000*l.* to be raised was required to be expended in the following manner: — building new staircases from the basement story, additional strengthening, and increased space in the wings, 12,500*l.*, making the total cost of the building, with its heating apparatus, 305,026*l.*; and a sum of 30,000*l.* was to be expended in taking down the water towers, which were considered unsafe, and rebuilding them in a larger and more substantial manner. On the construction of hydraulic works, principally in the sinking of an Artesian well, a further sum of 20,000*l.* has been expended, as, also, an additional sum of 27,000*l.* for additions made to the cascades and the iron pipes and valves connected with them; dolphins and Mercuries, sculptured figures and temples for the cascades, absorbed a further sum of 17,000*l.*, making the total expenses connected with the water displays, rather more than 200,000*l.* The grounds, in consequence of an enlargement to the extent of fifty-eight acres, required an additional grant of 29,500*l.*, making a total expenditure in that department, exclusive of hydraulic works, of 127,714*l.*

The expenditure in the park and grounds has been almost the same as that upon the Crystal Palace. The fine arts' department, under Mr. D. Wyatt and Mr. Owen Jones, received in February a further grant of 50,000*l.*, making their total estimated cost 102,500*l.* A sum of 26,000*l.* was expended in the construction of the seven industrial courts devoted to the exhibition of musical instruments, stationery, Sheffield and Birmingham goods, printed and woven fabrics, and French productions. To Mr. Waterhouse Hawkins was also awarded a further sum of 4,000*l.* in order to enable him to complete his interesting collection of extinct animals. Arranged under general heads, the expenditure, so far as the details have been furnished up to the present time, may be thus stated:—

Purchase of land	£ 50,240
Construction of building	306,176
Erecting grand terraces and waterworks	305,384
Fine Art Courts	102,500
Sculpture	32,000
Natural history and geology	15,176
Fittings and internal decorations	39,450
Roads and approaches	19,350
General charges	56,686
	£926,962

On the authority of Sir Joseph Paxton, the whole undertaking will have cost, in round numbers, one million; and no person who visits the Crystal Palace will dissent from the remarks of Sir Joseph:—"I think the shareholders, as well as the directors, on reflection and observation, will not fail to perceive that so grand a plan, comprising the erection of certainly the largest building in Europe, the formation of an extensive collection of objects of art and science, and the preparation of ornamental gardens of upwards of 200 acres in extent, will not suffer, as regards cost, by comparison with any other scheme, whether of a public or private nature." A more striking proof of the determination of those who had embarked their property in an undertaking, to see it carried out in a manner at once creditable to themselves and honourable to their country, was never afforded than by the readiness with which the increased capital was provided; and certainly it was a noble spectacle which was then held forth to the world; for the country was on the eve of embarking in a great struggle against ambitious despotism, and in favour of an oppressed nation abroad, but sincerely desirous of elevating the moral, social, and physical condition of the masses at home, there were still found those, who while they looked calmly on the preparations for these hostilities, proceeded with hopeful confidence to carry out that peaceful enterprise which had originated at a different period, and under far more favourable cumstances.

THE CRYSTAL PALACE: ITS CONSTRUCTION AND DIMENSIONS.

When in the memorable year 1851 an attempt was first made to construct upon a large scale an edifice of glass and iron, in a style of architecture which must be considered as purely English, an immense excitement was created among professional men and architects deeply versed in Vitruvian lore. It was interesting to note the manner in which, with a grave shake of the head, far more expressive and full of meaning than Lord Burleigh's famous nod, the rising lights of their profession deprecated the departure from the ordinary rules of construction, and predicted the speedy downfall of the fragile "house of cards." The completion and ultimate removal of the edifice, its re-construction upon a scale of greater magnificence at Sydenham, have established the value of the new style of English architecture, and, at the same time, it has afforded a striking proof of the value of many of those qualities which are characteristic of the English people. Our courage has been manifested in the readiness with which we have undertaken so vast a scheme; our energy, determination, and strength, has been shown by the rapidity with which our operations have been carried on; that freedom and liberty, on the possession of which we so justly pride ourselves, have been strikingly attested by the fact, that it has been in the power of the people, alone and unaided by Government resources,

to call forth the existence of a palace for themselves; while the fact that this Crystal Palace has been constructed without the slightest pecuniary assistance from Government, is an evidence of the wealth and noble spirit of enterprise which pervades more or less every class of society.

Jewish historians relate how that the chosen people, on their return from captivity, wept as they gazed upon their second and restored temple, and contrasted it with the magnificence of that in which they were wont to assemble prior to their removal from their native land. With far different feelings, however, will the *people* of England gaze upon their restored Palace—one far superior in magnificence of design and permanence of construction to that which first astonished and delighted millions of visitors in 1851. The main features of difference between the two buildings consist in the fact, that the present building has one centre, and two end transepts; while the former had but one in its centre. The Exhibition building was, with the exception of the transept, covered by a flat roof, whereas the nave of the Crystal Palace is covered by a semicircular vault of glass. The present building has also two wings at the extremities which, together with the main structure, communicate with splendid terraces and walks.

The Crystal Palace stands nearly north and south, on the summit of the Penge Hill, its length being 1,608 feet, its greatest breadth at the central transept 384, and at the smaller transepts 336 feet. The general width of the body of the building, between the transepts, including the glazed and open corridors, is 312 feet. In the old building, the greatest width was 456 feet, and at the transept it was 408 feet. The ground upon which the building stands slopes very much towards the park, and rows of brick piers are run up to support the front rows of columns. The nave consists of a grand avenue, nearly double the width of the nave of St. Paul's Cathedral, and more than three times its length; it is 72 feet wide, and 1,608 feet long, and crosses the transepts at right angles. At a height of 68 feet from the floor, there springs a semi-cylindrical vault 72 feet in diameter, which stretches away from one end of the nave to the other. The central transept has a vaulted roof of 120 feet span, extending for a length of 384 feet. The span of this noble arch is about 20 feet larger than that of St. Peter's at Rome, and nearly 40 feet greater than that of St. Paul's in London. The space covered by this colossal vault is considerably larger than the whole Minster at York. The walls of St. Paul's Cathedral are 14 feet thick—those of the Crystal Palace 8 inches; St. Paul's was thirty-five years in building—the People's Palace has been constructed in little more than twice as many weeks. At a distance of 528 feet on each side of the central transept, the nave is intersected by the two smaller transepts, each of which are, however, of the same dimensions as that which formed the great feature of the late Exhibition building. They are 72 feet in diameter, and spring from the same height as the vaulted roof of the nave, that

is 68 feet. At the point of intersection of the nave with the end transepts, the roof is flat, and forms a parallelogram of 72 feet square. On each side of the nave are aisles of 24 feet in width, formed by the columns which support a portion of the building. Beyond these first aisles, and parallel with them at a distance of 48 feet, are second aisles, 43 feet in height, and again beyond these, and at the same distance, are third aisles of the same width and height. At alternate distances of 72 feet and 24 feet, columns project 8 feet into the nave, which, continued up nearly to the roof, support an upper gallery, which runs completely round the building, and sustain also the arched girders which carry the semi-circular roof of the nave. A gallery, 24 feet in width, runs entirely round the building on the sides nearest the exterior, and round four courts, 48 by 120 feet, which abut on the central transept. This lower gallery is reached by eight double staircases, four being placed at each portion of the building, divided by the central transept. From the first or lower gallery, access is obtained to the upper 8 feet gallery by eight spiral staircases, one being placed at each end of the three transepts, and one at each end of the building. The second tier of columns supports in the transepts only a platform, or landing place, 24 feet in width, and 72 feet in length, with the exception of the larger one in the centre, the length of which is 120 feet, and from these platforms, at an elevation of 42 feet from the ground, a continuation of the spiral staircase leads to the second or upper gallery, at a height of 62 feet. The passage along this gallery is through a series of ring or "bull's eye" girders, 7 feet in diameter, resting upon the columns which project into the nave, at alternate distances of 24 and 72 feet. The views from this gallery, whether of the busy scene far down below into the nave of the building, or through the glazed windows over the surrounding country, or of the gradual diminution of the size of the hoops of the girders as they fade away in the long perspective of the gallery, will amply repay the visitor for the trouble of ascending. In the central transept there is yet a third gallery of 8 feet in width, which runs completely round the transept, crossing the nave at an elevation of 100 feet, and on a level with the top of the arched roof of the nave. The ascent to this third or uppermost gallery, is made from spiral staircases ascending from platforms at each end of the large transept. The view of the park and grounds, and of the surrounding country, from this elevation will repay the visitor for the trouble of ascending.

The ribs which support the semicircular roof of the nave and two end transepts are of wrought iron. At alternate distances of 24 and 72 feet are semicircular lattice-work girders, eight feet deep, which rest upon, and spring from the upper surface of the "bull's eye" girders just mentioned. These girders are connected and made rigid by other longitudinal girders of six feet in depth between the shorter spaces, and of three feet in depth between the longer intervals. The whole of the arch of the roof is divided into seven

equal parts by these longitudinal girders. The visitor, while he is struck with the imposing grandeur of this noble vaulted roof, will not fail to notice that it lacks that soft aërial perspective and atmospheric tint, which proved so prominent and marked a feature in the flat roof of the late Exhibition Building in Hyde Park. The necessity for greater depth, and more frequent intersection of the girders, has rendered this change unavoidable, but the vastly improved character of the edifice, by the substitution of an arched for a flat roof, more than compensates for the absence of this feature of the former building. The central portion of the roof, which rises eight feet above the upper surface of the girders, is fitted on each side with louvre plates for the purpose of ventilation. The girders which support the roof of the great transept are deeper and stronger than those of the smaller ones. The construction of this roof—one of the proudest monuments of engineering skill in the country—was the heaviest portion of the work connected with the erection of the Crystal Palace; and the melancholy accident of the falling of the scaffolding retarded its completion for more than three months. The scaffolding was originally constructed upon the suspension principle, the ends resting upon the upper tiers of girders. As many of the bridges of the present day, even upon railways, are constructed upon the same system, and have stood the test of long experience, there can be no doubt as to the safety of the principle applied, and the accident could only be ascribed to some imperfection or flaw in the materials employed. In order, however, to prevent any possible chance of the recurrence of such a disaster, the contractors proceeded to erect a new scaffolding from the ground, and which, when completed, was one of the most remarkable works of its kind probably ever constructed. Upwards of 22,000 cubic feet of timber, and fifty tons of iron, were employed in it. Three rows of timbers of a foot square, and 24 feet apart, were raised on end along the centre of the transept, and retained in their position by "binders" of deals 3 inches by 12, and diagonal bars of iron bolted to the timbers. At a height of 21 feet, pieces of timber, five inches square, rested longitudinally on the upright pieces, and were further strengthened by diagonal supports, stout "struts," and iron bars, which prevented the slightest movement in any direction. Each story of the scaffold was constructed in a similar manner until far aloft, at the dizzy height of nearly 200 feet, it supported a substantial stage, upon which a battalion of guards might have bivouacked with safety and comfort, or a monster band might have enlivened a crowded promenade concert, or a monster *bal-masqué*. With towering ambition we once soared to this giddy height and looked down, not with scorn, but with fear and trembling, on the dwarfish world below us. Our guide and several of the workmen jumped upon the loosely nailed boards to convince us there was no vibration, but we felt, we confess, a slight tremulous motion; it was not, however, in the

scaffolding, and self-respect forbids our stating the precise locality where that peculiar sensation was experienced. We assured our guide we were satisfied, that it was unnecessary, in order to convince us, to repeat the experiment. After the very intelligent foreman, Mr. Wilbee, had pointed out to us the spot from which the previous scaffolding fell, we descended a very lofty and perpendicular ladder, which had not the advantage of Jacob's ladder of "one end resting upon the earth," for it stood upon one or two isolated planks, a slip of the foot from which would soon have landed us upon *terra firma*. Finally, in our descent we reached one of the upper galleries, and as we flattered ourselves that we had performed as great a feat as the ascent of Mont Blanc, we received from our guide the alarmingly complimentary assurance that there were not ten men in a hundred of the workmen employed in the building who would have ventured where we had dared; and we thought that, slightly altered,

"Fools rush in where *angels* fear to tread,"

might be considered by some persons as a line not altogether inapplicable to ourselves.

The Palace, exclusive of the wings, is supported on the ground floor by 968 columns, secured in their position by a nearly equal number of cast and wrought iron girders; the former building in Hyde Park rested upon 1,060 columns, or 92 more than the present edifice. The second tier of the building is formed of 898 columns, and the third of 340 columns. The entire length of the building is occupied by 68 columns, placed 24 feet apart, and, at intervals of eight feet between these columns, are placed half columns of wood of the same form and appearance as the iron columns, and being 136 in number on each side of the building. The greatest number of columns in the direction of the breadth of the building is 17, and there are six rows of these near the central transepts. In every part of the building the columns are placed either at distances of 24 feet apart or multiples of that number. The columns which project into the nave are 8 feet, or one third of 24 feet; in the larger courts, they are so placed as to form courts of 48 by 72; the nave and end transepts are colonnades of 72 and 120 feet, and the wings of the building range between 32, 48, and 96 feet. The wings are each 576 feet in length. At the points of connection with the main building, the wings are 96 by 24 feet; they then assume the dimensions of 72 by 48 feet. Next, a long avenue of 384 feet in length (the same as the great transept) by 32 feet in width. Each wing terminates in a cross of 96 by 48 feet at the centre of intersection; and on the summit of the wings are water-tanks 48 feet square, capable of containing 800 tons of water. In the highest portion of the wings there are three stories, and in one of these at each wing are placed the refreshment-rooms.

The iron columns which support the building are hollow, and are 8 inches in diameter, the thickness of the metal varying, according

to the weight which each has to carry, from three-eighths to nine-eighths of an inch. The columns present the appearance of flat bands placed upon the ordinary circular form, and from their form are admirably adapted for the connection and attachment of the girders, which serve at the same time for support for the galleries and roofs, and for giving rigidity to the various parts of the building. Each of the columns is cast with small projecting pieces of metal, by means of which, short vertical "connecting pieces" may be readily secured to them. These "connecting pieces" are three feet in length, and each are armed on their upper and lower portions with "snugs" or hooks, which "clutching" similiar projections cast on the girders, effectually secure them in all directions. The girders, with the exception of those referred to as supporting the semicircular roof, are formed some of cast, and others of wrought iron, and are all three feet in depth. The galleries of the different tiers rest upon these girders, and where there are no galleries, the girders are still used for the purpose of giving stiffness and rigidity to the columns. The girders are 24 feet in length, and are divided into three parallelograms of 8 feet each, by vertical struts connected at the top and bottom by diagonal tiers; they have been all tested by hydraulic press, to a strain of 15 tons, and their breaking weight is not less than 30 tons; one which was tested with 30½ tons, flew so completely to pieces that it was impossible to ascertain with certainty the point at which fracture commenced.

The roof of the building, except in the case of the nave and transepts, is in its general form flat, but is made up of a series of ridges and furrows, which form the peculiar feature of its construction. It is in fact, a network of gutters, beautifully arranged for carrying off the water, and at the same time, serving to support the roof. The rain-water which falls is conveyed away down hollow columns connected with pipes at their base. At every 24 feet are placed transverse zinc gutters resting on the upper edge of the girders, and communicating with the columns down which the water is to be conveyed. At intervals of 8 feet, and with their ends resting upon the transverse gutters, running longitudinally, are the famous "Paxton gutters," which convey away simultaneously the rain-water falling on the roof, and the condensed vapour formed inside the building. Of these gutters, a total length of nearly thirty miles has been used in the entire building. Each of these gutters is formed of a piece of timber 5 inches by 6, and 24 feet in length, and it has on its upper surface a semicircular groove of about 1½ inch radius, and two smaller grooves downwards at an oblique angle to its sides; the larger grooves convey the water from the roof, and the smaller ones, the condensed water from the inside to the transverse gutters. In order to provide a sufficient fall for the water, each of the "Paxton gutters" is curved or "cambered" in its under side by means of iron rods to the extent of 2½ inches. At each end of the gutter, a

semicircular cut is given through its depth, so that when two of these pieces are brought end to end, the water flows down through a circular cavity into the box gutter, and thence down the hollow columns.

An extract from an able paper read by Mr. M. Digby Wyatt, at the Institution of Civil Engineers, will explain the mode in which the roof was constructed. "On each side of the Paxton gutters there are 27 notches, three of which are larger than the others, and on these, bars of wood 2 inches by 1½ inch, grooved for glass on both sides, are 'notched' down; these bars form principal rafters; and being set at a pitch of two and a half to one, are fixed to a ridge 3 inches by 3 inches, also grooved for glass on both sides. The long edge of a sheet of glass, 4 feet 1 inch by 10 inches, is then inserted into the groove of the principal rafter, and a sash bar is then brought down and secured to the ridge, and to the edge of the gutter, the lower edge of the glass bedding on putty about ¾ inch wide; a little force applied at the lower end, brings the upper edge of the glass home into the groove in the ridge. The glass being then pressed down, the putty is made good in the grooves externally, and thus simply is this system of roofing put together. Its lightness is one of its remarkable qualities, since the entire weight of one superficial foot averages only 3½ lbs."

The means of ventilation is produced by a series of louvre plates of zinc, fitting into frames; and which may be opened or shut in a manner similiar to the ordinary Venetian blinds. Small iron brackets are attached to the centre of each blade, and are furnished with eyes, through which are inserted pins passing also through holes bored at equal distances from one another in a kind of rack, so that by drawing these racks up or down, an opening or closing of the ventilators is effected. A large number of these racks are attached to levers, and by means of a series of rods and cranks, a very large space may be opened or closed simultaneously.

Under the ground floor of the building, is what is termed the Paxton tunnel. In consequence of the sloping nature of the ground on which the building stands, having a fall of 26 feet towards the Park front, it was necessary to run up brick piers to support the base plates on which the column rested; and a basement story looking out on to the terrace has been formed where the machinery in motion is exhibited. The tunnel extends from end to end of the building, and it also contains the boilers and apparatus for heating the building; not less than fifty miles of large iron pipes being employed for this purpose. A tramroad traverses the whole length of the tunnel, upon which the fuel for the smoke-consuming furnaces is conveyed. The roof of the basement floor is formed of brick arches, resting on the flanges of cast-iron girders, supported at one end by a row of monotonous looking iron columns; and upon the other, by a brick retaining wall. The position occupied by exhibitors of machinery is the part immediately facing the grounds.

THE GUIDE TO THE FINE ARTS COURTS.

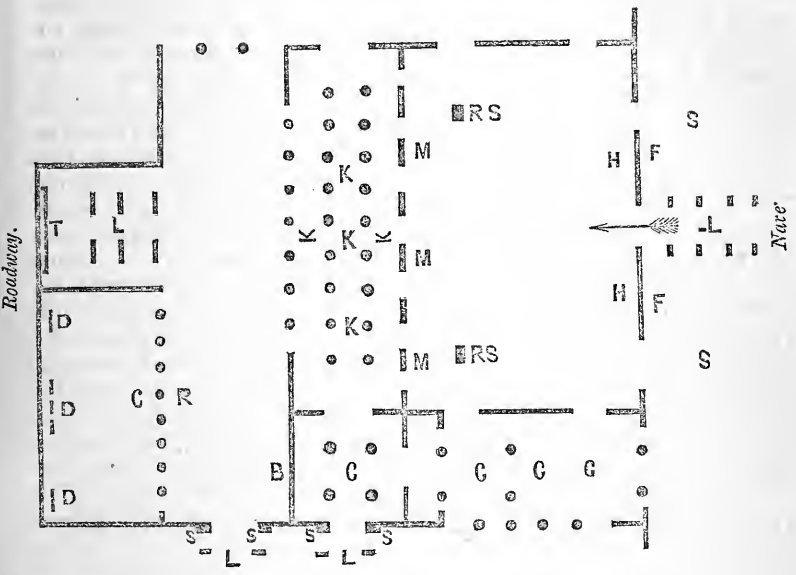
The attempt on the part of the Directors of the Crystal Palace to present to the eye of the visitor exact representations of those varied forms which art has assumed in each nation of the world, and the transitions through which it has passed from the earliest down to the latest period, is not merely one of a novel character, but it is one the practical value of which cannot be too highly appreciated. Collected within this vast building are to be found, not merely, as in the Great Exhibition in Hyde Park, works illustrative of the point of development at which man has arrived, in subduing Nature to himself, but opportunity is also afforded for learning the peculiar mode in which, from the earliest ages, the rude materials of Nature have been fashioned in accordance with the prevailing tastes or religious feelings of the people; and they show how, progressing through the ruder forms, the love of ornament and decoration has at length developed itself in those famous productions of the sculptor, the architect, and the artist, which can never be gazed upon but with feelings of intense interest and delight. Confining attention to the broad distinctions of ornament or style, without entering into very remote details, which are to be met with, it will not be impossible, as the visitor enters each court with this "Guide" in his hand, to point out those more general features which are characteristic of each style. The whole of the architectural and fine arts courts may be ranged under three heads, as representing respectively ancient, mediæval, and modern art. The courts devoted to ancient art comprise specimens of Egyptian, Assyrian, Greek, and Roman productions; the Byzantine, Saracenic, and the Gothic represent the middle age works; and, in modern times, there is the Renaissance, or the revival of the classic; the Cinque-cento, or style which prevailed in the 15th century, and which was predominant during the reign of Louis XIV. The broad features of each of these courts, and the subdivision of the styles, will be pointed out as the visitor proceeds round the building.

The visitor desirous of inspecting the varied contents and marvels of the Crystal Palace, will arrive at Sydenham by one of two routes—either by railway from London Bridge, or by omnibus or other conveyance from the West End. A small branch from the main Brighton line at Sydenham conveys visitors into the grounds of the Crystal Palace, and a covered way conducts from the station to the building. Travellers by the other route will pass through Camberwell, and Dulwich, or Brixton, Tulse Hill,

and Norwood, and enter the building from the opposite side to that which the railway conveys them. In either case we would advise visitors to proceed at once, and without stopping to pay more than a cursory inspection of the many objects which may attract their notice, into the central transept; arrived in the centre of which, they will have an opportunity of taking in at a glance the whole extent and beauty of the new edifice.

In order that the contents of the Exhibition may be examined in a regular order, and in such a manner as not, by producing confusion in the mind, to prevent that amount of instruction being afforded which it is the object of the Crystal Palace to furnish, it is essentially necessary that some plan should be adopted by the visitor. The best arrangement appears to be that which will admit, in the first instance, of an examination of those parts of the building where ancient and mediæval art is illustrated; then proceeding gradually onward, to arrive at the productions of art and industry of the present time. Having sufficiently studied the works of man; the gardens, the geological island, the natural history, raw produce, and ethnological collection will afford a glimpse of the varied beauties and wondrous productions of nature. This arrangement is one which will be found to fall in more conveniently than any other general plan with the topographical distribution which prevails in the building. It is to be regretted, that in arranging the works of art and interest which abound in the building, greater attention was not paid to some order of succession, whether in point of time or style, so that the visitor, passing by regular gradation and by progressive steps, might the more easily retain those valuable lessons which may be obtained from almost every department. In passing through the various courts, we shall have occasion to notice the mistakes which have there been committed. The threefold arrangement which we have proposed, is one which may be extended at pleasure by the visitor, and each division may be made the subject of one or more visits. For those whose opportunities may be limited to three visits, the proposed plan will be found to be the most convenient, while for the unfortunate person permitted to snatch from his other avocations only one short visit, he will find by following the course indicated that he will be spared the fatigue of travelling over the same ground more frequently than is absolutely necessary. Adopting this arrangement, the visitor will proceed at once to the court devoted to the illustration of the earliest style of art, that practised by the Egyptians.

EGYPTIAN COURT.



B Bas-reliefs.
C Columns.
D D D Deities.
F F Facade of court.
G G G G Græco-Egyptian columns.
H H Hieroglyphics.
K K K Colonnade of Karnak lions.
L L L Lions.
M M M M Egyptian monarchs.
R Roman-Egyptian columns.
R S R S Rosetta stone.
S S S S Statues.
T Tomb of Abou-Simboul.

⟶ indicates the entrance pointed out in the Guide.

Through each and every phase which the different styles of architecture have passed, they will be found to have closely followed the changes which have taken place in the religious institutions of the period. In the earliest epochs architecture, like religion, was pure and simple; at later periods its style became majestic and all-absorbing; but in its days of decline in religious fervour and sentiment, a meaningless and decrepid character displayed the simultaneous degeneracy of man and of art. How striking an illustration of this fact is afforded as the visitor enters the first of the series

of the fine arts courts, devoted to Egypt—the country which saw the first daybreak of civilization, and whose soil is hallowed by so many scriptural and patriarchal scenes. Here on the early temples of Egypt, every ornament is a religious symbol, showing by the exquisite taste and beauty of its execution, the earnest and loving faith of the hand that carved and coloured it; an intense feeling of calm repose is upon every feature, and traces of a local and national individuality arrest the visitor at every step. Passing from the transept a few steps along the northern part of the nave, the visitor's attention will be arrested by the sight of an avenue formed of eight sleeping lions; these figures mark the approach to the Egyptian courts, and they lead up to eight richly coloured pillars, forming one side of the great courts. These pillars, the capitals of which are formed of gracefully curved leaves, exhibit the influence of Greek notions of art upon Egyptian sculpture during the reign of the Ptolemies, and a certain degree of lightness and elegance has taken the place of the grand massiveness visible in an adjoining court, which illustrates the purer style of Egyptian art, in the palmy days of Sesostris and of the Pharaohs. In this open court are to be seen two models of the famous Rosetta stone, discovered by a French engineer during the time of the occupation of Egypt by the French army. The original stone is a tablet of basalt, now in the British Museum, bearing an inscription in hieroglyphic, demotic, and Greek characters, the latter affording the means of deciphering the mysteries recorded upon this and other monuments of Egypt. The upper line of the Rosetta stone records that a monument was set up to one of the Ptolemies during his lifetime. The literal English translation runs thus:—

GOD—LOVED BY PTHAH—EVER—PTOLEMAIS—KING—TH—STATUE
—SET UP—LIVING— OF

On the principal side of the court there are eight colossal standing figures of kings, four upon each side of the truncated pyramidical doorway. The hands tranquilly crossed upon the breasts of these figures, somewhat like the effigies of our crusaders, bear a crook, the patriarchal sceptre, and a three lashed scourge, emblematic of authority and power. On the heads of these kings are the double crown of Upper and Lower Egypt, a red conical knobbed helmet, with its golden circular diadem, and the regal adornments of the asp and the square hood which, covering the head, falls upon either side of the face, upon which a calm smile, as that of a pleasant dream, reposes. On the opposite wall is a low partition, on the border of which are represented gilded asps, each supporting a small golden sun, and round the curved cornice are gigantic crimson suns of fire, with the black wings of the vulture bearing a double tiara, while from each side of the fiery globe are seen protruding the flat heads of the asp, with the swollen hood,—emblems of eternal power.

The seated figures at the sides of the smaller court are illustrations of a period of Egyptian sculpture later than that of the colossal standing figures; and some anatomical knowledge of the body is shown by the artist, especially in respect to the knees of the figures. These seated monarchs are decked with rich anklets, sandals, and wear an article of apparel not much unlike a Highland kilt: it is a broad, fringed tunic, with a central boss, or ornament, in the shape of a lion's head. The fine tasselled helmets are secured under the chin by a broad lace, which also serves to keep secure an oblong beard-case, or false beard, which in that unsophisticated age was regarded as an emblem of regal power. The hair of these monarchs, like their beards, was, there is reason to suppose, also false, and is represented as worn like a turban for coolness. In other instances, the hair is plaited in long twills, and drawn into a club behind, or is altogether hidden by a large rounded head-dress, with hanging square lappets. By the side of these figures are some works by Greek sculptors—Antinous, and one or two others, where the ideal of Greek beauty has been brought forward as the standard of comeliness.

The fluted pillars in the small court adjoining the nave represent a bundle of the stalks of the papyrus, bound together with blue fillets, the blue leaves forming the capital; and in small cartouches, or ovals, are carved and coloured hieroglyphics, the principal of which represent the names of some of the Ptolemies. Other of the hieroglyphics exhibit the monarch richly clad and girdled, with his mitre, crown, and vulture-guardian, offering vases of libation and lotuses to Osiris, who is represented as bearing his javelin and trident-like sceptre, and smiling benignantly on his worshipper. Behind the king are priests in flowing vestments of the fine linen of Egypt, and in another place is the queen, distinguishable from her red-skinned consort by her fairer complexion, and a vulture's beak proceeding from her crown instead of the flat head of the regal asp. The hieroglyphics upon one side shroud in mysterious forms, "the prayers of the Lord of both Egypts, and the child of the sun to Osiris, the Lord of Life and Light;" or "to Isis," who appears behind, crowned like Diana with the moon; and on the other, "the ever-living God, who giveth life to man, promises the ever-worshipping king power and glory, and declares that he will put all things under his feet."

The colonnade, consisting of twenty-two massive pillars, similar to those which form a portion of the temple of Karnak, is worthy of marked attention, on account of the beautiful manner in which its decorations are executed. The hieroglyphics upon them are principally the name of the king, Rhamses, called, "The son of the Sun, loved of Ammon, Rhamses"—the name of the kings, as is the case with all proper names, being written in an oval, or square. On the upper parts of the frieze are the words, "Victoria and Albert," symbolically represented. The roof above the colonnade is painted a deep blue, and powdered with stars to represent the

firmament; the winged vultures on the roof of the central and intersecting avenue are supposed, in the old temples, to have marked the passage of the kings and the chief priests as they proceeded to the performance of their religious rites.

The remains of the temple or palace of Karnak, are even more wonderful than those of the far-famed palace of Luxor. An irregular avenue of sphinxes, 2,180 yards in length, connects the southern entrance of Karnak with the northern entrance of the temple of Luxor. The temple of Karnak is about 830 yards from the east bank of the Nile, and is surrounded by a wall of unburnt bricks, about 5,300 yards, or more than three miles, in circuit. The largest of the remains, which some have thought to be a temple and others a palace (it may probably have been both), is 1,215 feet in length, 360 feet in its greatest, and 321 feet in its least width. The western entrance fronts the Nile, with which it is connected by an alley of crio-sphinxes, or sphinxes formed of the body of a lion and the head of a ram. This alley conducts to a propylon, without sculpture, 360 feet long, and 148 feet high, with a great doorway in the centre 64 feet high; passing through which a large court is entered, having a range of pillars on the north and south sides, and a double row of loftier pillars down the middle, which terminate opposite two colossal statues in front of a second propylon. A flight of twenty-seven steps then leads to an enormous hall, which has been called the great Hypostyle Hall of Karnak. It is 338 feet by 170½ feet, and comprises an area of 57,629 square feet, being larger than the area enclosed by the great central transept of the Crystal Palace.

This temple, or tomb as it is more properly called, is one of the most remarkable of the rock-cut shrines which are to be found in Nubia. The celebrated traveller, Belzoni, first discovered it in 1817, but he had to remove upwards of 30 feet of sand before he came to the top of the door. The front of the shrine was almost entirely covered with sand, the only parts visible above the ground being the head and shoulders of one of the four colossal figures, a portion of the frieze, and the head of an enormous hawk. The excavation made in the solid rock is about 100 feet above the level of the river, which flows immediately in its front; its width is 127 feet, and its height 86 feet. From the top of the door to the top of the cornice is 66 feet 6 inches, and the height of the door is 20 feet. The enormous seated figure measures across the shoulders 25 feet 4 inches, the face is 7 feet long, the nose 2 feet 8 inches, the beard 5 feet 6 inches, the cap 14 feet high. The entire height of the figures is 72 feet 6 inches. Two of the figures are erected of the same size as the original in another part of the building. Only two of the monsters have as yet been uncovered, the others still remaining buried in the sand. The depth of the temple is 170 feet, and it contains fourteen apartments; the first chamber is 57 feet long, and 52 feet wide, and it is formed by two rows of square pillars 30 feet in height. A standing colossal figure is placed by

the side of each of the pillars, the cap of which, reaching to the roof, supports the superincumbent mass. These figures have their arms crossed on the breast, similar to those in the court first entered; in one hand they bear the mystic key of the Nile, and in the other the scourge of authority. The walls are painted in a corresponding colossal style, the subject represented being that of a giant hero vanquishing his enemies. In the smallest of the chambers hewn out of this vast rock, 24 feet long and 12 feet wide, is a pedestal upon which it is supposed the royal sarcophagus was placed. In the clear sunlight of Nubia this massive shrine might have been seen by adoring worshippers at a distance of thirty miles from the rock in which it is cut.

The external panels of the court beyond the colonnade record subjects taken from the conquests of Sesostris, and the domestic life of the Egyptians. In one of these compartments, Sesostris—"The king of the obedient people, the guardian sun of Truth and Justice, approved by the Sun"—is grasping the hair of a bunch of kneeling captives, and his hand is raised, as if in the act of slaying them with a broad, short dagger, something like a fish-slice; below, are seen the representations of conquered cities praying for mercy, with a halter round their necks; while their hands bound behind them by a tasselled rope are, no doubt, intended to give increased fervour to their supplications. In another division, the same victorious Pharaoh is seen trampling on his vanquished foe, while, with his long javelin, he pierces the side of a tatooed Arab who has fallen into his power. Hovering over the king's head is the guardian vulture, and behind him stands the bearer of the royal fringed standard of the empire, with its ram's head,—the emblem of Osiris; —and, above all, is a cornice of fierce-looking horned snakes. The row of smaller columns in this court represents the state of art during the reign of Cleopatra, whose name figures in many places upon the hieroglyphics in the columns; a period when the debasing influence of Rome had removed almost all traces of the early character of Egyptian art, and had banished those forms of elegance which the Greeks were gradually infusing into the massive palace-temples of the country. Two curious human-headed columns at the end of the court are striking instances of the effect of Roman notions imported into the realms of Egyptian art.

The colossal tomb of Abou-Simboul, in Nubia, is represented on the wall, upon a scale of about one-tenth of the size of the original. The principal deities or objects of worship among the Egyptians were "Isis" and "Osiris." Much doubt exists as to the nature and history of these mythological personages. They are, with some show of truth, supposed to represent all nature, and all the gods of other heathen nations. The Isis of Egypt was thus the same as the goddess Venus of Cyprus, Minerva of Athens, Cybele of the Phrygians, Ceres of Eleusis, Proserpina of Sicily, Diana of Crete, and Bellona of the Romans. Both Isis and Osiris are said to have reigned conjointly in Egypt, and Osiris was destroyed by

his brother Typho. The ox and the cow were considered as the sacred emblems of these duties, and Isis, supposed to represent the moon, is generally represented in the sacred writings of the Egyptians as holding a globe in her hand and a vessel full of ears of corn. The poetical sentiment of the Egyptians developed itself in the beautiful legend, that the yearly overflowing of the Nile, which gave fertility to their land, was caused by the abundant tears which the disconsolate Isis shed for the loss of Osiris, whom Typho had slain. One of the most famous of the temples of Egypt, sacred to Isis or Minerva, bore on the statue of the goddess the memorable words, "I am all which has been, and shall be, and none among mortals has hitherto removed my veil," a sentence highly suggestive of the reverence paid to this deity, whose character appears to have had some resemblance to that of the "Ancient of Days" and the great "I am" of the Mosaic dispensation. The priests engaged in the worship of Isis were under the vow of celibacy, their heads were always closely shaven, they walked barefooted, and were arrayed in linen garments. They never eat onions, nor partook of salt with their meat, they were forbidden to eat the flesh of either sheep or hogs, and were enjoined to spend the night in continual devotion near the statue of the goddess. Cleopatra, it is recorded, was in the habit of dressing herself like this favoured goddess, and desired to be considered a second Isis.

Osiris, the second great deity of Egypt, was supposed to represent the sun. An inscription upon some ancient Egyptian monuments thus records the great power and dignity of this sacred person: "Saturn, the youngest of all the gods, was my father; I am Osiris, who conducted a large and numerous army as far as the deserts of India, travelled over the greatest parts of the world, visited the streams of the Ister and the remote shores of the ocean, diffusing benevolence to all the inhabitants of the earth." Osiris returning home triumphant with his army, found that his brother Typho had raised sedition among the people; while endeavouring to convince his brother of his ill conduct, he was led into a secret apartment, where he was killed by Typho and his confederates, and the murdered body cut into pieces was divided among the guilty parties and thrown into the sea. Isis recovered the mutilated remains, and as many statues were ordered to be made of the murdered Osiris, as the pieces of his body which had been found. Each statue contained a piece of the flesh of the deceased monarch. Isis summoned separately to her presence the priests of the different deities throughout Egypt, gave to each a statue, and informed each priest that she preferred him above any of the other communities, and bound him by a solemn oath to keep secret this mark of her favour, and endeavour to show their sense of her kindness by establishing a form of worship, and paying divine honours to her deceased husband. Osiris from this time became one of the most favoured of Egyptian deities. He is generally

represented with a cap on his head somewhat like a mitre, decorated with two horns, holding a short stick in his left hand, and in his right hand a whip with three thongs; and sometimes he is personified by the head of a hawk, that bird, by its quick and piercing eyes, being supposed to be a proper emblem of the sun.

"Apis," or the bull, was the animal most of all sacred to Isis and Osiris. Magnificent temples were erected to him; extraordinary honours were paid him while he lived; and at his death it was customary for the whole population of Egypt to go into a general mourning. His obsequies were solemnized with such pomp as is hardly credible. In the reign of Ptolemy Lagus, the bull Apis dying of old age, the funeral pomp, besides the ordinary expenses, amounted to more than 100,000*l.* of the money of the present day. After the last honours had been paid to the deceased god, the next care was to provide him a successor; and all Egypt was ransacked through for that purpose. The sacred bull was known by certain signs which distinguished him from all other animals of that species;—upon his forehead was to be a white spot in the form of a crescent, on his back the figure of an eagle, upon his tongue that of a beetle. As soon as he was found mourning gave place to joy, and nothing was heard in all parts of Egypt but festivals and rejoicings. The new god was brought to Memphis to take possession of his dignity, and there installed with a great number of ceremonies. Cambyses, at his return from his unfortunate expedition against Ethiopia, finding all the Egyptians in transports of joy for the discovery of their new god Apis, and imagining that this was intended as an intended insult on his misfortunes, in the first impulse of his fury killed the young bull, and thus cut short his career of divinity.

The Egyptians also regarded with great veneration the ibis, a bird which is supposed to have been held in special reverence on account of the destruction which it committed upon young serpents. This sacred bird is about the size of the ordinary fowl, but with longer legs, perfectly bare above the joints. The general plumage is white, with the exception of the tips of the quill feathers, which are glossy black with violet shades. When young, the neck is partially covered with black down; this, however, soon disappears, leaving the head and neck quite bare. The beak and legs of the bird are black. There are some varieties of the scarlet ibis.

Another sacred bird was the phœnix. Herodotus, giving an account of the opinion which prevailed in Egypt with respect to that wonderful bird, the phœnix, states that there is never but one bird of the species alive at one time in the world. The bird is brought forth in Arabia, lives five or six hundred years, and is of the size of the eagle. His head is adorned with a shining and most beautiful crest; the feathers of his neck are of a gold colour, and the rest a purple; his tail is white, intermixed with red, and his eyes are sparkling like stars. When he is old, and finds his end

approaching, he builds a nest with wood and aromatic spices, and then dies. Of his bones and marrow a worm is produced, out of which another phœnix is formed. His first care is to solemnize his parent's obsequies, for which purpose he makes up a ball in the shape of an egg, with abundance of perfumes of myrrh, as heavy as he can carry, which he often essays beforehand; then he makes a hole in it, where he deposits his parent's body, and closes it carefully with myrrh and other perfumes. After this he takes up the precious load on his shoulders, and flying to the altar of the sun, in the city of Heliopolis, he there burns it.

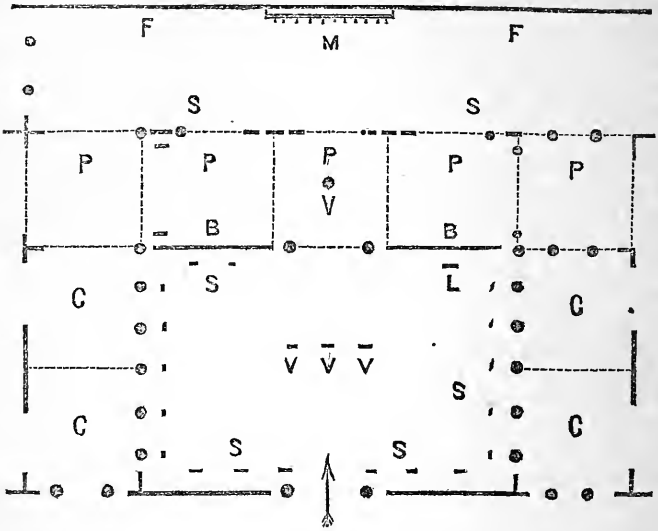
The ichneumon was adored because he prevented the too great increase of crocodiles, which might have proved destructive to Egypt. The little animal in question does this service to the country in two ways: first it watches the time when the crocodile is absent, and breaks the eggs, but does not eat them; and, secondly, when the crocodile is asleep on the banks of the Nile, and he always sleeps with his mouth open, the ichneumon, which lies concealed in the mud, leaps at once into his mouth, gets down to his entrails, which he gnaws; then piercing his belly, the skin of which is very tender, he escapes with safety; and thus, by his address and subtlety, returns victorious over an animal so terrible as the crocodile. Not merely the destroyer of this beast, but the crocodile himself, was an object of religious veneration, as well as leeks, onions, and many of the vegetable products of the soil. Juvenal, one of the most celebrated of the Roman poets, ridicules the absurd polytheism of this people, in one of his famous satires, of which the following lines are an extract:—

"Who has not heard where Egypt's realms are named,
What monster gods her frantic sons have framed?
Here Ibis gorged with well-grown serpents, there
The crocodile commands religious fear.
A monkey god! prodigious to be told,
Strikes the beholder's eye with burnished gold.
Through towns Diana's power neglected lies,
While to her dogs aspiring temples rise.
And should you leeks or onions eat, no time
Would expiate the sacrilegious crime.
Religious nation sure! and blest abodes,
Where every orchard is o'errun with gods!"

A writer in the *Athenæum* thus sums up the peculiarities of Egyptian sculpture and the present dreary desolation of this once flourishing empire. "In Egypt every sculpture wears some aspect of the desert—the sky, or the Nile; over everything there is the perpetual silence of Eastern noon; the universal, all-pervading, intense calmness of burning sunlight; a pressing sense of permanence. The animals of Egypt hover on every wall; the vulture, the hawk, the swallow, the asp, and the horned snake, are

seen on the roof of palace, tomb, and temple: here are the fox, the jackal, the ape, the cat: the emblems of evil are typified by the crocodile, the hippopotamus, and the snake. The meanest insect is not forgotten: the bee, the grasshopper, and the locust are all there: the lotus and the papyrus furnished designs for the pyramid builder. Everything they drew from the sky, the river, or the desert of Egypt. They decked Osiris with the feathers of the hawk and the ostrich; fillets of the sand asps wreathed the brows of their kings; withered lotuses are still found crowning the dry skulls of mummies—the maneless lion of Nubia became the model for the sculptor: even their minor deities appeared under thes emblance of frogs and part of the Nile. This great land is now the deadest of all lands: its palaces and temples are the habitation of sore-eyed Arabs, who light their fires with the gilded coffins of dead princes; the Nile flows on, unworshipped as in days of yore, though it still fertilizes the now uncultivated lands: papyrus grows no longer beside the sacred stream, and the scarlet ibis has fled far off to the desert, to escape the double-barrel and swan-shot of a superior civilization. Egypt, the site of so many powerful empires, was the home of a people, who, however fettered by priestly convention, crushed by the tyranny of its monarchs, or weakened by the traditions of caste, has still left behind them monuments more vast and more enduring, though, perhaps, less beautiful, than those of Rome or Greece. The sun still, at daybreak, turns the pyramids to flame, though it shine only to be cursed by the scorched Arab; and the statues of many a forgotten king still bear, says the eloquent author of Eōthen, 'an awful semblance of deity in their aspect; unchangefulness in the midst of change: the same seeming will, intent, and ever inexorable—the same earnest eyes and tranquil mien everlasting.'"

THE GRECIAN COURTS.



B B Bas-reliefs.
F F Friezes of Parthenon.
C C C C Greek busts.
L Group of the Laocoon.
M Model of Parthenon.
P P P P P Painted ceilings.
S S S S Statues.
V V V Venuses.

From Egypt to Greece—from the country which saw the earliest dawn of civilization, to that upon which art, and philosophy, and science first descended—is but a step. Enter these classic courts and vestibules, and you are surrounded with works of artists of the grandest days of Greece—the productions of men who were feelingly alive to the bounteous gifts of nature, who embodied them in their works, and who, conceiving of their "cloud-compelling" Jove as in the image of man, made men like gods, and who, to the marbles of Paros, could alone impart the beauty and celestial charm of that matchless Helen, who for "nine long years had kept the world in arms," who "moved a goddess, and who looked a queen." The clear sky and the happy temperature of Greece, the shores and beautiful island of the Ægean, exercised a great influence in forming the Grecian style of art. The mountains of this favoured soil inspired its architects with something of a sympathy with their character, and the temples of the gods of Greece "soared like

eagles from the mountain tops, which formed their firm pedestals," and gave a delicate finish to the works of nature.

Never did a nation owe so much to the physical aspect of a country, not merely in the character of its people, but in the development of its genius and art, as did the Greeks. To the Greek, his nation conveyed as distinct an idea as that of home in larger empires, for throughout the country an unvarying series of landscape, of heroic trophies, of temples, and monuments, was constantly before their eyes. The despot glittering in barbaric pomp, and surrounded by foreign guards, appeared to his subject provinces like a being of another order, but the small and independent Greek states, protected by the barriers of their gulfs and mountains, regarded their rulers merely as the persons appointed by themselves to direct and control the affairs of the state. The people of Greece modelled their government according to the circumstances and their views of the common interest, and never did the powers of the human mind display themselves with such energy and grandeur under any other system in the history of the human race.

Each order or gradation of Greek architecture is definite and easily understood. The severe style of the Doric admitted only the single ornament upon its capitals of the horse-chestnut (*echinus*). The figure of a ram's-horn (the *volute*) is added, and the beautiful Ionic style is formed, while the graceful acanthus with its stalks forms the rich and finished Corinthian order. Throughout the whole of Greek architecture there is a great degree of simplicity evident not alone in the details themselves, but also in the arrangements of the material which constitute the ornament. Many beautiful forms were employed by the Egyptians and Assyrians, such as the lotus, the water-lily, and the zig-zag, the emblem of water. These were taken up and improved by the Greeks, and almost the first step in art is shown by the manner in which these forms were introduced in Greece for their own sake, and purely for the purpose of ornament. From the earliest periods the sculpture of the Greeks was distinguished by a majesty peculiar to itself, and the images of their gods, rudely finished as they were at first, displayed a grandeur and sublimity of expression which delighted and astonished all who beheld them, even in the best and most refined ages of art. Few, indeed, are the number of Grecian sculptures which have come down to the present age; in the fifteenth century there were only six antique statues known to exist, and nearly all of these were, more or less, mutilated. Copies of these will be found either in the Greek or Roman Courts, but the extent to which the originals have suffered may be judged from the following instances—the left arm of the Apollo Belvidere is modern, and the right arm and foot have been badly mended; both the arms and the beautiful hands of the Venus de Medici are new; Mars has a new nose, a right hand, and a right foot; the hand and part of the foot of the Dying Gladiator are also modern additions; Apollino has been furnished with new hands; the beautiful Venus of the

Capitol has a false nose; and the right arm of the Laocoon is one which did not originally belong to him. The Discobolus (*i. e.*, quoit-hurler) has been fitted with a new head, and the charming Townley Venus owes her left arm and right hand to a modern sculptor. The wonder is that even so many relics of Grecian art have been preserved, when we consider the varied misfortunes to which they have been subjected. In one campaign the last King of Macedonia destroyed two thousand statues; the despicable Nero tore five hundred of the finest statues from the shrine at Delphi; "the very road dust of modern Athens," it has been forcibly said, "formed, perhaps, once a part of the noblest labours of Pheidias."

Passing from the larger Egyptian court the visitor enters a small vestibule of Grecian architecture. There is here a fine statue of Aristides the Just, and arranged on each side are busts of Homer, Æschylus, Euripides, Aratus, and other Greek poets and philosophers. At the entrance from the nave are two fine seated figures, the one of Demosthenes, most renowned of Grecian orators, and the other of Posidonius, famous as a philosopher and astronomer. On the right is the fine Borghese Achilles, on the left Silenus, who holds in his brawny arms the youthful Bacchus, and in the centre is the Dying Gladiator of the Capitol.

In front of the large Greek court, facing the nave, and next to the Silenus and Bacchus, are the Bacchus and Fawn, the Drunken Fawn, and the world-famed group of the Wrestlers. Many of the finest works of Grecian sculpture are devoted to the delineation of muscular forms as shown by gladiators, and in this case by wrestlers. The art of wrestling among the Greeks, as well as among other nations, was practised at first with simplicity, with but little art, and in a natural manner; the weight of the body and the strength of the muscle having more share in it than either address or skill. Theseus was the first that reduced the practice to method, and refined it by the rules of art. He was also the first who established the public schools called "Palæstræ," in which the young people were instructed in the art. The wrestlers, before they began the combat, were usually rubbed all over in a rough manner, and afterwards anointed with oils, for the purpose of adding to the strength and flexibility of their limbs. But as this unction, by making the skin too slippery, rendered it difficult for them to take hold of each other, they remedied that inconvenience sometimes by rolling themselves in the dust of the "Palæstræ," and sometimes by throwing a fine sand upon each other, kept for the purpose in the xystæ or porticoes of the gymnasia. Thus prepared, the wrestlers began the combat. They were matched two against two, and sometimes several couples contended at the same time. In the conflict the whole aim of the wrestlers was to throw their adversary upon the ground, and both strength and art were employed for this purpose. They seized each other by the arms, drew forwards, pushed backwards, used many distortions and twistings of

the body, locked their limbs into each other's, and seized one another by the neck; they endeavoured to choke their adversaries, to press them with their arms, and were incessant in struggling, plying on all sides, lifting from the ground, dashing their heads together like rams, and twisting one another's necks. The most considerable advantage in the wrestler's art was to make himself master of his adversary's legs, of which a fall was the immediate consequence.

In this manner the Athletæ wrestled standing—the combat ending with the fall of one of the competitors. But when it happened that the wrestler who was down drew his adversary along with him, either by art or by accident, the combat continued upon the sand, the antagonists tumbling and twining with each other in a thousand different ways, till one of them got uppermost, and compelled the other to ask for quarter and confess himself vanquished. This fine group represent the wrestlers in the most important moment of the conflict. Their fine athletic forms and muscular development cannot be too highly praised.

Near this group, and upon one side of this central entrance, is a beautiful cast of Adonis, the youth who, disregarding the fond advice of Venus, not to endanger his life by hunting savage beasts, received a fatal bite from a wild boar which he had wounded. The disconsolate Venus shed many tears, and after his death changed the daring and darling boy into a beautiful flower called the "Anemone." Proserpine, the Queen of Hades, however, restored Adonis to life on condition that he should spend half of the year with her, and the other half with Venus. What vast ideas of the grace and beauty of Adonis must the ancient Greeks have entertained, to suppose that the two most loveliest of goddesses, Venus and Proserpine, should forget their rivalry, and mutally agree to share the affections of the happy Adonis! A fine statue of an Amazon, one of that famous nation of women who so frequently made war upon the Greeks, and whose sole occupations were war or manly exercises—and a graceful Polyhymnia, the tuneful muse, are placed next in order, and then two charming figures of Apollo.

Ranged around the four sides of the court, commencing at the side adjoining the nave, are an Amazon, a Reposing Fawn, Juno the Queen of Heaven, a cast of the Ariadne from the Vatican, and a colossal bust of Juno. Then comes a fine copy of the Arrotino from the Uffizi gallery at Rome; that dreaming angel, the Genius of Eternal Repose; the Ludoviso Mars, the Diana found at Gable, and now placed in the Louvre at Paris, a second group of Wrestlers, and a cast of a fine Jason. On the third side are placed the Barberini fawn, a Minerva beaming with Divine Wisdom, a Minerva Giustiniana from the Vatican, and a Minerva Farnese In each, the fine features, the broad agis entwined with serpents, and the helmet on her serenely contemplative brows, attest the character and power of this favoured and much worshipped goddess. She alone of all the other deities could hurl the thun-

ders of Jove, prolong the life of man, or bestow the gift of prophecy. It was Minerva who presided over the liberal arts, and hence she was specially invoked by every Pagan artist. This goddess built the first ship, and was worshipped by mariners, she first taught mankind how to curb and manage the horse; she presided over all marts of commerce, and was equally worshipped by the votaries of peace and the lovers of warlike achievements. Minerva sprang fully armed and grown from the head of Jupiter, and appears to have brought with her all the brains of her blustering and despotic father.

The finest antique *group* which now exists is that of the Laocoon, a cast of which is placed on the principal side of the court. It represents the priest of Apollo and his two sons struggling in the deadly folds of the huge serpents. The old priest hearing that his fellow-citizens were about to assist in bringing into Troy the famous wooden horse constructed by Ulysses, in which several Grecian heroes were concealed, in order to betray the besieged city to their followers, conjured them not to do so; he then went with his two sons to offer a sacrifice to Neptune for further assistance, but whilst preparing the offerings, two enormous serpents suddenly made their appearance, and before the father could warn his sons, or fly with them, the monsters had already coiled their immense folds around the bodies of the youths. Laocoon rushed upon them to save his children, and became himself entangled within the fatal coils. This is the moment which the sculptor has selected for the representation of his group, before they died this dreadful death. The most ungovernable of human passions, united with anguish and torture of mind, are here expressed with a propriety and dignity which teach in the most forcible manner the lesson of heroic fortitude. A patient sigh, with eyes upturned to Heaven, are the only expressions of the feeling which the dying father displays, but while his manly heart struggles nobly against the calamity, the agony of suffering nature is evident in the contortions of his limbs; yet, amid all his pain, his languishing paternal eye demands assistance only for his miserable children, who look vainly to their parent for help. This splendid group was discovered in 1508, in the ruins of the baths of Titus; and Leo X.—who, following the example of his father, Lorenzo de Medicis, gave every encouragement to the discovery of antique works—rewarded the discoverer with an annual stipend, and afterwards conferred upon him the lucrative office of apostolic notary. The precious relic was removed to the Vatican, where it still remains.

On the remaining side of the court, are the beautiful Venus of the Capitol; Jason, called also Cincinnatus; a Danaide, one of the fifty daughters of Danaus, who cruelly murdered their husbands and kinsmen on the night of their nuptials, and were condemned to expiate their crimes, by constantly filling with water huge vessels, the bottoms and sides of which were pierced with holes. In striking contrast with the treacherous Danaide, is the faithful and loving

nymph Ariadne, who, cruelly forsaken by Theseus, put an end to her existence. The fond nymph gave to her lover the clue of thread which led him out of the labyrinth in which he was confined, where he would have been devoured by a monster. Theseus, by forsaking his fair deliverer, added the crime of ingratitude to that of unfaithfulness and cruelty. A poetical conception of the character of Ariadne, is that she guides the soul through the winding labyrinth of life, and leads it forth again to freedom and a new existence. By the side of the nymph Ariadne, is a seated Mercury, the messenger of the gods.

Near the centre of the court, are placed three of the finest of the Venuses extant. They are the voluptuous Venus of Milo, the Venus conquering, and the Venus Dione, the originals of which, are in the British Museum. On each side of the Venuses, the types of female grace and loveliness, is a representation of manly beauty and muscular strength; the Discobolus, and the Fighting Gladiator; the latter found in the ruins of the marine villa of the Emperor Nero, at Antium. The model of the Parthenon will be described in another part of the Greek courts.

The architecture of the court is of the best period of Pericles, the columns in the façade are Doric. Of the coloured frieze round the court, authority exists only for the small "fret," and the red, blue, and yellow ornament on the top of the small pilasters of the columns. The remaining decoration is due to Mr. Owen Jones, who very fairly considers that the Greeks would not have coloured the small portion only, and have left the rest uncoloured. The restorations are in harmony with the design, for which authority exists; and the laurel wreaths encircling the names of the principal sages and warriors of Greece, are classic in their design, and give a pleasing and finished appearance to the court. The panels round the sides are intended to be covered with paintings of various mythological subjects.

Of the domestic architecture of the Greeks but little is known; the only ornaments spoken of by Homer consist of pillars, the orders of architecture not being known at the time in which he lived. The houses of the more important Greeks were generally surrounded by a wall, and usually consisted of two floors. The lower of these was divided into four apartments, which have been described as the hall, portico, antechamber, and bedchamber. The roofs of the houses were flat. In each period of Grecian history, the style of the dwellings differed to some extent; but the general arrangement of the principal houses was one or more open courts, surrounded by various rooms: the females lived in private apartments allotted to their exclusive use. Up to the time of the Peloponnesian war the houses were very plain, the Greeks expending their wealth on temples and other public buildings. Foreigners, even in Pericles' time, were struck by the contrast between the grandeur of the public edifices and the meanness of the private dwellings at Athens.

We would advise the visitor to step back to the principal entrance of this court, and observe the pleasing arrangement of the statues: the large model of the front of the Parthenon occupies the back-ground; the three Venuses the centre fore-ground; a little behind these, the Minervas; and still farther back, Flora, and several of the finest of the Muses. The *coup d'œil* presented by these and the other figures near them, is one of the finest in the building. The spectator must not, however, linger over these beauties of classic art; there are vast treasures yet in store for his admiration.

Re-entering the nave, we proceed a few steps to the second Greek vestibule, at the entrance into which, are two statues of Meleager, one of the most celebrated heroes of antiquity. His principal feat was the destruction of the Calydonian boar, which had been sent by Diana to punish Æneas for neglecting the sacred altars, and which ravaged and laid waste the whole country. Meleager, accompanied by a troop of armed men, went forth to attack the beast, and, upon killing the boar, he presented the skin and head to Atalanta, who had inflicted the first wound. His brothers, irritated at this partiality to a woman, endeavoured to rob her of the trophies of her victories, and in doing so were killed by the conquering Meleager. Opposite to the statues of Meleager, is this famous boar of Calydon. Adjoining Meleager, are two seated effigies of Posidonius and Menander, the latter a celebrated comic poet of Greece, who drowned himself on account of the greater success of one of the compositions of a rival poet. In the vestibule are arranged busts of sages, orators, and warriors, whose very names awaken up a thousand thoughts of heroic valour and noble daring, of undying patriotism and stirring eloquence, of profound philosophy and transcendant wisdom. This illustrious muster-roll of Greek writers includes, commencing with those nearest the nave, Pisistratus, Periander, Hippocrates, Pericles, Aspasia, Antisthenes, Plato, Isocrates, Demosthenes, Miltiades, Alcibiades, Diogenes, Epicurus, Alexander the Great, and Zeno.

With the last of these worthies, the visitor is led to a covered gallery, or corridor, formed of four compartments, the entrances to which are supported by Doric columns, some of which are round, and others square. The capitals are formed of a plain moulding with square abacus. The ceilings of these courts will attract deserved notice, on account of their pleasing style and classic beauty. Of Greek ceilings, unfortunately, no extensive remains have been found; and the only portion of these ceilings for which authority exists, is the blue star, with its surrounding border seen in the smallest of the sunk panels. The remainder of the decorations were designed by Mr. Owen Jones, and these ceilings are amongst the happiest and most successful of the works of that talented artist. In each of the ceilings of the compartments, the same small star and border is preserved, but the details and treatment slightly differ, some of them being upon a light, and the others

upon a darker principle. Arranged beneath the ceilings are casts of the graceful nymph Anchynoe, a curious laughing satyr, Clio, the muse of history, Euterpe, the muse of music, Urania, the muse of astronomy, Polyhymnia, the muse of eloquence, Thalia, the muse of comedy, and the other sisters of the "tuneful nine." At the principal entrance into the larger court, are placed two casts from antique statues of Minerva. One of these was found at Herculaneum; and the other, admirably restored by Rauch, a celebrated German sculptor, is now in the Museum at Dresden. Near these is a graceful and charming Flora, and beyond are several casts of antique statues and torsos. Among these, are a torso of one of the Graces, of Venus, and of the Belvidere. Here are also a Minerva, and a curious Etruscan idol. There are some very beautiful small works, such as a "Boy Praying," and a reclining Cupid. Then, too, we have Polyhymnia, Thalia, and Melpomene, the tragic muse, a small figure of the godlike huntress Diana, and a cast from the celestial Venus. Along the walls are placed numerous antique bassi-relievi. A most charming vista is here presented to the view of the spectator, commencing with the Greek courts, continued through the arches and dark pilasters of the Roman baths, and ending with the gorgeous stalactite arches of the Alhambra. The statues which occupy the centre, have a charming appearance from this point of view.

In the glazed corridor, and built up against the wall, is a model of the west front of the Parthenon, one of the finest of the temples of Greece, sacred to Minerva. It is to the ruthless vandalism and barbarous hostilities of comparatively modern times that the present ruinous condition of this temple is to be traced. Turkish batteries and Venetian fire have done more to destroy this noble edifice, than all that the destructive hand of time could have accomplished unaided. The wall of this fine temple is destroyed, its columns shivered, its friezes scattered, and many of its rich capitals are buried among the debris of the ruins. The Parthenon was built of beautiful white marble, which, according to Plutarch, expressed, "when new, the mellowed beauties of time and maturity, and when old, still preserved the fresh charms and alluring grace of novelty." The temple was built by Callicrates and Ictinus, and has always been considered as the noblest monument of antiquity, and as one affording the finest examples of the Grecian Doric style. The extreme length of the edifice was 228 feet, and its breadth 100 feet, the interior of the "cella," or part enclosed by the columns and inner wall, was 145 feet 6 inches by 63 feet 6 inches. The building was what is termed "octastyle," that is, there were eight columns at each end of the building supporting the pediment, in the same manner as in the west front of the Royal Exchange of London. On each side of the building was placed sixteen columns. The central space of the building, called the "cella," was open to the sky, or was, as architects term it, "hypæthral." In 1687, the structure was greatly shattered by an explosion of gunpowder—

the Turks using the centre of the edifice as a powder magazine, and it has subsequently been fitted up as a Turkish Mosque and a Christian Church. The principal ornament which decorated the Parthenon was a "chryselephantine," or colossal gold and ivory statue of Minerva, 39 feet in height. This statue was the work of Pheidias, and the value of the gold employed in decorating the ivory was 44 talents, or equal to 120,000*l.* About a century after the death of Pericles, the statue was robbed of its gold by Lachares. This extraordinary work of art was 39 feet in height. On the convex side of the shield of the goddess was represented the battle of the Amazons with the Greeks, and on the other side the battle of the gods and the giants. A figure of the head of Medusa adorned the breastplate of the deity; on the sandals of her feet was depicted the fight of the Centaurs and Lapithæ. The base of the statue was ornamented with twenty figures of the gods, and the birth of Pandora. The excellence of his work brought upon the artist the fate which usually befell the benefactors of Greece. He was falsely accused of having embezzled some of the gold with which he was entrusted for the purpose of adorning the statue; and when this serious charge failed, an accusation was brought against him of having sacrilegiously carved his own likeness and that of Pericles, his munificent patron, on the goddess's shields. For this heinous offence he shared the fate of Aristides the Just, and was banished from the city. The persecuted Pheidias retired to Elis, where he revenged the ill-treatment he had received from his fellow-citizens by making a statue of Jupiter Olympus, which soon eclipsed the fame of the costly Minerva. The people of Elis, appreciating the merit of the artist, and the great honour he had conferred upon their city, appointed his descendants to the honourable office of keeping clean the magnificent statue, and guarding it from injury.*

The statue of Jupiter Olympus is thus described by ancient writers:—The god was represented sitting on a throne, and being sixty feet high, touched the roof with his head; and threatened, if he moved himself, to dash in pieces that noble edifice, which, lofty and spacious as it was, still appeared unworthy to contain him. This vast colossus was composed of gold taken at the sack of Pisa, and of ivory, then almost as precious as gold, which was brought from the East by Athenian merchantmen. The god had an enamelled crown of olive on his head, an image of Victory in his right hand, and a burnished sceptre in his left hand. His robes and sandals were variegated with golden flowers and animals. The throne was made of ivory and ebony, inlaid with precious stones. The feet which supported it, as well as the fillets which joined them, were adorned with innumerable figures; among which were the Theban children torn by Sphinxes, together with Apollo and Diana shooting the beautiful and once flourishing family of Niobe. Upon the

* Olympus, i. 442.

most conspicuous part of the throne which met the eye in entering, were placed statues representing the gymnastic exercises; and a beautiful figure, whose head was encircled with a wreath, resembling young Pantarces, the favourite scholar of Pheidias, who, in the contest of the boys, had gained the Olympian prize. In addition to these, the throne was supported by four pillars placed between the four feet, and painted by Panænus, the brother of Pheidias. On these that great artist had delineated Hesperides guarding the golden apples; Atlas painfully supporting the heavens, with Hercules ready to assist him; Salamine with naval ornaments in her hand; and Achilles supporting the beautiful expiring Penthesilea.

Pericles, the most distinguished of Greek statesmen and rulers, fell a victim to the pestilence which devastated Athens in 429 B.C., in the 70th year of his age. He was for forty years at the head of the administration of public affairs; and for fifteen of these years, notwithstanding the jealousy of the republic against the idea of absolute sovereignty, he continued to be the sole head of the state. In his earlier days he was a pupil of the philosophers Zeno, Anaxagoras, and Damon, and as commander, statesman, and orator, gained the affection and applause of the Greek people. In the prosecution of the great Peloponnesian war, some reverses which were sustained by the Greek forces were attributed by the enraged populace to the conduct of Pericles, and he was deposed from power and compelled to pay a fine of fifty talents of gold. The tide of unpopularity soon, however, rolled away; and Pericles had the proud satisfaction of witnessing the contrition of his fellow-citizens, who universally begged forgiveness for the violence and injustice which they had done him, and he was restored to all his honours, power, and authority. The Athenians, in compliment to his eloquence, which they compared to thunder and lightning, gave him the sacred surname of Olympus; and the poets and flatterers of that day were in the habit of saying that the goddess of persuasion, with all her charms and attractions, dwelt on his tongue. In person, Pericles is represented to have been handsome and prepossessing in appearance, with small and delicate features, though with a head of disproportionate length and of peculiar formation. This defect, which the sculptors have uniformly concealed by a helmet, gained for him the name of Schinocephalus, or "onion-head," and he was in consequence a fruitful source of jokes and ridicule to the comic poets of the time. Pericles accepted no invitations, and partook of no social entertainments. So convinced was he that familiarity would derogate from the dignity of his position, that during the forty years of his administration he is believed to have supped but once with a friend, that occasion being the marriage of his nephew, and then he stayed only until the ceremony of libation was ended, or, in other words, until after grace. He seldom appeared in the streets, except on his way to the assembly of the people or the senate. Nor would he speak on every point that was submitted to be deliberated upon, but transacted minor

business by means of other orators, reserving himself, "like the state galley," for occasions of more than ordinary interest or difficulty. Thus he invested himself with a certain mysterious authority, and a concealment of minor failures, which tended to disarm satire and excite the most unquestioning popular reverence.

Numerous excavations have recently been made in the neighbourhood of the Parthenon, at Athens, and many beautiful fragments of sculpture have been brought to light. There are in the British Museum two fine models of this elegant building, one of which represents it in its ruinous state, and the other is a beautiful restoration, with the sculptures in their appropriate positions.

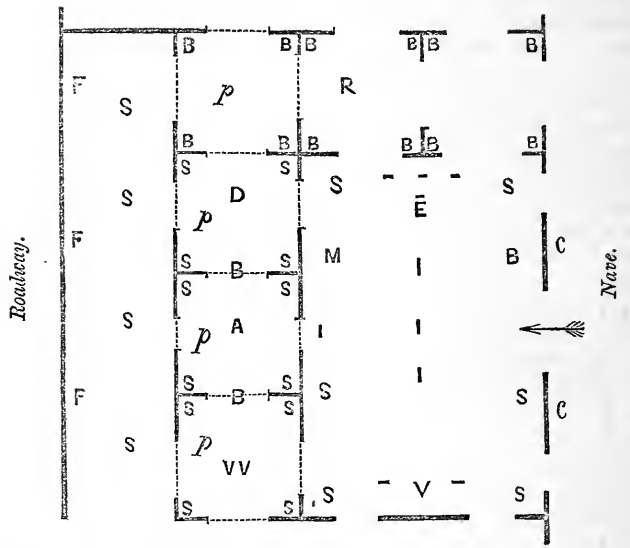
The chief portion of the sculptures of the temple was a beautiful frieze executed by Pheidias, and this work is represented on each side of the model of the Parthenon. The originals are deposited in the British Museum, having been purchased in 1816, by the Government, for the sum of 35,000*l.*, from the Earl of Elgin, who, while our ambassador at Turkey, caused the valuable fragments to be removed. The pieces represent the combat of the Centaurs and Lapithæ, and also the sacred procession which took place every fifth year at Athens, in honour of Minerva, the favourite goddess of the city. The procession on the frieze represents the people assembled to accompany the carrying of the veil consecrated to the goddess—the work of young virgins selected from among the best and richest families of Athens. Upon the veil was embroidered the battle of the gods and the giants, and Minerva seated in her chariot as the vanquisher of Typhon. The names of Athenians, eminent for their military virtues, were also embroidered upon the sacred offering. The entire length of the frieze was 300 feet.

The propriety of colouring these famous friezes is a question which has been warmly discussed by artists, the almost unanimous opinion being, that to overlay these exquisite bas-reliefs with colour for the purpose of improving their appearance, can only be compared to the attempt to gild refined gold. Mr. Owen Jones contends, however, on the opposite side, for the propriety and justice of the step he has taken, and considers that certain stains upon the marbles warrant the supposition that they were originally coloured. While contending that these friezes were coloured, no authority appears to exist for the particular style adopted in the present instance, beyond the fact that upon some ancient Etruscan tombs some of the horses are represented as of the colours here exhibited. Some portion of the frieze is white upon a blue ground, and some is left entirely white. An inspection of the three specimens will suffice to show the difficulty of applying colour to works of sculpture, and more especially so, when it is intended, as in the present case, to convey the idea of motion. This most difficult of all the work of a sculptor, was accomplished by Pheidias, by means of the lowness of the relief which he gave to the numerous figures in the procession; and the effect thus obtained may be entirely destroyed by the too liberal and injudicious use of colours.

Among the other more prominent figures in this gallery, is the weeping Niobe, surrounded by her dying children. Niobe was the fruitful mother of a large family, according to some, of seven sons and seven daughters. She insulted Latona, the mother of Apollo and Diana, and rashly claimed a homage superior to that paid to Latona, on account of her more numerous family. The goddess, incensed at this arrogance, entreated her children to punish the boasting mother. Apollo and Diana obeyed the behests of the vengeful Latona, and, while surrounded by her children, Niobe saw all her sons suddenly fall beneath the darts of Apollo, and her daughters, with the exception of Chloris, as mercilessly destroyed by Diana. While weeping over her misfortunes, the unhappy Niobe was changed into stone, but the rocky form of the bereaved mother still wept.

Among the numerous other figures in this gallery, an enumeration of which must suffice, are colossal statues of Juno and of Ceres with a torch, several fine figures of Vestals; a priest of Bacchus; a broken colossal group of Ceres and Proserpine; a nymph and satyr; a half draped Venus; Ganymede and the eagle; Cupid as Hercules; a satyr plucking a thorn from the foot of a fawn; Æsculapius and Telephone; a boy with a mask; several fine sacrificial and tripod Greek altars, and some interesting bas-reliefs.

THE ROMAN COURTS.



A Statue of Apollo Belvedere.
B B B B Roman busts.
B...B... Roman baths.
D Statue of Diana.
E Electre of Orestes.
F F F Friezes of Parthenon.
M Minerva.
P P P P Painted ceilings,
R Roman ladies.
S S S S S S Statues.
V Venus.
V V Venus victorious.

Passing from Greece, the visitor enters a series of courts, the many-coloured marble walls of which convey an idea of gorgeous magnificence, which contrasts strongly with that sense of quiet repose which characterizes the Greek court. The larger court is a chamber in the palace of the Cæsars. It is in the style of a period when the Roman Empire had obtained to almost universal dominion, and when ideas of military glory, territorial conquest, and enervating luxury alone occupied the attention of rulers and people. Instead of that exquisite taste and loving sympathy with the objects of their religious faith which animated the Greeks, the Romans were intent only upon the erection of temples and edifices upon a vast and imposing scale. The wealth of the empire was expended in the construction of a golden palace for the despicable Nero; whole provinces and nations could assemble in their Colosseums and amphitheatres, and armies might repose beneath the

shade of their grand triumphal arches. Rome built the temples and theatres, but Greece supplied and adorned them with gods, and statues of heroes and sages; and while the devout Roman offered his libations in the temple of Janus, he might gaze upon the deities around the sacred shrine either as objects of his reverend adoration, or as pleasing trophies of the valour of the conquering legions of his country. Every nation which fell beneath the ruthless valour of the Roman legions, was stripped of its statues and works of art, which were carried away to decorate imperial Rome, or the new seat of empire at Constantinople. The spoils of Corinth furnished the ornaments of the first Roman amphitheatre, and the finest works of Athens were transported to the public and private baths of the Imperial City. Rome became the general storehouse for the wealth, and the productions of the world's genius and art, and Caligula and Tiberius held sway over more foreign and Greek statues on the banks of the Tiber, than enslaved and degenerate Roman citizens.

The visitor will commence his examination of Rome with the suite of small courts, representing three Roman baths, decorated in the most delicious and varied style of colouring. The playful pencil of the artist, M. Abatti, appears to have been here guided by the most exquisite taste, and the most exuberant of fancies. The style of decoration is somewhat analogous to that of the Pompeian Fine Arts, which, if the courts had been placed in chronological order, would have formed one of the Roman courts. While Egypt, Greece, and Rome, are placed in chronological order, Pompeii is looked upon as a province or colony of Rome; and with a view, it must be supposed, to geographical accuracy, the Pompeian court has been placed at the other end of the building. We shall conduct the visitor, in due course, to this representation of a house in the buried city, when he will be able to compare the style of decoration which prevailed in the quiet and secluded Roman watering place, on the Bay of Naples, with that which existed in the gorgeous marsions of Rome. The casts in these baths are from statues discovered in the ruins of Roman baths.

The first of these courts is the "Venus bath," and in the centre is the beautiful statue "Venus Victorious," holding in her hand the sword of Mars, while her son, the mischievous little Cupid, groans beneath the weight of a huge helmet which he is supporting. There is also an exquisite figure representing the old Greek legend, that, as Venus sought the beautiful and beloved Adonis through the forest, a thorn pierced her tender foot, and from the blood which flowed from the wound sprung up the modest and sweet-scented violet. Venus at the bath, and a crouching Venus, a pretty group of those types of divine and human childhood, Cupid and Psyche, and a small Borghese Faun, complete the statues arranged in this charming apartment, sacred to love and beauty.

In the next bath is a cast of the world-famed Apollo Belvidere, found amid the ruins of Nero's marine villa, at Antium. This

figure has been justly described as one of the sublimest that imagination could conceive, or skill could execute. The graceful god is in the act of darting the fatal arrow against the serpent Pytho, which Juno had sent to persecute his mother, the beautiful Latona. The stature of Apollo is above the life size; his attitude is majestic—the spring of youth softens the manly graces of his person, and the bold structure of his limbs; disdain sits on his lips, and indignation swells his nostrils, but an unalterable serenity invests his front, and the sublime elevation of his aspect aspires at deeds of renown still surpassing the object of his victory. Animated by the noblest conception of heavenly powers, the artist has far outstepped the perfections of humanity, and (if we may speak without irreverence) made the corruption put on incorruption, and the mortal immortality. In this, which we shall call the Hall of Apollo, are two casts of the youthful Apollo, in which he is represented as a shepherd tending the Thessalian flocks, and musing on his godhead laid aside; and in the other he is in the act of killing a venomous lizard, as if nerving his arm for his future conflict with the monster Python. A boy extracting a thorn, and a faun sounding a flute, are the remaining works to be noticed in this apartment. The decoration, it will be seen, differs in colour from the Court of Venus, but there still prevails the same beautiful and delicate taste and design.

The third court is sacred to Diana and the chase. In the centre stands the chaste and ever active sister of Apollo, the huntress Diana, with the captured stag by her side. The expression of her face conveys the idea of manly courage combined with female beauty. Her keen eye appears capable alike of piercing the mountain mists in search of the royal bird, or following, with the hunter's enthusiasm, the bounding leaps of the affrighted deer; her legs are strong and firm; youth and activity are stamped upon every limb, and she appears fully capable of pursuing, fleet as the winds, the timid fawn, or antlered stag, which vainly fly at the approach of this chase-loving goddess. Most appropriately arranged around the principal figure are two small groups, representing a stag torn by mastiffs, a boy who has captured a swan, and a youth who is dragging captive an unwilling goose. Tempting as the halls of the Alhambra may appear, they must not yet be entered until we have visited the large hall of the Cæsars.

Entering this larger hall from the Court of Diana, the visitor will see in the centre a model of the Colosseum, or Flavian amphitheatre at Rome. This, the largest of Roman amphitheatres, was commenced by the Emperor Vespasian, and was completed by his son Titus, A. D. 80. The building was nearly circular in form: its greatest dimensions 613 feet, or little more than one-third the length of the Crystal Palace, and its shortest diameter 510 feet, being a few feet more than the greatest width of the central transept of the building. The exterior of this remarkable building consisted of three stories, the columns of each of which differed in their

style of architecture: the lower series, that represented in the façade of the Roman court, being of the Doric, or simplest style, while the second series was composed of Ionic, and the third of Corinthian columns. The arches resting upon the columns are semicircular in form, and the pilasters, with foliated capitals, are of the composite, or mixed order. The uncovered area enclosed by the walls of this theatre would contain eighty thousand persons, seated upon a graduated series of benches, rising upward from the central arena, following the circular, or, rather, elliptical form of the building. The gladiatorial and other shows were exhibited in the smaller area, around which, upon an inclined plane, the graduated series of benches were placed. There are no Roman buildings with respect to the details of which so much accurate information exists as these vast amphitheatres, where such vast expenditures of blood and treasure took place, in order to gratify the debased taste of the people during the declining days of the Roman empire.

On the side of the court approached from the baths are placed some more of those exquisite statues, into which the whole energy of the Greek sculptors appears to have been thrown, in order to realize their ideal of female beauty. Here are the Marine Venus with the Cupid by her side—let thoughtless visitors beware his fatal arrow;—here is the Venus *drapée*, the draped Venus—the Venus found at Arles, and the Venus Genetrix. Cold must be the heart of that visitor who can behold without admiration the calm serenity of pleasure depicted in the half-closed eyes of the loving goddess, or who can fail to admire the exquisite form and love-inspiring features of this object of Greek worship. For him who, with affected Tartuffe modesty, or Mawworm-like hypocrisy, turns away from these breathing images, nothing remains but to wander unpitied and alone, amid more congenial objects of his contemplation, probably among the dragons and chimeras dire, which inhabit the geological island. If any of the visitors should, however, be affected with that sentiment of false delicacy—a modesty which has led to much angry discussion, as to the propriety of exhibiting these nude, or semi-draped, figures, they will do well to ponder over the remarks on the subject made by Mrs. Jameson, a lady whose acute and vigorous intelligence is only equalled by her exquisite purity of thought and style, whose writings charm and instruct thousands of the people of England, while they point out to them the noblest and brightest examples of the beautiful, in poetry, in history, and in art. "It may be proper to take notice," says Mrs. Jameson, in her Hand-book to the Public Galleries, "of the prejudice many people have against naked figures. It is difficult to discover any settled rules of propriety in the different modes of dress, as all nations and ages have fluctuated with regard to their notions of fashion in this matter. The Greek statues of the Laocoon, Apollo, Meleager, Hercules, the fighting and dying Gladiator, and the Venus de Medici, though altogether without drapery, have surely nothing in them offensive to modesty—nothing

immoral. On the contrary, looking on these figures, the mind of the spectator is taken up with the surprising beauty or sublimity of the personage—his great strength, vigorous, and manly character, or with the pains and agonies that so feelingly discover themselves throughout the whole work. It is not in showing or concealing the form that modesty or the want of it depends: it arises entirely from the choice and intentions of the artist himself. The Greeks and other great designers gave into this practice of representing the figure undraped, in order to show, in its full extent, the idea of character they meant to establish. If it was beauty, they show it to you in all the limbs; if strength, the same; and the agonies of the Laocoon are as discernible in his foot as in his face. This pure and naked nature speaks a universal language, which is understood and valued in all times and countries, even where the Grecian dress, language, and manners are neither regarded nor known. It is worth observing that many of the fair sex do sometimes betray themselves by their over-delicacy (which is the want of all true delicacy) in this respect. But I am ashamed to combat such silly affectations: they are beneath men who have either head or heart—they are unworthy of women who have either education or simplicity of manners—they would disgrace even waiting-maids and sentimental man-milliners."

A charming group of Electra and Orestes deserves attention. The daughter of the unfortunate Agamemnon is urging her brother Orestes to kill their faithless mother, the adulterous Clytemnestra, and thus avenge the murder of their injured father. The recollection of all the misfortunes and adventures of the brother and sister, who form this interesting group, will cause it to be examined with more than ordinary interest, while the expression depicted in the features and attitudes of the figures are worthy of the performance of the best of ancient artists.

There are also in this court a group of Castor and Pollux, a fine figure representing a faun carrying a goat; a life-size Bacchus; Mnemosyne, the mother of the muses and goddess of memory. Near the centre are Ganymede and the Eagle, a satyr with a wine skin, and several more of those strange types of rustic ever-living youth, the fauns, who pelt the Naiads with the fir cones, and trample themselves red in the wine press. Scattered through the various courts are many of these strange creations of the declining days of Greek art. In one place they are seen drunk and sleeping on swollen wine skins; now bounding on their way, borne down with plunder from the vineyards, laughing wildly at the sight of Bacchus, and dashing together their cymbals, and now grinning at some friendly satyr who earnestly endeavours to draw the thorn from their horny feet.

A winged Victory on a globe, the Medicean Vase, a sybil poring over the leaves of destiny, a young nymph, and one or two other figures, complete the statues in this hall. Around each side are arranged busts of many of the Roman Emperors. There are Nerva,

Trajan, Caligula, Claudius, Galba, Nero, Hostilianus, Chlorus, Julianus, Carinus, Maximus, Phillipus, Gallienus, Gordianus, Saloninus, Heliogabalus, Severus, Decius, Gordianus II., Caracalla, Geta, Macrianius, Maximus, Pupienus, Macrinus, Commodus, Gordianus III., Africanus, Septimus, Galerius, Pertinax, Verus, Antoninus Pius, and Marcus Aurelius.

Passing by the central opening into the nave, there is a fine statue of Mercury disguised as a shepherd, and a faun with cymbals. Next the beautiful Adonis are two seated figures, one of these is the Emperor Trajan, who, for his virtues and great abilities, received the titles of "Optimus" and "Father of his country;" the other, with the mean and sensual expression on her face, and false and frizzled hair, is Agrippina. She is pensive, as if foreseeing the dark fate which awaits her at the hands of her son —the monster Nero. She was the wife of Domitius Ænobarbus, and subsequently of her uncle, the Emperor Claudius, whom she assassinated, in order to pave the way to the throne for her son Nero, by whose orders she was afterwards assassinated.

At the entrance of the Roman vestibule is one of the fierce dogs of Epirus, famous among the Romans, and called by them the "Molossi." Near it is the youthful Hercules, he who when eight months old became the object of jealous Juno's determined hostility, and who sent two snakes to devour the child while in his cradle. The young Hercules, reserved for deeds of noble daring and superhuman strength, cast his childish but fearless eyes on the glistening serpents peering over his cradle, and stretching forth his infantile hands squeezed the reptiles to death, while his elder brother alarmed the house by his frightful shrieks.

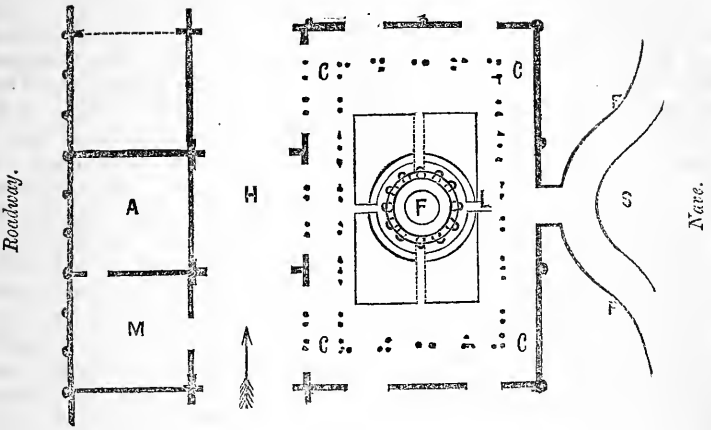
By the side of the youthful stands the full-grown majestic Tortona Hercules, the impersonation of human strength, armed with his knotted club, with which he attacked the Nemean lion in his den, and arrayed in the skin of the fierce beast. It was this same Hercules who, having vanquished the lion, destroyed the Lernæan hydra, a monster with one hundred heads—that hydra which as soon as one head was beaten to pieces was instantly provided with two fresh ones; it was Hercules who caught the swift stag with golden horns and brazen feet; who brought in alive the wild boar that ravaged Erymanthus; who cleared out the Augean stable, where 3,000 oxen had been confined for many years; killed all the carnivorous birds which ravaged Arcadia; caught alive the wild bull which devastated Crete; obtained the mares of Diomede which fed on human flesh; secured the girdle of the Queen of the Amazons; killed the monster Geryon, and captured his flesh-eating flocks; robbed the orchard of Hesperides, and dragged up to earth the three-headed dog, Cerberus, who watched the gates of hell, and who, as a reward for his many useful labours upon earth, was carried up to heaven amid thunder and lightning, by the orders of Jupiter, in a chariot drawn by four celestial horses.

In the vestibule is a bust of Seneca, a distinguished Roman philo-

sopher of the school of Pythagoras, born about the year 6 B.C., and a preceptor of the cruel Nero. He fell a victim to the duplicity of his imperial pupil, who had murdered his own mother and assassinated nearly all his friends. Seneca was at table with his wife Paulina and two friends, when a messenger arrived from the tyrant, ordering him to destroy himself. The mandate was received with firmness and even joy by the philosopher, who observed that it was one which might have been long expected. He was refused the liberty of disposing of his vast possessions as he wished; and after having endeavoured to comfort his friends, his veins were opened, as well as those of Paulina, who refused to survive her husband. Nero ordered the flow of blood of Paulina to be stopped, and her life was spared. Seneca, while his life was slowly ebbing away, kept up an animated conversation with his friends, the purport of which has been preserved. Poison was resorted to ineffectually, in order to hasten his decease; the effects of a warm bath was next tried, and was attended with no better success; and finally, the Roman soldiers, clamorous at the delay, carried the fainting philosopher to the stove used in heating the bath, where he was suffocated by the steam. He died on the 12th of April, A.D. 65, in the 53rd year of his age. There are also busts of Trajan, Tiberius, Balbinus, Cicero, Terence, Corbulo, Virgil, Julius Cæsar, Hortensius, Brutus, Marcellus, Hadrian, Clodius, Albinus, Scipio, and other Roman worthies. A second portion is occupied by famous Roman women and wives of emperors. There is the cruel Messalina, the wife of the Emperor Claudius, whose cruelties and immoralities have rendered her name conspicuous in history. Summoned by her husband to answer the charges brought against her, she attempted to destroy herself; her courage failing, she was killed, A.D. 48, by the sword of one of the tribunes who had been sent to summon the empress. There are, too, Plotina, Julia Masa, Julia Mammæa, Agrippina, Julia Pia, Sabina, Livia, Mariamne, Crispina, and others.

At the upper end of the glazed gallery, in which the Parthenon friezes are displayed, there are several copies of Roman works, such as a bas-relief of the three provinces found in the Via Appia; a fine allegorical head of Spain; a statue of Julia, the daughter of Augustus; "Camillus" from the Capitol; a cast from the fine Sarcophagus of Amendola, from the Capitol at Rome; a statue of Lucille, with a cornucopia; several vestal virgins, and some remarkably fine and richly foliated architectural scrolls.

THE ALHAMBRA.



A Hall of Abencerrages (not completed).
C Cloister.
F Fountain of lions.
F F Walks.
H Hall of justice.
L Lions round fountain.
M Museum of the Alhambra.

Pass under these honey-combed, or stalactite arches, rich with gold and azure, and the visitor enters into the tesselated halls of the Alhambra—the last productions of Pagan art have been left behind; the Polytheism of Egypt, Greece, and Rome, have fallen before the conquering sword of the Saracens; and the flowing Arab inscriptions on the gorgeous diapers of the walls embody the creed of a resistless people, "There is but one God, and Mahomet is his prophet." The Alhambra, or the Red Palace, is the most gorgeous specimen of the architecture of the strange and enthusiastic people who professed the new religion. Occupying a sort of middle place between the Pagans and the Christians, they abjured alike the classic elegance of Greece and the uncouth vitality of the works of converts to the Christian faith, and left to the full play of a lively and fruitful imagination, they produced an architecture and a style of ornament, the most refined and elegant that has ever yet appeared. Representations of manly grace, and feminine beauty, as among the Greeks, formed no part of the decorations of the sacred mosques or palatial edifices of the followers of

Mahomet; the silken tissues, the rich diapers, and the luxurious shawls from the looms of Cashmere, which adorned their desert tents, lived long in the memories of the conquering Arabs; and when they reared their more abiding homes on the heights of Granada, or in other conquered cities, they covered their walls with a tapestry of mosaic, richer than Moor could weave, and more enduring than the gorgeous magnificence of the Cæsars.

While the visitor reposes upon the luxurious couches of these halls, listening it may be to the gentle plash of the water in the adjoining "Court of Lions," or gazing with ecstacy upon the endless repetition of gorgeous ornaments, which Mr. Owen Jones, with an earnest and loving faith in the beautiful, has snatched from the palace of the Granada sultans, he will be pleased to hear, in the words of the gifted artist himself, that, "In spite of earthquakes, mines, and counter-mines — spite of Spanish convicts, French soldiers, Spanish bigotry, and Flemish barbarism—of thieves and gipsies, contrabandists and brigands, paupers, charcoal burners, and snow-gatherers, the Alhambra still exists—one of the most recent of European ruins. It is the most perfect in repair, and the richest in design; it has suffered less from man, or the elements, and has fallen more gently and imperceptibly to decay. It was not molten, like Nineveh, in an hour, or buried in a day, like Pompeii; it was not smitten down at a blow, like Corinth, or sapped for centuries, like Athens. Though it has been alternately a barrack, a prison, a tea-garden, and an almshouse—though its harem has been a hen-house, its prisons pens for sheep—the Alhambra is still one of the most wonderful productions of Eastern splendour, lingering in Europe long after the Moslem waves have rolled back again into Asia, like a golden cup dropped on the sand, or like the last tent of some dead Arab, still standing when the rest of his tribe have long since taken up their spears, untethered their camels, and sought their new homes in the far desert."

Resistless as was the march, and rapid as were the conquests of the followers of Mahomet, their progress in science and art was not less extensive than remarkable. At a period when the Western world had sunk into barbarism, when poetry and philosophy were unknown or proscribed, the Arabs devoted themselves to the cultivation of science and literature with a success equalled only by the achievements of their valour. The short space of a century sufficed to raise the Saracens from the deepest barbarism to the glorious days of Haroun-al-Raschid and of his son Al-Mammon. The literary relics of conquered cities were sought with eagerness, and guarded with jealous care by the enlightened caliphs of the race of Abassides; to every mosque which religion consecrated to Allah, were attached schools for the education of the youthful Moslems. But it was in Spain, and more especially in the fruitful Granada, that Arab learning shone with the greatest brightness, and made its most rapid progress. Cordova, Granada, and Seville, rivalled each other in the extent and magnificence of their

schools, colleges, academies, and libraries; and here poetry, philosophy, the study of history, and the cultivation of the sciences, flourished in a congenial soil. No nation of the world could boast a code of laws more just and perfect than that of the Arabs in Spain; and no people ever reached to a higher pitch of agricultural prosperity than did the subjects of the kingdom of Granada. The beautiful paper manufactered from the delicately formed Spanish flax, gave a world-wide renown to the paper-mills of Moorish Spain. Gunpowder, the use of the compass, algebra, and many most valuable discoveries in the sciences of chemistry and astronomy, owe their origin to this most remarkable people. Since the period when science and literature flourished among the Moors, what vast changes have taken place! "The kingdoms of Morocco and Tunis," says Sismondi, "once renowned as seats of learning, are now little better than waste and dreary deserts of burning sand; the once flourishing kingdom of Mauritania, the seat of commerce and of the arts, is the dark retreat of pirates and corsairs. Egypt has by degrees been swallowed up by the sands which formerly fertilized it. Syria and Palestine are desolated by the wandering Bedouins, less terrible still than the pacha who oppresses them. Bagdad, formerly the residence of luxury, of power, and of knowledge, is a heap of ruins. The celebrated universities of Cufa and Bassora are extinct, those of Samarcand and Balkh share in the destruction. In this immense territory, twice or thrice as large as Europe, nothing is found but ignorance, slavery, terror, and death." And now the last hold of Islamism in Europe is threatened to be swallowed up by Russian ambition; there still, however, flows in Moslem veins some of that illustrious blood which animated their ancestors, who, beneath the standard of the Prophet, swept away kingdoms and dynasties powerful as Rome and illustrious as Greece; and, on the banks of the Danube or the passes of the Balkan, the Turks still manfully defy the encroaches of the Northern despot.

Granada was the province where the conquests of the Arabs in Europe ended, and the towers of the Alhambra mark the spot where the tide of Moslem conquests began to recede. The conquest of the Moors was accomplished by Ferdinand and Isabella, who, shortly after the surrender of Boabdil, amid all the imposing splendours of high mass, took possession of the Alhambra. The cruelties of Philip II. drove the Moors into the revolt in 1569, which finally ended in their extirpation and expulsion from Spain. The Moors were ordered to abandon the use of their native language; the negro slaves, whom they had treated with the same tenderness as their own children, were taken from them; they were forced to throw aside their Arab habits, and purchase Castilian dresses; the women were required to walk abroad with their faces unveiled, and free access was to be given at all times to the closed houses of the Moors; their children were to be taken from them and educated in Castile; the use of the

bath was interdicted, and their music, songs, and festivals forbidden. Driven by these persecutions into revolt, the oppressed and persecuted Moors for many months held possession of their mountain-fortresses, even against the mighty forces of Don John of Austria. Never was war conducted with more savage or brutal ferocity upon the one side, or with more determined valour on the other. The inhabitants of whole villages were massacred, thousands were sold into slavery, or left to die by starvation; and Philip, goaded on by his persecuting spirit, and the remorseless advice of his theologian, Oradici, "that the more enemies he destroyed the fewer would remain," all but completely exterminated the once victorious people. But in the present day, scattered among the cities of Barbary, are many descendants of the exiled Moors of Spain, who still preserve and cherish the ancient maps and plans of the estates and gardens of their ancestors, and even the keys of their houses at Granada, as evidences of their hereditary claims to be produced at the day of restoration—an event to which they look forward as confidently as do the Jews to their restoration to the Holy Land. Daily in his mosque, the devout Moor offers up his prayers to Allah to hasten the time when the faithful shall again revel in the salubrious Granada, and taste the charm of this terrestrial Paradise; and oft do they sing in the touching lines of Calderon:—

"A captive sad, in sorrow bowed,
Lone Afric weeps in sable shroud;
Her empire lost, her glory gone,
And set in night her ruling sun!
Yet will we boast the golden time,
When fierce from Afric's swarthy clime,
Fair Spain was vanquished by our sword,
And Allah's name was all adored!
But Allah's hand hath bent the bow
That laid our nation's honours low;
Dark and mysterious is his will,
Yet Allah's name be worshipped still."

The court in which the fountain is playing is formed on the same plan as the Court of Lions of the Alhambra, but is less than half its size, the dimensions of the original being 150 feet in length, and 50 feet in breadth. One hundred and twenty-eight slender columns of white marble support the arches of the light and seemingly fragile colonnade which forms this Moorish cloister. In the court to which we will now invite the visitor, the principal sides are formed of one central stalactite arch, with four smaller ones on each side. The central arch is supported on each side by two graceful and delicately-formed columns, and the smaller arches alternately by one and two columns. The smaller ends of the court are formed of five small arches, resting upon double columns. The space over

the smaller arches is filled in with pierced trellis-work of the most exquisite forms, through which the sunlight gleams upon the glistening tapestry of the walls, or the softened moonlight falls like showers of pearls on the bright mosaics of the court. Between the arches the space is filled with floral diaper-work of chaste patterns, richly coloured with red and blue and gold. Over each of the single columns is an inscription in Arabic: "Glory to our lord the Sultan, Abu-Abdallah!" over the double columns, the words, "Glory to our lord, the warlike and just Abu-Abdallah!" and above these inscriptions, in the square Cufic character, is the oft-repeated text from the Koran: "There is no conqueror but God!" The fountain in the centre is constructed of marble, of the same form as that which in the original gives its name to this enchanting court. It is in form dodecagon, or twelve-sided, and is supported by twelve rudely-carved lions, with legs of irregular octagonal shape and without joints. This is one of the few instances in which the Moslem artists ventured to represent animals in their decorations. The water flows over the rim of a smaller basin into the larger one, whence it passes out of the mouths of the lions. The inscription is not yet placed on the basin. Around this fountain it was that thirty-six of the Abencerrages were massacred, by orders either of the fierce Aben Hassan, or, as some suppose, of that unfortunate Boabdil el Chico, who ignominiously closed the splendid drama of Moslem dominion in Spain by surrendering the keys of Granada to Ferdinand of Castile. For centuries the waters of that marble fountain have flowed, but they have never yet washed out the blood-stain of the ill-fated Abencerrages; and no visitor enters the forsaken Court of Lions, but some son of the Alhambra still points out the ensanguined marks. How strangely do such tales of violence and blood jar upon the feelings, as we gaze upon a structure so light, so fragile, and so fairy-like as this! It is difficult to believe that a court, where everything appears adapted to call forth nothing but kind and happy feelings, could have witnessed so dark a scene of cruelty and treachery.

The three smaller compartments at the side of the Court of Lions represent together the famous Hall of Justice, in which Ferdinand and Isabella first entered when they took possession of the palace. The effect of the coloured decoration in this hall is charming in the extreme. In the style of decoration here adopted, those religious cycles and symbolic figures which engrossed so much of the attention and formed such constant objects of study among the Byzantine and early Christians, are seen to give way before an elaborate geometrical ornamentation, interspersed with inscriptions in the Arabic or Cufic character. Curves falling gradually into conventional floral shapes, and lines and angles developing a species of characteristic tracery, or strap-work, form the chief part of a design more remarkable for its general effects than for the peculiar merit of its details or combinations. It conveys, in fact, the idea of a flower-garden, formal in the construction of its beds and parterres,

and deficient in the simplicity or grandeur of natural scenery. The ceiling of this hall is a remarkable instance of the effect which may be produced by the combination of even the simplest of geometrical forms. Here, in a space of 24 feet by 24, there are not less than 2,000 separate panels, the whole of which are formed by the intersections of straight lines, there not being a single curve or portion of a circle employed on the whole surface. It would appear at first sight incredible how such a diversity of style could be effected by this mere intersection of straight lines. One square crossing a second square diagonally, is the system upon which the decoration is commenced, and each variety of pattern is produced by lines emanating from, or converging to, this very simple geometrical arrangement. The ceilings of the cloister differ somewhat in their style of decoration; they are profusely covered by gilt star-like figures upon a light ground. But there also the same adhesion to geometrical forms is to be seen. The diapering upon the walls of each of the compartments of the hall differs somewhat in design. In all of them, however, the same profusion of golden flowers, of beautifully-balanced colours — more than rivalling the choicest gardens of Paradise—rich emblazoned shields, and flowing Arab scrolls, with bright interlacings and perpetually changing forms, cover the walls like the illuminated leaves of some gigantic missal, upon which the cloistered artists of mediæval ages had expended a lifetime of loving and religious toil. A delicate peach-like bloom pervades the gilded walls and starry geometric fantasies of the ceiling, softening and blending in one harmonious whole the bright colours of the peacock with the gilded lace-work and the glittering petrifications of the stalactite arches. Who can wonder, that those who produced a scene of such gorgeous beauty should, in the exuberance of their pious loyalty, have bordered the creations of their rich and fertile fancy with the inscriptions which appear on the walls of these chambers: "May power everlasting and imperishable glory be the lot of the owner of this palace!"

We cannot refrain from reproducing here that gorgeous picture which Washington Irving drew of the scene of Ferdinand and Isabella entering this hall in triumph. "The very cross," he says, "is still to be seen upon the wall where the altar was erected, and where officiated the Grand Cardinal of Spain, and others of the highest religious dignitaries of the land. I picture to myself the scene when this place was filled with the conquering host—that mixture of mitred prelate and shaven monk, and steel-clad knight and silken courtier; when crosses, and crosiers, and religious standards were mingled with proud armorial ensigns and the banners of the haughty chiefs of Spain, and flaunted in triumph through these Moslem halls. I picture to myself Columbus, the future discoverer of a world, taking his modest stand in a remote corner, the humble and neglected spectator of the pageant. I see in imagination the Catholic sovereigns prostrating themselves before the altar, and pouring forth thanks for their victory; while the

vaults resounded with sacred minstrelsy, and the deep-toned 'Te Deum.'" The transient illusion, however, is now passed—the pageant has melted from the fancy; monarch, priest, and warrior, have sunk into oblivion with the poor Moslems over whom they exulted; the hall of their triumph is waste and desolate; the bat flits about its twilight vaults, and the owl hoots from the neighbouring tower of Comares, and the Alhambra stands a desolate Moslem pile in the midst of a Christian land—an Oriental palace amidst the Gothic edifices of the West; an elegant memento of a brave, intelligent, and graceful people, who conquered, ruled, and passed away.

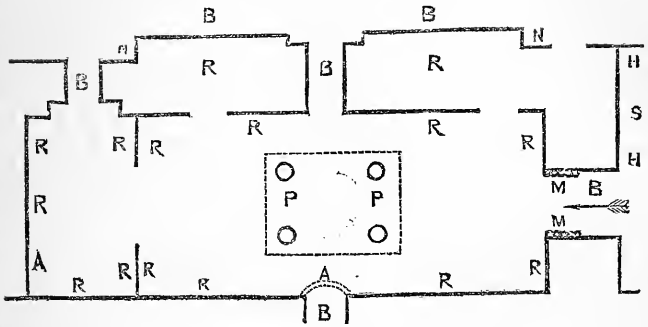
The external sides of the court, the one abutting on the transept, and the other on the nave, is ornamented in the same profuse style of decoration, the cornice being of the most beautiful and elaborate description. The shields upon the walls are inscribed alternately with the words "grace" and "blessing." There are five patterns of this chaste mosaic tapestry used in covering the walls, and on the exterior, the spot where the corners of the four pieces of diapering join, is ingeniously concealed by the emblazoned shield. The diapers were moulded in thin square slabs of plaster, of about 18 inches square, and when perfectly dried, were secured to the walls and coloured. There are but three colours used in order to produce this gorgeous effect—blue, red, and gold; these primary colours being the only ones used for decorative purposes by the best artists of Greece and Byzantium. A different rule appeared to be adopted with respect to the pavement of the buildings, and there the secondary and tertiary colours were employed, the mosaic in the halls of the Alhambra being composed of green, purple, and orange.

There still exist in the Alhambra many most interesting and beautiful apartments which would have been produced, had not considerations of time and space prevented. A beautiful illustration of the Hall of the ill-fated Abencerrages, with its fairy-like dome, and shadowy arcades, where the victorious Ferdinand first set his foot, is in course of construction in an adjoining court, and will in a short time be completed. Of other courts which the visitor would have wished to witness are the Court of the Pool, 135 feet long by 74 feet wide, with its large reservoir of water, supplied with gold fish; the Hall of the Ambassadors in the Tower of Comares; the Hall of the Two Sisters, so called from two colossal slabs of white marble, 11 feet long and 5½ feet wide, which form part of the pavement; the Mosque of the Palace; the Bath of the King and the Princes; the Queen's exquisite Dressing-room, and several others, which still remain elegant mementoes of this brave, intelligent, and graceful people, who once held sway in Spain. It is only of comparatively recent date that the beauties of this celebrated palace have been brought to the knowledge of the people of this country. In the summer of 1834, Mr. Owen Jones, in connection with his friend M. Jules Goury, visited Granada, for the purpose of obtaining the means of affording to the world a more

perfect representation of the Palace of the Alhambra than had before been obtained. Considerable advantages were possessed by these gentlemen for the fulfilment of their mission, in consequence of their having previously passed a considerable time in Egypt, in the study of the valuable remains of Arabian architecture which that country possesses. After a residence of six months in the Alhambra, M. Goury fell a victim to the cholera. Overwhelmed by the loss of an attached friend and valued coadjutor, Mr. Owen Jones at once returned to England, and in the following year commenced the publication of the original drawings, and in the spring of 1837, after re-visiting the Alhambra, completed the collection. Every precaution was adopted in order to ensure perfect accuracy, and in 1842 appeared that magnificent work—"Plans Sections, Elevations, and Details of the Alhambra," by Owen Jones, architect. This work reflects not merely the highest credit upon its author, but is one the publication of which tended, in a high degree, to vindicate the character of England from that charge of apathy to the beauties of art which has too frequently—and, unhappily, with some reason—been brought against it by foreign countries. As has already been intimated, the construction of this court has been carried out under the direction of Mr. Owen Jones, who has now the satisfaction of knowing, after many years of anxiety, that the public appreciate his labour, and award to him the honour of having produced the brightest gem in the People's Palace. This gentleman derived much valuable assistance in carrying out the practical details from the able services of his assistant, Mr. Smith.

There are two other rooms at present unfinished, lying on the left hand side of the Hall of Justice. One of these will represent the famous Hall of the Abencerrages, with its fairy-like stalactite dome. The farthest one on the right will probably be fitted up to represent an entrance or gateway. The court on the left is a sort of museum, containing the casts and moulds used in the construction of these courts. On the other side of the court, immediately opposite the entrance, are arranged a number of architectural and other drawings of different portions of the Alhambra. On the left hand side are plaster casts from the original building, the large arch in the centre having been moulded direct from one of the existing arches. Below are arranged four casts of bas-reliefs from the cathedral at Granada. The series represents the triumphal entrance of Ferdinand and Isabella, the Moors leaving the Alhambra with their hands tied as prisoners, the presentation of the keys to the conquerors, and the final conversion of the Moors, where bishops are seen busily engaged in baptizing the converts from Islamism. On the opposite side are arranged casts from the models actually used in the construction of the courts just visited. When completed, two small archways will lead from this museum into the Hall of the Abencerrages.

THE ASSYRIAN COURT.



A Archway.
B B B B Winged bulls.
H H Hawk-headed figures.
M M Mosaic Wall.
N N Nimrod.
P Columns of Persepolis.
R R R R R Bas-reliefs.
S Sacred tree.
entrance indicated by Guide.

Hitherto the visitor has proceeded through the courts in regular chronological order. He has witnessed the massive structures and colossal effigies of Egypt gradually pass into the elegant temples and breathing statues of Greece, the gorgeous dwellings of the palace of the Cæsars, and the sparkling halls of the Alhambra. The placid and eternal repose of the works of Rhameses and the Ptolemies, and the exquisite beauty of the Venuses and Apollo of the Greeks now give place to that expression of power, dignity, and dominion which characterized the works of artists in the remote ages, when Sardanapalus and Sennacherib swayed the sceptre of power on the banks of the Tigris. If the visitor inquires why his continuous train of thought is thus disturbed, and the natural sequence of his observation broken?—why from the days of Philip and Ferdinand he is suddenly whirled back in imagination through thousands of years, to a period scarcely a century removed from the deluge, to the days when "Nimrod began to be a mighty one in the earth," and made Babel the seat of his authority, and when "Asshur went forth and builded Nineveh," the reply is, that this Assyrian court does not belong to the region of sober fact. Egypt, Greece, Rome, and the Alhambra, are positive reproductions of things which now exist, or which up to within a very recent period have been looked upon by many persons. Not so this Assyrian

court, which Mr. Fergusson has reared in the Crystal Palace. The whole is a grand fiction, founded, however, on fact; and as in a well-ordered library the same shelf does not contain works of history and of imagination, so in this case, the transept is made to divide sober reality from the creations of fancy. There is, however, in this Assyrian court much that is as true as the glittering beauty of the Alhambra. These winged bulls, with their massive limbs and firmly planted feet, their bold outstretched wings, their noble semitic features, fine aquiline nose, and firmly clasped hands; these bas-reliefs of lion hunts, and victories of Assyrian monarchs, are as true as those quaint representations of the victories of Sesostris in Egypt—these cuneiform characters are exact copies of those brought to light by the labours of Botta and Layard; but we should have liked to have passed at once from the shrine of Ammon to the temple of Belus, to trace the effects of the victories of the Asian monarchs on the banks of the Nile, and mark the favour with which Egyptian notions of art were received on the shores of the Tigris. For there are in reality many points of resemblance between the decorations of the two nations. Over the heads of Assyrian kings there floats a flying encircled vulture-like deity, similar to that which hovers over the head of Sesostris, and upon several of the columns of Carnac, the name of Nineveh is inscribed amid the hieroglyphics of Egypt. Our duties, as a guide, would therefore have been considerably more easy, and the visitor would have received a far more regular course of instruction, if he had not been called upon to read backward from the Alhambra to the hanging gardens of Babylon, and from the Moors to the Assyrians. Probably, however, there is a deep and hidden meaning in this arrangement; Eastern writing is to be read from right to left, instead of from left to right, as is the case with Western languages, and the directors have probably wisely resolved that the people should study Asiatic art under such difficulties as would enable them best to appreciate the labours of Col. Rawlinson, in deciphering the cuneiform inscriptions which have recently been unearthed from the mounds of Assyria.

Let us, however, proceed to the examination of these fac-similes of Persepolis and of Nineveh—thankful that we have an opportunity of doing so without fear from the attacks of the Turcoman and the Kurd, thievish Arabs, or lying guides, who dispute with the wild beasts of the desert the possession of the city of Belshazzar. Here, again, we encounter a second anachronism, and we pass from the Moors in Granada through the deserts of Nubia, and look upon the colossal seated figures from the tomb of Abou-Simboul with its avenue of colossal sphinxes, which were objects of adoration to Nubian worshippers, when Hagar went forth an outcast from the house of Abraham, and, with her son Ishmael, journeyed weary and famishing to the wilderness of Beersheba, where the son of Abraham was destined to become the skilful archer, and the father and founder of that Arab nation which conquered Rome,

and reared the Alhambra—whose hand has been against every man's, and every man's hand against them, but who still exist a great and powerful people. Passing out of the Alhambra, and standing immediately beneath the colossal figures, is not, however, the best spot to witness this Nubian tomb; we will, therefore, pass under the chair or bench upon which these figures are seated, and proceed to Nineveh, having inspected which, we will cross the building, where, at the end of the avenue of sphinxes, a far better view will be obtained of the colossal shrine. The small compartments formed beneath these colossal seated figures, represent the tombs or chambers found hewn out of the solid rock in which this vast shrine was formed, and in the midst of which were discovered a number of huge seated figures and several sarcophagi. The space occupied by these small chambers is 48 feet by 32 feet.

Two winged human-headed bulls guard each entrance and exit from the Assyrian court. Of the origin of these mysterious looking creatures which were the object of veneration, and probably of worship, among the Assyrian people, nothing is known with certainty. One curious and striking coincidence has been hitherto, to a great extent, lost sight of, in endeavouring to explain the symbolic meaning which no doubt lies hidden in these winged human-headed bulls; and that is, the manner in which they combine the peculiarities of the cherubim of the Jewish tabernacle, and, at a later period, of the holiest place in the temples of Solomon and Hezekiah. Those symbols, representing the Deity, were winged animals with four faces, each of which represented the chief divisions of the animal kingdom, viz., the lion, the king of beasts of prey; the ox, the chief among cattle; the eagle, the ruler of birds; and man, to whom was given dominion over all animals. Whatever may have been their origin, however, it is scarcely possible to conceive of figures which would more finely convey the notions of strength and swiftness, directed by wisdom and intelligence, than do these colossal human-headed beasts. As we look upon these impersonations of calm majesty and power, we cease to wonder that the people who moulded, or gazed with reverent awe upon them, should have been among the most powerful and warlike of the nations of the world.

The large colossal relievi on the right of the door, entering from the Alhambra or Nubian shrine, represent "Nisroch," the hawk-headed deity; next to him another human-headed figure, with his beard curled and trimmed according to the latest Ninevite fashion. There is also a representation of the sacred tree, probably the date or palm tree, and near it the sacred eagle or vulture. As the visitor passes along this entrance, he will observe on each side a sort of Mosaic wall, apparently formed of five circular columns placed closely together. This representation of the exterior face of a wall is the latest discovery that has been made in Assyria, having been found so recently as the month of February last, by Mr. Kennett Loftus, a gentleman employed by the Assyrian Exca-

vation Fund. The discovery was made at a place called Wurka. The wall is about 30 feet in length, and is composed of terra-cotta cones about 3½ inches in length, imbedded in a cement of mud and chopped straw. The cones are laid horizontally, their circular bases being placed outwards. These ends have been dipped in various colours, and they are arranged in geometrical forms, some circular, some diamond shaped, and others angular and zig-zag. As these cones bear a remarkable resemblance to some found in ancient Egyptian tombs, it is supposed that the edifice to which this newly-discovered wall belongs is a sepulchral monument; further excavations in the neighbourhood will no doubt be attended with considerable success.

The large room in the centre is supported by four majestic looking columns of about fifty feet in height, modelled from some ruins which have been found in Persepolis, once the Persian palaces of the successors of Cyrus. The bases of these columns are of that peculiar globular form which marks the style of many of the Indian temples. The shafts of the columns are fluted, and the rich capitals, extending to nearly half the length of the column, impart to them an appearance of profuse and lavish ornamentation. The other portions of the roof are supported by short pillars, resting upon a wall elevated about 20 feet above the pavement; those facing the nave have their capitals formed of two bulls kneeling back to back, apparently much too large for the columns, and painted deep blue, with black curly hair, and bright yellow horns and hoofs. The temple of Persepolis, the remains of which still exist, is called the "Throne of Jamshid," and, like all other magnificent works in the East, was supposed by the Arabs to have been built by King Solomon. A heavy, overlapping, Egyptian-looking cornice surrounds the upper portion of the building, painted deep blue, and ornamented with the conventional representations of the lotus and other sacred emblems, and above is a battlement painted red, blue, and yellow. The roof is formed of sunk panels, of diamond and square patterns, for the colouring of which authority exists in some traces of colour which have been found upon some ruins in a temple at Persepolis. The effect is pleasing, and the colours are judiciously arranged. The principal ornaments on the roof are the constantly recurring winged bulls, antelopes, pomegranates, and fir cones. The animals represented are either red on a buff ground, blue on red, or red on blue. The honeysuckle pattern, so gracefully displayed in Grecian decorative works, is rudely shown in some of the panels.

The panel of the ceiling over the entrance from the nave has upon it a representation of the sacred tree, and the curious winged figures in each of the corner panels in the centre of the ceiling are the Assyrian deities, the centre panel being covered with fruit and foliage. On the left of the court is a semi-circular archway supported by winged bulls—the only instance of an

arch which has yet been discovered in the excavations of Assyria. It has a fine and imposing effect. Around it are placed patteræ and small ornaments, which are exact copies of some which were found a short time since by Mr. Layard, M.P.

The large bas-reliefs around the court represent in one place the king—distinguished from the other figures by his regal cap—with his ministers and attendants; in another the king is seated in his chair, and is receiving from one of his attendants a bowl, of the contents of which he is about to partake; on a third side the king has near him the strange hawk-headed figures, which in no case have yet been discovered except in immediate proximity to the entrances of the buildings, and which are supposed from this circumstance to have been looked upon as the sacred guardians of the place.

The bas-reliefs in the smaller halls represent the king arrayed in his royal robes, surrounded by his soldiers and attendants hurrying forth in his royal chariot to the battle; the royal canopy is held over his head, and his bow and javelin are strung beside him. Then come representations of battles, sieges, and triumphs, as portrayed upon the walls of the palace at Khorsabad, recently discovered by Mr. Layard. There is the attack on the fortress; the army crossing the rivers; the chariots taken over on rafts; the horses swimming behind; the soldiers floating over on inflated skins. The army approaches the embattled walls; the archers and the slingers discharge arrows and stones at the enemy; the fortress is scaled by the troops; a group of prisoners is brought forth, perhaps to be flayed alive, or led bound to Assyria. Another campaign is illustrated:—the king is in his chariot engaged in the thick of the fight—around him is a shower of arrows and javelins; the battering ram is brought up against the walls; within view of the besieged citizens are three poor wretches impaled, as a salutary warning against the continued obstinacy and valour of the enemy, and at the foot of the wall lie headless victims; the city is abandoned, and a chariot, drawn by oxen, conveys a man and his family, with their household goods, from the scene of desolation; the prisoners are brought on the scene with their hands tied behind them, and then come the spoils of the conquered city, elephants, camels, monkeys, gold-dust, cedar wood, ivory, and other precious treasures, and then the libation and offering to the god Siroch.

The inscriptions are in what is termed the cuneiform character; a key to the deciphering of which, was first obtained by Professor Grotefend, of Bonn, who, in the temple at Persepolis, made out two inscriptions, "Darius, the great king, the king of kings, the son of Hystaspes, the Achæmenian;" and "Xerxes the great king, the king of kings, the son of Darius, the Achæmenian." Upon a rock in Behistun, at an elevation of 300 feet above the plain, an inscription was shortly afterwards discovered, which contained from 80 to 100 proper names in the Persian cha-

racter; and by comparing these with the same names in the Assyrian version, Colonel Rawlinson was enabled to obtain an additional clue to the reading of the Assyrian records. But some idea may be formed of the patient labour expended by this zealous labourer in the field of antiquity, when one of the thousand difficulties that lay in his path was, that this delicately written Behistan inscription could only be read and copied by the aid of a telescope.

Applying the knowledge thus obtained, Colonel Rawlinson has been enabled to decipher a very large proportion of the inscriptions which have been discovered, and a portion of the writing inscribed on the large obelisk, in the British Museum. After setting forth the ascent to the throne of Shalmanassar, and invoking the gods on his behalf, this obelisk, now in the British Museum, narrates the campaigns of each year, and thus describes a grand expedition, which took place in the fourteenth year of the reign of the monarch. "In the fourteenth year, I raised all the country, and assembled a great army; with 120,000 warriors, I crossed the Euphrates; then it came to pass, that Hemithra, king of Atesh, and Arthulena, king of Hamath, and the twelve kings of the tribes of the upper and lower country, collected their forces together, and came before me offering battle. I engaged with them, and defeated them; their leaders and captains, and men of war, I cast into chains."

On the outer side of the court facing the nave are shown several showily painted human-headed bulls. They have deep red bodies, black glossy curly hair, wings of blue white, and black and yellow caps on their heads. On each side is shown a colossal human figure with a blue tunic, with immense locks of black curly hair, and a deep formal looking beard. The figures are supposed to represent Nimrod, the mighty hunter and founder of the Assyrian monarchy. He is depicted strangling a young lion, which he presses against his chest with his left arm, while he is clutching in his hand the fore paw of the animal, which seems convulsed in the agony of his grasp. In his right hand he holds an instrument somewhat analogous to the boomerang of the Australians, used by them in hunting, and in war. Great attention is paid to the hair and beard, which are arranged in clusters of minute curls, and so elaborately executed, that every hair seems to be represented in its exact place, and the beard, as represented, is the beau-ideal of beards according to the Assyrian notions. The same care seems to have been bestowed on that appendage in all the sculptures, and even at the present day in Persia, the beard is cherished with peculiar care.

Mr. Layard thus alludes to the striking difference which exists between the ruins of Nineveh as they now exist, and those of other ancient cities. "The graceful column rising above the thick foliage of the myrtle, the ilex, and the oleander, the gradines of the amphitheatre covering the gentle slope, and overlooking the

dark blue waters of a lake-like bay, the richly carved cornice, or capital half hidden by the luxuriant herbage, are replaced by the stern, shapeless mound, rising like a hill from the scorched plain, and the fragments of pottery, and stupendous masses of brickwork, occasionally laid bare by the winter rains. He has left the land where nature is still lovely, where in his mind's eye he can rebuild the temple or theatre; half doubting whether they would have made a more graceful impression upon the senses than the ruin before him. Those of whose works they are the remains, unlike the Roman and the Greek, have left no visible traces of their civilization, or of their arts: their influence has long since passed away. The more he conjectures, the more vague his results appear. The scene around is worthy of the ruin he is contemplating: desolation meets desolation; a feeling of awe succeeds to wonder; for there is nothing to relieve the mind, to lead to hopes, or to tell of what has gone by. These huge mounds of Assyria make a deeper impression upon the visitor, and give rise to more serious thoughts, and more earnest reflections, than the temples of Baalbec, or the theatres of Ionia."

But Nineveh was once the seat of one of the most powerful nations of the world, and more than four thousand years have passed away since Ninus, its first monarch, swayed the scepture of absolute power. Ancient history tells how, upon the death of this monarch, his widow, Semiramis, not daring to trust the sceptre in the hands of her youthful son, arrayed herself in male attire, gave out that she was the son, and not the wife of Ninus, led her armies forth to do battle against the older dynasties of the East, and built the city of Babylon. The wonderful works, and the marvellous valour of this heroic woman, have served to invest her origin and history with much that is marvellous. Diodorus, an ancient Greek writer, narrates how that Semiramis was exposed when a child on a barren rock in Syria; how she was kept warm, nourished, and fed by a flock of pigeons; and how, as she grew up, the claims of her beauty attracted the notice of the king, Ninus, who made her his queen; and how that when she died, the body of the conquering Semiramis was changed into a pigeon. It was this heroine who led forth an expedition against India, consisting of 3,000,000 foot, and 500,000 horse soldiers, and dressed camels like elephants, in order to deceive the enemy; and who, when engaged upon one occasion at her toilet, hearing of a tumult in the city, rushed out of her palace with her hair dressed upon one side, and the other in wild disorder, or perhaps still tied up in papyrus, and did not return until she had quelled the disturbance. Among the statues erected in the city, was one which represented the dauntless woman with her tresses in this semi-disordered condition. At her death, the Assyrians worshipped Semiramis under the form of a dove.

Her degenerate successors fell into a state of slothfulness and debauchery, without parallel in the world's history; and Sardana-

palus, the last of the royal line of Ninus, after one vigorous but ineffectual attempt at resistance to the enemy, set fire to his palace, and destroyed himself, his treasures, and his companions. A statue was afterwards erected to his memory, which showed strikingly the opinion entertained of him by his subjects. The king was represented in the attitude of a dancer, and the inscription was "eat, drink, and be merry; everything else is nothing."

Next came the dynasty of the Medes, which in its turn was overthrown by the victorious Cyrus, the Persian king. From the capital of the Persian empire, Xerxes set out with his myriad army to conquer Greece, and he returned to it a fugitive and defeated monarch. At length, Babylon fell beneath the all conquering power of Alexander the Great; it afterwards formed, for some time, a distant and insignificant fragment of the vast Roman empire, then sank amid the mounds of buried ruins, sixty miles in circumference, which now exist in the vast plains watered by the Tigris.

Nineveh was the largest and richest city of the world, considerably exceeding in extent the vast metropolis of England. It was in form a parallelogram $18\frac{3}{4}$ miles in length, $11\frac{1}{4}$ miles in breadth, and its circumference was not less than sixty miles. When the prophet Jonah passed through the streets of the city, warning the people of its coming destruction, he described it as "an exceeding great city of three days' journey." The whole of the city was surrounded by walls 100 feet in height, and of such thickness that three chariots might drive abreast on them, and they were fortified with 1,500 towers of 200 feet in height. History tells how Semiramis employed two millions of men, collected from all parts of her empire, to build the mighty Babylon, that she surrounded it with sixty miles of wall 350 feet high, or double the height of that transept beneath which the Nubian shrine is placed, and eighty-seven feet thick, or fifteen feet wider than the central nave of the Crystal Palace. On each side of the building were twenty-five brazen gates, which were opened in the day-time, and always closed at night. It was through these gates that Sennacherib issued forth, and went up to besiege Jerusalem with an army of 185,000 men; the destruction of the whole of which in one night is so poetically described by Byron,—

"Like the leaves of the forest when summer is green,
That host with their banners at sunset were seen:
Like the leaves of the forest when autumn hath blown,
That host on the morrow lay withered and strewn."

The city was surrounded by the Euphrates, or canals in connection with it; and to provide against the danger of the overflow of the river, a vast artificial lake, forty miles square, rather more than the extent of the whole of London and its suburbs, was excavated to the depth of seventy-five feet. How can we speak

of the excavations and earthwork of our docks and railways, or even the grounds at Sydenham!—All the earthwork that has been removed in this country for docks and railways, could have been deposited in this Babylonian reservoir, and Penge Hill to boot, in order to have brought it to a level with the lowest swamp in Lambeth! The palaces of Babylon were worthy residences for those who could order the construction of such works. "The old palace on the east side of the river," near to the temple of Belus, was three miles and three quarters in extent, and the new one on the opposite side was just double its size or seven miles and a half in compass. Our Windsor Castle and Buckingham Palace would be but porter's lodges, or gate-keeper's houses; and the New Palace at Westminster but an insignificant portion of this vast pile—perhaps an aviary for golden parrots and chattering pies, or a theatre where Sardanapalus revelled in a private performance. The famous hanging gardens were enclosed within the area of this larger palace; they were supported by massive arches covered with earth to such a depth as to admit of the largest trees taking root in them; and the Sir Joseph Paxton of that time devoted all his energies to laying out the various terraces and grounds with the most fanciful forms of flower-beds and pleasing walks; and engines and pumps forced the water up to cisterns on vast water-towers, where it was used to water and refresh the elevated gardens. The temples of this mighty city were in keeping with the colossal ideas of the Assyrian nation. The temple of Belus was a square, a furlong on each side, or half a mile in compass, and was constructed of eight towers rising one above another, gradually decreasing in size, the topmost tower reaching to a height considerably exceeding that of the loftiest pyramid in Egypt. The statue of the great god Belus was forty feet high, the gold of which it was formed was of the value of more than three million of pounds, and the whole of the treasures of the temple are stated to have exceeded twenty-one millions. This wonderful temple was plundered and destroyed by Xerxes on his return from his Grecian campaign; and Alexander, on his way back from his Indian conquests, set ten thousand men to work for more than three months in order to clear the building of the ruins and rubbish in which it was buried: his death, however, put an end to the proceedings long before they were completed.

Accounts have very recently reached this country of the discovery of a most beautiful palace at Nineveh, once belonging to the son of Esar-Haddon. The sculptures are infinitely superior in variety of subject, in artistic treatment, and skill and delicacy of execution, to everything that has been before found. The palace also is of great extent, containing perhaps five hundred sculptured slabs, and the marbles are generally in a good state of preservation. Colonel Rawlinson says, "The new palace is by far the most magnificent thing yet discovered in Assyria. Each hall,

room, and passage, is devoted to a separate subject; and where the series is complete, and the sculpture is well preserved, as not unfrequently happens, the series are of extraordinary interest. In fact, the variety of subject, artistic grouping and treatment, high relief, richness of detail, and delicacy of execution, entitle the palace to be reckoned the *chef-d'œuvre* of Assyrian art. Some of the pavement slabs are most superb; and the animals, trees, and flowers—even the human figures—are much more natural and free from conventionalities, than in any of the earlier palaces. There are between two and three hundred sculptured slabs already uncovered, and not above half the palace is yet explored. Colossal bulls and lions there are none, but monsters, centaurs, hippogriffs, &c., as many as you please. At one of the entrances there are a pair of round ornamental pedestals, which certainly supported columns—they must have been formed, I suppose, of wood. On one slab there is a city with a double wall, and within, a temple, faced with a row of columns, supported on the backs of animals. On another there is a mound, on the top of which is a castle, and to give more extent to the upper platform, a causeway is run out from the top of the masonry, with sharp-pointed arches stretching down the side of the mound. One of the slabs representing the palace or temple, represents very minutely the exterior architecture. The second story is built with pillars, which have their bases on the backs of lions and human-headed bulls, with their heads turned like those found at Khorsabad. One of the best executed slabs represents a lion-hunt. In this scene the king is the principal huntsman, and he is in the act of striking a lance into a lion springing upon his chariot, whilst seven others, already pierced by many arrows, some of which are dead, and others dying, are most beautifully and naturally portrayed upon the slabs. On another slab they have represented a park with an open gate, through which is seen the king hunting lions, executed on a very minute scale, as if they intended it to appear far in the distance. The art displayed in the treatment of both men and animals in the bas-reliefs surpasses everything yet discovered in the ruins of Assyria."

The Assyrian court was restored, constructed, and arranged by Mr. Fergusson, under the general superintendence of Mr. Layard.

ÆGINA MARBLES.

Passing from the Assyrian court, the visitor will now cross the nave under the gallery at the north end of the building, where an interesting collection of rude and hard-looking statuettes arrest attention.

This group of figures, known as the Ægina marbles, are from the Temple of Jupiter Panhellenius, built on the beautiful island of Ægina, at least six centuries before the Christian era—a period

considerably earlier than that in which the Parthenon was erected at Athens, the models of which have already been inspected. The larger of these groups consists of ten statuettes from the western pediment of the temple, representing the fight around the body of Patroclus. The friend of Achilles lies dead in the centre; upon the right are the Trojan heroes, Hector, Paris, and Æneas, and an unknown warrior; on the left of Patroclus are the Greeks, represented by Ajax, Teucer, Diomede, and one unknown. The second group is composed of the five statues from the eastern pediment of the temple, representing the fight of Hercules and Telamon against the Trojan king Laomedon. The originals are in the Glyphothekè, at Munich.

These interesting relics of ancient Greek art were discovered in 1811, by a party of English and German travellers, among whom was Mr. Cockerell, one of the most celebrated architects of the present day. They were found buried under the ruins of the temple, and accumulations of rubbish, nearly as they had fallen from their original places. Almost all the figures from the west front were recovered, while those which belonged to the eastern pediment were in a more ruinous and dilapidated condition. Thorwaldsen, the eminent sculptor, was engaged to repair and restore all the statues which were not so completely broken as to render reparation impossible. Entire restorations of this beautiful Doric temple of Jupiter, with imitations of the figures, have been made, and deposited in the British Museum, and form an important addition to the other specimens of Greek art in that grand national collection.

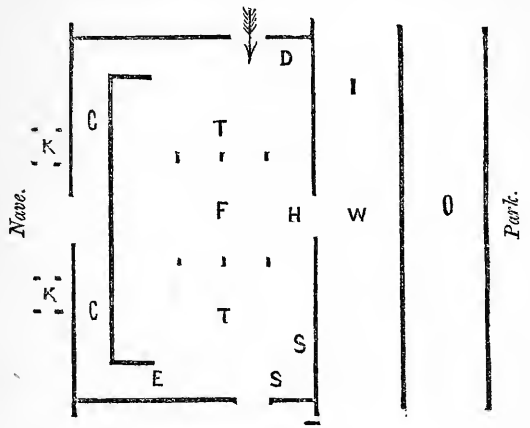
THE COLOSSAL NUBIAN SHRINE OF ABOU-SIMBOUL.

Walking on a few steps down the nave, contemplating meanwhile the grand perspective of the lofty arched nave, with its network of girders and cross-girders, and its background of light blue sky; or, perhaps, admiring the elegant form of the basin of water with its water-lilies and plants, or the mounds formed of roots of old trees stubbed up in the course of the earthworks necessary to the construction of the building and laying out of the ground, and now tastefully covered with a variety of creeping plants, we arrive at an avenue of twenty-four colossal sphynxes, which form an appropriate passage to the two giant figures which form a portion of the rocky front of the famous tomb of Abou-Simboul. These colossal figures are seventy-two feet in height as they are seated. On the original tomb, or shrine, there were four figures, two being seated on each side of the huge entrance into the rocky chamber where reposed the dust of the Nubian monarchs. These gigantic figures astonish and overwhelm the visitor as he reflects upon the immense labour which must have been expended in carving these monstrous forms out of solid rock, and thus exposing them in the

clear atmosphere of Nubia to the adoring gaze of the worshippers of Isis, at a distance of thirty miles from the rocky shrine. The strange combination of human and animal features in the figure known as the sphynx, is of frequent occurrence in both Greek and Egyptian mythology and art, but more frequently found in the case of the latter. The great sphynx at Jiseh, near the pyramids, is not less than 143 feet in length, and 62 feet in height, or nearly the same as that of the colossal seated human figures. The admirable author of "Eōthen" thus describes the appearance of the sphynx of Egypt, and the poetic sentiments to which its contemplation gave rise in his mind:—"And near the pyramids, more numerous and more awful than all else in the land of Egypt, there rests the lonely sphynx. Comely the creature is, but the comeliness is not of this world: the once worshipped beast is a deformity and a monster to this generation, and yet you can see that these lips, so thick and heavy, were fashioned according to some ancient mould of beauty—some mould of beauty now forgotten—forgotten, because that Greece drew forth Cytherea from the flashing foam of the Ægean, and in her image created new forms of beauty, and made it a law among men that the short and proudly wreathed lip should stand for the sign and the main condition of loveliness through all generations to come! Yet there still lives on the race of those who were beautiful in the fashion of the elder world; and Christian girls, of Coptic blood, will look on you with sad, curious gaze, and kiss your charitable hand with the big pouting lips of the very sphynx. Laugh and mock if you will at the worship of stone idols, but mark ye this, ye breakers of images, that in one regard the stone idol bears awful semblance of Deity—unchangefulness in the midst of change—the same seeming will and intent for ever and ever inexorable! Upon ancient dynasties of Ethiopian and Egyptian kings — upon Greek and Roman, upon Arab and Ottoman conquerors—upon Napoleon dreaming of an Eastern empire—upon battle and pestilence—upon the ceaseless misery of the Egyptian race—upon keen-eyed travellers, Herodotus yesterday, and Warburton to-day — upon all, and more, this unworldly sphynx has watched, and watched like a Providence, with the same earnest eyes, and the same sad, tranquil mien. And we shall die, and Islam will wither away; and the Englishman, straining far over to hold his loved India, will plant a firm foot on the banks of the Nile, and sit on the seats of the faithful; and still that sleepless rock will lie watching and earnest, the work of the new busy race, with those same sad eyes, and the same tranquil mien everlasting. You dare not mock at the sphynx."

Let us, however, press on; a new order of things demands attention, for the realms of Christian art lie as yet unexplored by the visitor, or unexplained by the guide. Leaving the avenue of the sphynxes, the visitor sees on the left-hand side of the nave a series of courts, profusely coloured and decorated: these are courts devoted to the illustration of Christian art.

THE BYZANTINE AND ROMANESQUE COURTS.



C Cloister.
D Doorway (Kilpeck).
E Ely doorway.
F Fountain.
H Hildershein door.
I Irish vestibule.
K Knights Templars.
O Open colonnade.
S S Shobdon doors.
T Royal tombs.
W Winchester font.
Entrance indicated by "Guide."

Here all traces of the vast palace-temples of Egypt, those

> "High built temples fit to be the homes
> Of mighty gods, and pyramids, whose hours
> Outlast all time."

disappear in the realms of Christian art. The massive pillars of Karnak, covered with hieroglyphics, shrouding their impenetrable mysteries from vulgar eye, are replaced by the slender, clustering columns, and the aspiring towers, and pointed arches, with their endless variety of conventional ornament of Gothic architecture. The beautiful classic form of art, surrounded by which the Greeks and Romans offered their adorations to "Almighty Jove," are, however, reproduced in the Renaissance courts of the thirteenth and fourteenth centuries,—periods when almost every city of Italy was a new Athens, when its artists could contend with the great names of antiquity for the palm of excellence; and when the princely patronage of the Medicis nurtured and cherished the rising attempts to restore the classic arts. The winged cherubim

of the Jewish tabernacle, with their four faces of the man, the ox, the lion, and the eagle, combined to some extent in the majestic winged human-headed bulls of Assyria, reappeared in the first attempts to produce an architecture symbolical of a Christian hope and faith, which had its origin in the splendours of a Jewish theocracy. The pagan styles of art were disregarded and interdicted by the converts of the new faith, and the scroll, the fret, the echinus, or the egg and dart, the flowing honeysuckle, the graceful volute and acanthus of Greece, and the ruder additions of human, animal, and vegetable forms introduced by Rome, gave place to the early symbols of Christianity, or, if employed at all, they were sculptured by unskilled hands, and untutored eyes. The lily, the cross, the serpent, the aureole, the fish, the glory, the trefoil representing the Trinity, and the quatrefoil, with the lion, ox, eagle, and man, of the Mosaic dispensation, adapted as types of the four evangelists, were very gradually introduced and extended through all styles of Christian art. It was impossible, however, for the early Christian artists completely to free themselves from the shackles of Pagan forms, and the influence of idolatrous art, and in some of the earlier productions, the lingering traces of Roman forms may be easily detected. All the Byzantine decorations are conventional in their forms; that is, they are not close imitations of natural productions, the greater amount of skill being lavished in producing general effects than elaborate and truthful details. The rich materials employed, the use of dazzling gold mosaics, and of bright colours, assisted greatly in the development of a gorgeous system which, partly symbolical, partly barbarous, serves as a connecting link between the European and Asiatic the Pagan, and Christian art.

The Kilpeck Church Doorway.—As the visitor enters the Byzantine court he will see upon his left a famous old doorway, completely restored, from Kilpeck Church, remarkable for the symbolism which is supposed to be contained in the details of its ornamentation. This door is supposed to have been designed to convey to the flock or congregation their way to everlasting life, and contains, in its sculptured forms and architectural divisions and arrangements, the leading features of the Law and the Gospel. The most striking feature in the design of the door is the cross form. The tympanum, which contains the tree of life, is the head; the horizontal portions, one on each side, which are filled with crosses, are the arms, and the entrance is the body, through which—the cross of Christ—the flock enter to offer up their prayers and thanks to their heavenly Father. The tree of life is placed in the head, the crosses on the arms, and the tree of knowledge of good and evil on the columns, forming part of the lower beam of the cross. The tree of life is divided into three principal parts, symbolic of the Trinity; the centre, or head, and two arms, indicating the cross form in the design. The head is divided in the same manner into three parts—a head and two branches: the branches are repre-

sented as the fruit, or inspiration, from the head. The two branches of the lower division are divided into eight parts, seven of which represent foliage, in allusion to the six days of creation and the day of rest, and the one fruit, Christ Jesus, the end: "I am the Vine, and ye are the branches," &c. In this arrangement of the tree of life, the designer produces in the head the Trinity, and in the two branches the natural and spiritual world—the Alpha and Omega. The stem of the tree of life is made to proceed from a foundation of light, which the angular forms are designed to convey. The semicircular forms which enclose the tree are the glories shed from it, in number ten, for the Commandments. The triangular forms above these glories are sixteen, and divided into four parts, symbolizing the four Evangelists and the sixteen Prophets. The horizontal portions, or cross-beams, have nine crosses on the left and eight on the right; the nine crosses remind us of the ninth hour, when Christ gave up the ghost, and the eight for the eighth day, when Christ rose from the dead. The four crosses on the return side of each arm are made to unite with the glories containing the ten divisions, or Commandments, for the purpose of uniting the Law with the Gospel. Under the left arm, on the top of the tree of knowledge, is evil contending with good, in the forms of the dragon and the lion. The dragon, being overcome, assumes the form of the serpent, and descends upon earth for mischief, where he is biting at the foundation of that part of the tree which is for good, and on the other side he is poisoning the fruit which is for evil. The tree of knowledge is divided into good and evil: on the one side is the dragon, or Satan, contending with the lion—symbolical of Christ; and on the other is the serpent, symbolical of Satan, poisoning the fruit of which Adam is partaking. On the left part of the tree, or pillar, are sculptured two men in armour, the upper one carrying a mace of a cross form to designate the Church in its spiritual and moral capacity, and the lower one carrying a sword to signify the State—the cord above shows they are united. On the upper part of the tree were birds of Paradise, and at the base birds of the earth, showing their union by the cord above. Two very excellent and highly interesting works, published by Mr. G. R. Lewis, are well deserving the attention of those who may desire to obtain further information on the symbolism of early Christian art, as exhibited in our old ecclesiastical edifices.

THE SHOBDON DOORWAYS.—At the further end, upon the same side of the court, are the three remaining doorways of Shobdon Church, also in Herefordshire, not less remarkable than that of Kilpeck for the symbolism of its architectural decorations. The church, of which these interesting old doorways formed a part, no longer exists, it having been pulled down some years since, when a new one was erected in its stead; but these curiously sculptured columns and arches were considered so extraordinary that it was determined to preserve them, and they were re-erected in Lord Bateman's park, where they at present remain. A curious old

manuscript of the twelfth century, written in Norman French, gives an account of the origin and building of this church, a translation of which we here subjoin. It is headed,—

"How the very noble lord, Monsieur Hugh de Mortimer, made Oliver de Merlimond his chief steward, and gave him the town of Shobdon to serve him faithfully, and how the church of Shobdon was made.

"This very noble and honourable lord, wishing to give himself up freely to his pleasures and amusements, without charging himself with or intermeddling in other things, chose a prudent man, wise and experienced, who was named Oliver de Merlimond, and made him chief steward of all his land and manager of all his property. This Oliver possessed the land of Ledecote by descent of heritage, and his lord, Monsieur Hugh de Mortimer, gave him in addition all the town of Shobdon, to serve him more loyally and more laboriously. And so Eode, son of the said Oliver, was very thoughtful on the building of a new church in Shobdon, and in honour of what saint he would have it dedicated when it was finished. At last he selected St. John the Evangelist, whom Jesus Christ chose before all the other disciples, to be patron of the church.

"After that, he sent for Eode his son, parson of Aymestry, and they took counsel together how his church of Shobdon might be relieved from its subjection to the church of Aymestry by an annual payment of two shillings. When this matter was settled, the said Oliver began the building of the church of Shobdon. In the mean time, this same Oliver was siezed with devotion and desire to perform the voyage to St. James (of Compostello) in pilgrimage, and he entrusted to a knight named Bernard the whole care of the work, with the necessary funds; and he undertook the pilgrimage in the name of God, and came to St. James safe and sound. When he had performed his duties there, he returned, always thoughtful of the work of Shobdon; and when he approached the city of Paris, a canon of the Abbey of St. Victor overtook him, and very devoutly prayed him to take up his lodgings in the abbey with him, and was handsomely and courteously received with great honour.

"While he was therein, he examined and carefully considered all things which he saw in the hostelry, in the cloisters, and in the choir, and particularly the service which was performed round the altar; and his heart was much moved at the decency which he saw among them in all places. Then he took leave of the abbot, and the other brothers there, and returned to his own country. And when his church was entirely finished, he very humbly requested Sir Robert de Beton, Bishop of Hereford—of whose gift we have the church of Lydbury. North—that he would condescend to dedicate his church of Shobdon; and he granted the request, and fixed the day of dedication. At the day assigned came the bishop, and all the great lords of the country, knights,

clergy, and others, without number, to be present at the solemnity, and before them all was read the composition made between Oliver and his son Eode, and it was confirmed by the bishop and witnessed by all the people. And when the church had been dedicated, the feast was very ceremoniously laid out for the bishop, and for the others who were invited, and for those who might come of their own accord."

The larger of these doorways and arches was the chancel or centre arch. It is supported by six pillars, and is composed of four concentric arches, each of which differs from the other in the style of its ornaments. Mr. G. R. Lewis, a gentleman who has paid the most careful attention to the details of this doorway, as well as to that of Kilpeck, states that the four arches and six pillars symbolize together the ten commandments—four of which relate to God, and six to man. The upper of the arches is filled with semicircular forms, symbols of glory; the second with angular forms, symbols of rays of light; the third with pointed arches, representative of God's house; and the fourth with angular forms and pointed arches, signifies the house of God in which the true light shineth. On the first pillar there are thirteen divisions of crozier heads, emblematic of the priesthood, and on the capital is the dragon bound and conquered, his jaws extended, but his teeth and tongue are gone. The eleven human figures above represent the eleven apostles, the base is formed of fruit and flowers. The second column has five divisions of men in armour, and the interlacings around them, without beginning or end, are symbolical of eternity; the third column has five divisions, showing the works of creation in love and harmony. Animals of various kinds, between interlaced cords, are shown on the fourth pillar; on the fifth there are four divisions of serpents with wings, their mouths open, and their tongues extended with a floral extremity; eleven divisions of descending doves are shown on the sixth pillar.

In the arches of the two doorways a striking difference is perceptible: in the one on the left hand side, the serpents around the top are shown in an active state, with open mouths and darting foliated tongues, expressive of prosperity; and their evil effect is seen in the wild and riotous state of the strange nondescript animals represented below in the second division, and which is symbolical of the sinful state of man. In the arch on the right, a more comfortable state of things for humanity is depicted: the coiled serpents are lean and thin, they are deprived of their stings and of their power to hurt the sons of men; and peace and harmony are represented on the second division below them, by men standing erect, and animals no longer in the inverted and uncomfortable position represented on the other arch. On the arches are represented the lamb, the bear, the tiger, the lion, and the bull; man is embracing man, peace and contentment abounds, and Christianity has brought happiness and peace to every living being. On the pillars of the small arch on the left, three small human figures,

with their hands raised very dolefully to their faces, represent Adam and Eve, and Cain, in a state of grief for the death of Abel. At the foot of one pillar lies the snake in the grass; and at the other, fallen man is illustrated by a head turned upside down. On the tympanum of the arch on the right, is shown Moses with the table of the Law; he is surrounded by the glory of God, and he is supported by four angels in somewhat perilous positions, and who are provided with remarkably accommodating spines and wings. We would strongly recommend persons anxious to obtain more complete information on the subject of these curious old English edifices, to consult the interesting works of Mr. G. R. Lewis on the subject, published by Pelham Richardson of Cornhill. Under the superintendence of Mr. Digby Wyatt, these doorways have been most skilfully coloured by Mr. Moone.

Probably a more striking instance is not to be met with of the value of the instruction which the great school of the Crystal Palace affords to visitors, than these restored doorways. The visitor here may see not a ruined arch, graceful and imposing even in its decay, but he is afforded an opportunity of judging correctly of the appearance which the productions of early English architects presented to the eyes of our ancestors in centuries long since passed by. The Crystal Palace is not a museum filled with the mouldy relics of bygone times, intelligent only to the most eminent scientific men, and the beauty of which can only be appreciated by the most learned disciples of Vitruvius; but it presents to the mind of even the most cursory visitor, those pictures of art and beauty which have hitherto been only gazed upon by the most skilful of architects and artists.

Above the restored doorways of Kilpeck and Shobdon are two bas-reliefs, the oldest which exist in this country, one represents the Raising of Lazarus, and the other the miracle of some early saint. The originals from which these casts were taken, still exist in Chichester Cathedral, and were no doubt executed as early as the seventh century. The faces of two of the principal figures, it will be seen, very much resemble the "masks" to be seen in some of the Roman sculpture on the opposite side of the nave, and show in a striking manner how Pagan ideas, in connection with art, lingered in this country after Roman legions had ceased to protect the soil against the invasion of barbarous hordes. The next structure is a bronze door from Augsburg Cathedral, of the eleventh century. This door is divided into thirty-five panels, containing rude and curious figures of Adam and Eve, Samson slaying the Philistines, and other subjects of Old Testament history.

The next in order is a part of the beautiful cloister of St. John's Lateran. These elegant twisted columns inlaid with glass mosaics, will convey some idea of the effect produced by this style of decoration in conjunction with architectural forms. The columns were in all probability erected in the beginning of the thirteenth cen-

tury. The earliest known specimen of glass tesselation of this kind is in the episcopal chair of Tribune in the Basilica of San Lorenzo at Rome, constructed in 580. Very few specimens are to be met with out of Italy; but we may instance those under the pulpit of the noble Byzantine church at Wilton, near Salisbury, erected by the munificence of the Right Hon. Sidney Herbert. The shrine and tomb of our Edward the Confessor, in Westminster Abbey, were once covered with some beautiful specimens of this description of work, but nearly all traces of the original have now disappeared. The disuse into which glass tesselation fell soon after the thirteenth century, was owing to the extended employment of painted decorations, while, in later years, it was found unfit to harmonize with the reproductions of classic art. To arrive at a just perception of the value of this specimen of decoration, it is necessary to see it in combination with the noble colours, and scenic and picturesque associations of the old Italian churches, in which the examples are now only to be found.

The doors adjoining this cloister are copies of Bishop Bernward's bronze doors of Hildershein, the subjects represented being the Creation of Eve, the Temptation and Fall, the Expulsion from Eden, the Adoration of the Magi, and other subjects of sacred history. The fine old Saxon doorway of Ely Cathedral next arrests attention as the visitor passes round the court. This door is one of the most curious and interesting specimens of the skill which prevailed in the twelfth century. It was constructed in the reign of Henry I., and completed in 1174. The bas-relief over the door represents our Saviour standing on a rainbow surrounded by glory; his right hand is giving the benediction, and his left holds a book and a crucifix. The pilasters of the doors are covered with curious grotesque figures. On the right hand side are a man and a woman drinking out of the same cup; a little removed are the same man and woman each pulling contrary ways in a boat—a symbolic representation of the opinion of our Saxon ancestors of the troubles of a married state, while the man and woman drinking out of the same cup, conveys the idea of the Saxons with respect to the more pleasing time of courtship, when the happy pair are imbibing large draughts of love. There are also figures of tumblers, dancers, and fencers, and of a man blowing into a bag, probably the bag-pipes.

The side adjoining the nave is a representation of a part of the cloister of St. Mary in the cathedral of Cologne. The columns which support the cloister-arches are of plain stone, slender in structure, and are surrounded with a tesselage of pierced work, imitating knotted and almost leafless stalks bound together by ornamented bands and studded with rosettes. The cloister which runs round one half of the court is paved with a border of encaustic tiles, surrounding some very curious mosaic pavement. The sides of the cloisters are covered with bas-reliefs obtained from different edifices in France and Germany, and various imitations of Mosaic

decorations. Again entering the central court, we find the restored effigies of English sovereigns buried in France, and which have recently been so ably illustrated by Mr. Stodhart. The effigies are those of Richard Cœur de Lion and Berengaria his wife, and King John with his queen, Eleanor of Guyenne, and Henry II. with Elizabeth of Angoulême. The fountain in the centre is a copy of one found in a ruined cloister at Heisterbach, constructed of black Derbyshire marble. The splendid work consists of an upper and lower basin, the former of which is 25 feet 6 inches in circumference, and the latter 33 feet. The basins are placed upon a massive central pedestal, supported by fourteen surrounding columns, the capitals of which differ in design, and are each carved from the solid block. The weight of the entire structure is sixteen tons, and nearly forty tons of marble were used in its construction. It was supplied to the Crystal Palace by Mr. Redfern, of the marble works, Ashford, near Bakewell, and the colour and beauty of the material will no doubt attract considerable attention to the capabilities for ornamental purposes of our Derbyshire marbles.

The façade of the court in the nave represents a portion of St. Mary's at Cologne: the surface is inlaid with imitations of green marble, the cornice is formed of ornamental work, alternately red and black, and blue and black, and a green trefoil border runs along the lower portion. At the back of this court is a representation of the fine old Norman doorway of Romsey Abbey, Hants, supposed to have been erected as early as the reign of King Edgar. It was from this abbey that Henry I. took Maud for his bride, although it was asserted that this fair daughter of the King of Scotland, and descendent of Alfred, had taken the veil, and had dedicated herself to the service of the Church. This, however, the princess denied, and stated that her aunt, in order to save her from the insult of the Normans, used to throw a black veil over her head, but that when the danger was passed, the gauzy protection was thrown aside and trampled under feet. There is also a fine Norman doorway from Tuam Cathedral, a dilapidated edifice, but one revered as the last resting-place of Roderick O'Connor the last of the Irish kings. Many portions of the ruins are in an excellent state of preservation, and some of the carvings are still as fresh as though they had just passed from the hands of the sculptor; near the doorway is a fine old window from the same cathedral, and at a short distance an interesting doorway from Birkin Church in Yorkshire.

The gorgeous magnificence which prevailed under this style of art, can scarcely be credited in the present day. One of the most remarkable works of Byzantine architecture now extant is the mosque of Santa Sophia at Constantinople, which was originally erected as a Christian Church by Constantine. The Emperor Mahomet, upon taking possession of Constantinople, converted the edifice into a Mahometan mosque; every trace of Christian

worship and ornament was removed, and the arms of the metal crosses were bent into the form of crescents. Within the walls of the cathedral, which glowed with gold and mosaic, such a collection of utensils appropriated for the service of the church was preserved as the world has never since beheld. Among these articles were no less than 6,000 gold candlesticks, the two finest of which weighed each 100 lbs.; 24 copies of the Evangelists with golden covers, each weighing 400 lbs., and seven massive gold crosses of 200 lbs. weight each. St. John Chrysostom states that, in his time, A.D. 400, all admiration was reserved for goldsmiths and embroiderers, and it is stated that upon one mantle or tunic were represented as many as 600 figures in embroidery. To all this profusion of riches, is to be added the most exquisite of enamels, the most beautiful and elaborate of filagree works, and a gorgeous style of coloured decoration.

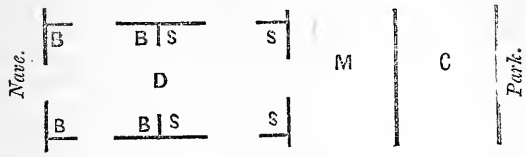
As evidences of some of the magnificence which prevailed under this style during the ninth century, we quote from a description of the chapel of St. Peter at Rome at that period, given in Mr. Digby Wyatt's work on "Metal Work and its Artistic Treatment." The chapel had in front twelve columns of porphyry, alabaster, and other rare marbles, and a rich railing of bronze stood between each column. From this portico up to the tomb of St. Peter, the pavement was covered with sheets of silver of the weight of 150 lbs. The entablature surmounting the columns was enriched with bas-reliefs in silver, representing our Saviour surrounded by his apostles, and on the other, the Virgin accompanied by holy women, the whole was crowned with a profusion of silver lamps and candelabra weighing 700 lbs. The railing which surrounded the tomb and the crypt was of silver, and the columns and arches were adorned with precious hangings and golden cherubim. Near the tomb was a massive cross of gold, weighing 100 lb., presented by Belisarius, and the whole of the crypt was covered with engraved sheets of gold, weighing 453 lbs., given by Pope Leo III. Around the crypt were silver statues of St. Peter, St. Paul, St. Andrew, and the four evangelists, but these were replaced by the emperor by statues of gold. The tomb was of gilt bronze, and upon it rested a cross of gold given by the Emperor Constantine, of the weight of 150 lbs. The high altar was covered with sheets of gold weighing 597 lbs., and the ciborium, at first silver, was soon replaced by one of silver-gilt, with four columns of silver of more than a ton weight—2,704¼ lbs.

The characteristics of this style of decoration have been thus summed up by Mr. Thornbury:—"The Byzantine decoration has two features that peculiarly distinguish it from the early English, which it resembles as the oak does the birch: first, a fondness for knotted branch-work rather than foliage; and, secondly, a preference to depict animals rather than men. We could scarcely have augured that from these lurid clouds would have broken the soft warm spring-days of the later Gothics; that these thorny leaves would

have budded into the lily and the rose of Ely—this coarse type of the vine leaf into the twining tendrils of the decorated. Yet from this very stony shell burst the tender shoot, and from this dark knotty root came the coloured flower—a birth as strange as is that of the rainbow's from the exhalations of earth's swamps, or the blanched water-lily's from the muddy refuse of a pool.

"But amid these braidings of cable and net work, these ribbed knottings, roundels, and Greek crosses, that form the characteristic feature of the style—the round arches—the low, massive-headed pillars—the quadripartite vaulting with its gilded borderings—the pilastered arcade work, all stamped with energy, undeveloped and unrestrained imagination, and barbaric richness—we occasionally come to beautiful glimpses of a deeper and more spiritual nature. In one bas-relief, amid eagles and horned monsters devouring their hunters, sit a virgin and child, tender and heavenly as those of Giotto; the child as beautiful a type of divine infancy as was ever conceived before the birth of Raphael—the virgin, holy and calm, with long braided hair and drapery simple and statuesque; and below, in the cloister, are twisted slender pillars, enriched with spirals of black, red, and gold mosaics—the archway supported by lions of sculptured stone; while above are the peacock, emblem of the resurrection, the lion, and the serpent, and the ram."

GERMAN GOTHIC ART.



B B B B Bas-reliefs.
C Colonnade (open).
D Nuremburg doorway.
M Mayence entombment.
S S S S Statues of Archbishop Electors of Mayence

From Byzantine and Romanesque decorations, the visitor passes on to the varied stages of mediæval and Gothic art. Before and around him are reproduced the works of men who laboured during what it is the fashion to call "the dark night of the middle ages," for night no doubt it was, as compared with modern civilization, but few persons consider how radiant and how starlight was that night,—that since the stars which shone upon it have been dimmed, the world has been shrouded in a confused and lingering twilight. "More than once during this time," says an eloquent German writer, "men have bid us hail the dawn of a new sun bringing universal knowledge, happiness, and prosperity; but the results have by no means justified the rash anticipation, and if some promise still seem to herald the approach of day, it is but the chill mist of the morning air which ever precedes the breaking twilight." Standing beneath the vaulted roof of a crystal palace—a building novel in its style, and a type of the age in which we live,—let us hope that the gray streaks of the morning's dawn will soon melt away in the broad light of a day when art will usurp the place of fashion, and again influence our social life as it once did among the Greeks, and at a later period during the reign of Catholicism in the middle ages.

Crossing the threshold, behind which he leaves the gorgeous colours and rich decorations of Byzantine art, the visitor finds himself surrounded by productions of early German artists, which, grotesque and rigid as they appear, are yet full of individuality, and their rude portraiture is evidence of the labours of the artist to preserve on the sculptured stone the lineaments of departed saints and heroes. While criticizing these early productions of Christian art, and comparing them perhaps unfavourably with the more beautiful and classic form of Greece and Rome, let the visitor remember the eloquent advice of Ruskin, and while the recollec-

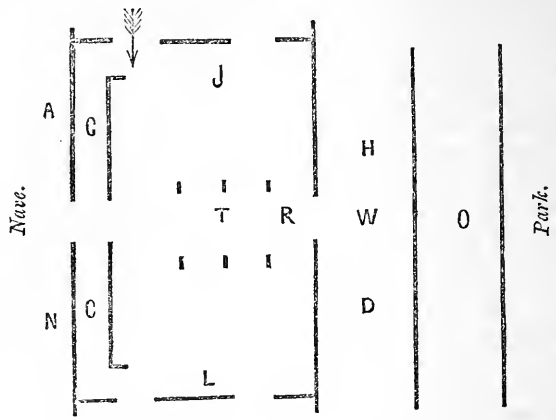
tions of what he has witnessed of the triumphs of pagan art are still vividly before his mind, and while he pays the tribute of his admiration to the patient artists of Italy as they place side by side their burning gems, or smooth with a soft sculpture the jasper pillars that are to reflect a ceaseless sunshine, and rise into a cloudless sky, let him with not less reverence stand by the works of the ruder northman, who, "with rough strength and hurried stroke, has smitten an uncouth animation out of the rocks, which he has torn from the moss of the moorland, and has heaved into the darkened air the pile of iron buttress and rugged wall, instinct with work of an imagination as wild and wayward as the northern sea—creatures of ungainly shape and rigid limb, but full of wolfish life, fierce as the winds that beat, and changeful as the clouds that shade them."

Among the works of art in this court, either executed in Germany by the mediæval artists of that country, or under their immediate influence, the first which arrests attention is the splendid doorway of Frauen Kirche at Nuremburg. This doorway is remarkably interesting as containing in its two large basreliefs, some of the finest specimens of the two greatest masters of German art of the fifteenth century, Adam Kraft and Veit Stoss. The doorway is 25 feet in height, and is modelled from the original. The most important monuments in the court are the series of Archbishop Electors of Mayence, the earliest of these reverend prelates being Siegfried von Epstein, who exercised his important politico-theological functions in the later part of the thirteenth century. The last of the series is Urich von Gemmingen, a most valuable and interesting example, displaying as it does the transition from the mediæval to the classic forms, a revival of the taste for which commenced at the end of the sixteenth century. The two earliest of the series are seen on the side adjoining the Byzantine court, and produced in their original colours, are probably the most authentic and valuable examples extant of the application of polychromy to monumental works of this class. The archbishop is represented in a curiously constrained position, holding a crown in each hand over two smaller figures by his side, and representing the two emperors, whom the good prelate had the honour of crowning during his lifetime: the other archbishop elector has three figures on his monument; of these, however, two only are emperors, the third representing the prime minister.

Passing under the doorway which separates this vestibule into two compartments of 24 feet square, the visitor will see around the upper part, in a series of small arches, a quantity of specimens of the German style of foliage, and others illustrating their mode of treating small panel subjects. The most conspicuous of this series are the eight curious dancing fools from the Rath Haus at Munich. The attitudes and expressions of these figures are admirable, and highly characteristic. The monuments in this

compartment are entirely selected from the principal works of the artists of the Nuremberg school, including those of Adam Kraft and Veit Stoss. There is a copy of Adam Kraft's elaborate monument from the Church of Our Lady, and with three characteristic bas-reliefs representing "The Last Supper," "The Agony in the Garden," and the "Betrayal," from the church of St. Sebald. The masterpiece of Veit Stoss is reproduced, in the celebrated garland from the Castle Chapel at Nuremberg. In the examination of this marvellous work of art the visitor might profitably employ himself for hours. It contains within the garland the whole history and life of our Saviour, and upwards of 100 portraits of holy saints and fathers of the Church. On each side are square medallions representing the various incidents of the life and passion; and on the lower portion is a curious representation of the miseries and torments of hell, where each description of vice is punished with fearful and grotesque appropriateness by remorseless demons. The happiness of the saints in Paradise is a more pleasing and not less elaborate work of art. By the side of this interesting work is one of the most beautiful of the celebrated stations on the *via crucis*, or road to the cemetery at Nuremberg, by the same artist. A fine work of Peter Vischer, representing the coronation of the Virgin in bronze, from the church at Erfurdt, is deserving of minute and careful inspection. Placed near this court, will be seen an admirable illustration of the style of German Gothic art, in the bronze tablet of the tomb of Louis, Emperor of Bavaria, from the cathedral at Munich. This monarch, at first King of Bavaria, was elected Emperor of Germany in 1315, in opposition to an Emperor of the House of Hapsburg; and during almost the whole of his reign he was actively engaged in hostilities with the kingdom of Austria and neighbouring provinces. The last war in which he was engaged, was one against the territories of John, the old blind King of Bohemia, who, at the Battle of Creçy was, at his own earnest request, led to the ranks of the enemy in order that he might have "one stroke with his trusty sword," and who was slain, with his valiant knights who accompanied him. Previous to this famous battle, the old king, annoyed at a portion of his provinces going into the possession of the Emperor Louis, had induced Pope Clement VI. to excommunicate and depose him from the Empire; and, while marching at the head of his army to invade Bohemia, Louis was seized with apoplexy, and died in 1347. He was buried in the cathedral at Munich. At the back of the German Gothic court is a copy of the celebrated entombment at Mayence Cathedral; a work of art which was most justly regarded by the late Mr. Pugin, as expressing in a higher degree than any with which he was acquainted, that religious sentiment and subdued emotion which ought ever to be the grand essential in the treatment in fine arts of all subjects of a religious character. The opinion of Mr. Pugin will be fully confirmed by even the most superficial of visitors.

ENGLISH, OR NATIONAL ART COURT.



A Abbey front (Tintern).
C C Cloister.
D Sir Giles Daubeney.
H Henry IV. and Joan of Navarre.
J John of Gaunt's window.
L Lichfield door.
N Netley Abbey.
O Open colonnade.
R Rochester doorway.
T Tombs.
W Walsingham font.

To the visitor whose pride and boast it is to know that English blood flows through his veins, there is certainly no court which will be examined with greater interest than that devoted to the illustration of the early art of this country. The various cathedrals and monastic edifices of the country have, thanks to the active energies of Mr. Digby Wyatt, yielded up their most elaborate and interesting works to instruct the student of the present day. Some of the most characteristic monumental productions of early English art are placed in this court and the nave. Many of these represent the best style of early English art in this country. The tomb of Bishop Bingham, from Salisbury Cathedral, presents some of the most beautiful English details to be met with in the country; it is the work of the fifteenth century. There is also a fine monument of one of the Beauchamp family, from the interesting old church of St. Mary, at Warwick. It was intended that the famous Percy shrine, from Beverley Minster, should have been placed by the side of these tombs, as a fine illustration of the state of art in the fifteenth century. The narrow-minded churlishness of one of the wardens of the minster, however, effectually prevented the object being carried out, notwithstanding all the laudable

exertions of the Archbishop of York, the Duke of Northumberland, himself the representative of the Percy family, Sir C. Barry, Archdeacon Wilberforce, and many others, who each and all vainly endeavoured to soften the heart of this village Dogberry.

Eight tombs of the Templars, from the Temple Church, so ably restored by Dr. Richardson, are remarkably interesting illustrations of the state of art, at the time when the nations of Europe went forth at the bidding of Peter the Hermit, to rescue the shrine of the nativity from the hands of the Saracens. Here lies Geoffrey de Magnaville, that "bold and bad baron," who, in the reign of Stephen, died excommunicate, and whose body for many long days hung upon a tree in the Temple Gardens. By his side lies the great Protector, Earl of Pembroke, he who, by his sage wisdom and prudent councils, assuaged the divisions which rent the kingdom after the death of the weak and vacillating Plantagenet, John. Near him are his sons, Gilbert and William Marshall, Earls of Pembroke. The one has his sword sheathed; he has "fought the good fight" at Ascalon, and witnessed the rout of Mahometan bands; the other has drawn his sword, and intends to plunge it deep in Moslem blood, but death arrests the gallant Templar upon his native soil, and he is deemed worthy of a tomb in the famous Round Church of the Templars, built by the bold Heraclius, the Patriarch of Jerusalem. Robert de Roos, Earl de Roos, *alias* Fursan, is also a Templar, but he, instead of settling disputes between Turks and Christians at Jerusalem, assisted in achieving, on the field of Runnymede, a bloodless victory over a tyrannous monarch, and securing to a people the great charter of its rights and liberties. The remaining three monuments are those of Templars, who probably either gave battle in Palestine, or rendered good service to their native land; the hand of time has, however, swept from their sculptured graves the records alike of their titles and of their valiant deeds. The colouring of these monuments will be in accordance with the traces found upon the remains; and, as in the originals, the glass eyes of the mailed warriors stare ghastly from those holes, "where eyes did once inhabit."

Turning from monumental to architectural illustrations of our national art, the visitor sees along the façade of the mediæval courts facing the nave, various architectural features taken from the ruins of Tintern, Netley, and Guisborough Abbey, and the triforium of Lincoln Cathedral. Here may be realized something of that Gothic element which in earlier times reared itself in vast towers and lofty pinnacles, which flung itself into dark and shadowy aisles, which threw out massive buttresses, which built up in clustering columns long vistas as of forest trees, which shaped vast pointed arches and groined doorways—it is a style vast and grand in conception, and gloomily vigorous in execution. But while planning long drawn aisles, and lofty naves, picturesque transepts, Gothic art did not disdain minuter details in the adorn-

ment of the vast cathedral edifice,—rose, oriel, and lanced windows poured in floods of rich and mellowed light through their delicate and ever-varying traceries, and whether in the richly-carved screens, in the chandeliers which lit the darkened shrine, or in fonts, sedilia, lecterns, or in the holy vessels of worship, or in the silent arcades of their cloisters; everywhere the Christian worshipper beheld with reverent gaze the productions of a rich and glowing fancy, or the traces of the deep and reverential love of nature which animated the sculptors and artists of this gloriously devised Gothic architecture.

Netley Abbey once reared its lofty towers amid the gentle slopes, the rich verdure, and luxurious foliage, near the broad expanse of the Southampton water, and the mariners of early days once looked upon the towering pile as the landmark to guide them to their wished-for port, and listened with reverend joy to the vesper-bell, which told of "ocean's wanderings o'er." In the beginning of the last century, a builder of Southampton purchased the deserted abbey, intending with its hallowed material to construct for himself a town house; he disregarded the omens, and the advice of his friends, and while removing a portion of the building, the keystone fell from one of the windows on to his sacrilegious head, and killed the ruthless spoiler. And sad should be the fate of those who dare to remove the few remaining landmarks of antiquity in our native land! Near the banks of the Sylvan Wye, and in the pastoral and romantic vale of Tintern, stands all that now remains of the abbey, founded by Walter de Clare in 1131. Its lofty tower and the roof of the church has fallen, but its gray walls still afford evidence to show that for beauty of composition and delicacy of execution, Tintern Abbey was not excelled by any ecclesiastical edifice of the twelfth century. We never strolled among these ancient ruins without thinking,—

> "Here in this open court,
> Which now lies naked to the injuries
> Of stormy weather, some lie interred
> Loved the church so well, and gave so largely to't,
> They thought it should have canopied their bones
> Till doomsday: but all things have their end;
> Churches and cities, which have diseases like to men,
> Must have like death that we have."

Let us now enter the restored western doorway of this venerable and picturesque abbey, and inspect some of the *chef-d'œuvres* of English and mediæval artists. Before crossing over to the beautiful restoration of the Walsingham font on the opposite side of the court, rich in its varied colours, and full of elaborate detail, the visitor enters a charming cloister, with its groined roof, coloured as our forefathers once delighted to decorate their edifices, ere an age of "white-wash" had familiarized us with the cold, white ceilings

of modern times. As the visitor gazes through the open arches of this cloister upon the rich treasures of the court, he will appreciate in some degree how true it is that—

> "———While cloistered piety displays
> His mouldering roll, the piercing eye explores
> New manners, and the pomp of early days;"

and with Warton he will say,

> "Nor rough, nor barren are the winding ways
> Of hoar antiquity, but strewn with flowers."

The pavement of this cloister is of encaustic tiles from ancient examples, and at the extreme end on the right is a copy of the interesting doorway of Prior West's Chapel at Ely, with some elaborate ironwork decorations. Mr. W. Digby Wyatt, in his interesting work on "Metal Work," gives a beautiful illustration of this door, and in speaking of it, states that "There is scarcely a single chapel in the whole of England which offers more attractions, than that of Bishop West's Chapel at Ely. The delicacy of the stone carving is almost marvellous; while the iron-work, though not so minute as we generally find it, is still admirable. The ironwork, as well as the stonework, exhibits traces of German design. In examining the ornamental portions of the metal work, we shall find that those parts which imitate foliage are most deserving of attention. The roses are formed of several pieces of thin iron cut out, and then turned up at the edges; while the nail, which passes through and holds them together, has its head worked into the form of the petals of the flower." At the other end of the cloister is the beautiful entrance to Prince Arthur's monument at Worcester Cathedral. This prince was the eldest son of Henry VII. At sixteen years of age he was married to Catharine of Arragon, but died a few months after, much regretted by the nation. So unwilling was the avaricious monarch to let the rich dowry of the Infanta go out of the family, that he married the widowed princess, then but eighteen, to the brother of the deceased husband, when he had but just completed his twelfth year. In an open panel above the tomb, casting its "dim religious light," is a small painted window by Mr. Hardman, of Birmingham.

Entering the court from the cloister, we now stand among the restored tombs of the Plantagenet monarch of Westminster Abbey. There is the tomb of Henry III., he who, with a good disposition, but small ability, wielded the sceptre of England for fifty-six long years. By his side is the tomb, unequalled for beauty, of his good Queen Eleanor, daughter of the Count of Provence, she who suffered such gross insults from the powerful citizens of London, who, with unmanly and cruel feelings, thronged old London Bridge, and shouted as the Queen passed along the river on her

way to Windsor, "Drown the witch!" pelted her with rotten eggs and dirt, and who provided themselves with huge stones to drop on the state barge, if she should attempt to shoot the rapids of the bridge, and compelled the frightened Eleanor to return to the Tower. By the side of the Queen will be placed the tomb of her valiant son, Edward I., the conqueror of Wallace, the hero of Scotland, who commanded that his bones should be carried as a banner at the head of his invading army, in order that the "treacherous Scots" might yet tremble at the name and sight of Edward,—the same monarch who, having conquered Llewelyn, the last of the Welsh monarchs, heard

> "From a rock, whose haughty brow
> Frowns on old Conway's foaming flood,
> Robed in the sable garb of woe,"

the aged and venerable bard give utterance to his vengeful malediction—

> "Ruin seize thee, ruthless king!
> Confusion on thy banners wait!"

Next, in chronological order, is the tomb of the inoffensive and unfortunate monarch, Edward II.—defeated at Bannockburn, deserted and dishonoured by his wife, and then cruelly murdered by the orders of the guilty Isabella in Berkeley Castle. After his death three several monasteries refused to receive the corpse, till at last the good Abbot Thokey, daring the vengeance of the regicides, appropriated a spot of earth for the reception of the bones in Gloucester Cathedral. Due punishment overtook the murderers, and the ill-fated monarch was soon remembered only with pity and veneration, and his shrine, decorated with a heart and an urn of gold by Queen Philippa, and with a golden cup, presented by the Black Prince, shortly became one of the most popular and respected in the country. The tomb of the heroic Edward, the Black Prince, from Canterbury, is a monument which will be regarded with interest, not only on account of its beauty, but as a monument of one who, by his illustrious character, unstained by a blemish, was "qualified to throw a lustre not only on that rude age in which he lived, and which nowise affected him with its vices, but in the most shining period of ancient or modern history." To the tears of his spouse Joan, the "Fair Maid of Kent," was added a nation's grief, when the hero of Crecy expired, after a lingering illness, in the forty-sixth year of his age, and on the 8th of June, 1376.

Near the royal tombs is the interesting monument of William of Wykeham, once a poor boy, placed in the great grammar school of Winchester by a generous lord. His early dreams were filled with visions of lofty towers, and flying buttresses. His monarch, Edward III., saw and admired his growing genius, and the

youthful architect was made Bishop of Winchester, that diocese which his predecessor, the shrewd William of Edington, preferred to the archiepiscopal throne, because "though Canterbury had the highest rack, yet Winchester had the deepest manger." New College, Oxford, and the great school at Winchester, attest to the present day the great skill and munificence of the architect-bishop, and his desire to promote the cause of education among the people of his native country. A copy of the original charter, preserved in the British Museum, of New College, states, that "his chiefest reason" for desiring to establish a college at Oxford "was because of the scarcity of scholars in the nation, having been swept away by great pestilences and wars." The jury appointed to inquire whether the king would suffer any danger from granting the land for the site of the New College, agreed—and this affords curious evidence of the state of the country at that time —"That the site was a common way or lane, and plots of ground which were not built on or included for a private use, but were full of dirt, filth, and stinking carcases; and also there was a concourse of malefactors, murderers, and thieves, and that scholars and others were there often wounded, killed, and lost; and that the said plots of ground lay waste, and long time deserted from the inhabiting of any person." The license for the college was obtained in 1379, from Richard II., and the society took possession of the noble residence on the 14th of April 1386, and the seventy scholars, for whom the college was founded, were solemnly laid under the penalty of an anathema, and the indignation of Almighty God, if they should offend the statutes framed for their guidance and regulation. Originally founded for the education and benefit of seventy poor scholars, the institution has utterly and shamefully departed from the purposes for which it was originally founded; and at the present time, even the small measure of reparation due to the mass of the people of England, proposed by the Government for the reform and extension of colleges and universities, has in no place been met with such determined hostility as from the fellows of New College, Oxford. Near the tomb of Wykeham is the exquisite Canteloupe shrine from Hereford.

The walls of the court are covered with a beautiful collection of specimens of every time, nearly all of which are faithfully restored, and afford the visitor, as far as it is possible, an accurate idea of the appearance of these monumental remains when seen in their pristine beauty. The principal features in the upper part consists of the series of angels which form the angel choir of Lincoln Cathedral. In the niche of the various angels are placed a series of beautiful figures from the west front of Wells Cathedral, which a short time since were so beautifully illustrated by Professor Cockerell, and which, in the present instance, have been restored under the superintendence of Dr. Richardson—a gentleman whose labours in the Temple Church, and other places, have shown with how much safety the delicate work of restoration may be confided to

his care. Conspicuous among these is the richly-illuminated doorway of the Chapter House of Rochester Cathedral, as suggested by Mr. Cottingham. The lower part of the central panels is filled up with a rich quatrefoil with lions' heads and rosettes. Upon the right side, supported by a fine corbell, is a figure emblematic of the Mosaic dispensation, represented with the eyes covered, and holding in his hand the two tables of the law; on the opposite side, the figure with the mitre represents St. Augustine, the first preacher of Christianity in this country. Above these are monks engaged in studying the gospels, and angels employed in singing and praying, while at the top of the doorway the small naked figure represents the human soul—the object of the solicitude and care of holy monks and ever-youthful angels—happy in the enjoyment of the pleasures of Paradise. The smaller panels between the mouldings are enriched with a number of heads, the expressions of the faces of many of which are curious and grotesque. The outside of the small panels is formed by a trellis of vine, the leaves of which appear through small loop-holes, and the springing of the arch is supported by small diapered staff-poles. The spandrils of the arch are richly ornamented in gold and bright colours.

At the end of the court on the left, as the visitor enters from the nave, is a beautiful window of John of Gaunt, from the castle-yard at Lincoln, which has been recently removed from its original position by Lord Brownlow. Near it, in the corner, is a fine canopied niche reaching the whole height of the court, taken from Bishop Auckland's chapel at Ely, and forming one of the richest specimens of its kind in the country. On the principal side of the court, and ranged beneath a beautiful series of bosses from Tewkesbury, representing the "firmament of heaven," are the Easter sepulchre, from Hawton Church, in Lincolnshire, two compartments of the Lady Chapel at Ely, and a portion of the arcades and sedilia from York and Southwell minsters.

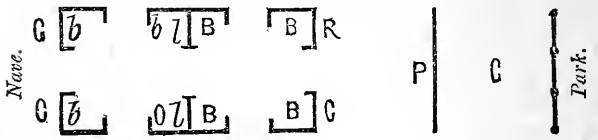
At the opposite end of the court, and facing the window of John of Gaunt, is placed one of the western entrance doors of Lichfield Cathedral, representing the most perfect example of the elaborate iron work of this country, during the period of the thirteenth century. The graceful form of this iron work, and the great support which hinges of this kind must have given to heavy doorways, are evident, and they show not only the skill, but the practical uses to which in earlier times the artists applied their love of decoration. Near this door, is a portion of the iron-work which protects the tomb of Queen Eleanor, in Westminster Abbey, which was recently rescued from the neglect in which it had lain for ages, and so admirably restored by Dean Buckland. The tomb of Humphrey de Bohun, from Hereford Cathedral, near the door, is one of the most graceful and beautiful of monumental works of the fifteenth century; the two carved figures exhibit a purity of style and power of execution not to be found in any other work of that period.

At the back of this court is placed a remarkable restoration of the celebrated Walsingham Font. At an early period of the existence of national art in this country, the shrine of Our Lady at Walsingham was even more visited than that of its great rival of Thomas a Becket, at Canterbury; and foreigners came to this little village in Norfolk, from all parts of the world, guided thereto by the "miraculous light of the milky way." Henry VIII., in the second year of his reign, walked barefoot to Walsingham, from an adjoining village, and laid down his offering on the glittering shrine. A few years afterwards, the same monarch removed the sacred shrine; and, actuated partly by the fury of a renegade, partly by the zeal of a convert, and in the exercise of his new authority as Defender of the Faith, did, to the horror of his Roman Catholic subjects, publicly burn the sacred shrine of Our Lady at Chelsea.

A fine copy of the famous work, "The Coronation of the Virgin," from Wells Cathedral, occupies a place near to the Walsingham Font. There are also the tombs of King Ina and Queen Ethelburga, and Anne of Bohemia, with that of another English monarch whose name must be added to the long array of those who came to their death by violent means. All the prudence and courage which the young King Richard II. displayed in the interview with the famous Wat Tyler, and upon other critical occasions, could not avail to keep "the mounting Bolingbroke" from ascending his throne, or ward the fatal halberd which stained with Richard's blood the gloomy dungeon of Pomfret Castle. The other monuments at the back of the court are those of Sir Giles Daubeny, and of Henry IV. and Joan of Navarre.

In the front of the court, approaching the nave, are three small, curious-looking kneeling figures—they are from the tomb of Ulrich von Gemmingen; and there are also some larger figures, one of which is a lady with a richly-embroidered dress. These latter are four of the principal figures which surround the tomb of the Emperor Maximilian, at Inspruck.

FRENCH AND ITALIAN GOTHIC COURT.



B B B B Bas-reliefs from the choir of Notre Dame, Paris.
b b b Bas-reliefs and figures from St. Peter's, Rome, and the Campo Santo at Pisa.
C Monuments from Chartres Cathedral.
C C Guisborough Abbey.
l l Arches from the arcades at Lincoln.
O Or San Michelé, altar frontal.
P Monuments from Notre Dame, Paris.
R Monuments from the Cathedral at Rheims.

Passing from the works of Gothic art in England, we now proceed to inspect the works intended to illustrate the state of art in the mediæval ages in France and Italy. The two small courts next visited are set apart for this object. In one court, Gothic art is principally illustrated by works of an architectural character; and, in the other, chiefly by models from sculptures. That style of design known as the Gothic had in Italy but a short-lived existence; the artists of that country were among the latest to adopt the pointed and angular characteristics of the style, and they were the earliest to return to an imitation of classic types. The most conspicuous work is a copy of the magnificent altar frontal of San Michele in Florence, richly ornamented with specimens of that glass tesselation, which prevailed so largely in the decorations of Italian architecture at this period. As proofs of the extent and perfection to which this style of ornamentation was carried at an early period, Mr. Hope, well known for his extensive and valuable researches in all matters relating to ecclesiastical architecture, states, that "sometimes our Saviour is represented in these mosaics by a lamb exalted on a pedestal, and surrounded by a nimbus, to whom twelve sheep, representing the twelve Apostles, pay homage; at other times, stags approaching a vessel, stand for the souls of the faithful, thirsting after the living waters; these souls, while here below, appear in the shape of doves; after the resurrection, and in a glorified state, in that of the phœnix. Often, too, are represented troops of martyrs, male and female, distributed to the right and left, worshipping the more colossal central figure: if of our Saviour, or of the patron saint, standing on the clouds, or if of the Virgin, sitting on a gemmed throne.

The sculptures illustrate, in a most remarkable and interesting manner, the gradual transition from rude Gothic art to that more

refined study of the human figure, which, at a later period, took place upon the discovery and exhumation of the beautiful remains of classic art at Rome and other cities, and which led in so marked a manner to that change in style to which the name of the Renaissance has been applied. One of the most interesting figures in the Italian courts, is that of a Madonna by Bembino, from the church of La Spena, and a beautiful figure of "Our Lady," and St. Peter, from the reredos of the altar of the same church. Some beautiful figures from the Campo Santo, at Pisa, are also deserving of the visitor's closest examination.

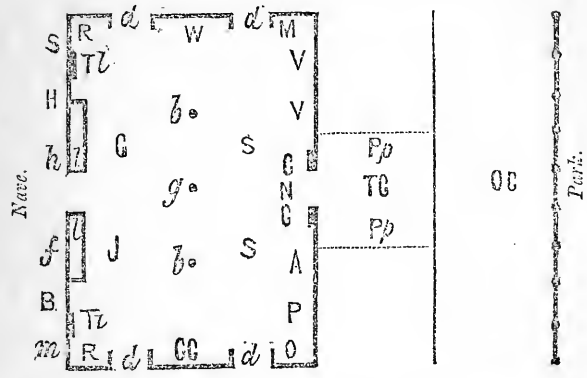
The principal sculptures of France, are illustrated by a complete and interesting series of copies from the bas-reliefs from the choir of Nôtre Dame Cathedral, in Paris. The casts, which have been most ably and carefully made by M. Viollet le Duc, of Paris, are twenty-three in number. These curious and highly valuable sculptures, were commenced by Jehan Roux, and completed by Jehan le Boutelier, in 1352; and they represent passages in the life of Christ. Commencing with the visitation of the Virgin, the sculptures proceed to illustrate the calling of the shepherds to the manger, the nativity, the adoration of the magi, the massacre of the innocents, the flight into Egypt, the presentation in the Temple, Christ in the midst of the doctors, the baptism of Christ, the marriage at Cana in Galilee, the entry of Christ into Jerusalem, Christ washing the feet of his disciples, the last supper, Christ on the Mount of Olives. There were, originally, four bas-reliefs, which followed next in order, but which were destroyed during some recent alterations made in the arches of the choir next to the high altar; the subjects were, the crucifixion, the entombment, the resurrection, and the ascension of Christ. After this break in the series, the next casts which are shown in the court are—Christ's interview with Mary Magdalene and the holy women, Christ appearing to the apostles after his resurrection, Christ and the two disciples in the way to Emmaus, Christ at table with the disciples, breaking bread, Christ again appearing to the disciples, the credulity of St. Thomas, the miraculous draught of fishes, the mission of the apostles, and finally, Christ giving his apostles the benediction before his ascension.

As a corresponding feature to the fine old Lichfield door in the English court, is placed in the French vestibule the west door of the Cathedral of Nôtre Dame de Paris, almost the oldest ecclesiastical edifice in France. The dimensions of this cathedral, large as the building appears to visitors in Paris, would very nearly admit of its being erected in the transept of the Crystal Palace. The length of the cathedral is 390 feet, width at transept, 144 feet; height of vaulting, 102 feet; height of western towers, 204 feet—nearly the same as the roof of the Crystal Palace transept; width of west front, 128 feet; length of nave, 225 feet—width, 39 feet; roof, 356 feet in length, and rising 30 feet above the vaulting. The weight of lead which covers the roof is 420,000 lbs. The whole of the work

about this structure is remarkable for its great delicacy and finish. The west front, from which the door now shown is taken, is the finest and most remarkable feature in the building, the sculptures upon it representing the angels sounding the last trump, the tombs opening, and the dead rising to judgment. A second series shows the separation of the righteous from the wicked; and a third, our Saviour seated on his throne, worshipped by the Virgin and St. John the Evangelist, and accompanied by angels bearing emblems of the Crucifixion. On the arch are represented figures of Moses and Aaron, the Saviour treading the wicked beneath his feet, whom Satan is dragging away to hell, and the rider on the red horse at the opening of the second seal, the blessedness of the saints, and other allegorical subjects. The remarks of the late Mr. Pugin, in his admirable work on "The True Principles of Christian Architecture," expresses clearly and forcibly the merits of doors of this kind, and how admirably the design is suited to the material and the purpose for which it was constructed. "Hinges, locks, bolts, and nails," he says, "which are always concealed in modern designs, were rendered in pointed architecture rich and beautiful decorations; and this not only in the doors and fittings of buildings, but in cabinets and small articles of furniture. The early hinges covered the whole face of the doors with varied and flowing scroll-work. Of this description are those of Nôtre Dame at Paris (one of which is now before the visitor), St. Elizabeth's Church, at Marburgh, the western doors of Lichfield Cathedral (in the English mediæval court), the Chapter-house at York, and hundreds of other churches, both in England and on the continent. Hinges of this kind are not only beautiful in design, but they are practically good. We all know that, on the principle of a lever, a door may be easily torn off its modern hinges by a strain applied to its outward side. This could not be the case with the ancient hinges, which extended the whole width of the door, and were bolted through in various places. In barn-doors and gates these hinges are still used, although devoid of any elegance of form; but they have been most religiously banished from public edifices as unsightly, merely on account of our present race of artists not exercising the same ingenuity as those of ancient times in rendering the useful a vehicle for the beautiful."

The wall at the back of the court is covered with a collection of most interesting monuments from the Cathedrals of Rheims, Chartres, and Nôtre Dame.

THE RENAISSANCE COURT.



A Altar, Certoza at Pavia.
b b Bronze wells, Ducal Palace, Venice.
C C Caryatidal figures, Jean Goujon.
d d d d Doorways from the Doria Palace.
G David, by Donatello.
G G Ghiberti gates.
g Vase from Cnatcau Gaillon, and figures from the tomb of the Emperor Maximilian at Innspruck.
H B Hotel Bourgtholde, façade of.
h f Frieze—Henry VIII and Francis I., or the Field of the Cloth of Gold.
J St. John, by Donatello.
l l Loggia of the Certoza, Pavia.
M Carved door, St. Marclou, Rouen.
N Nymph of Fontainbleau, by Cellini.
O Carved door, Hotel de Ville, Oudenarde.
O C Open colonnade.
P Piscina and high altar, Certoza.
P *p* Ceiling of Pietro Perugino.
R R Carved doors, Rouen.
S *m* Frieze—seven acts of mercy.
T G Three Graces, by Germain Pilon.
T *i* Tomb of Icaria di Caretta, Luca.
T *l* Tomb of Roberte Legendre, wife of Louis de Poncher.
V V Monuments of the Visconti family.
W Window of the Certoza, Pavia.

The visitor now passes from the latest phase of Gothic art to the earliest revival of classic styles. He leaves behind the gloomy sublimity of the Gothic arcade and cloister, and contemplates no more the solemn mysteries of an age when, from ecclesiastical edifices, vast pyramids of towers of chaste and beautiful tracery ever soared heavenward, and pierced the clouds with their delicately-tapering spires—when richly-groined vaulted roofs—miracles of art—reposed upon long avenues of slender clustering columns; —when, upon shaft and capital, deep retiring doorways, silent recesses, solemn altar-pieces, and contemplative cloisters, the loving hand of mediæval sculptors had carved with lavish profusion the works of an exuberant fancy, full of deep expression, tranquil mystery, and joyous loveliness;—when a pious and reverential spirit pervaded the wondrous building, suited to a time when the cathe-

dral pile resounded and spoke like God from the clouds, from its lofty towers, or alternately sorrowed and rejoiced like man in the tones of the deep-sounding organ. The style adapted to the long-drawn processions of mitred abbots, and the imposing solemnities of the Catholic worship, gives place to a system fitted for the luxury of the palace and the pomp of regal and courtly magnificence. The erect and formal appearance, and the close, clinging drapery of Gothic statues, suited only to the peculiar forms of the architecture they were designed to decorate, are in the Renaissance exchanged for the graceful imitations of Grecian art. Instead of effigies of holy abbots, with their hands folded in prayer, and cross-legged crusaders, we have the exquisite works of Michael Angelo, rivalling the best productions of antique art, and subjects sacred to the Christian religion treated by Ghiberti, with all the vigour and beauty of the choicest impersonations of Greek mythology.

The "Renaissance" is a style which, according to the poetic and perhaps too enthusiastic eloquence of Mr. Ruskin, is "base, unnatural, unfaithful, unenjoyable, and impious—pagan in its origin, proud and unholy in its revival, proud and unholy in its old age, yet making prey in its dotage of all the good and living things that were springing around it in their youth—an architecture fit only to make plagiarists of its architects, slaves of its workmen, and Sybarites of its inhabitants—an architecture in which intellect is idle, invention impossible, but in which all luxury is gratified and all insolence fortified. The first thing we have to do is to cast it out, and shake the dust of it from our feet for ever. Whatever has any connection with the five orders, or with any of the orders—whatever is Doric, or Ionic, or Tuscan, or Corinthian, or Composite, or in any way Grecised or Romanised—whatever betrays the smallest respect for Vitruvian laws or conformity with Palladian work, that we are to endure no more. To cleanse ourselves of these cast clouts and rotten rags, is the first thing to be done in the court of our prison."

Between Mr. Ruskin, who, with all the zeal of an iconoclast, would destroy the works of a pagan character, and Mr. Petit and others, who would remove all traces of the Gothic or early Christian, but neither of whom have offered a substitute for them, the world would soon be cleared of its public edifices and private buildings, and its houseless inhabitants compelled to seek the airy shelter of sylvan architecture, or the gloomy caverns of Nature's production. The visitor, however, in spite of these denunciations, will probably not be deterred from entering upon an examination of the many exquisitely beautiful works in this court. Before doing so, it will aid the visitor if he will bear in mind that this revival of classic art dates from about the time of the Venetian conquest of Constantinople in 1204. At first, the revival confined itself to the classic orders of architecture, and did not fully manifest itself in ornament and decoration until the fifteenth century, when a style was created, known as the "Cinque-cento." A careful observer will notice in

the illustrations of the revival of classic art in these courts four distinct epochs, or styles. The earliest period, that of the fourteenth century, may be recognized by the general use of foliage conventionally treated, and the use of the scroll-forms peculiar to the Byzantine style. The fifteenth century is marked by the introduction of the natural floral imitations of Ghiberti on the gates of the Baptistry at Florence. The sixteenth century witnessed the production of a style which, like the "Composite" in architecture, combined indiscriminately all the elements of other styles, and to this system the vague name of the "Renaissance" has been given. In this last combination may be seen classical orders and ornaments, Byzantine scroll-work, Moorish tracery and interlacings, scrolled shields, strap-work, natural imitations of animal and vegetable forms, and grotesque arabesques. Some of these styles had their origin in Italy; in France, the revival of art took the form of the mixed, or "Renaissance;" and in England it developed itself in a style known as the Elizabethan, or Tudor.

The Ghiberti Gates.—At the opposite end of the court, as the visitor enters from the Gothic vestibule, is an exquisite copy of the bronze gates of Lorenzo Ghiberti from the Baptistry at Florence, and which Michael Angelo declared—an opinion in which the visitor will concur when he has examined them—were worthy to be the entrance of Paradise; gates before which Moore's lovely Peri, the "nymph of a fair but erring line," might have stood disconsolate, and

> "Wept to think her recreant race
> Should e'er have lost that glorious place."

These gates, cast in bronze, may be fairly considered as worthy rivals of a magnificent gate, upon which Andrea Pisano was employed for twenty-two years, and to which, it has been said, we are indebted for "all that is excellent, difficult, or beautiful, in the workmanship of succeeding artists." The Company of Merchants at Florence determined upon the execution of a door in bronze which should rival those of Pisano. Seven artists were selected from the number, who were to produce a panel for the door, finished in bronze, on the subject of the sacrifice of Isaac by Abraham. Ghiberti's design was considered so admirable by Brunelleschi, his greatest competitor, that he solicited that the sculptures for the gates should be left entirely in the hands of Lorenzo Ghiberti. The door, which shows only one side, contains ten panels, the exquisite bas-reliefs upon which are founded upon subjects taken from the Old Testament history. They represent the death of Abel, Noah and his family leaving the ark after the Deluge, the sacrifice of Isaac, the blessing of Esau, the interview of Joseph with his brethren, Moses receiving the tables of the law, the Israelites before the walls of Jericho, David and Goliah, the meeting of Solomon and Queen Sheba, and the marriage of the Virgin. On the upper part

of the doorway is represented the creation of the world, and upon the sides are charming figures of flowers and birds, interspersed with graceful arabesques. The bronzing of the present copy of the door was the work of M. Logit, of Paris, and reflects great credit upon the ability and taste of the artist. Mr. Digby Wyatt, in his remarks on "Metal work and its Artistic Design," has the following remarks upon this gate and the works of Ghiberti:—

"Through all that Ghiberti has executed, there runs a strain of grace and beauty which has, perhaps, never been equalled. The qualities in Ghiberti's disposition we may most admire are his incessant labour to make everything as good as it could be, and his perfect sympathy with those natural laws of convention which limit and define the effects peculiar to the material with which he deals. His design was studied and drawn, and altered and re-drawn, and modelled and drawn again, and re-modelled and altered, until the utmost simplicity and beauty were combined. Then, when the casting was made, every little imperfection was smoothed down, and every tenderly-modelled surface and texture brought out; until at last the whole appeared, as Vasari says, to have been rather modelled 'by a breath,' than by casting and chasing."

The Nymph of Fontainbleau.—On the side of the court facing the entrance from the nave is an architectural arrangement, in which the most important work executed by Benvenuto Cellini for his patron, Francis I. of France, and two remarkably fine Caryatide figures by the famous but ill-fated Jean Goujon,* are combined, and exhibit together fine examples of the best style of the Renaissance art in France. Benvenuto Cellini, in his interesting and amusing autobiography, thus describes the design which he had prepared. After describing the form of the palace gate as an "odd mixture of greatness and littleness," he states: "I gave a beautiful proportion to the gate, and over it I put an exact semicircle, with some agreeable projections on each side. Instead of two pillars, which the order of architecture seemed to require for their support, I placed two satyrs. One of these, something above half-relief, appeared to sustain with one arm that part of the pile which touched the columns; in the other, it held a large, massive club: the countenance was so stern and fierce, as to strike terror into the beholders. The other had the same attitude, but differed from the former in the head and some other parts; it held in its hand a whip, with three bells fastened to certain chains. In the half-circle, I represented a female figure in a reclining attitude, with her left arm upon the neck of a hart, which was a device of the king's. On one side of her I designed, in half-relief, little goats, boars, and other wild beasts; and on the other, in stronger relief, greyhounds, and other dogs of different sorts, such as are to be seen in the delightful wood where the fountain rises." This work, and some others submitted at the same time, so pleased his majesty, that he immediately sent for his treasurer, and ordered that Benvenuto should be sup-

* He died of starvation!

plied with the necessary funds, however large they might be; and, clapping the artist on his shoulder, said, "Mon ami, I do not know which pleasure is the greatest—that of a prince who meets with a man after his own heart, or that of the artist who finds a prince that gives him all the encouragement necessary to carry his great and sublime ideas into execution." Benvenuto, with the true spirit of the courtier, replied, that if he was the artist meant by his majesty, the happiness was all on his side. Francis answered, laughing, "Let us, then, reckon it equal on both sides." The luckless artist, however, incurred the lasting displeasure of the beautiful Madame D'Estampes, the mistress of the king, because he had neglected to submit the designs to her grace. Upon hearing of the offence he had inadvertently given, the artist endeavoured to propitiate her good graces by presenting her with a very beautiful gilt cup; his name was accordingly announced, and the offended lady replied haughtily, "Tell him to wait." Cellini accordingly waited some time, till, he says, "perceiving that it grew late, hunger provoked me to such a degree that, unable to resist its cravings any longer, I gave the lady a hearty curse; and going directly to the Cardinal of Lorraine, made him a present of the cup, begging that he would stand my friend with the king, and prevent me being deprived of his good graces." The original Caryatide figures which support the work of Cellini are preserved in the Louvre at Paris, and are justly remarkable for their great beauty.

At the side of the court opposite to the Exhibition gates, is a copy of the great window from the façade of the Certoza at Pavia, the decorative work upon which displays, in a most striking manner, the effect produced upon architecture, by a style in which sculpture is made the relieving element—the whole of the surface being covered with rich devices, and no opportunity lost for introducing beautiful representations of the human figure. The four smaller doorways in the court are taken from palaces anciently belonging to the Doria family, and the illustrations upon them record, in a fanciful and allegorical manner, the glories and triumphs of that once illustrious family. Upon each side of the Nymph of Fontainbleau and the Caryatides are a series of beautiful monuments, also from the Certoza at Pavia, the great school in which the genius of the art of Northern Italy was carried to its highest point of perfection. The principal works of this class are considerable portions of the monuments of Jean Galeazzo Visconti, Duke of Milan, conspicuous in history as the cruel and profligate head of the Visconti family. There is also a splendid altar-piece from the principal chapter-house, a piscina, and the high altar from the Certoza at Pavia. Some specimens illustrating the high state of perfection to which wood-carving was carried at this time are in this court, the principal of which are the enclosure of the entrance-doors of the Hotel de Ville at Oudenarde, and the four doors executed by Jean Goujon for the church of St. Maclou, at Rouen. The tombs in the court are those of Ilaria di Caretta,

from Lucca, and of Roberte Legendre, wife of Louis de Poncher, from the Louvre at Paris.

The Fountains.—The central fountain is a reproduction, in terra cotta, of the celebrated vase in the chateau Gaillon, in France, the original being preserved in the museum of the Louvre. The fountains of this splendid chateau were saved from destruction by the celebrated Lenoir, by whom they were brought to Paris, and, having for some time existed as conspicuous ornaments in his museum in the Petits Augustins, have been recently placed in the front of the Academy of the Fine Arts at Paris. The two other fountains consist of the famous "wells" in the courtyard of the Ducal Palace at Venice. The upper portions exhibit a reproduction of the ornaments of the fountains Palazzo Decchio at Florence, and at the Ganse Manchen at Nuremberg.

A copy of the colossal statue of David, of which Vasari said, that "it bore away the palm from every statue, modern or ancient, either Grecian or Roman"—the work of Michael Angelo—will be examined with interest. The history of the statue is a curious one: a large block of marble, to which one Simone de Fiesole, a Florentine sculptor, had attempted to give the resemblance of a human figure, had remained neglected for upwards of a hundred years, and was supposed to be irremediably deformed. The magistrates of Florence were anxious that this opprobium of the art should be converted into an ornament of the city, and Michael Angelo undertook to form it into a statue of one entire piece, and under his skilful hand this shapeless block soon became the colossal figure of David, and was placed, by order of the magistrates, before the gates of the Palace of Justice of the city. With such accuracy had the sculptor estimated the dimensions of his statue, that in several parts of the figure he has actually left untouched the ruder labours of his predecessor, upon which he could not employ his chisel without injury to its proportions.

Near to the statue of David stands a not less beautiful one of St. John, the work of Donatello, an artist whose extraordinary energy and vigour led him to excel in every department of sculpture. He was one of the seven artists who competed with Ghiberti for the honour of executing the bronze gates of the Baptistry of Florence.

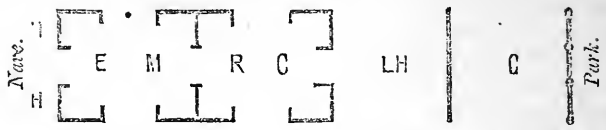
At the back of the court is a rich ceiling, from the Sala di Cambro at Perugia, painted by Pietro Perugino, emblematic of the planets. Jupiter, seated in his car, is drawn by eagles, and surrounded by the other divinities. Beneath each car is the name of the planet, that of Jupiter being curiously spelled with two "p's." Saturn is represented drawn by dragons, Mars by fiery steeds, Venus by the doves, and the other orbs by their respective emblems. This ceiling was most carefully copied by Mr. Digby Wyatt himself; and to his skill in this respect the visitor is indebted for the opportunity of witnessing one of the most magnificent specimens of this species of decorative art executed by Peru-

gino. Beneath this ceiling is placed a copy of the celebrated "Graces" of Germain Pilon, remarkable as embodying in the principal figure a no less notorious and celebrated personage than Catherine de Medicis, and which those who have visited the museum of the Louvre will remember as one of the most remarkable of the many works of art in that museum.

Crossing the larger court, the visitor will now inspect a small *loggia*, divided into three compartments, on the vault of which, exquisitely painted, are copies of the twelve signs of the Zodiac, found in the entrance to the Certoza at Pavia. The pavement is formed of rich mosaic, and the walls are decorated with elegant arabesque ornaments.

Passing into the nave, the façade of the court displays one of the most successful restorations in this department of modern art. The building represented is the Hotel Bourgtheroulde, at Rouen, and affords an admirable idea of the peculiar richness of the decorations adopted in this period, and the pleasing effects produced by the judicious use of gilding upon external structures. On the upper portions of the hotel are copies of the great frieze from the Hospital for the Poor at Pistoia, representing the Seven Acts of Mercy, and upon the lower part is represented the meeting of Henry VIII. and Francis I. on the Field of the Cloth of Gold, an historical event, which will be referred to in connection with the monument of the latter monarch in the next series of the courts. The figures of St. George, by Donatello, and Bacchus, by Michael Angelo, are placed opposite to the façade of the court.

THE ELIZABETHAN COURT.



C Tomb of Sir Thomas Cheney.
E Tomb of Queen Elizabeth.
H H Holland House, façade of.
L H Tomb of Lady Hertford and her sons.
M Tomb of Mary Queen of Scots.
R Tomb of Countess of Richmond.

The rise and progress of Gothic architecture, from its earliest simplicity to its latest development of beauty and sublimity, and the revival of classic notions of art in France, Italy, and Germany, have now been traced. The visitor next proceeds to learn what particular phase the revival of classic art assumed in this country, at a time when the Gothic style succeeded to the Renaissance in other parts of the world. In England, this revival of antique art assumed so distinct a character from that which it exhibited in other countries, that it was deemed but just to its peculiar characteristics to devote a separate portion of the fine arts' courts to its illustration. Originally introduced into the country by Italian designers, the antagonistic influences of the Gothic system, then in vogue, offered perpetual obstacles to the adoption of the classic proportions in their pure and integral conditions; and the works of the architects and sculptors in consequence displayed a singular compromise between the vertical tendency of the Gothic, and the horizontal of the Italian art.

It was during the reign of Henry VIII. that the revival of the classic art on the Continent first spread in England, but no recognized arrangement of the details took place until the time of Queen Elizabeth, when a style was developed known as the Elizabethan, or Tudor. The peculiarities of this style consist in elaborately-carved woodwork, full of quaint repetitions of classic details; ceilings executed in handwork stucco, in a variety of ingenious forms, and the walls frequently exhibited a combination of heraldic devices and rude arabesques. At a later period, the Renaissance developed itself into the grandest conceptions of palatial magnificence; as instances of this, may be mentioned the Banqueting House at Whitehall, by Inigo Jones, and St. Paul's Cathedral, by Sir Christopher Wren.

The decorations which sprung up with, and which appeared to run riot under this system, were of the most elaborate character; but ample and magnificent as were the details, the general cha-

racter of the works of this period bore the indelible stamp and impress of their Gothic origin. The style of architecture which was finally developed, is, perhaps, the most valuable for general purposes of any which has yet existed, for it possesses qualities which make it available either for large or small edifices, and suitable alike for the grandeur of palatial residences, or the modest villa or road-side cottage, which, with its gabled roof, and projecting bay window, gives so picturesque an appearance to the suburban districts and road-sides of our country.

The building selected as the representative of the early style of this architecture, and which forms the façade of the court, is Holland House, Kensington, one of the most interesting and complete illustrations of this style to be found in the country. The internal decorations of this court convey an excellent idea of the gorgeous style which grew up under the Elizabethan system. A room decorated in a style similar to portions of this court now exists in the mansion of the Marquis of Northampton, at his seat in Castle Ashby. The lower part of the walls is painted plain, in a rich purple; above this, and reaching up to the first cornice, the walls are painted a beautiful pure blue. The visitor will remark a similarity in this treatment of the walls, between the Elizabethan and the Roman courts; in the latter case, however, the gorgeous magnificence of the Romans covered the walls with large slabs of marble; but in the absence of richly-coloured marbles in this country, deep and bright colours were employed upon the surface of the walls. The mouldings of the cornice are beautifully picked out in colour, and the panels of the frieze decorated with gold ornament. Between the lower and upper cornice, the space is filled in with rich diaper pattern, and the upper cornice profusely ornamented with gold and richly-coloured mouldings. The arches, pendants, panels of the door, beads and pilasters, are covered with imitations of small, inlaid, raised marble panels and jewels, which produce a pleasing and agreeable effect. The manner in which the decorations of this court, and the imitations of marbles have been executed, reflects the greatest credit upon the ability of Mr. J. L. Coulton, to whom was entrusted the whole of the decorative works of this court, as well as the beautiful restoration of the doorway of the Chapter-House of Rochester Cathedral.

Among the monuments in the court, the most conspicuous is that of the famous Duchess of Richmond, the mother of Henry VII., towards whose memory it is gratifying to find that the last Lancastrian monarch did find, amid his scheming, time and inclination to devote a passing thought. And right well did the noble Margaret, Duchess of Richmond, deserve that due honour should be done to her memory, for in her lifetime she vainly endeavoured to rouse the nobler qualities of her son, and to shame him into a more manly course, by threatening that "if the princes of Christendom would combine themselves and march against the common enemy, the Turk, she would willingly attend them, and 'be their

laundress in the camp.'" It would have been to the credit of Henry VII. had he allowed the grateful feelings of a grandchild to have paid to the dust of Katherine of Valois, the same honour which he paid to that of his mother, Margaret, and not to have disturbed and left uncovered the body of the widow of Henry, the hero of Agincourt. The body of Katharine was removed by Henry VII. when laying the foundation of the chapel in Westminster Abbey, and placed by the side of her husband's tomb, and the gossiping diarist, Pepys, tells how he did see, by particular favour, the body of Queen Katherine of Valois, and "I had," he says, "the upper part of her body in my hands, and I did kiss her mouth, reflecting upon it that I did kiss a queen, and that this was my birthday—thirty-six years old—that I did kiss a queen." Had Henry VII. performed his filial duty, the ecstatic Pepys would never have kissed—or worse—have told, that he had kissed the lips of the fair Katherine of Valois.

Few monuments would have been examined with greater satisfaction and interest by persons interested in English history, than the tomb of the monarch who, at Bosworth field, vanquished the last of the White Roses, who, by his marriage, brought to an end the desolating wars of the rival houses of York and Lancaster, and upon the ruins of both founded the dynasty of the Tudors. Who, in gazing upon this noble monument of Torregiano's art, could have failed to reflect that it was the tomb of the greatest master of state cunning that, perhaps, ever existed; of a man, who, having circumvented all with whom he had to deal in his lifetime, reared the costly shrine of the chapel at Westminster, superintended the erection of his own monument, and ordered three masses to be performed before it daily, so long as the world should last, in order that he might, if possible, deceive his own Maker, or dazzling posterity with his magnificent piety, conceal from them his treacheries, his crimes, and his cruelties?

Here, most appropriately placed, would have been the tomb of Henry VIII., the first Tudor sovereign. A strange and inconsistent career was that of the gay, handsome, and despotic Henry VIII., —never reign commenced under happier auspices, or ended with less regrets, than did that of this monarch. His first victories were gained by Surrey upon Flodden Field,

> "Where shattered was fair Scotland's spear,
> And broken was her shield,"

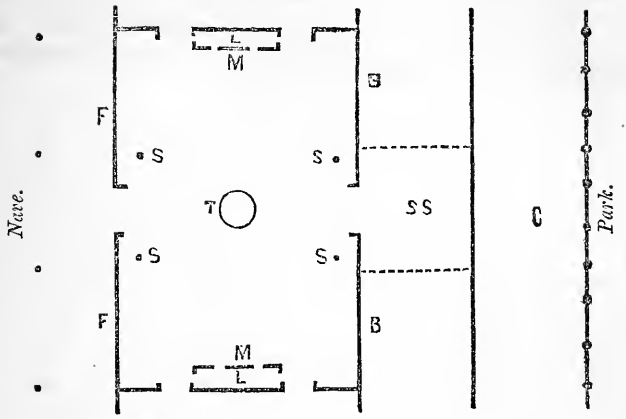
and the last thought of the dying monarch was how he might best take the head of that gallant nobleman. "Uncouple the dogs, and let us follow the sport!" said the brutal and unfeeling husband, when the signal gun announced that the axe of the executioner had severed the small and beautiful neck of the gentle and innocent Anne Bullen, and away he went coursing through Epping Forest with his gay and thoughtless courtiers and on the

morrow Lady Jane Seymour was the short-lived queen of the palace. At other times Henry was alternately the bosom friend and mortal foe of the noble Stafford, the haughty Wolsey, the accomplished More, the good Cromwell, and the pious Latimer. On the Field of the Cloth of Gold he vowed eternal friendship with Francis I. He lived to break his vow, and unjustly invade the territories of one whom he fondly embraced as a brother and cousin, saying, "I never saw a prince with my eyes, that might of my heart be more beloved; and for your love have I passed the seas into the farthest frontier of my kingdoms to see you." "Sack Holyrood House and as many towns and villages about Edinburgh as ye conveniently can; sack Leith, and burn and subvert it, and all the rest, putting man, woman, and child to fire and sword, without exception, sparing no creature alive, and so this journey shall succeed most to his Majesty's honour," were the remorseless instructions of this monarch to the commander of his forces, the Earl of Hertford. England, steeped to her very lips in degradation, and weary of witnessing the burnings of now Catholic, now Protestant heretics, disgusted with the tragedies of beheading gallant and accomplished nobles, rejoiced at the death of a sovereign of such unbridled licentiousness and passion; and Protestants sighed that the proud title of "Defender of the Faith" had not been conferred upon one whose spirit was more in accordance, not merely with the principles of the religion he was to defend, but with the sympathies of common humanity.

In this court are placed the monuments of two queens whose names are intimately associated with the most interesting period of English history—they are those of Elizabeth, and of the lovely, but unfortunate Mary, Queen of Scots. One queen for forty-five years swayed the sceptre of her country with vast ability, and her memory is still fondly cherished and revered as that of the best of sovereigns. The other, although "descended from the blood royal of Henry VII., a married Queen of France, and anointed Queen of Scotland," fell, after nearly twenty years of cruel and unjustifiable captivity, beneath the fatal warrant of the jealous and haughty Elizabeth; and when the headsman's axe had done its work, and the bleeding head of Mary was held up to the commiserating gaze of the witnesses of her execution, only one voice—that of a furious and bigoted Dean—exclaimed, "So perish all Queen Elizabeth's enemies!" and only one voice responded to the loyal aspiration. Forget for a moment this crimson blot upon the escutcheon of Elizabeth, and her strange coquetry with the unfortunate Essex, and listen to her as mounted upon her war horse, she tells her "loving people" at Tilbury, "I know that I have but the body of a weak and feeble woman, but I have the heart of a king—and of a king of England too! and think foul scorn that Parma, Spain, or any Prince of Europe, should dare to invade the borders of my realm. To which, rather than any dishonour shall grow by me, I myself will take up arms—I myself

will be your general, the judge, and rewarder of every one of your virtues in the field." Hear her also after the defeat of the Armada, when kneeling down at the west door of St. Paul's, she openly and audibly praises God, who had "delivered the land from the rage of the enemy," and it will not be matter of surprise that Elizabeth won for herself the honourable and distinctive name of the "Good Queen Bess," or that her name is still traced in letters of gold upon the brightest page of our history. At the back of the court is the interesting monument of the beautiful Lady Hertford and her sons.

THE ITALIAN COURT.



B Bas-reliefs.
C Open colonnade.
F Facade of Farnese Palace.
L L Loggia.
M M Medici tomb.
S. S. S. S. Statues.
SS Sebastian Serlio's ceiling.
T Tartarughe fountain.

THE next court is one devoted to some of the finest works of Italian sculptors and artists. At each end of the court are copies from the exquisite tomb of the Medici—the great patrons and encourages of the revival of classic art. After the death of Leo X. no monument for several years marked the place of his sepulture. The Cardinal Ippolito de Medici, upon removing the remains of Leo from the Vatican to the chapel of Santa Maria ad Minervam, employed Alfonzo Lombardi to erect some fitting memorials to the memory of the two Pontiffs, to whom he stood so nearly related. The sketches for the tomb were furnished by Michael Angelo, and Lombardi commenced the work: the death of the Cardinal, however, put an end for a time to the further progress of the work. Through the influence of Lucrezia Salviati, the execution of the tomb was entrusted to Baccio Bandinelli, who completed the beautiful monument, and it was placed in the choir of the church of Santa Maria, which was built on the ruins of an ancient temple of Minerva—hence its name Santa Maria ad Minervam. It is stated that Pope Clement VII., in order to compel Michael Angelo to complete his statue for the tomb, threatened to excommunicate him in the event of employing himself upon any other work until he had finished the tomb.

The fountain in the centre is a copy of the "Tartarughe" at Rome; the beautiful figures which surround it were the works of Taddeo Landini, and Giacomo della Porta, two able pupils and followers of the school of Michael Angelo. At the end of the court is a beautiful specimen of painted architecture, from the Casa Taverna at Milan, by the celebrated Bernardo Luigi. Among the statues will be noticed the Pieta and the Slave by Michael Angelo, and the charming Madonna, executed for the Cardinal Rohan, in the same chapel as the Medici tomb, when the artist was but twenty-four years of age. There is also in another part, a noble work of art, the statue of Pope Julius, of which it is said, that when the Pope observed the vigour of the attitude, and the energy with which the right arm was extended, he asked Michael Angelo whether he intended to represent him as dispensing his benediction or his curse? to which the artist very prudently replied, that he meant to represent him in the act of admonishing the citizens of Bologna, and, in return, the Pope was asked whether he would be represented with a book in his hand? "No," replied the head of the church militant, "give me a sword, I am no scholar." At an outbreak of popular fury in Bologna, the original statue cast in brass was mutilated, and after having been indignantly carried about the city was broken into pieces, and sent by the French commander to the Duke of Ferrara, who formed it into a cannon, to which he gave the name of Julio. The head alone was preserved, and for some time it ornamented the ducal palace of Ferrara. The cost of the statue was 5,000 gold ducats. The colossal figure of Moses, also the work of Michael Angelo, from St. Peter's Church at Rome, is included in the collection of works of Italian sculptors. The sonnet to which this fine work of art gave rise will be read with interest:—

"And who is he that, shaped in sculptured stone,
Sits giant like? Stern monument of art,
Unparalleled, whilst language seem to start
From his prompt lips, and we his precepts own?
'Tis Moses; by his beard's thick honours known,
And the twin beams that from his temples dart.
'Tis Moses; seated on the mount apart,
Whilst yet the Godhead o'er his features shone.
Such once he looked when ocean's sounding wave
Suspended hung, and such amidst the storm
When o'er his foes the refluent waters roared.
An idol calf his followers did engrave;
But had they raised this awe-commanding form,
Then had they with less guilt their work adored."

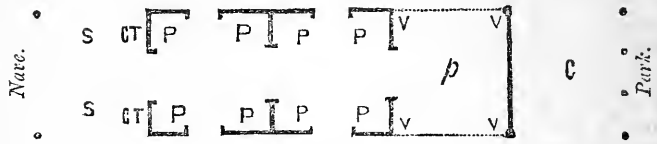
In the other parts of the court are some bas-reliefs of Michael Angelo, representing the Madonna, in a circular panel, from the chapel of the Medici, at Florence, and an unfinished, but still

beautiful, bas-relief on the same subject, which has been for a long time the neglected and unvalued property of the Royal Academy. There is also a copy of the most famous work in sculpture, by Raffaele, the subject being Jonah, the foot of the prophet being just placed in the opening of the mouth of the whale. The exquisite design and perfect style of execution which this work displays, excited unbounded admiration at the time it was first executed, and in the present day it is justly considered as displaying a degree of excellence scarcely equalled by the finest remains of ancient art. The original statue is in the Chigi Chapel, in the Church of Santa Maria del Popolo at Rome. The other works in the court are the Triton, by Montorsoli, from the Doria Gardens, at Genoa, a rich doorway from a palace at Genoa, and a Pieta, by Bernini.

The façade of the court is a representation of the palace of the illustrious Farnesse family, the decorations of which were the work of Vignola, the celebrated fresco painter.

At the back of the court is a beautiful ceiling in "grisaille," by Sebastiano Serli, from the splendid library at Venice, and the four famous Venetian standards, including the celebrated statue of Mercury, by John of Bologna.

THE ITALIAN VESTIBULE.



C Open colonnade.
CT Casa Taverna at Milan.
P P P P Copies of old masters in water colours.
P Painted ceiling.
S S Statues.
V V V V Venetian standards, and Mercuries of John of Bologna.

A SMALL vestibule adjoining the Italian court, filled with some of the choicest productions of Italian art is the last of the series of courts devoted to the illustration of the Fine Arts of a past epoch. The charming paintings on the upper portions of this vestibule are imitations of the paintings round the open galleries of the Vatican. The pictures which cover almost the entire surface of the centre, are copies of the works of Vandyke, Titian, and other old masters, made upon a cabinet scale by Mr. West, whose abilities in this peculiar kind of work are most remarkable. The casts of the doors of St. Mark's, Venice, by Sansovino, in this vestibule, are worthy rivals of those of Ghiberti in the Renaissance Court. Mr. Digby Wyatt, speaking of these doors executed about eighty years after those of Ghiberti, says "The particular point in which she must advance, appears to have been made in the interval which separates the two works, is the acquisition of a free command over the application of classical connection which attaches with propriety to the several degrees of relief, and which were founded by the ancients on profound observation and study. A just appreciation of the skill with which Sansovino has contrived his round and flattened mouldings would not fail to be serviceable to those who would desire to reproduce works of similar elegance in the present day. With Sansovino closed the series of those artists who in Italy treated bronze in a distinctive and metallic manner.

At the back of the Italian vestibule is a beautiful reproduction of Raffaele's finest ceiling, that from the Camera della Segnatura in the Vatican; the ceiling has been characterised as a "work so daring in its design, and so complex in its composition as to have given rise to various conjectures respecting the intention of the artist," and it has been generally but erroneously called "The Dispute on the Sacraments." The copy of this admirable work was

executed by Mr. G. A. Stevens, a gentleman whose long studies in Italy have made him fully acquainted with the details, remarkable in all the Raffaelesque frescoes, and that facility of "handling" by which alone successful reproductions of such work can be obtained. Beneath this ceiling is placed a copy of the *chef d'œuvre* of the sculptures of Benvenuto Cellini,—the head of Perseus, a work the casting of which was attended with so much difficulty and vexation as nearly to have cost the life of the artist; and Cellini narrates in his memoirs, how his patron calling upon him shortly after the completion of the statue, and requiring him to commence some other work, the pious and overjoyed artist shed tears of joy, and, kissing the hem of his excellency's garment, said to him, "My most noble lord, liberal patron of the arts, and of those that cultivate them, I beg it as a favour of your excellency, that you would give me leave to retire for a week to return thanks to the Supreme Being, for I know how hard I have worked, and am sensible that my faith has prevailed with God to grant me this assistance. On account of this and every other miraculous succour afforded me by the Divine power, I propose going on a pilgrimage for a week to express my acknowledgments to the Eternal Being who ever assists those who sincerely call upon him." The only cast which was ever allowed to be taken of this extraordinary work of art, was one, the permission for which was granted by the Grand Duke of Tuscany to the Duke of Sutherland, under whose directions a fac-simile was taken. This fac-simile was completed with the greatest care, and finished by the most careful and closest comparison with the original statue. By the kind permission of his Grace the cast in this court has been taken.

In front of the vestibule is placed the charming monument of the Madonna della Scarpa, from the chapel of Sanzeno, adjoining the baptistry in the Cathedral of St. Mark at Venice. This statue is considered as the finest of existing Venetian bronzes, excepting, perhaps, the beautiful doors of Sansovino placed in the choir of the same cathedral, and the copy of which has already been noticed.

MEDIÆVAL FINE ART COURT.

NEXT in order to the Italian or latest revival of antique art, is an open court abutting on the great transept, which is occupied by the *chefs d'œuvres* of the works of Christian art, from its earliest to its latest development. On the opposite side of the nave, in a corresponding part of the building, is a similar court, occupied by some of the finest works of ancient and pagan art. These beautiful works of all times and all ages are placed amidst a fine collection of orange trees, purchased by the directors in Paris, and the combination of statuary with these graceful and beautiful trees, presents a striking resemblance to the style of decoration adopted in the gardens of the Tuilleries, the pleasing effect of which cannot have escaped the notice of all persons who have visited Paris. At the smaller angles of the nave and transept, cool and refreshing ices will be obtained by the visitor, who by this time will probably feel in a condition to be grateful to the considerate attention of the directors in thus providing the means of recruiting exhausted nature.

The most ancient of the works which occupy a place in the *chefs d'œuvres* court of Christian art are some curious Irish antiquities. Among these are a stone cross from the market place of Tuam, erected by Turlogh O'Connor, King of Ireland, and Edam O'Hoisin, Comharha of St. Jarlath, in the beginning of the twelfth century. There are four inscriptions on the cross, two on the base and two on the shaft, soliciting the prayers of the faithful for the founder and the artist of the cross. By its side is another richly and elaborately carved cross from Monasterboice, the seat of a ruined abbey, about four miles from Drogheda; and a small circular stone cross, from Kilerispeen, near Kilkenny, which tradition states was erected in memory of Neill Callan, one of the early kings of the country, who was drowned in one of the neighbouring rivers while humanely endeavouring to rescue one of his humbler followers from a watery grave.

There is also a cast from the celebrated brass pillar which originally stood in the court of the Cathedral of Hildershein. It is ornamented with not less than twenty-nine groups in relief, representing various incidents in the life of Christ, which wind round the column in a spiral manner, similar to the decorations on the famous monuments of Trajan and Marcus Aurelius at Rome. The capital of the column has unfortunately been destroyed. Bishop Bernward, who lived in the eleventh century, was one of the most munificent patrons of the Church, and with excellent taste he devoted himself to the decoration of the ecclesiastical edifices of the time. The curious bronze doors of Hildershein

shown in the Byzantine court, were an instance of his liberality and good taste, and they are almost the earliest instance of bronze doors with decorated panels, those previously constructed consisting of plain panels without any figures whatever. The good Bishop Bernward was in the habit of working himself upon many of the objects of decoration, and there is still preserved in the Church of St. Mary at Hildershein, a fine gold cross richly ornamented by him with filagree work and precious stones; there are also two very fine lamps, the inscription upon which shows that they were the work of some of the pupils of the art-loving prelate. About this period, the desire to ornament the churches was very prevalent among the heads of the Church, and Archbishop Willigis showed his interest in such matters by presenting to the church of St. Mary, in addition to a vast quantity of gold and silver vessels and rich tapestry, an immense crucifix, the cross of which was entirely overlaid with gold plates; and the figure, also in gold, was so formed that the different limbs could be separated; the eyes were of large carbuncles, and the cavity of the body, larger than life size, was used to contain the holy relics. The weight of the gold in this work was not less than 600 lbs.

One of the columns from the Doge's Palace at Venice, is an admirable representation of the style of Byzantine art which prevailed in the early part of the Christian era. The early style of monumental art in this country, is illustrated by the beautiful tomb of Bishop Bridport, from Salisbury—the finest specimen of early English work in this country. There is in this compartment a cast of the exquisite monument known as that of the "Lady Abbess," from the cathedral of Chichester. It was of this work that the great sculptor Flaxman expressed the opinion, that he should be highly gratified if he could look upon any of his own works with the same degree of satisfaction as that with which he looked upon the principal figure in this group. A tomb of one of the priests of the Percy family is also placed in this collection. The tomb of Abbot Wakeman, from Tewkesbury, is an interesting specimen of the perpendicular style of Gothic art. Two colossal figures of the Virgin, from the cathedral of Chartres in France, are fine specimens of mediæval sculpture; and the large figures of St. Philip and St. Andrew, from the gateway of the Bishop's Palace at Peterborough, are the finest specimens we possess of English art applied to sculpture. There are in this court also fine specimens of the Renaissance works of England, France, Germany, and Italy.

THE GREAT TRANSEPT.

On the opposite side of the nave, in the court of ancient art, the principal figure is the splendid group of the Farnese Bull, and several of the finest of Grecian sculptures. Conspicuous in the nave, is the work known as the "Lantern of Demosthenes," or

the choragic monument of Lysicrates. Mr. Henry Cook, in some interesting accounts of the present state of the monuments of Greece, published a short time since in the *Art Journal*, has the following remarks upon this work of art:—

"A proof of the varied character of the Athenian architectural intellect, may be found in the exquisite model, the Lantern of Demosthenes, or, as it is more properly called, the choragic monument of Lysicrates. It is, in common with the greater number of Grecian remains, of Pentelic marble. By whomsoever conceived, designed, or executed, this must have been a labour of love; and the result is such as might be anticipated from the consequent development of the highest powers of one to whom a people like the Athenians would entrust the task of doing honour to those who had paid to their native land a similar tribute. It is small, and formed of a few immense masses; the roof is one entire block; the temple or monument itself is circular, and is formed of six slabs of pure white marble, the joints of which are concealed by an equal number of beautiful Corinthian columns, partly imbedded into, and partly projecting from them. These have been fitted with such exactness, that before the 'fretting hand of time and change' had done its work, the whole must have appeared as if cut from one solid mass. Thanks to chance, we have this single example left, of a class of buildings once so numerous, that they formed an entire street." Its protection was due to the erection over it of an hospice, which alone saved it from the ruin of its companions. The removal of this structure has permitted this exquisite result of intellect and refined taste to be once more exhibited to the admiring gaze of travellers.

Placed by the side of this monument of Greek art are the famous Montecavello horses, by many persons supposed to represent the twin brothers, Castor and Pollux, the sons of Jupiter and Leda. These two famous brothers cleared the Hellespont and the neighbouring seas from pirates, for which good service they were always esteemed the best friends of navigation. Castor distinguished himself greatly in the management of horses, and Pollux, after having slain Amycus in combat, was promoted to the honour of the god and patron of boxing and wrestling. In the expedition in search of the "golden fleece," and during a violent tempest, two flames of fire were seen to play around the heads of the twin brothers, the storm immediately ceased, and the sea became calm; and the sailors of the present day look with interest upon the twin fires which tell of fair and foul weather. A curious arrangement was made by Jupiter at the request of Pollux, that Castor, who had been killed, should share his immortality, under which the fond brothers alternately lived and died every day; and their fraternal love was rewarded by Jove by making them constellations in heaven, under the name of "Gemini," which stars never appear together, but each alternately rises and sets. Rumours were frequently spread that Castor and Pollux had made their appearance

to the Roman armies, and at the head of the conquering legions had furiously attacked the enemy. White lambs were the offerings usually made to these deities, who were represented riding side by side, mounted on white steeds, armed with spears, their heads covered with a kind of bonnet, on the top of which glittered a radiant star.

There is, near the transept, a colossal equestrian figure of Bartolomeo Coleoni, a soldier of fortune. He was born in the year 1400, and died in 1475. His career may be appropriately told in the following amusing lines:—

"Listen, gentles, while I tell,
How this knight in fortune fell.
Lands nor vineyards had he none,
Jousts and war his living won:
Well on horseback could he prance,
Boldly could he break a lance;
Well he knew each warlike use.
But there came a time of truce,
Peaceful was the land around,
Nowhere heard a trumpet sound:
Rust the shield and faulchion hid,
Joust and tourney were forbid;
All his means of living gone,
Ermine mantle he had none;
And in pawn had long been laid,
Cap and mantle of brocade;
Harness rich, and charger stout,
All were eat and drunken out."

Beneath the noble arched roof of the transept are also placed the equestrian figures of Frederick the Great, King of Prussia, and other objects of interest. The exact height of this noble roof, from the spot on which the visitor stands is 176 feet 7½ inches, including the open louvre work at the top. The highest point of the arch which spans the area is 168 feet 7½ inches; the radius of the roof is 60 feet, and it springs from a height of 108 feet 7½ inches. The length included within the building is 360 feet, which is extended at the park front a further distance of 24 feet, by an open corridor. The highest point of the transept roof in the garden-front, measured from the ground, is 200 feet 2½ inches, the height of the basement floor being 23 feet 7 inches.

THE NORTH NAVE.

The visitor will, passing along the north nave, have an opportunity of witnessing the series of façades of the different courts, with the arrangement of the statues and flowers in the front, a

clear and uninterrupted promenade of 24 feet in width being afforded up the centre of the nave. There are also two smaller walks provided at each side of the nave, with frequent communications with the centre walk, and the respective courts.

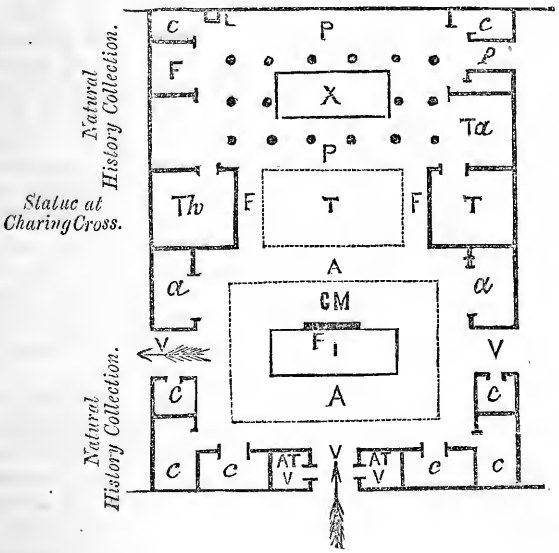
The ornamental basins, with the fountains and bridges, will now arrest attention. These basins are formed of a patent stone manufactured by Messrs. Buckwell and Co., of London, and called by them "granitic-breccia." The mode of its formation is exceedingly ingenious, rapid, and economical. A mixture of Portland cement and small broken pieces of stone is rammed down between two iron slabs of the form and size required, by "rammers" weighing 68 lbs. each, the materials being slightly damped. When the space between the slabs is filled up, the iron sides are lowered, the materials resting upon the "foundation piece" retain the form of the slab, and are raised up and conveyed to the place required. After remaining for about fourteen days, the slabs become as hard as the hardest of granite, and are perfectly impervious to wet. Those manufactured for the basins were 8 feet by 5, and 3 inches thick, each slab weighing rather more than a ton weight. Not less than 40,000 square feet of the "breccia" were employed, the whole weighing more than 1,000 tons, and the saving to the company by the use of the material, as compared with stone, was not less than 1,500*l.* to 2,000*l.* So hard and enduring is this substance, that a large piece of the pavement laid down with it in King William Street, City, has been affected by the traffic much less than the ordinary stone.

These fountains were designed by M. Monti, and have been cast in metal from the models furnished by that gentleman. The female figures represent the four quarters of the globe, and near them are dolphins and water plants. The figures are well moulded, and the grouping is artistic and appropriate. Passing by mounds of rustic work covered with creeping plants, and surrounded by floral walks, the visitor passes by the suite of four royal reception rooms—one of which is appropriated to Her Majesty, the second to Prince Albert, a third to the maids of honour, and a fourth to the gentlemen and equerries in waiting—to the wings of the building. Here a collection of raw produce—at present but imperfectly arranged—will be examined; and refreshments supplied with liberality and economy, under the superintendence of the directors. Descending the steps, we arrive on the lower terrace walk; and well satisfied and instructed, and, perhaps, not a little fatigued, our "Guide" will conduct the visitor, disregarding the temptations to linger in the grounds, along the terrace to the covered way which conducts to the railway station, where, with a cordial wish that he may succeed in elbowing his way among the crowd of intending travellers, and that he may ultimately reach in safety and comfort the bosom of his family, we conclude our first day's duties as *cicerone*, and, for the present, part company with our readers.

SECOND DIVISION.

POMPEII AND MODERN ART AND INDUSTRY.

THE POMPEIAN COURT.



A A *Atrium*—open hall.
a a Ala—business rooms.
C C *Cubicula*—bedrooms.
c Culina—Kitchen.
F F *Fauces*—passages for servants.
F *Frigidarium*—bath.
F I *Impluvium*—basin and fountain.
G Genius of the fountain.
L *Lazarium*—altar.
M *Compluvium*—roof opening.
Œ *Œcus*—wine and dessert room.
P P *Peristyle*—open colonnade.
p Porta postica—back door for servants.
T *Triclinum*—dining room (winter).
Ta *Triclinum*—dining room (summer).
Th *Thalamusa* — bedchamber of the master and mistress of the house.
T *Tablinum*—drawing room.
V V V *Vestibulum*—entrance.
AT AT / V V Rooms for the slaves each side of entrance.
X *Xystus*—garden.

THE idea of reproducing an accurate representation of a Pompeian house is among the happiest and most successful of the measures adopted to make the Crystal Palace the means of blending instruction with recreation. While the general form and decoration of

such a building cannot but excite the curiosity of uninformed visitors, they will not the less fail to win the attention of the artist, and satisfy the inquiry of those more learned students who have not yet had an opportunity of visiting for themselves the sublime remains of antiquity which yet exist in classic lands. The visitor will be supposed to commence his second visit to the Crystal Palace by an examination of this beautiful restoration. Leaving the railway station, he will enter the building at the south end, at the point marked in the plan; and passing through a portion of the natural history and ethnological collection, to be hereafter visited, and crossing the ornamental basin by the second bridge, he will enter the Pompeian house at the entrance facing the nave, shown in the ground plan.

It is to Mr. Digby Wyatt, ably assisted by Signor G. Abbati, of Naples, that the visitor is indebted for the opportunity of inspecting an accurate representation of the house of a Roman citizen in the first century of the Christian era, during the reign of Titus, the tenth Roman emperor and the conqueror of Jerusalem. Pompeii and Herculaneum were at that period two small towns on the Bay of Naples, about 130 miles from imperial Rome, and near the foot of Mount Vesuvius. The visitor will not expect to find in these small watering places—the Worthing or Hastings of the old Romans—any of that magnificence which characterised the palaces and mansions of the nobles in the city of Rome. The restoration in the Crystal Palace represents no particular house, but it may be taken as a representation of the best style of Pompeian decoration and architecture, as found in the house of Pansa, the tragic poet, and in other buildings discovered in the buried city.

It was on the 24th of August, A.D. 79, that the population of Herculaneum and Pompeii, amounting in each to about 5,000 souls, alarmed by the smoke and flames, showers of ashes, and streams of molten lava which issued from the crater of Vesuvius, and the thick darkness, broken only by rapidly succeeding flashes of lightning, which overspread the city, hurried, wild and haggard, now towards the sea, and now back to the shore, amid falling showers of burning ashes, in order to escape impending destruction. "The whole elements of civilisation were broken up. Ever and anon by the flickering lights you saw the thief hastening by the most solemn authorities of the law, laden with, and fearfully chuckling over, the produce of his sudden gains. If in the darkness wife was separated from husband, or parent from child, vain was the hope of reunion. Each hurried blindly and confusedly on. Nothing, in all the various and complicated machinery of social life, was left, save the primal law of self-preservation."* Herculaneum, lying nearer to the mountain than Pompeii, was covered with the stream of boiling, seething lava, beneath which it still lies buried. Pompeii was reserved for another fate. An eye-witness, of no less celebrity than

* "The Last Days of Pompeii," by Sir E. Bulwer Lytton.

Pliny the younger, shall tell in his own words the sad story. After having detailed the circumstances of the death of his uncle, Pliny says, "Though it was now morning, the light was exceedingly faint and languid; the buildings all around us tottered; and though we (himself and his mother) stood upon open ground, there was no remaining there without certain and great danger: we therefore resolved to quit the town. Having got to a convenient distance from the houses, we stood still in the midst of a most dangerous and dreadful scene. The chariots which we had ordered to be drawn out were so agitated backwards and forwards, though upon the most level ground, that we could not keep them steady, even by supporting them with large stones. The sea seemed to roll back upon itself, and to be driven from its banks by the convulsive motion of the earth; it is certain, at least, that the shore was considerably enlarged, and several sea animals were left upon it. On the other side a black and dreadful cloud, bursting with an igneous serpentine vapour, darted out a long train of fire, resembling flashes of lightning, but much larger. The ashes now began to fall upon us. I turned my head, and observed behind us a thick smoke, which came rolling after us like a torrent. We had scarcely stepped out of the path when darkness overspread us, not like that of a cloudy night, or when there is no moon, but of a room when it is shut up and all the lights extinct. Nothing then was to be heard but the shrieks of women, the screams of children, and the cries of men; some calling for their children, others for their parents, others for their husbands; one lamenting his own fate, another that of his family; some wishing to die from the very fear of dying, some lifting their hands to the gods; but the greater part imagining the last and eternal night was come, which was to destroy the gods and the world together. The fire fell at a distance from us, then again we were immersed in thick darkness, and a heavy shower of ashes rained upon us, which we were obliged every now and then to shake off, otherwise we should have been crushed and buried in the heap. At last this dreadful darkness was dissipated by degrees, like a cloud of smoke; the real day returned, and even the sun appeared, though very faintly, as when an eclipse is coming on. Every object that presented itself to our eyes seemed changed, being covered over with white ashes, as with a deep snow."

Seventeen centuries had passed away, and Pompeii still lay entombed in its own ashes. The excavations that have, during the last century, been carried on, have revealed in the deserted houses walls still fresh with colour, as in the restored building in which the visitor now stands; they have brought to light the household arrangements of a people who have passed for ever from the world; there is the furniture of the saloons, the fragments of the last feast, the treasures, the coins, the jewels, the weapons, the statues finished and unfinished, and the bones and skeletons of those whom fear, duty, or avarice, detained until escape was impossible. The sentinel has been found at his post, the lady with her

jewels at her toilet, the miser lying beside his treasure, or still clutching his bag of coins, the priest in his temple, the mother with her child, the prisoner in his chains, and in one vault there were found twenty skeletons of people who had sought vainly in its subterranean shelter safety from the fine ashy dust which formed their tomb.

Signor Abbate, by whom, under Mr. Digby Wyatt, the charming decorations of the Pompeian house were superintended, has been for the last twenty-six years an inhabitant of this buried city; he has lived within its walls, studied all its paintings and treasures of art, and is acquainted with every fragment of stone and stucco in the place. His principal occupation of late years has been that of tracing from the walls of Pompeii the actual paintings as they have been discovered. Signor Abbate came to this country almost with the authority of one risen from the dead; and his long experience in the entombed city claims for his opinions the greatest possible interest. Some time since, this talented artist embodied his views on the interesting subject of the dwellings of Pompeii, and the style and character of their decoration. An extract from his able paper will be perused with interest by the visitor at his fireside, and will also be useful in explaining the uses and construction of the restored Pompeian house.

"It should be borne in mind that the dwellings of Pompeii are by no means adequate to present a complete idea of the magnificence of Imperial Rome, or of the sumptuous habitations of those who were regarded as the conquerors of the world; since Pompeii was no more than a city of the third rank. When, however, we perceive in the dwellings of this small city the admirable distribution of the various apartments—the purposes to which they were respectively devoted—the abundant supply of the luxuries and elegancies of life—the love of order, and the exuberance of art which they display—we cannot but remain impressed with wonder: and how much would that wonder be increased, should we endeavour to form a notion of the great capitals of the country, and of the residences of its consuls and emperors!

"In all the domestic buildings of Pompeii, there exists a general similarity of arrangement. They have frequently more than one entrance; and the external walls are covered with a hard and brilliant stucco, often coloured with lively tints over a certain portion of the height of the façade. There is little doubt that the greater portion of the houses had originally two floors, the uppermost of which had small windows, and was terminated with a flat or terrace roof. Internally, the houses are chiefly distinguished from modern dwellings by being divided into two portions, in conformity with the manners of the period; such division consisting in a separation of the public from the private portion of the house, and involving, to a certain extent, the separation of the sexes.

"At a period when the application of the intellect to commerce and industry was believed to be unworthy of freemen, and when life was essentially public, it was but natural that a portion of

every habitation should be accessible to all. When the fair sex had not been raised in the scale of social regard to that position which has been recognized as its due by the great scheme of Christianity, when women were considered by the laws as wholly dependant on men, it was but natural that they should be kept in a state of semi-oriental seclusion. Accordingly, in every Pompeian habitation, the apartments of the females were in some manner separated from those of the males; and a luxurious opportunity was afforded for the private and somewhat mysterious display of the attractions of female beauty. It may readily be imagined how fatal to freedom were the consequences of such a system as that which recognized no other love than that based upon material beauty. We should, indeed, be thankful to the spirit of religion and civilization, which now sanctions a purer and more ennobling affection. In the present day, the man who retires to his domestic hearth after the fatigues of the day, finds in the society of the female members of his family the most refined sources of domestic enjoyment. Hence, happily, those divisions so common in the houses of the ancients, are to us entirely unnecessary.

"The suite of rooms appropriated to the male portion of a Pompeian establishment, had in the midst an open hall or 'atrium.' The Tuscan 'atrium' (the one adopted in the restored house) was distinguished by having its roof inclined towards an opening in the centre of the apartment, through which the water falling on the roof was conveyed, discharging itself into a basin formed in the floor in the centre of the apartment. The opening in the roof was known as the 'compluvium,' and the basin in which the water was collected as the 'impluvium.' The poorer class of houses possessed only an 'atrium,' called the testudinate, which was without inclination, and had no opening or compluvium. The apartments of the females were at the rear of the house, and were decorated with columns of a more rich character than the simple Greek, and with gardens to delight the senses of the fair occupants. The public portion of the house consisted of the vestibule and the atrium, parallel to the tablinum. Between the wings, or aulæ, and the tablinum, were the fauces, or passages leading to the apartments of the women. The private portion of the house opened upon a garden. There gushed the waters of the fountain; and there were disposed the beds and couches of repose. The banqueting hall was provided in the triclinium. In the exedra, a kind of retiring room, the studious found materials for the refreshment of the mind, either in a cabinet of study or a gallery of pictures. It may suffice to add that the upper floor served, for the most part, for magazines or warehouses, which were let out by the proprietor of the house, and of which there now remain scarcely any other traces than the marks of the wooden staircases formerly connected with the walls.

"The paintings and mosaics which adorn the Pompeian houses, bear in almost all cases some reference, or contain some allusion to

the destination of the different apartments in which they are introduced. The profusion of paintings and mosaics found among the remains of this small town, are striking evidences of the great popularity of the fine arts at the period when Pompeii was destroyed. In considering these paintings and mosaics, the visitor cannot refrain from rendering a tribute to the elegance and grace with which the works were executed, and from expressing astonishment at the large number of artists whose labours must have been required for the production of so vast a number of works. Such undertakings could never have been carried out, without an unlimited devotion to art, the fruit of which may be recognized in the emulation excited by it, leading to perfection; and that very perfection once attained, acted as a powerful stimulant in keeping alive in the spirit of the people the love of art which had originally engendered it. Thus cause and effect co-existed, and quantity and quality were alike maintained.

"After many careful investigations, I have arrived at the conclusion that the Pompeian paintings were executed in fresco-secco; but at the same there was mixed with the colours some resin, or other material capable of giving them tenacity, and rendering the impasto of the tints glutinous. The plaster upon which the painting was executed, consisted of seven coats, exactly as Vitruvius has described them; the first three were of sand, the other four of marble dust, reduced from a fine to a finer texture as each coat was laid on, so that the last coat consisted of the very finest powder. These several coatings were laid one upon another, without allowing any one to dry; the painter then commenced by tracing with the 'style' the principal lines for the ground tints; he then indicated with the same 'style,' the figures and arabesques, and proceeded to paint them in. It will be easily understood that where the painter commenced he found the wall moist, and hence his colours would unite themselves chemically with the lime of the intonaco or plaster, into the pores of which they would readily insinuate themselves. As, however, he proceeded in his work, the wall would continue drying, and hence the amalgamation of the colours with the surface would be less complete. Thus, in the present day, we may easily and clearly discern that certain parts of the wall paintings of Pompeii, have altogether detached themselves from the plaster, whilst in the other parts, the adhesion has been complete and perfect. I feel convinced that a coating of wax was applied to the paintings after their completion, in order to effect the following objects—to preserve them from the action of the atmosphere—to add to their brilliancy—and to insure their tenacity to the wall, by amalgamation with the resinous substance to which I have already referred, and the nature of which has not yet been discovered. The principal colours used in Pompeii, were red, usually the earth from Sinope; blue, or cerulean, which is the Egyptian frit; yellow ochre, and white. With regard to the position which Pompeii and its decorations

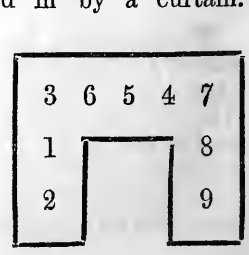
should occupy in the history of art, I may observe, that we are too much inclined to speak of 'the Pompeian style,' as though the remains of Pompeii presented one style only; whereas it is difficult to imagine any more concrete phase of style than that of Pompeii. Originally a Greek colony, the town afterwards became amalgamated with its Samnite and Etruscan conquerors. It ultimately degenerated into a mixed race known as the Campanian, and became subject to Rome; thus, in its various vicissitudes, obtaining some modification from each existing school of art. Altogether, we have here exhibited a most charming mixture of styles, and any person going carefully through the existing remains, cannot but trace many forms which cannot be accounted for, except as derived from these mixed sources. In some paintings we find green and purple used with curious white lines, more Etruscan in their character than we should expect to find; there is likewise a good deal of Greek work about the tombs, and in the earlier portion of the buildings, the Greek style of decoration seems to have been prevalent. The decorations in such cases, are divided into compartments of flat tints, with central pictures, frequently surrounded by suitable frets and ornaments apparently derived from mosaic work. Subsequently, the fashion changed with what was going on in Rome. In the time of Augustus, Pliny relates that Ludius, a celebrated painter, introduced a system of arabesque decoration; and in the most fashionable houses of Pompeii, that style appears to have been carried to very great satisfaction. Upon this there supervened a more fantastic style, in which there is a quantity of architectural work indicated in thin lines, in a most peculiar manner."

Generally speaking, the colours in Pompeian decoration are arranged in horizontal zones, the lowest being dark, the second of an intermediate depth, and the uppermost the darkest of all. Perhaps the most striking characteristic of Pompeian works, is the extraordinary exuberance of invention which they display. Hardly one moulding or ornament is like another, and even the two sides of an ornament are seldom alike. This is an interesting circumstance, as proving that the artists did not trace their drawings on the wall, but drew them freely as their fancy dictated.

Entering the building from the nave, the visitor passes along a narrow entrance called the "Vestibulum," on each side of which are the apartments of a portion of the slaves, into the atrium or open hall. Around the three sides of this hall are a number of small rooms called "cubicula" or bed-chambers, almost all of which have some exquisitely painted small panel in the centre. In a small room to the right on a blue ground, is Cupid pointing Dido to her lover's galley lying in the distance, and opposite, an old man drawing a Cupid from a cage full of little winged gods, half-butterflies, half-seraphs; in a small delicately painted white room is Venus fishing; next, in a chamber with buff panels, is Perseus rescuing Andromeda—always a favourite subject at Pompeii—from the delicate looking monster rising out of the sea to devour her.

The next compartment has a panel representing Ceres, the goddess of plenty; a wreath of wheaten ears confines her golden tresses, and near her is the cornucopia of plenty, near this again is Bacchus, the representative of the overflowing fullness of nature. Another chamber has a panel representing a musical party of the Graces seated on couches, and others applauding a girl who dances to the sound of a flute, keeping time with the castanets; Venus in an adjoining room is seen driving a small fairy-like car; and in another, a group of winged loves struggle beneath the burden of a delicately shaped wine jar; tempting fruits and flowers decorate the summer and winter dining-rooms; and in a small room near one of the entrances, are the lawyer and his client. The small bed-rooms with black ground, are charmingly decorated with buds and flowers painted in the most delicate and exquisite manner. The roof of the atrium is supported by winged angelic figures, the four facing the entrance, and above the tablinum or state room is gilt, the other being only slightly relieved with gold. The painting of the frieze is similiar to a decoration found in the house of the tragic poet at Pompeii, and represents a contest between the Greeks and Amazons. Some of the female warriors are in chariots, others on horses, and they are armed with bows, as well as with their usual shields and battle axes. All are represented as in violent action, and are shown as alternately pursuing, and falling before the Greeks. The men, the Greeks, may be distinguished by their helmets; the Amazons, the women, have their heads bare. The small statue in the centre near the basin is the genius of the fountain, who supplies the water from his exhaustless pitcher.

The hall opposite to the main entrance is called the "tablinum." Here the records of the family and the choicest statues and ornaments, and perhaps the library of the owner of the house, were placed. On each side are placed tables with vases, chairs, and candelabra, and in the centre is a table supported by a sphynx. On each side of this private apartment are passages, or "fauces," leading to what is classically termed the "peristyle," the centre of which open to the sky, and surrounded by sixteen fluted columns, is occupied by a small garden. In the passage on the right of the tablinum is a small room, very delicately painted, and lighted by a circular window from the top—this is the winter dining-room, or "triclinum; when used, the open space between the short wall and the ceiling was covered in by a curtain. Adjoining this apartment is the dining-room, used in the summer. This was generally furnished with three couches—hence the name "triclinum"—accommodating three persons, so that the number of guests at table did not exceed the number of the muses. Each person had his seat according to his rank and dignity; the places being thus appropriated:—1,



the host; 2, his wife; 3, guest; 4, consular place, or place of honour; the remaining seats being occupied by other guests. A painting found in one of the rooms at Pompeii gives a complete idea of a Pompeian feast—the table being set out with every requisite for a grand dinner. In the centre is a large dish, in which are four peacocks, placed one at each corner, forming such a magnificent dome with their tails, as would do credit to the artistic abilities of Soyer himself. All around are lobsters, one of which holds in his claw a blue egg, a second an oyster, a third a deliciously stuffed rat, and a fourth a little basket full of grasshoppers. At the bottom of the table are four dishes of fish, and above them are partridges, hares, and squirrels, each holding its head between its paws. The whole feast is surrounded by some article of diet, not unlike a German sausage; then comes a row of yolks of eggs; next a row of peaches, small melons, and cherries; and finally a row of vegetables of different sorts; while some sort of green coloured sauce covers and imparts a piquancy to the whole. The "culina" or kitchen, next to the dining-room, no larger than a cupboard, is decorated with a representation of two sacred serpents—ornaments which would be considered by our present race of cooks as anything but objects of religious veneration. In Pompeii the presence of serpents was always considered as a good omen: they were kept in the houses like the dogs or cats of modern times, and were in the habit of coming out from their hiding places, to be patted and caressed by visitors, and beg for something to eat. At the dining table they crept about the cups of the guests, and in hot weather ladies would use them as living boas, and twist them round their necks for the sake of their agreeable coolness. Virgil thus refers to a scene which he, no doubt, frequently witnessed:—

> "Scarce had he finished when, with speckled pride,
> A serpent from the tomb began to glide.
>
> * * * * * *
>
> Betwixt the rising altars and around,
> The rolling monster shot along the ground.
> With harmless play amid the bowls he passed,
> And with his lolling tongue assayed the taste;
> Thus fed with holy food, the wondrous guest,
> Within the hollow tomb, retired to rest."

These reptiles, bearing a charmed life, increased to an incredible extent in Rome, and Pliny states that the only thing which kept them under were the frequent fires which occurred in the city. The fire for cooking was made upon the top of the small dresser, on the top of the arch, in the same manner as that now adopted in almost all the Italian states. The open space underneath was usually appropriated to the reception of the kitchen utensils. No chimneys or arrangements of that sort have been yet discovered in

Pompeii for carrying off the smoke, but it is not easy to reconcile the state of elegance of the decorations of Pompeii with the supposition that the inhabitants thus consumed their own smoke.

At the corner of the Peristyle stands the "lararium," sacred to the Penates, or household gods. Upon this altar the festive offerings were placed, and the sacred fire burned in homage to the favourite gods. Close to the altar is a small room or recess, which may be supposed to be a sleeping apartment. Near this, upon the ground, will be observed the letters "C. P." Many persons would suppose these letters had some hidden classical meaning. Quite the reverse; they mark, in the most common-place manner, the parish boundary. On a recent occasion of beating the parish bounds, it was found that this Pompeian house had the privilege of being situated in two parishes, and these letters record their respective boundaries. If the house were provided, as many of them were at Pompeii, with an upper story, the staircase communicating with these apartments would be placed in this part of the house. Adjoining this room is the bath, where a slave is represented holding a "strigil," or flesh scraper, with which persons taking a bath were accustomed to have their flesh scraped in something the same manner as ostlers of the present day scrape their horses. Next to the bath, upon the right of the "tablinum," as the visitor passes into the "atrium," is the "thalamus," or sleeping apartment of the master and mistress of the house. A small apartment in the entrance to the right of the "atrium," with a representation of a lawyer and his client, is the room in which conferences were held with persons who had business to transact with the owner of the house. *The Builder* supplies the following details with respect to the origin and progress of this highly interesting court:—"In the first instance, it was proposed that this should simply be a refreshment court, decorated in Pompeian style, not a complete reproduction. As the arrangements were proceeded with, the idea of refreshments there was given up; and the endeavour has been made to produce a perfect type of domestic habitation—atrium, tablinum, peristyle, triclinium, and cubicula; the floors paved with mosaics, the walls covered with paintings.

"It was designed and has been carried out by Mr. Digby Wyatt; and to Signor Abbate is strictly due the whole merit of the *painted decorations* of the Pompeian house, but nothing more. He is not an architect, and has never been one: but his knowledge of every detail connected with Pompeii is very great, and he has doubtless given the full benefit of his judgment in the architecture, as the architect has afforded him whatever advice he could beneficially offer throughout his work. We have seen the original sketch made by Mr. Wyatt at Naples, which shows that the idea was fully conceived before even the assistance of Signor Abbate was positively engaged. The size of every room was arranged at Naples; and then, with Signor Abbate, the various paintings to be

reproduced on every wall were selected, and the latter gentleman remained there to make his tracings and cartoons, which he brought complete to this country. Before his return to England the working drawings had been made, and the works considerably advanced. Owing to the backward state of the building, it was some months after his arrival before he could begin his work, and much of that time was spent in completing the cartoons, arranging them to suit some variations which had been made in studying out the details, and in trying experiments as to media and pigments. The moment the walls were in a fit state to begin upon, proper ornamental painters were supplied him, and Signor Abbate began his work. Mr. W. A. Parris, the son of Mr. E. T. Parris (who will hereafter, we suppose, be called St. Paul's Parris), has throughout acted as his deputy, assisting him in setting out the decorations and mixing all the tints. Mr. Thomas Hayes has been Mr. Wyatt's deputy as superintendent of the architectural arrangements. Let us add that Mr. Falkener has aided with some valuable hints, and that most of the ornamental portions have been modelled by Signor Monti."

ENGLISH AND GERMAN MODERN SCULPTURE COURT.

A considerable part of the building is set apart as courts for the exhibition of works of modern sculpture, and to these we now propose to conduct the visitor. Leaving the Pompeian house, we pass northward along the nave on the left-hand side, till we reach the collection of English and German sculptures adjoining the Stationery Court. Although in this court there are few works which are not already well known to the artist and a large portion of the public, this collection of the choicest and best of the works of modern sculptors will still afford a vast amount of instruction and delight to all classes of visitors; for the student may employ himself in tracing the influence which the old masters still exercise over modern art, or gaze with delight upon the actual achievements of modern artists of the present day; the evidences of the mastery which has been obtained over mechanical difficulties, and the success with which the sculptor has infused into the breathing marble the expression of those passions and qualities which stir to action, or lend dignity to repose. But whether it be the innocent smile of infancy, the careless enjoyment of youth, the soft loveliness of woman, man flushed with the animation of victory, instinct with courage, or marked with the expression of refined intellect; or whatsoever conception either dramatic action

or poetic fancy has embodied—in each case, youth, maturity, and declining age, will present some object in unison with its own peculiar feelings and emotions, upon which the memory will linger with delight, and the mind repose with satisfaction.

An examination of the collection of English modern sculpture will prove, in the most striking manner, that the artists of this country possess considerable affection for, and a ready appreciation of the powers of physical beauty. Their works possess to as great, and probably a greater extent than those of other countries, all those leading qualities which constitute beauty in art. The visitor will not find in English sculptures many groups in which attempt has been made to represent the combined action of several figures, such as the Farnese Bull, the Laocoon, the Elgin friezes, of ancient art; the Seven Acts of Mercy, of the Renaissance period; or the beautiful bas-reliefs of the pleasures of public gardens, by modern German sculptors. In the English collection, there are single figures of nymphs, Cupids, Pysches, athletes, and character statues, but no embodiment of scenes from sacred or national history, or from the highest order of lyric poetry. But he will not, however, fail to perceive that English sculpture is deficient only in aim, rather than form, and that, as compared with the corresponding productions of other countries, the single figures of our artists will successfully stand the test of comparison.

The visitor having noticed the phases which German sculptures presented in the mediæval time, will be anxious to learn the general features which characterize the works of the later artists of Germany. Debased Roman in style, in its incipient stages, German art imbibed a peculiar hardness and rigidity in its Romanesque period of transition, though occasionally attaining a really grand severity. In its earlier Gothic phase, it was truly fine, simple, and earnest in sentiment, although in its later style it grew too florid—expression degenerating into caricature—refinement into attenuation, and easy-flowing lines of form and draperies into unnatural and angular contortions. In its Renaissance period, Germany was peculiarly favoured, since in many of her sculptors' productions recurrence to antique types was happily blended with much of the old dramatic energy in composition and intention which prevailed in the best periods of the middle ages.

"Scarcely any monuments of German sculpture of a date prior to the eleventh century, are known to exist, though from soon after the year 1100 they begin to abound.* About the middle of the thirteenth century, the Gothic element appeared to develope itself in sculpture, and may be especially recognized in the tombs which date from that period. In all the old cities, in Cologne, Strasbourg, Magdeburg, Fribourg, Nuremberg, Wurtzburg, Augsburg, the churches and cathedrals were most lavishly decorated with carvings in stone, metal, and wood. It was, however, at

* Digby Wyatt's "Industrial Arts of the Nineteenth Century."

Nuremberg that the great stride was made, and the foundation laid for that excellence which subsequently so eminently distinguished that city. In the sixteenth century the reputation of Nuremberg was fully sustained by Adam Kraft, but it was reserved for Peter Visscher to carry to its utmost perfection the sculpture of the Renaissance period. After the death of Visscher, numerous artists essayed to equal his productions, but none succeeded, although much prolific genius was constantly labouring for the rich merchants, more particularly those of Augsburg. From the commencement of the seventeenth century, the pernicious taste of Bernini spread from Italy over the continent of Europe, and Germany did not escape its influence, and art dwindled to a comparative nonentity. The continued wars and troubles which devastated the nation, retarded for awhile the rekindling of the spent fire, which, at length, the ancient spirit of the German nation revived, and from the commencement of the present century her word of command in art, as it was of old in battle, has been only "Vorwarts!" Fired, no doubt, by the writings of Lessing, Goethe, Schiller, Schlegel, and many more, the youth of Germany has laboured hard; and at Berlin, Munich, Dusseldorf, and Dresden, schools have arisen, the admirable works emanating from which have redounded to the eternal honour of the present age. It is impossible to cite the names of sculptors, such as Rauch, Schwanthaler, Dannecker, Rietschel, Kiss, Drake, and Wolff, without feeling that it is our good fortune to live in the same generation with some of the finest masters of the art who have ever existed, and whose works are worthy of the high state of mental culture universal at the present day in Bavaria, and in Northern Germany generally, but more especially in Prussia.

It is impossible to do more than notice briefly a few of the more prominent of the English and German works here exhibited.

"*The Greek Hunter.*" — Of English sculptures, "The Greek Hunter," by Gibson, will be found to be one of the finest types of manly beauty in the whole building. "This statue affords," says Mr. Wyatt, "a remarkable instance of the account to which the highly educated artist is frequently enabled to turn the casual combinations of form and movement, which nature provides abundantly, for the benefit of those who have the ability to appreciate and adopt the inspiration she offers. The simple incident of a boy struggling to restrain an impetuous hound, caught the eye of the accomplished sculptor of this admirable work as he was walking in the streets of Rome. His attention was at once arrested by the vigour of the contrasted action, and the idea of embodying it in marble immediately suggested itself to his mind. The result was shown in the statue which was unquestionably one of the most beautiful works of art contributed to the late Great Exhibition." Mr. Gibson has preserved all the best qualities of antique art, without allowing any peculiarities of mannerism to detract from its great merit. The graceful arrange-

ment of the varied lines of the composition, the vigour of the action, the perfect balance of the figure, the manly beauty and activity of the athlete, the eagerness of the hound, the anatomical detail expressed, but not overwrought, and the admirable finish of the carving, all contribute to the perfection of a whole, eminently calculated to maintain that national reputation for excellence in works of the highest order of sculpture, which the genius of Flaxman first acquired for this country throughout Europe.

"*The Bather*" of Mr. Lawlor contrasts, by its loveliness of feminine beauty, with the many forms of "The Greek Hunter." Throughout the whole collection there is probably not a more beautifully modelled female figure than "The Bather," and it is worthy of a place near the Venuses of the best time of Grecian art.

"*Una and the Lion,*" by Bell, is a group which will always be viewed with interest by those who appreciate the beauties of Spenser, one of England's oldest poets, and who can sympathize with Una, the faithful and forsaken lady who, day after day, sought her long-lost knight through dark and tangled forest, and pathless desert, and to whom, when

"On the grass her dainty limbs did lay"—

a fierce lion, bounding from the neighbouring woods, with gaping mouth rushed towards the fair lady, but as he drew nearer, awed by the beauty of his intended victim, laid aside his fury, and

"Instead thereof he kissed her weary feet,
And licked her lily hands with fawning tongue,
As he her wronged innocence did weet,"

and accompanied the poor lady as her guardian and servant upon her toilsome search.

"Oh! how can beauty maister the most strong,
And simple truth subdue avenging wrong."

"*The Eagle Slayer,*" by the same artist, is a most successful production. In the composition of the figure there is much that is alike bold and original, and the whole of the details are worked out with great care and tenderness. The action of the figure is vigorous and appropriate. The statue of Shakspeare, also by Bell, is remarkable for the intellectual character given to the great dramatist. Mr. Bell stands prominently forward as an artist who has done more, perhaps, than any other living artist to infuse into manufacturing industry something like purity of style and a due regard to art. A beautiful statue of Mr. Bell's, of Andromeda, cast by the Coalbrook Dale Company, was in the late Great Exhibition, where it attracted great notice, not less on account of the admirable manner in which the casting was accomplished, than in

the extreme beauty and delicacy of the figure itself. The Andromeda was purchased by Her Majesty. The "Eagle Slayer" was also cast in bronze, and exhibited by the Coalbrook Dale Company at the Exhibition in Hyde Park.

"*The Narcissus.*"—This charming figure, the work of Mr. Gibson, admirably represents that beautiful youth, who, seeing his image reflected in the crystal waters of a fountain, and believing it to be the nymph of the place, loved and sighed for her, and at length, finding all his attempts to approach her were fruitless, did as "slighted lovers" often threaten to do even in the present age—killed himself; but the blood which flowed from the hapless youth, changed into the graceful and sweet-scented Narcissus. Sorrowing nymphs raised a funeral pile on which to burn the body of the rash youth, but they found only a beautiful flower. This statue is worthy of notice, as having been the first work which was produced by Messrs. Copeland and Co. in that beautiful material known as Parian, and in which so many beautiful statuettes and small groups are now executed. The same subject is treated in an admirable manner by Mr. Theed; Narcissus being represented as leaning upon his staff, and viewing with admiration his beautiful features as they are reflected in the stream.

"*Sabrina.*"—This statue of Mr. Calder Marshall received considerable praise at the late Great Exhibition, on account of its exquisite feminine grace, the fineness of its head, and its great beauty, both in form and general expression. There is in the collection by the same artist, a fine statue of old Chaucer—a poet whose name stands second only to that of Shakspeare in the annals of English literature, and whose "Canterbury Tales" will be read with interest as long as the English language shall continue to be spoken. A charming work, "The First Whisper of Love," tells its own story in a graceful and beautiful manner. The group of "Zephyr and Aurora," and "The Dancing-girl," also by Mr. Marshall, are equally pleasing; and in each of them, as in the others, the composition of the figures is graceful, and the modelling tender and beautiful.

"*Ino and Bacchus.*"—Mr. Wyatt has in this work most admirably portrayed the figure of the faithful nurse, and unhappy victim of the jealousy of the Queen of Heaven. Juno, envious at the prosperity of Ino, took every means to disturb her peace; and at length the persecuted daughter of Cadmus threw herself into the sea, whence, by the pity of the gods, she was rescued, and changed into a sea deity. Ino was the nurse of Bacchus, and she is represented employed in amusing the infant god. Among the other exquisite productions of Mr. Wyatt, worthy of notice, are Penelope, the wife of Ulysses, with her faithful dog; a nymph, exquisite in form, entering the bath; a delicately-formed nymph with an urn; and there is a charming figure of a "Huntress," by Richard Wyatt.

A charming figure, by Westmacott, representing Pandora, deserves more than a passing notice. The first mortal female who was ever created, possessed of all the beauty which Venus could

bestow upon her, all the attractions of the Graces, all the winning eloquence which Mercury could teach, and all the riches which Minerva could bestow upon her, holds in her hand the wondrous box which Jupiter gave to her to present to the man who should marry her. From this box, presented by Pandora to her husband, flew out, says Hesiod, all those evils and distempers which have never since ceased to afflict the world;

"But Hope, the charmer, lingered still behind,"

and the saddening features of the lovely mother of mortals gleam with a joyous smile as she contemplates secure in her box that heaven-born Hope which can still provide

"Wreaths for each toil, a charm for every woe."

One of the most graceful and lovely of nymphs, by Westmacott, will not be passed over by the visitor without receiving that attention which its beauties so well deserve.

The statues of Mr. Macdonald, always interesting, as well from their subject as their style, consist of a beautiful figure of Andromeda, and Ulysses with his faithful dog, Argus, who recognizes his master on his return home after his twenty years' absence, and dies licking his hand.

"Highland Mary" is a charming figure, and the drapery, though of a homely style, has been most successfully treated by Mr. Spence. Lavinia and Flora, by the same artist, are most creditable specimens of English sculpture.

"Psyche borne by the Zephyrs," "Cupid disguised as a Shepherd," "Aurora," and "The Wounded Amazon," by Gibson, need no commendation, for they evidence on the part of this talented sculptor a profound knowledge and perfect command over every condition requisite to success in art.

It is only necessary to enumerate in the nave a colossal figure of Satan, and a small one of that mischievous little Puck, the "merry wanderer of the night," by Lough; a Flora, and a pretty little Dancing-girl, full of girlish innocence and glee, by Crawford; a Boy with a Butterfly, and a charming little Psyche, by Theed; a Little Boy with a Tambourine, and "The Murder of the Innocents, by Legrew."

Winged Victories.—The six winged Victories are by Christian Rauch, one of the most celebrated of German sculptors. The originals of these figures, executed with great freedom and vigour, at present decorate the interior of the Walhalla, a noble structure erected by Louis, King of Bavaria, on the banks of the Danube in 1832. The Walhalla was, according to the ancient Scandinavian mythology, the temple of Odin, into which the Walkyriæ, or War Virgins, introduced to the gods all heroes who had fallen in battle from the beginning of the world. The temple was entered by 540 doors, each of which admitted at once 800 nobles, who could march

through them abreast. In the centre of the hall, or temple, stood a mighty tree, called the Ljeradhr, the leaves of which were eaten by the goat Heidhrun, from whose udder flowed daily a vessel full of delicious mead, which was part of the nourishment of the heroes in this Paradise. The heroes, seated in a vast circle, regaled themselves, in addition to their bowls of mead, with the flesh of the bear Sährimnir, which possessed the valuable quality of always remaining whole, no matter what number of steaks were cut from him; and their dessert was made of the apples of Iduna, which preserved them in eternal youth; while the "scalds" sang in praise of the gods, the charms of the Walkyren, and of their past glories. The present Walhalla is not so ambitious in its objects as the once wondrous temple of Odin, but was erected for the purpose of containing the statues and busts of those Germans who had gloriously distinguished themselves in the cause of their country. The building, which is of the Doric order, is approached by a magnificent flight of fifty marble steps. The entire height of the building is 200 feet, its length 438 feet, with projecting terraces 208 feet beyond the building. The hill upon which the Walhalla stands is 304 feet to its summit, and the central temple or hall is 330 feet long, 108 feet wide, and 69 feet in height. The exterior pediments of the building are adorned with figures in high relief. The principal one represents the battle of Tentoburg, where the Roman legions were conquered by Arminius—the victory which so afflicted the Emperor Augustus that he started from his sleep, exclaiming, "Restore me my legions, Varus!" The grouping of the figures in this pediment is admirable, and the whole is one of the finest compositions of Schwanthaler, who was occupied eight years in its completion. Other pediments in the interior represent the creation of the world; the ice-giant, Ymer, rises from the icicles, and the first human pair spring out of his shoulders. Odin is next seen seated on his throne with his wife, Frigga; and near them stand Braga, the god of Wisdom, with his consort Iduna, and Thor, the god of Thunder, and the two ravens by which Odin discovers the actions of mankind: next is represented the contest constantly going on between the destruction and preservation of the universe. Past, Present, and Future, water the tree of the world from the well of wisdom, while Fenrir, the gigantic wolf, and Yermungard, the monster snake, are endeavouring to destroy the tree. The historical portrait-gallery, to which attention will presently be directed, is an attempt to produce in this country an extensive Walhalla, in which the portraits and busts of the great and good of all nations may find a suitable home, and may be examined with interest and profit.

The other works of Rauch include four very fine seated figures, representing the cardinal virtues; copies of the bas-reliefs from the monument of Frederick the Great; a small but charming little work, "A Boy holding a Book;" two exquisitely modelled life-sized stags; and a truly royal eagle.

There are five copies of works by the immortal Thorwaldsen, upon which too great praise cannot well be bestowed. One represents Venus holding in her hand the famous golden apple, the prize which the Goddess of Beauty had gained over Pallas and Juno; a fine figure of Mercury; an exquisite statue of Ganymede; a gentle shepherd; and, finer than all, his charming group of the Three Graces.

Tieck, one of the most famous sculptors of Berlin, exhibits statues of Ulysses, Ariadne, Iphigenia, and Achilles—works deserving of the highest praise.

A vigorous and spirited group, representing Minerva protecting a warrior, originally designed by Drake for the Castle Bridge at Berlin, merits attention. There is also a very pretty nymph holding a basket of fruit and flowers, by the same sculptor.

Of works of Rietschel, one of the ablest pupils of Rauch, there are copies of some fine medallions, with allegorical representations of night, morning, noon, and dawn. The beauty of these figures, and their light and flying drapery, will not escape the notice of the visitor.

M. Wolff, a celebrated German sculptor, is represented by several casts of his most successful productions: among them will be noticed a pretty little Basket Bearer; Diana leaning on her Bow; and a Nereid.

A small shepherd boy, with a dog by his side, and a pipe in his hand, by Zwergen of Frankfort, is pretty in design and skilful in execution. Erato, the muse of lyric and amorous poetry, whose assistance youthful Roman swains were wont to invoke when preparing their tender epistles, is the work of the great sculptor Launitz, of Frankfort. There are two statues of old blind Homer and sage Thucydides, by Professor Mayer of Munich; a fine effigy of the godlike Hector, by Danneker of Berlin; the original model of the beautiful and penitent Magdalen, by Wagner of Stutgard; and a pretty and graceful standing nymph, by Schwanthaler.

Next comes a fine group representing Ceres and Proserpine; the youthful Proserpine holding in her hand a bouquet of flowers, gathered perhaps from

> "That fair field of Enna
> Where Proserpine gathering flowers
> Herself, a fairer flower, by gloomy Dis
> Was gathered."

A group representing a Hunter defending his family against a panther, by Widnmann of Munich, is boldly conceived and ably executed. The hunter is shown in the act of plunging his knife into the ferocious panther, who has already sprung upon the principal figure, and the mother crouches in terror with the infant in her arms from the savage beast, while a look of anxious affection

is directed towards the father, upon whose skill and energy his life as well as her own safety and that of her child depend.

Two other works deserve notice in this court; they are a seated statue of Medecina, and a Centaur instructing Achilles, the former by Hahmel of Dresden, and the latter by Brugger of Berlin.

FRENCH AND ITALIAN MODERN SCULPTURE COURT.

We now cross the nave, and enter the courts devoted to French and Italian sculptures, where will be found casts from the works of some of the best sculptors of the two nations. In the English court an earnest attention was shown to have been displayed in the development of forms of beauty, grace, and loveliness, or of strength and manliness of character evinced in strong and energetic action. The works of German artists are marked by endeavours to represent either the stirring events of real life, allegorical figures, or a deep religious sentiment. French art manifests itself by its devotion to the expression of those tender feelings called forth by the varied relations of life, or by its endeavours to delineate subjects of a sentimental character. The work which more, perhaps, than any other is deserving of notice in this court is—

"*The First Cradle.*"—This charming group is the production of Auguste Debay of Paris. Eve, the mother of the human race, is holding to her bosom and in her arms, with which she forms a cradle, her two children, Cain and Abel, who are sleeping. Her head is bowed over them, and her look of fond affection falls upon the sleeping objects of her maternal love. She seems as though she could already perceive some faint indications of the different feelings which, in despite of sleep, betray themselves in the instinctive movements of her children. In blissful ignorance of the future she sees no crime, she perceives no virtue, she has but one sentiment—the first and most natural feeling of woman—that of maternal affection. Cain sleeps; but, in his unquiet slumbers, his hand repulses his brother, whom he seems to feel too near to him; this action, and the expression of his features, already reveal the nature of his cruel instinct. His brother Abel reposes in the pure sleep of innocence; he appears an angel in the cradle. On the side of the pedestal is a bas-relief representing the fatal tree of knowledge; the offering of Abel accepted by the Creator, that of Cain refused; and upon the front the fratricidal murder—a sad summary of the first page of human history. No subject could be

better adapted for sculpture, no work could be expressed in a more perfect manner, and the whole bears a touching aspect of grace, melancholy, and mystery. Some experienced matrons have objected to the manner in which the children are lying, as being somewhat dangerous for them, and one which no fond mother of the present day would think of adopting. It should, however, in justice to the artist be remembered that this is the *first* cradle, and that Eve's experience was necessarily somewhat limited. A fine spirited group of the "Chase," and a beautiful and charming work, "Modesty and Love," also by M. Debay, will not pass unnoticed.

"*Cupid Captive*" is one of the most poetically conceived groups in the court. Look at the quiet assumption of power in the beautiful Psyche,—the young Cupid is held in gentle captivity by the foot and a single finger; see the unwillingness with which the little god of love submits to the bondage of his lovely and graceful captor. The design is graceful and delicate in the extreme, and the whole of the lines harmonize together in most elegant form. It is the production of M. Fraikin of Brussels, a sculptor who possesses as great a reputation among his fellow artists in Belgium as with amateurs and the public in general. "Venus with the Doves" is another exquisite work by the same artist, and the principal figure affords admirable evidence of his great ability and success in giving to female figures great beauty of form, and life-like expression. "L'amour au berceau," or "Cupid in his cradle," "Psyche," and a "Roman peasant woman," are works also by M. Fraikin, which will appeal to the sympathies of visitors of all ages.

"*Malibran.*"—The statue of this celebrated vocalist, from her tomb at Laeken, near Brussels, was designed by M. Geefs. The feet of the figure appear to be just parting from earth, the robes seem already to have begun to float in air, and the soul-beaming face of the ascending Malibran is suffused with a radiant expression of serenity and beatific pleasure. The original statue in the churchyard of Laeken is protected by a building something in the form of a light summer house; and the monument, lighted by a glazed roof, is seen through the iron grating of the door.

"*Venus disarming Cupid*" is one of the most admirable of the works of Pradier, the most successful of French sculptors. His statue of Phryne, the exquisite impersonation of a degraded woman, beautiful but fallen, received from the jurors of the late Great Exhibition the award of a council medal. The same beauty of feature, subtle refinement of form, and graceful attitude which distinguished Phryne, prevail, to a great extent, in the principal figure of the present group.

"Cyparis" and "Cupid taking a Butterfly from a Rose," by M. Chaudet; "Eurydice," by M. Mantcuil; "Venus at the Bath," by M. Allegrini; "Innocence," by M. M. Ramey, fils; "Modesty," by M. Cartelier; a fine figure of a "Mower" with his scythe, by

M. Guilliome; and a "Dancing Fawn," by M. Fontaine, are each and all admirable specimens of the works of some of the best of modern French sculptors.

Of Italian casts, a large proportion are from the works of the celebrated Canova. A "Sleeping Lion," a "Weeping Magdalen," a charming Vase, a splendid group of "Mars and Venus," a "Venus leaving the Bath," "The Three Graces," "Terpsichore," "Venus and Adonis," and "Paris," whose love for the beauteous Helen caused the Trojan war, were some of the happiest and most successful of the works executed by this great sculptor, and they are worthy of comparison with any of the most famous works of antiquity.

"*The Dying Ishmael.*"—Though a painful subject, is undoubtedly one of great talent, and reflects great credit upon M. Strazza. The original of this cast, shown in the Great Exhibition, attracted a more than ordinary share of attention. There is a cast of a fine figure of a "Mendicant," by the same sculptor.

"*The First Step.*"—This beautiful specimen of picturesque sculpture will not fail to receive very general admiration. The graceful and natural incident so charmingly represented, awakens at once all the pleasing sympathies of human nature; while in an artistic point of view the manner in which the difficulties of depicting successfully an every-day costume, in a material universally employed for classic forms, have been overcome, can only be fully appreciated by those who are aware of the serious obstacles with which Pietro Magin, the sculptor of this work, had to contend. M. Magin is still very young, and the present work may be looked upon as the artist's "First Step"—certainly full of promise, and in Milan both the work and the talented artist are exceedingly popular. A small figure of a child sewing is treated in the same successful manner by this rising artist; and in the figure of David M. Magin has also achieved another success.

Among the other Italian works deserving of notice, are a "Hunter with his Horn," by Vetty, of Rome; "Charity" and "Prayer," by Bartolini; "The Prodigal Son," by Sangiorgio; a Greek statue, by Rosetti; and "Melpomene," by Rinaldi.

THE HISTORICAL PORTRAIT GALLERY.

From the productions of the principal artists of England, Germany, France, and Italy, the visitor will proceed to examine a fine collection—the first ever attempted to be made in this country—of the busts and statues of the most famous and illustrious persons of all ages and all nations. Germany has its Walhalla for

noble Germans, France has a splendid collection of national portraits and busts; but, in this country, no collection of the sort has yet been attempted. The Crystal Palace is a realization, to a great extent, of the "New Atlantis" of Lord Bacon—of "Solomon's House, or the College of the Six Days' Work," described as the noblest foundation that ever existed on earth, and "the lanthorn" of that Utopian commonwealth. It was described as founded for the obtaining of knowledge, and "the enlarging of the bounds of human empire to the effecting of all things possible." Solomon's House possessed, like the Crystal Palace, its high towers, its cascades, its engines, its gardens, parks, and enclosures of all kinds, for all sorts of birds and beasts. But it contained also "a long and fair gallery filled with the statues and portraits of all great inventors and worthy men, for the people of the New Atlantis paid great honour to inventors, and upon every invention of value they erected a statue, and gave a liberal reward to the inventor." Wise and happy people! How many illustrious men, who in this country have had the misfortune to be possessed of an inventive mind, would have sailed to those shores with the productions of their inventive genius, rather than have lived in penury, or have died in wretchedness in their native land!

The worthies of ancient times have been pointed out in the vicinity of the courts devoted to the illustration of Greek and Roman art. The great men of mediæval and later times could not, however, conveniently be arranged in proximity to the architectural courts, and they are, therefore, arranged around the large transept in the vicinity of the Modern Sculpture Courts. Passing from the French and Italian Sculpture Courts, the visitor is at once introduced to the illustrious men of France and Italy. We will commence with

FRANCE.

Among the royal personages whose busts or statues appear in this gallery, taking them in chronological order, are—

Francis the First, the great patron of art and literature, the companion of Erasmus, the patron of Cellini, and the friend who received the last dying breath of Leonardo da Vinci. He succeeded Louis XII., 1515, and died in 1547.

Next in chronological order is Henry II., son of Francis I., born in 1518, succeeded to the throne, 1547, and died, 1559, of a wound accidentally received at a tournament.

Charles IX., second son of Henry II., ascended the throne, 1560, when eleven years of age, and died, 1573, aged 24.

Henry III., third son of Henry II., born at Fontainbleau, 1551, became king of France, 1573. He was assassinated at St. Cloud, by Jacques Clement, a fanatical Dominican monk. With Henry III. ceased the Valois dynasty.

Henry IV., son of the Queen of Navarre, was born 1553, he became King of Navarre, 1572, and after a long siege of Paris was acknowledged King of France 1594. He was assassinated by Ravaillac, 1610.

Next, in order of time, is Anne of Austria, daughter of Philip of Spain, born 1602; married at 13 years of age to Louis XIII. of France, and died in the 62nd year of her age.

Louis XIV., whose reign was remarkable alike for its splendour and prodigality, became King of France in 1648, when five years of age. He died 1715, aged 77.

Louis XV., the great grandson of Louis XIV., was born 1710, commenced his reign 1723, and died 1764.

Madame Du Barry, celebrated mistress of Louis XIV., born 1744, and was executed by the Revolutionary Tribunal of Paris, 1793.

Marie Antoinette, the beautiful queen of Louis XVI., daughter of Francis, Emperor of Germany, and Maria Theresa of Austria, was born at Vienna, 1755, married the Dauphin, grandson of Louis XV., 1774. Beheaded on the 16th Oct. 1793, at 38 years of age, during the French Revolution.

Napoleon Buonaparte, born at Ajaccio, in Corsica, Aug. 15, 1769; First Consul of France, Aug. 2, 1802; Emperor of France, Dec. 2, 1804; abdicated in favour of his son, April 4, 1814; escaped from Elba, Feb. 26, 1815; defeated at Waterloo, June 18, 1815; surrendered himself to the British, July 15, 1815; landed at St. Helena, Oct. 16, 1815. Died, May 5, 1821, and his body was removed to the Invalides, at Paris, Dec. 15, 1840.

The more celebrated statesmen and ministers of France include—

Name.	Place and date of birth.		Died.
Colbert	Paris . .	1619	1683
Mazarin . . .	Piscina . .	1602	1661
Richelieu . . .	Paris . .	1585	1642
Sully	Rosni . .	1559	1641

The marshals, great generals, and admirals of France are represented by the illustrious Bayard, without fear and without reproach, who died in 1524; and Admiral Coligny, who was shot at the massacre of St. Bartholomew, in 1572.

Name.	Place and date of birth.		Died.
Berthier . . .	Versailles .	1753	1815
Bessiers	. . . . .	1768	1813
Condé (the Great)	Paris . .	1621	1686
Dumourier . .	Cambrai .	1739	1823
Foy	Picardy . .	1775	1825
Lafayette . . .	Chevagnac .	1757	1834
Lannes (the Great)	Guienne .	1769	1809
Massena . . .	Nice . . .	1758	1817

Name.	Place and date of birth.	Died.
Ney	Sarre Louis, 1769	1815
Turenne . . .	Sedan . . 1611	1675
Vauban, military engineer . .	1633	1707

There are, also, Augereau, Cambronne, Hoche, and the brave Kellerman.

The painters of France are represented by—

Name.	Place and date of birth.	Died.
Brun, Le . . .	Paris . . 1619	1690
David	Paris . . 1750	1825
Gerard	Rome . . 1770	1837
Girodet	Montargis . 1767	1824
Gros	Paris . . 1771	1835
Guerin	Paris . . . 1774	1833
Mignard	Troyes . . 1610	1695
Poussin, Nicholas .	Normandy . 1594	1665
Sueur, Le . . .	Paris . . . 1617	1705
Vouet, Simon . .	Paris . . . 1582	1641

Of dramatists and poets there are—

Name.	Place and date of birth.	Died.
Boileau	Paris . . . 1636	1711
Corneille	Rouen . . 1606	1684
Crebillon . . .	Dijon . . . 1674	1768
Fontaine, Le . .	Thierry . . 1621	1695
Moliere	Paris . . . 1620	1673
Racine	Ferte Milon 1639	1699
Sage, Le	Ruys . . . 1667	1747
Sedaine	Paris . . . 1719	1797
Voltaire	Paris . . . 1694	1778

Of others, forming a galaxy of illustrious men, there are—

Name.	Profession.	Place and date of birth.	Died.
Arnaud . . .	Advocate . .	Paris 1550	1620
Bossuet . . .	Theologian . .	Dijon 1627	1704
Buffon . . .	Naturalist . .	Burgundy . . . 1707	1788
Chaptal . . .	Chemist . .	Mossaret . . . 1756	1832
Cuvier . . .	Naturalist . .	Montbéliard . . 1769	1832
Denon . . .	Antiquary . .	Chalons . . . 1747	1825
Descartes . .	Philosopher .	Touraine . . . 1596	1633
Dufresnoy . .	Dramatist . .	. . . 1648	1704
Felibien . . .	Historian . .	Chartres . . . 1619	1695
Fenelon . . .	Theologian . .	Perigord . . . 1651	1715
Hamel, Du . .	Philosopher . .	Vire 1624	1706
Joubert . . .	Physician . .	Valence . . . 1520	1582

Name.	Profession.	Place and date of birth.		Died.
Jussieu . . .	Physician . .	Lyons	1699	1758
Mabillon . .	Theologian. .	Paris	1632	1707
Montaigne . .	Essayist . .	Perigord . . .	1533	1592
Pascal . . .	Belles Lettres	Clermont . . .	1623	1662
Peirese . . .	Antiquary . .	Pisa	1580	1637
Reaumur . .	Philosopher .	Rochelle . . .	1683	1757
Rollin . . .	Historian . .	Paris	1661	1741
Rousseau . .	Philosopher .	Geneva . . .	1712	1778
Soufflot . . .	Sculptor . . .	Trancey . . .	1713	1781
Tournefort . .	Nat. History .	Aix	1656	1708

There is also a fine bust of Jean Goujon, the "Correggio" of French sculptors, who, being a Huguenot, was shot on the scaffolding while at work upon some bassi-relievi at the Louvre, during the massacre of St. Bartholomew. He was the sculptor of the famous Caryatid figures in the Renaissance Court.

ITALY

The great men of Italy are chiefly represented by painters and sculptors, among whom are—

Name.	Place and date of birth.		Died.
Bramante . . .	Urbania .	1444	1514
Brunelleschi . .	Florence .	1375	1444
Caliari	Verona . .	1570	1596
Canova	Rome . .	1757	1822
Caravagrio . . .	Rome . .	1757	1822
Carracci	Bologna. .	1560	1609
Correggio . . .	Modena . .	1494	1534
Cortona	Cortona. .	1596	1669
Domenichino . .	Bologna. .	1581	1641
Donatello . . .	Florence .	1383	1466
Fiesole	Burgello .	1387	1409
Garofalo	Ferrara . .	1481	1559
Ghiberti, Lorenzo	Florence .	1378	1455
Guido Reni . .	Bologna. .	1574	1642
Ghirlandaio. . .	Florence .	1451	1495
Giovanni . . .	Udine . .	1490	1561
Giulio Romano .	Rome . .	1492	1546
Leonardo . . .	Vinci . .	1445	1520
Mantegna . . .	Padua . .	1431	1505
Paolo Veronesi .	Verona . .	1528	1588
Palladio, Andrea .	Vicenza . .	1492	1546
Perugino, Pietro .	Perugia. .	1446	1524
Piranesi, G. . .	Venice . .	1720	1778
Pisano, Andrea .	Bologna. .	1225	1320

Name.	Place and date of birth.		Died.
Raffaelle d'Urbino	Urbino . .	1483	1520
Sarto, Andrea Del	Florence .	1488	1530
Signorelli, Luca .	Cortona. .	1439	1521
Titian	Venice . .	1477	1576

The Poets and Dramatists are—

Ariosto, Ludovico	Reggio . .	1474	1533
Dante	Florence .	1265	1321
Goldoni	Venice . .	1707	1793
Guidi.	Bologna . .	1575	1642
Metastasio, Pietro	Rome . .	1698	1782
Petrarch . . .	Arezzo . .	1304	1274
Tasso, Torquato .	Near Naples	1544	1395

Musicians:—

Cimarosa . . .	Naples . .	1754	1801
Corelli	Bologna . .	1653	1713
Paganini . . .	Genoa . .	1784	1840
Palestrina . . .	Palestrina .	1524	1594

Among the remaining busts which will be viewed with interest, are those of Cosmo de Medici, the princely patron of the arts, and called by the Florentines the "Father of his people and the deliverer of his country," born in 1399, and died in 1464. There is Columbus, the discoverer of America, who was a native of Genoa, and who died in 1506, in the 64th year of his age; and near him is Galileo, the famous astronomer, born in Florence, 1594, and who died in 1642. Machiavelli, the Florentine politician, born 1469, and died 1530; and Muratori, the prince of antiquarians, born in Bologna, 1672, and who died in 1750, are also members of the goodly company. Of living Italians there are but few, and the principal of these is the world-famed Grisi, the "Queen of Song," born 1816.

GERMANY.

Crossing the nave, and passing on the way a colossal statue of Rubens, from Antwerp, and one of the great French Admirals, Du Quesne, the visitor arrives at the collection of German historical characters. The illustrious Germans who have the honour of a pedestal here, are comparatively few in number. The visitor will, however, examine with interest the fine expressive features of most of them. There are

Name.	Profession.	Place and Date of Birth.		Died.
Beethoven .	Composer . .	Bonn	1770	1827
Blucher . .	Field Marshal .	Rostock . . .	1742	1819
Bulow . .	Field Marshal .	Rostock . . .	1755	1816

Name.	Profession.	Place and date of birth.		Died.
Carl . . .	Composer . .	. . . . .	1758	1832
Fichte . .	Philosopher . .	Lusatia . . .	1762	1814
Glück . . .	Composer . .	Bavaria . . .	1700	1791
Goethe . .	Dramatic Poet .	Frankfort . . .	1749	1832
Hahnemann .	Physician . .	Meissen . . .	1755	1843
Handel . .	Composer . .	Hall.	1684	1759
Haydn . .	Composer . .	Rohrau, Austria	1732	1809
Hermann . .	Mathematician .	Basle	1678	1733
Hufeland . .	Physician . .	Basle	1762	1836
Kant . . .	Philosopher . .	Konninsberg . .	1724	1804
Lessing . .	Dramatist . .	Camenz . . .	1729	1781
Luther . .	Theologian . .	Isleben, Saxony .	1483	1546
Melancthon .	Theologian . .	Britten . . .	1497	1568
Mendelssohn	Composer . .	Berlin	1809	1847
Mozart . .	Composer . .	Salsburg . . .	1756	1791
Schadin . .	Sculptor . . .	Salsburg . . .	1764	1850
Schiller . .	Dramatist . .	Marbach . . .	1759	1805
Schinkel . .	Architect . .	Brandenburg .	1781	1841
Schwanthaler	Sculptor . . .	Munich . . .	1802	1848
Thorwaldsen	Sculptor . . .	Copenhagen . .	1770	1844

Of living persons, there are busts of Nicholas, Emperor of Russia, born 1796; the Emperor of Austria, born 1830; Ludwig, King of Bavaria, born 1786; Cornelius, painter, born 1787; the illustrious Baron Von Humboldt, born at Breslau 1769; Rauch, the eminent sculptor, born at Aroslem in 1777, and others.

ENGLAND.

The historical portrait-gallery of our own country is at present but scantily supplied. Among the illustrious men, however, who worthily occupy a portion in it, may be found some of those whose names reflect the greatest lustre upon the arms, the literature, and the science of the country. We may enumerate in chronological order the following, including several of the principal American statesmen; who, though they belong to another nation, are the representatives of a people who speak a common language with ourselves, and who look upon this country as the home of their ancestors.

Name.	Profession.	Place and date of birth.		Died.
Bacon, Lord .	Philosopher	London	1561	1626
Shakspeare . .	Poet . . .	Stratford-upon-Avon .	1564	1616
Milton . . .	Poet . . .	London	1608	1674
Locke . . .	Philosopher	Wrington, Somerset.	1632	1704
Wren, Chrpher.	Architect .	Wilts	1632	1723
Newton, Isaac .	Philosopher	Woolsthorpe, Lincoln	1642	1727

Name.	Profession.	Place and date of birth.		Died.
Pope	Poet . . .	London	1688	1744
Franklin . .	Philosopher	Boston, America . .	1706	1790
Pitt, William .	Statesman .	Cornwall	1708	1778
Hunter . . .	Surgeon .	Lanarkshire . . .	1728	1793
Garrick . . .	Actor . .	Hereford	1716	1779
Washington .	Statesman .	Virginia	1732	1799
Watt	Engineer .	Greenock	1736	1819
C. J. Fox . .	Statesman .	London	1749	1806
Eldon, Lord .	Lawyer . .	Newcastle	1751	1838
Nelson . . .	Admiral .	Burnham Thorpe, Norf.	1758	1805
George IV. .	King . .	London	1762	1830
William IV. .	King . .	London	1765	1837
Quincy Adams .	Statesman .	America	1769	1848
Sir Walter Scott	Poet . . .	Edinburgh	1771	1832
Webster . . .	Statesman .	America	1782	1852
Calhoun . . .	Statesman .	America	1782	1850
Daniel O'Connell	Statesman .	Kerry	1774	1847

Of living personages, there are Lord Brougham, born 1779; the Right Hon. Sidney Herbert, the present Secretary at War, born 1810; Lord Monteagle, born 1790; Lord Ashburton, born 1774; Charles Kemble, born 1775; Mrs. Mary Somerville, astronomer; Fanny Butler, actress; Charles, Adelaide, and Fanny Kemble, &c.

THE INDUSTRIAL DEPARTMENT OF THE CRYSTAL PALACE.

It is gratifying to find that while the managers of the Crystal Palace have devoted their attention to the attainment of all that is attractive in statuary, decorations, horticulture, fountains, and other sources of instruction and recreation, they have not overlooked the exhibition of the industrial products of the present day. Artists, manufacturers, and producers in every branch of industry, have been invited to send in the proofs of their excellence and skill, and very many of them have responded to the appeal. The late Great Exhibition building contained an area of nearly 800,000 square feet; the New Crystal Palace contains about one-fourth more, or nearly 1,000,000 square feet. The area available for exhibitors in the first building was 400,000 square feet, and notwithstanding the New Crystal Palace contains so much more space, the amount available for exhibitors is only 140,000 square

feet. Of this space, the basement, set apart for machinery in motion and agricultural implements, contains 22,016, the ground floor 18,240, the galleries 33,376 square feet, the remainder being made up of seven courts on the ground floor. The lower galleries, and the principal portion of the nave, extending from the central to the south transept, with the basement, are the parts allotted for exhibitors, the remaining portions of the building being occupied by the various architectural courts, the conservatories, and the ethnological and natural history collections. The classification adopted with respect to the exhibition of industrial and raw products does not follow closely that laid down at the late Great Exhibition, the arrangement of the articles exhibited having been made more subservient to the general appearance and harmony of the whole than on the previous occasion. That the applications for space by exhibitors have not been so generally made as in the case of the late Great Exhibition, is a circumstance which need not be matter of surprise. In 1851, the Exhibition was world-wide in its scope. and the manufacturers and producers of this country were compelled, in self-defence, to sustain their reputation and their fame against all comers in that vast industrial tournament. That object was achieved, the rewards of success were distributed among them, and they now very quietly repose upon the honours which they then obtained. A large proportion, too, of the most interesting articles displayed in the exhibition were contributed by firms and persons who had no object to gain by publicity, and who were actuated solely by a desire to promote the success of a great national undertaking, with which the credit and honour of the country were intimately associated. The fact, too, that in addition to the expense required to be incurred by exhibitors in the fitting up of their stands, a considerable sum was required to be paid in the shape of yearly rent, deterred many other persons from coming forward, and while exaggerated rumours had fixed the rentals at almost fabulous prices, no steps were taken by the directors to put the public in possession of an intelligible scale of prices. This department of the undertaking cannot, therefore, be considered so satisfactory, or so successful, as other portions; it is wanting in novelty, and it lacks that stimulus of national rivalry and individual competition which were so highly characteristic of the Exhibition of 1851. As a means of affording publicity to exhibitors, and of promoting their commercial interests, the Crystal Palace, no doubt, affords many advantages, and among the articles exhibited are to be found many of intrinsic excellence, as well in design as in workmanship, and which reflect the highest credit upon their producers. The series of seven industrial courts for exhibitors will be examined with interest, as they were designed and constructed under the superintendence of some of the most eminent artists and architects in the profession.

COURT FOR MUSICAL INSTRUMENTS.

Among the industrial courts the most interesting is one designed by Mr. John Thomas, a gentleman employed to execute a large proportion of the works of art for the decoration of the New Houses of Parliament. The visitor will find this court the last of the series upon the left hand, as he proceeds towards the south, and immediately opposite the Pompeian Court. The directors have done wisely in choosing so prominent a position for a court devoted to an art which, like music, is held in such universal estimation. The interior court is 70 feet long and 46 feet wide—the same dimensions as each of the other six courts. The four sides of the court are perforated by a series of arched recesses, which are glazed inside and out, thus forming cases for the purpose of depositing those instruments that require such accommodation. The exterior decorations of the end elevation being intended to typify sacred music, scriptural subjects are introduced over the two entrances—one being David, "the sweet singer of Israel," who, with instrument in hand and face turned heavenward, is represented as giving utterance to the words which are engraved beneath—"Yea, on the harp will I praise thee, O my God!" The other represents Miriam, the prophetess, sister of Aaron, with timbrel in hand, exultingly exclaiming—"Sing ye to the Lord, for he hath triumphed gloriously."

The exterior elevation of the side, which faces the nave, while harmonizing with the other sides in its general effect and architectural character, differs in the signification of its ornamentation, which is designed to set forth pastoral and martial music. In keeping with this idea, the ornament consists of heads of Pan, Pandæan pipes, and shells, interwoven with foliage of an appropriate character. On each side of the entrance are caryatid figures in lively attitudes, playing on different instruments—the entrance itself being surmounted with a large bust of Apollo. The greatest amount of work is, however, to be found in the interior; each side being richly covered with ornament, though at the same time disposed with so much taste as not to appear in excess, but rather to present to the eye a playful and musical effect. Over each arched recess is a bust of some great musical composer, either native or foreign—twenty-four in all—which being more than life size, and carefully modelled from the best portraits by Mr. Thomas himself, will of themselves compose an interesting gallery of celebrated masters, and as the names are placed above each bust, no difficulty will arise in distinguishing them. Between each bust are projecting decorated columns, upon which are standing in various graceful attitudes boys playing on different instruments, while over each recess are panels of musical instruments, in bas-relief, crossing one another, and entwined with myrtle and other twigs and branches. Over the side entrances, and facing one another, are two alto-

relievo figures of St. Cecilia and Erato, having appropriate inscriptions under each; that under St. Cecilia being from Dryden:—

"At last divine Cecilia came,
Inventress of the vocal frame;"

while under that of Erato, are lines from Collins:—

"O Music, sphere-descended maid,
Friend of pleasure—wisdom's aid."

The whole is surmounted with a bold cove, enriched at intervals by the introduction of ornamental shields, bearing upon them ancient lyres. The court, covered with a canopy of bunting suspended from the roof, will prevent the bad effects which would result from the rays of the sun coming directly upon the instruments, and at the same time give a pleasing and effective finish to the whole. The busts, figures, and ornaments, have been admirably modelled by Mr. John Thomas, the architect and sculptor, at his studio, Paddington.

Within this court are exhibited some beautiful wind instruments by Messrs. Distin; and some fine pianos by Messrs. Peachey, Tolkien, Mott, Brinsmead, Boosey & Sons, Moore, Jones, Marsh & Steedman, Rolfe & Sons, Ventura, Pain, Challen & Son, J. C. Jones, Kohler, Levesque, Edmeades & Co., Cooper & Son, Greaves, Hughes & Denham, Bowler, and others.

COURT FOR PRINTED FABRICS.

Next to the musical instruments is situated a very elegant court designed by Sir Charles Barry. The front and sides are fitted with glass, through which the articles exhibited may be inspected. In the centre of the court is a large octagonal glass case, intended for the reception of some of those articles of ever varying style and pattern and colour which are characteristic of this important branch of manufacturing industry. There was no class for the special exhibition of this description of goods in the Great Exhibition, and it is to be regretted that a more extensive display has not been made in the present instance.

COURT FOR WOOLLEN AND MIXED FABRICS.

The adjoining court is one designed and constructed by Professor Semper, an artist of great ability, and who was employed to design the famous funeral car for the late Duke of Wellington. The court is entered through a dwarf semicircular projection into the nave, against which are placed low counters. On the pedestals

at the entrance are two ornamental figures. The front division of the court is 24 feet wide, and is fitted with glass cases on each side 10 feet high, 4 feet deep, and 6 feet wide. The two side entrances, in imitation of oak, are richly ornamented with representations of the "golden fleece," supported by genii, and fruit. The larger entrance is a lofty triumphal arch, of a clear width of 12 feet, and about 40 feet in height; and upon each side glass cases are fitted, as well as round the sides of the principal court into which the arch leads. Around the compartments of the court are twenty-four small panels, representing in *grisaille* all the varied processes connected with the production and manufacture of the fabrics which may be shown in this court. The ceiling is divided into a centre and two end compartments. The centre ceiling is ornamented with sculptured decorations, and the sunk panels have representations of the plants used in the process of manufacturing mixed fabrics, such as flax, hemp, the mulberry, and thistles. The central panel is ornamented with four golden fleeces, tied together with festoons, and it is surrounded by small panels, bearing the names of the towns most celebrated for the arts of spinning and weaving. In the recesses under the arch are rich arabesque and other ornaments of the cinque-cento style, escutcheons, medallions, and numerous small symbolic figures.

Among the exhibitors in this court, to whom we cannot at present do more than refer by name, are Messrs. Dick & Sons; Messrs. Leach, Broadbent & Co.; Messrs. Bull & Wilson; Messrs. Lucas & Wells; Messrs. Groucock & Co.; Messrs. McCrea & Co.; Messrs. Lewis & Allenby; Messrs. Farmer & Rogers; Messrs. Stratton & Co.; Messrs. Cherronet, Mr. Jay, and others.

THE STATIONERY COURT.

On the opposite side of the nave is the stationery court, designed by Mr. Crace. Among the most interesting of the articles exhibited in this court, are some pictures painted in oil colours by Mr. G. Baxter. Nothing can be more beautiful and more perfect in execution than these charming plates. The smaller plates, called "Gems of the Great Exhibition," represent some of the most beautiful and interesting of the specimens shown at the last Great Exhibition. These objects here represented have now passed away, and live but in the memory of those who had the pleasure of examining them; but in these exquisite little gems they are rescued from oblivion, and are presented in a form accessible to thousands who may desire to preserve some tokens of that great event of 1851. Nothing can be better adapted to generate a love for the fine arts than these copies of some of the choicest works of the artists of the present day. They are beautiful in form and expression, correct in colour, and what is of not less equal importance, they are reasonable in price. By an

arrangement made with the directors, some beautiful views of portions of the present Crystal Palace, and of the more interesting of the courts, have been taken by Mr. Baxter, coloured by Messrs. Charles Buckley, Hind, and other distinguished artists, and they form part of the highly interesting collection of plates which the patentee exhibits.

In other portions of the building, the directors have made arrangements with Mr. P. Delamotte for the sale of photographic illustrations of different portions of the building, and various objects of interest; and this collection already includes upwards of one hundred copies of the most famous of antique and modern busts, many beautiful groups of statuary, and views of the building and grounds. These may be obtained at prices within the reach of all classes of visitors, and if our advice be followed, the visitor will take with him, as mementoes of his visit to the Crystal Palace, one or more of these charming little oil colour pictures of Mr. Baxter, or a copy of some daguerrotype picture by Mr. Delamotte.

The exhibitors in this court include, among others, Messrs. Leighton & Sons, Messrs. Hyde & Co., Messrs. Letts & Son, Messrs. Jones & Causton, Messrs. Wright & Foster, Messrs. Bradbury & Evans, Messrs. Barret & Co., Messrs. Boatwright & Co., Messrs. G. Routledge & Co., Messrs. Taylor & Francis, Messrs. C. Robeson & Co., Messrs. Haddan & Son, Messrs. Marion & Co., Messrs. Layton & Co., Messrs. H. G. Bohn, F. W. Ralph, H. Pope, J. A. Novello, J. Abbot, J. H. Saunders, R. Pemberton, J. R. King, J. Williams, C. Dolman, H. G. Collins, G. Jarrett, Thomas Shepherd, and others.

THE BIRMINGHAM COURT.

This fine and characteristic court was designed by Mr. Tite, the architect from whose designs the Royal Exchange of London was built. The front of the court is formed by a richly ornamented iron screen, with a centre and two side entrances. The tops of the columns are decorated with sword-blades, guns, and other articles emblematic of the products of Birmingham. Within the court, on the smaller sides, are allegorical figures of the four quarters of the world. The centre panel on the one side represents "mining industry." The miner is seen toiling in the depths of the mine, and on the opposite side the smith wields his massive hammer, others are engaged in the construction of a steam-engine, while a huge boiler is represented in the background. On the principal side of the court are two panels, representing by allegorical figures, "utility" and "art," and between these two panels are placed roses and fruit, surmounted by richly-painted arabesques, and a bronze cornice. The decorations of this court were completed by Mr. C. Smith.

Among the manufactures carried on in Birmingham, not the least important is that of steel pens: one manufactory alone, that

of Messrs. Gillott and Co., turned out last year not less than 180,000,000 of them, and there was required for their production not less than 268,000 lbs. or 120 tons of steel.

"An attempt," says a lively writer in the *Leisure Hour*, "at the mere enumeration of the articles fashioned in this central workshop would transform our pages into a dry catalogue of goods along which the reader might wander till he was weary. Presuming, therefore, that such enumeration may be spared us, we would desire the reader to divest himself and all that belongs to him, if he can only do it in imagination, of the products of Birmingham; he may by this means derive something like an adequate notion of what they are. Only suppose the thing done in an instant—presto! and every button has vanished from your attire, you have to hold your outer man together by force of arms; your hat-band is streaming in the wind for lack of a buckle, and flies off altogether as the hat sinks over your eyes; you feel especially loose and rickety about the heels, and in a moment are nearer the ground by half an inch, the heels of your boots having taken their farewell of the soles. The cold air blows into your breast for lack of the vanished shirt-buttons which kept it out. These sudden changes set you wondering what o'clock it is now, and you have recourse to your watch, but your watch is gone, or else it won't go, as the result of some hiatus in its machinery. Or, supposing you to be sitting in your easy chair by your own fireside when the talismanic word is uttered—suddenly said easy chair lets you comfortably down on your back, from the absence of the long screws which kept it together, the stove walks off with your fire and leaves your hearth cold; if you attempt to follow it you find yourself stumbling over loose boards, the flooring having started from the cross timbers, for want of the nails which kept it down; you cannot open the door of your room, for the handle is gone, but on making the attempt it tumbles down upon you for want of the hinges. One after another, every article of furniture in your dwelling is crumbling to pieces; the window-curtains lie on the floor for lack of rods, and half the house is flying out at windows. There are no means left of kindling a fire or boiling the tea-kettle, and no tea-kettle to boil if there were. In short, you find that you must bring back Birmingham again to help you out of your difficulties, and that there is no living without her. This is a plain fact, and one upon which the whole world are unanimously agreed; hence, it is impossible, in one sense, to get out of Birmingham, go where we will. She meets us in the form of her multiplied manufactures in every corner of the globe; with her we ride the rail on the wings of steam, and sail the ocean to the far antipodes. She is present at our bed and board, be it in Old England or New Zealand, in the palace of the prince or the cabin of the emigrant; she surrounds us with the elements of comfort and convenience, and provides the materials of out-of-door labour and in-door enjoyments for unnumbered millions; she is in the truest sense the

benefactress of universal man, from the crowned head to the savage of the wilderness; while she builds up her own greatness by administering to the wants of others."

The exhibitors in this court are Messrs. Peyton and Sons, Messrs. Jennens and Betteridge (Papier Maché Manufacturers), Messrs. Blews and Sons, Messrs. W. Parker, E. Lingard, Frederick Allen, R. Timmins, J. C. Onions, James Horsfall, and others.

THE SHEFFIELD COURT.

The court devoted to the illustration and exhibition of articles of Sheffield manufacture was designed by Mr. Stokes, the son-in-law of Sir Joseph Paxton, and it is one of the most effective of the series. When completed and fully furnished it will present an appearance of which the following description given in the *Edinburgh Guardian* is by no means an exaggerated one:—

"In this Sheffield Court one may judge of the varied manner in which, with material so apparently unsusceptible of it, the aims at Sydenham are transforming the compartment of a trade-show into a vision from the Arabian Nights, while preserving every convenience of business. Crimson and purple colours glow round the lower partition, decked with candelabra, with arms, vases, cutlery, and all the various products of their kind, each under its maker's name; the area glitters with its slabs and tables, orderly arranged: all round, through the open arcade, decorated with arabesques, is seen the strange tropical verdure of palms, bananas, acacias, that feather sometimes past the upper gallery to the roof; above—each within its section of the richly bracketed cornice—those figured spaces are frescoes of the origin, progress, and effect of metal-work or craft in steel—a pregnant history; over each, all round, their overhanging range of mirror, sloped inward, with reverted image, and shimmering flush of colour, mingled with reflections of the pilasters from below, all glittering and breaking downward, in gorgeous confusion, that serves to render the distinctness dream-like. The Moors never reached an effect by half so fanciful: the art of decoration might well pause. Yet over all stretches the azure space of roof, in ridge and rib, with diamond-framed girders of blue and white, so softly lucid, so half-aerial. Be we practical or poetical, could we not gaze about on those lamps, those arms, those multifarious appliances, and feel as if we went once more with young Aladdin, or were once more the Caliph, mingling unknown among his people in the bazaars of Bagdad seeing secrets and planning strange surprises."

Of articles exhibited in this court, the visitor will notice many of the excellent specimens sent by Messrs. Fisher and Bramall, Messrs. Parker and Thompson, Messrs. Guest and Chimes, Messrs. Turton and Sons, Messrs. Nappin, Brothers, Messrs. Wilkinson and Son, Messrs. Crocker, Brothers, Mr. Jowitt, all of whom are Sheffield manufacturers.

THE SOUTH NAVE.

Retracing our way along the nave we may examine those more adventurous producers, who, scorning the comparative quiet of the enclosed courts, boldly sought the foremost positions in the ranks of industry, and who paid heavy sums to secure their proud position, and to satisfy the demands for "rent" made by Mr. Belshaw, on behalf of the shareholders of the Crystal Palace. In that richly decorated case designed by Mr. Owen Jones, the Mayor of Oxford, Mr. Spiers, whose valuable private collection of works of art attests his taste and liberality, exhibits the choicest of his famed papier maché productions. In the centre is a table, on the top of which is portrayed picuresque views of the city of which he is the chief magistrate. Around it are trays, and baskets, and desks, and cabinets, and portfolios, and some of those thousand of fanciful forms which papier maché is made to assume for the purpose of graceful ornamentation and household decoration. Mr. Mechi, in a wonder of a case, displays some of the dressing cases, and cutlery, and "strops," which have conferred immortality upon Leadenhall-street. Messrs. Atkinson and Co. invite attention to their extensive and well assorted collection of perfumeries, and their fancy articles for the toilettes of the fair visitors. Messrs. De la Rue charm us by their display of fancy and useful stationery of all kinds, and recall to recollection the time when, in the nave of the Great Exhibition, wondering thousands clustered around their ingenious envelope-folding machine, their gay playing cards, and iridescent decorations. Messrs. Jackson and Graham support their well-established reputation for cabinet work in another department; and here they display some of the finest bronzes of MM. Barbedienne and Collas of Paris, which received the highest of medals at the Great Exhibition. Messrs. Osler, of Crystal Fountain notoriety, show fine specimens of their best crystal works. Groux's Patent Soap Company show an attractive collection of their fancy soaps, and Price's Patent Candle Company attract notice by their patent candles. There are others, one of whose names must suffice enumeration, who form a part of this foremost rank of exhibitors; among them are Messrs. Macdonald of Glasgow, Messrs. Barnett and Myers, Messrs. Forrest and Sons, Messrs. Judkins and Wickerham, Mr. Morgan, Mr. Powell of Dublin, Messrs. Brown, and others, to whose productions we may more particularly refer in subsequent editions.

Furniture.—If the visitor will now pass to the back of the Sheffield and Birmingham Courts, he will there see the productions of a small army of exhibitors of furniture, mineral manufactures, and hard-ware. Articles of furniture are contributed by many of the principal makers in town and country. Prominent at the head

of all competitors is the firm of Jackson and Graham, of Oxford-street, who was only prevented, in consequence of his being one of the jurors, from successfully carrying off several of the highest rewards at the Great Exhibition, and whose cabinet work there exhibited, rivalled in beauty of design, and surpassed in execution, the best of the works produced by foreign exhibitors. The other exhibitors include Messrs. Wilkinson and Co., Messrs. Crace, Messrs. Teale and Smith, Messrs. J. and W. Vokins, Messrs. Oliver and Sons, Messrs. Smee and Sons, Messrs. Filmer, John Box, H. J. Betjeman, R. Harrison, W. G. Rogers, J. Lyle, W. Nosottie, J. Bayley, R. Loader, &c.

Hardware, exclusive of that exhibited in the Birmingham and Sheffield Courts, is exhibited by a large number of manufacturers, principally of London. Among them may be mentioned Messrs. Hulett and Co. of High Holborn, who exhibit coffee-urns, and many useful articles of domestic economy. Messrs. J. and W. Hill, Messrs. Parnell and Puckeridge, Messrs. Burney and Bellamy, Messrs. Moorewood and Rogers, Messrs. J. and S. Knight, Messrs. Warner and Sons, Messrs. Robinson, Langton, and Co., Messrs. Russell and Co., Messrs. Hart and Sons, Messrs. Nye and Co., Messrs. Benham and Sons, Messrs. Duley and Sons, Messrs. Barringer and Co., Messrs. Selby and Johns, Messrs. Chubb and Son, Messrs. Ralph and Co., Messrs. Masters, J. W. Hill, W. Kent, A. Lyon, W. Young, E. Zimmerman, Robert Jobson, James Billing, and others who occupied a position in the late Great Exhibition.

Mineral Manufactures.—Conspicuous among the exhibitors of this description of goods are the Messrs. Minton and Co., who have furnished the encaustic tiles and mosaic pavement required in the various courts of the Crystal Palace. The specimens here exhibited are some of the finest that have yet been produced by the firm. Messrs. Minton have confined themselves to the exhibition of encaustic tiles, and have not sent any specimens of their beautiful works in china and porcelain, such as were shown by them at the late Great Exhibition. There is also in this department some specimens sent by Messrs. Buckwell and Co., whose granitic breccia, referred to in another place, was employed in the construction of the ornamental basins in the nave. The other exhibitors are Messrs. Morgan and Rees, Messrs. Doulton and Co., Messrs. Brace and Coult, the London and Penzance Serpentine Company, the Farnley Iron Company, Messrs. Stevens, Lipscombe, Blashfield, Finch, Brown, Workman, and others.

SOUTH WEST GALLERY.

The visitor will now ascend the staircase at "Charing Cross," near King Charles' statue, close to the Pompeian Court, by which he will reach the south-west gallery, occupied by five classes of products,

"Miscellaneous," "Perfumery," "Chemicals," "Leather," and "India Rubber." Among the varied miscellaneous articles, the earliest to attract notice, and to excite a wonder how, in the course of classification, they came there, when there was a not overcrowded musical court for their reception, are some fine "harmonicons," manufactured by Mr. Hack, of Fleet Street. These charming little instruments are said to possess the extraordinary quality of being always in tune, always up to concert pitch, and ready at a moment's notice to give forth to the skilful hand the softest and most musical of notes. At the Great Exhibition these harmonicons caused no small amount of interest, even though surrounded with instruments of far greater pretension, and a young lady who was in the habit of "discoursing sweet music" upon them, was always sure of an attentive and delighted audience, even though the vast organs or tremendous "Somerphone" were pealing through the vast building. Among the exhibitors of miscellaneous articles, which tell their own character and uses, are meerschaums, by Mr. Inderwick; stuffed animals, by Mr. Bartlett; cricket bats and balls, toys, sweetmeats, and an immense variety of other things, contributed by Messrs. Marsland and Son, Messrs. Latour, Ratteau, and Co., Messrs. Philips and Co., Messrs. Holylands, Messrs. Whitelock and Son, M. Pierrottie, Mr. Noden, Mr. Saunders, Mr. Jones, Mr. Cowvan, Messrs. Mead and Powell, Mrs. Foot, Mr. Revell, Mr. Jackson, Mr. Farlowe, Mr. Child, Mr. Walden, Mr. Maynard, Mr. Taylor, Mr. Sangster, Mr. Ramage, M. Réné, Mr. Callingford, Mr. Grugeon, Mr. Carlos, Mr. Nixey, Mr. Marcus, Mr. Lewin, Mr. Lillywhite, Mr. Ansell, Mr. Sanders, Mr. Barnett, Mr. Collings, Mr. Reed, Mr. Lee, Mr. Cave, Mr. Fowle, Mr. Franks, Mr. Salmon, Mr. Wood, Mr. Holiday, Mr. Joyce, Mr. Davis, Mr. Farley, Mr. Hyam, Mr. Hodges, Mr. Giles, Mr. Kite, &c.

Perfumery.—Next come all the elixirs, and perfumes, and ottos, which, distilled from the blooming realms of Flora, lend their fragrance to the fair daughters of Eve, and closely sealed bottles and boxes, tempting as that of Pandora, are ranged in order by Messrs. Lewis, Higgins, Samson, Sturrock and Sons, and others of the skilful fraternity, who delight to extract the fragrant essences from even the most unlovely flower or herb.

Chemicals.—Next comes a goodly collection of chemicals—crystals of all shapes and hues, and pigment of all colours. The Electric Power, Light, and Colour Company show some of the pigments produced by their patent process, under which we are told the more electric light we consume the greater the quantity of colour and profit obtained by the consumer. We shall, probably, shortly hear of a proposal to give a handsome income to every person who will consent to have electric lights constantly burning, and the parishes will derive a large income from the pigments produced from the street lamps, and so far from light and heat being included in the list of household expenses, every anxious couple

who entertains notions of domestic economy may henceforth rely upon incomes derived from this substitute for coals and candles. Messrs. Reeves and Son show near the electric pigments some of their fine water-colours, and other articles included in this class are exhibited by Mr. Holt, Mr. Field, Mr. Gibbs, Messrs. Burton and Co., Mr. Proctor, Messrs. Jones and Co., Messrs. Blundell and Co., Mr. Rose, Mr. King, Mr. Andrews, and Mr. Allshorn.

Leather and its Manufactures.—Illustrations of the varied preparations of leather, and the uses to which it may be applied, mainly in the time honoured-craft of St. Crispin, are exhibited by Messrs. Oastler and Palmer, Messrs. Haines and Nobes, Messrs. Maxwell and Co., Messrs. Wilson and Co., Mr. Sparks Hall, Mr. Gotting, Mr. Clark, Messrs. Jones and Waters, Mr. Ford, Mr. Wright, Messrs. Cant and Son, Mr. Watson, Mrs. Davis, Messrs. Earl and Son, Mr. Deed, Mr. Roberts, Mr. Blackwell, Mr. Preller, Messrs. Swain and Co., Messrs. Hall and Co., Mr. Norman, Mr. Urch, Mr. Jeffs, and Mr. Marsden.

India Rubber.—Messrs. Macintosh and Co., Mr. Goodyear, Mr. Edmiston, Mr. Gruber, and Mr. Wansborough, illustrate the various valuable uses to which India rubber may now be applied. Articles of apparel, and articles of furniture, maps for instruction, toys for children, rafts for swimming, and shoes, and hats, and coats, are but a few of the multitudinous uses to which this useful material is applied.

WEST GALLERY.

Philosophical Instruments.—In the west gallery is exhibited a collection of philosophical instruments, and a large number of photographic portraits, by that clever chemist and artist, Mr. Mayall. Mr. Beard likewise shows some very fine specimens of his coloured portraits, almost rivalling the highly finished miniatures of the present day. Instruments for all kinds of philosophical purposes are shown by Mr. Hobson, Messrs. Horne and Co., Messrs. Elliott Brothers, Mr. Bermingham, Mr. Statham, Mr. Potter, Mr. Pottinger, Mr. Bailey, Mr. Smith, Mr. Grosmith, Mr. White, Mr. Hogg, Mr. Reid, Mr. Caplin, and others.

Continuing the promenade of this gallery, passing round the great transept, and looking down in the way upon the English and German sculpture courts—peering over the colossal head of Bavaria at the gigantic Franken opposite to it, the large horses of Castor and Pollux, and the Lantern of Demosthenes in the transept—looking down upon Egypt, upon Greece, upon Rome, and upon the Alhambra, the productions of India now present their rude and grotesque forms for examination and admiration. A portion of the space here set apart has been filled up by the East India Company with an interesting collection of articles illustrative of the habits and industry of the vast Indian empire. The industrial art of China is represented by specimens contributed from

the vast collection and storehouses of Mr. Hewitt in Fenchurch Street. Here are Chinese lanterns and puzzles, cups and saucers, vases and grotesque figures, embroidered silks and baskets, screens and umbrellas, and all manner of those curious and grotesque knick-knacks and trifles in which the genius and cunning of the workmen of the Celestial Empire delight to revel.

THE NORTH GALLERY.

Here a fine view may be obtained of the entire length of the building, and of the busy and crowded scene presented by the nave and various courts. From the north transept the colossal figures from the tomb of Abou Sinboul, and the avenue of huge sphynxes, show to perfection, and display all their noble and gigantic dimensions and proportions. Continuing along the east gallery, some interesting views may be obtained of the various courts of Christian art, and numerous models of small works of art of the mediæval times, principally consisting of vessels used in the service of the church, will merit attention. It is intended to form in this gallery a very complete and extensive collection of works of this nature, including also models of all the finest examples of ornamental metal work which are known to exist.

China and Glass.—Some fine specimens of china and glass will be here examined with interest. The articles were manufactured and are exhibited by the Aire and Calder Company, Messrs. Kerr, Binns, and Co., Messrs. Hetley and Co., Messrs. Lockland and Co., Messrs. Goode and Co., Mr. Green, Mr. Sinclair, Messrs. Bourne and Sons, Mr. Roberts, Miss Clarke, and some few others.

Precious Metals.—Some precious metals next attract attention by their glitter and beauty. Conspicuous in this collection are the articles exhibited by Messrs. Elkington and Co., a firm whose electro-plated articles and works in precious metals justly excited so large an amount of notice in 1851, and who received the council medal for the articles which they contributed. In addition to these, the visitor will notice with pleasure the works contributed by Messrs. Watherston and Brogden, Messrs. S. and J. Benson, Mr. Waterhouse, Mr. Marshall, Mr. Gorsuch, Mr. Forrer, Mr. Chaffers, Mr. Meyers, Mr. Straight, Mr. Goggin, Mr. Jackson, Mr. Atcheson, Mr. Mahood, Mr. Keith, Mr. Holt, Mr. Hawkins, Mr. Biden, and others.

Substances used as Food.—Contrasting with the brilliancy of crystal and silver, a short distance along the gallery, is a variety of substances used as food, intended, however, for the instruction, and not for the refreshment of the visitor. The most tempting of the goods here displayed are from the establishment of the world-famed Mr. Gunter; the remainder of the articles are principally furnished by Messrs. Edwards Brothers, Messrs. Dunn

and Hewitt, Messrs. Philips and Co., Messrs. Kent and Son, Mr. White, and Mr. Turner.

CLOTHING.—In the south gallery, from which again an admirable view will be obtained of the entire length of the building, "clothing," the article which, next to "food," is the most essential of our creature comforts, is displayed in all its varieties. Here garments and articles of clothing, suited to clothe humanity from head to foot, are displayed in the most tempting and fascinating style. Here are goods sent by Messrs. Dando and Sons, Messrs. Nicoll and Co., Madame Caplin, Mrs. Julia Smith, Messrs. Capper and Waters, Messrs. Thresher and Glenny, Messrs. Williams and Sons, Messrs. Marion and Maitland, Messrs. Hayward and Co., Messrs. Carter and Houston, Messrs, J. Brooks, Paine, Banks, Stuart, Knox, Nicoll, Philips, Ellwood, Asser, Easton, Hawkins, Grundy, Davis, Berrall, Stroud, King, Watkins, Coles, Wright, Thompson, and many more.

THE UPPER GALLERIES.

Having completed this portion of our inspection, we will now ascend the spiral stairs which lead from the gallery at this point, up to the second or upper gallery. The height of the lower gallery in which the visitor is now standing, is 20 feet 7½ inches from the floor of the nave. The first landing of the spiral staircase is 20 feet above the gallery. It is 72 feet long, and 24 feet broad. Another ascent is made of 20 feet, and the third story or landing is reached, which leads to the 8 feet galleries which make the entire circuit of the building, and the construction of which is described in another part of the "Guide" (page 26). Walking along at the height of 60 feet 7½ inches above the nave, we at length reach the great transept. Here, from a platform 120 feet by 24 feet, spiral stairs lead up to a fourth story, and convey us up another stage of 20 feet. There is yet another and a fifth story to be reached by a continuation of these spiral stairs, and this last or uppermost set communicates with a gallery which runs round the whole area of the great transept, at a height of 100 feet 7½ inches above the floor of the building. The gallery crosses the nave upon girders of 72 feet span, and the simple, though apparently complicated construction of the roof of both nave and transept may be easily examined from this point. The diminished figures of the statues, and the dwarfed moving masses below, convey the best idea of the height at which we have now arrived. Just above the head of the visitor—8 feet from the gallery floor—springs the vaulted arch which covers the transept; each foot of the arches that span this space are 120 feet apart, or nearly 20 feet more than the distance which the visitor is elevated above the floor, and the highest point of the arch is more than 60 feet above his head. Crossing the narrow bridge over the nave, a charming

and extended view may be obtained through the end windows of the surrounding country, extending for miles around; and from the opposite window St. Paul's Cathedral and Westminster Abbey may be seen looming through the mist which overhangs the vast metropolis. The whole of the grounds of the Crystal Palace may be seen at a glance from the Park front, and the outline of the terraces and basins most distinctly traced. A bird's eye view of this kind will enable the visitor the better to understand the objects of interest which will be pointed out to him when we visit the grounds. From the top of the flight of steps leading from the central transept on to the terraces to this gallery, is a total height of 132 feet 2½ inches.

Descending upon the side opposite to that which we ascended, the nave of the building is again reached. Here it may be as well to state that the brass band, consisting of seventy performers, the music of which has so frequently been heard in the course of the day, is under the superintendence of M. Schallelin; and that included in the band are the celebrated Flugel horn-players, and several others who formerly belonged to the Hungarian band.

Machinery.—The basement floor is the next to be visited, and the machinery there exhibited will be examined before quitting the building. The visitor will inspect machinery of various kinds exhibited by Messrs. Dunn, Hallersley, and Co., Messrs. Walker and Hacking, Messrs. Robinson and Co., Messrs. Manlove and Alliot, Mr. Renshaw, Mr. Richmond, Mr. Goodfellow, Mr. Mason, Mr. Ramsbottom, Mr. Goodall, Mr. Gent, Messrs. Hansom and Chadwick, Mr. Preston, Mr. Harrison, Mr. Lloyd, Mr. Mansell, Mr. Onions, Messrs. Shand and Mason, Messrs. Lister and Co., Mr. Taylor, Mr. Calvert, Mr. Piper, Mr. Galloway, Mr. Belhouse, Mr. Coltman, Mr. Williams, Mr. Burch, Mr. Quick, Mr. Collins, Messrs. Hughes and Denham, &c.

Carriages.—We conclude this portion of the inspection of the Crystal Palace by an examination of some of the carriages which so temptingly invite the attention of the fatigued visitor, who would no doubt most willingly consent to be conveyed home in one of them, rather than stand the jostling and crowding of the railway. This time, however, it cannot be so arranged, and we can only admire that splendid Dioropha exhibited by Messrs. Rock and Son of Hastings, and which is upon the same principle as that for which the prize medal was awarded to them at the Great Exhibition. This carriage was constructed for the purpose of showing the facility with which all the useful parts of two or three distinct carriages might be combined in one, and may, nevertheless, be adapted to the changes of design and fashion which are constantly occuring. In one of its forms, the Dioropha is an elegant open barouche, in no way differing from the most fashionable carriage of that name, and serving for the same uses of pleasure or display. By simply removing the leather folding head, and putting on another formed of panels, and provided with glasses to

let up and down—in fact the upper half of a close carriage—the barouche becomes, to all intents and purposes, a close carriage, showing no evidence, even upon the strictest examination, of ever being any other kind of vehicle than that which it *is* at the moment of examination. This change is managed in two or three minutes by means of a pulley, a cord, and a counterbalance, on the principle of a sash window, which enable one person to effect the changes with perfect ease.

Other exhibitors who display their ingenuity and taste in this department, are Messrs. Offord and Co., Messrs. Holmes and Co., Messrs. Corbin and Sons, Mr. A. J. Hoadley, Messrs. Kinder and Co., Mr. Hedges, Mr. Starry, Mr. Mason, Mr. Ward, Mr. Kesterton, Mr. Meaden, Mr. Tudor, and other carriage makers and builders of London and the provinces.

Passing along the upper terrace, the visitor will now proceed towards the railway station, or if disposed to prolong his visit, and enter upon the third division of his examination, will proceed to the south end of the nave, and visit the natural history and ethnological department.

THIRD DIVISION.

NATURAL HISTORY AND ETHNOLOGICAL COLLECTION.

(*South End of Nave.*)

THE visitor having examined the monuments and illustrations of man's genius and art, now proceeds to carry his inquiries a stage further, and to enter upon the third great branch of instruction—the natural history of man—the condition under which he exists in different parts of the globe—and the varied descriptions of vegetable and animal life by which the different tribes of the human race are surrounded. In order to obtain this highly interesting information, the visitor passes into the natural history and ethnological department. Without entering minutely into the various features which the study of natural history presents, there are, however, a few of its leading divisions which, if stated, will enable the visitor to appreciate the more readily the design and plan upon which this department has been arranged.

All natural productions are divided into two great classes, the living and the lifeless (the organic and inorganic), or into the mineral, vegetable, and animal kingdoms. Of the subjects which compose these kingdoms, science is acquainted with several thousands in the mineral; and from seventy to eighty thousand plants, shrubs, and flowers in the vegetable; and 2,000 molluscs, 60,000 insects, 6,000 fishes, 500 serpents, 1,000 amphibious animals, 5,000 birds, and 1,500 mammals, belonging to the animal kingdom. Included within this vast range are the animalculæ—millions of whom occupy a space of less than a cubic inch—the tiny shrew-mouse, and the vast elephant, the dark mine, and the vast Alps, the giant oak, and cedars, which soar to the height of several hundred feet. The animal kingdom includes four divisions, the lowest of which differ to an extent almost imperceptibly from plants, and are in consequence known as zoophytes, or living plants; they possess no organs of feeling, but few of them have a circulation of the blood; they breathe from the surface of their bodies, and for organs of digestion they have a mere blind sack or bag. To this division belong starfish, polypes, sea-nettles, &c. So tenacious are the polypes of this first principle of life which they enjoy, that if cut into many pieces, each separate

portion is capable of an independent existence; and some of them may even be turned inside out like the finger of a glove, and still continue to exist and perform the various functions of their life. This lowest class of animated existence is known as the "radiata." The second class is one which includes jointed or articulated animals, some provided with limbs, a feeble circulation of blood, air vessels, and organs of taste and sight. Many descriptions of insects, earthworms and leeches, are included in this division, which is called the "articulata." The "molluscs," constituting the third division, are composed of snails, mussels, and some kinds of worms; they have no bony skeletons, but they have the senses of taste, and sight, and touch; and the skin, to which a nervous system is attached, is frequently found in connection with a horny plate or shell, and they are provided with a respiratory and breathing apparatus. The fourth division is formed of vertebrated animals, to which belong birds, mammalia, reptiles, and fishes. In these the brain is enclosed in a bony case or skull, and to the vertebrata, or back bone, is attached the ribs and bones of the animals, which, together with it, form the skeleton or frame of the individual, while muscles are everywhere disposed over the bones to which they give motion. All these animals have red blood, a muscular heart, a mouth with an upper and lower jaw, organs for each sense—except that of touch—in the cavities of the face and head; none have more than four legs; a division of the sexes prevails, and a nervous system animates the whole frame. With one exception, to be presently noticed, the whole of the natural history collection is devoted to the illustration of this class of vertebrated animals.

At the summit of this living kingdom is placed that class called the mammalia, or sucking animals, the young of which, for a certain period after birth, are maintained with milk given from the breast of the parent. To the first order in this division belong that class of "two-handed" mammals who constructed the Crystal Palace, and who, by the exercise of their reason, have been enabled to do that which no other animals could accomplish, viz., to decorate the structure with reproductions and restorations of the works of their ancestors; to improve upon their modes of thought and action; and to discover new modes and appliances by which they may be enabled more completely and efficiently to subjugate nature to their own uses. Of the two-handed mammal of the genus "homo," or "man," there are several varieties or races, which exist under the most opposite circumstances; the Esquimaux, living in a country of eternal frost, would pine and die if removed to a more genial climate; and the African beneath the torrid zone and on the burning sands of Africa, looks upon his country as a terrestrial paradise. There have been instances of individuals belonging to this class, whose stature has reached 8½ and 10 feet; while the famous dwarf Bebe, who belonged to Stanislaus, King of Poland, was but 8 inches long when born, and

weighed only one pound and a quarter; and when he died, in the thirty-fourth year of his age, he was but 34 inches high. Not only in stature, but also in bulk, there have existed vast diversity; one Modesta Malhoit, of Quebec, was 7 feet in girth, his thigh was 3 feet 10 inches in circumference, the calf of his leg 3 feet, and he weighed in 1833 not less than 619 lbs. Contrasting with him was the famous Claude Seurat, exhibited as the living skeleton, and whose muscles were so shrunken, that every bone of his body could be distinctly seen. The food of the different tribes of man differ greatly: the negroes of Senegal, the Siberians, and other nations, devour with avidity the clayey minerals of the earth; in Egypt large quantities of green clover is eaten; the people of Congo eat toads and reptiles, and the skins and wool of lambs; the besotted worshippers of Thibet eat the excrements of their high priest; and many savage nations look upon human flesh as a dainty morsel. Many strange instances of diseased taste have occurred; one Jacob Kahle, of Wurtemberg, ate a sucking pig for his breakfast, a sheep with its skin and bones for his dinner, and he made his dessert off stones and glass. "Good's Study of Medicine" records the fact of a real "greedy boy," twelve years of age, who gnawed his own flesh when not supplied with food, and who in six successive days devoured 384 lbs. 6 oz. of bread, meat, beer, milk, potatoes, butter, cheese, sugar, treacle, puddings, pies, fruits, and broths, being at the rate of 64 lbs. per day. M. Fournier also narrates how that when seventeen years of age, when he weighed only one hundred pounds, he could devour a quarter of beef as heavy as his own body; and that on one occasion when his commander wished to put him in a good humour, he treated him to 30 lbs. of raw liver and lights.

The varieties or races of men have been variously calculated at three, five, six, seven, and fifteen. The one which is most generally received is that of Blumenbach's, consisting of five varieties. They include the Caucasian, or white race, estimated to amount to 475,000,000, principally in Europe and Asia, and a small proportion in Africa and America. The Mongolian, or yellow race, including Kalmucks, Chinese, and North Americans, in number about 270,000,000, of whom not more than 9,000,000 are in Europe. The Æthiopian, or black race of Africa, numbering 100,000,000, of whom about 8,000,000 or 10,000,000 reside, partly as slaves, and partly free, in America. Next, the American, or red race, of whom not more than 10,000,000 at present exist; and fifthly, the Malay, or brown race, inhabiting the Asiatic Islands, Australia, and New Zealand, and probably amounting to 25,000,000. The illustrations of each of these varieties of the human race, as prepared by Dr. Latham, are among the most interesting specimens in the whole Exhibition.

In the arrangement by which the natural history of man and the animal and vegetable kingdom is illustrated, the ornamental piece of water at the south end of the nave must be supposed by the visitor

to represent the Atlantic ocean separating the two hemispheres. Sailing down the nave from the Polar regions the old world is upon the left, and the new world upon the right hand. On the left is Lapland, where is placed a group of those peaceful natives included in the Mongolian race, which occupy the sterile and sandy districts in the north near the Polar circle. The number of native Laplanders does not exceed 7,000, and they live peaceably on the produce of their herds or fisheries. For three-fourths of the year their country is covered with snow, and a few days of intense heat in July and August are all that the Laplanders know or feel of summer. Co-partners with them on the soil are bears, beavers, wolves, hares, squirrels, martens, and otters; and over their vast forests of birch, fir, and pine, the eagle soars supreme. From Lapland, we pass by a few steps to the East, to Chinese Tartary—the animals of which are represented by two rare specimens of the "grunting ox," of Chinese Tartary, called the "yack." One of these animals is shown in a wild state, and the other is its domestic condition. The hairy tail, somewhat like that of a horse, is, when dyed red, used by the Indian princes to drive away flies; the Turks use it as an emblem of rank, known as "the horse-tail." The high withers of the animal, and the long fringe falling from his body, are remarkable features. Very recently several live animals of this species were brought to Paris, and attempts are now being made to acclimatize the yack in France. Buffon states, that this animal is worth more than all the gold of the new world. In Thibet and China he serves as a horse, an ass, a cow, and a sheep; he bears heavy burdens, draws large loads, supplies milk, has flesh which is excellent food, and hair which can be made into warm clothes. The late Earl of Derby made an unsuccessful attempt to naturalize the animal in this country; it is to be hoped that the efforts of French naturalists will prove more successful.

From Tartary and the vast pastoral tracks inhabited by the Scythian tribes, the visitor crosses to India, where a pair of leopards are seen engaged in mortal conflict, and a huge elephant, a lion, and a tiger, are seen amid the banana, the mango, the cotton plant, and other indigenous products of the country, while beneath the rich foliage of India repose groups of peaceful Hindoos and desolate Ryots. There is, too, a rare specimen of the original "ounce," of which in years long since gone by so much was written and said. It differs from the leopard, in having the ground colour of its skin gray, instead of pale yellow. The "ounce" has a longer and more bushy tail, the head is also smaller, and the limbs appear much stronger than those of the leopard. There are a pair of these animals, male and female.

A group of short squat-looking Malays are the next group. Round faces, wide mouths, square-looking chin, prominent jaws, high cheek bones, and hollow cheeks, are the characteristics of this race. The natives here represented are of the deep brown

colour peculiar to the Malays, and they have long, lank, and black hair. The Malays have made considerable advances towards civilization, and in Java and some of the smaller islands of the Indian Archipelago, the arts of agriculture are practised with considerable success, as well as some of the simpler of the mechanical arts. Tigers, leopards, rhinoceroses, and elephants, are the animals which share with the Malays the scattered islands at the south-eastern extremity of the continent of Asia.

The next Polynesian natives are some from Australia. Their colour is something of a sooty brown, and is not so black as the African negro. The forehead of the Austral negro rises higher, the hinder part of the head extends farther, the nose projects more beyond the face, and the lips are not so thick as those of the negro of Africa. The upper lip is very large, and the lower one projects forward from the lower jaws to such an extent, as to appear to divide the face into two parts. Their features present but few of those characteristics which would justify the description of the "human face divine." The limbs and whole frame of the body is lean, and display nothing of that muscular strength by which the negroes of Africa are distinguished. The pure Austral negro holds about the lowest position in civilization, that of a naked, houseless, cannibal. They have no habitations, and wherever they intend to pass the night they kindle a fire, and place a slip of bark, or a bough, to the windward, for shelter and protection. The tribes are constantly on the move in search of food, and the strongest and the most cunning among them generally succeeds to the position and dignity of the chief. The little religion which they possess is confined to the belief in the existence of a spirit of good and of evil: the one watches over and protects them, and assists in the recovery of stray children, while the other is a treacherous decoy, who seeks only opportunities of devouring them, as they devour each other. Their diet is not refined, and is varied by grubs, snakes, vermin, and stinking fish when hard pressed.

As a representative of the Mauritius, there is a curious and interesting specimen of the Dodo, now an extinct creature. These birds were once natives of the Mauritius, where they were found in large quantities in the beginning of the last century: no existing member of the specie is now known to exist. All that remains of the creature are some portions of its skeleton now contained in the Ashmolean Museum at Oxford, and from the data afforded by these, and the assistance derived from some old drawings of Savery, preserved in the galleries at Vienna and Berlin, this specimen has been constructed. In preserving a real animal, the skin and skeleton are of course kept entire, but in the instance of the Dodo an artificial body was required to be constructed, and afterwards covered with the greatest care and patience, feather by feather, selected from the plumage considered to be most in accordance with the knowledge possessed of the habits and character of the extinct bird. The Dodo, as he now appears, is

considered by high authority to represent with great accuracy the form, colour, and dimensions of the original bird, so far as those characteristics can be ascertained from the evidence which exists.

Passing to the vast arid and unexplored continent of Africa, the Earthmen and the Zulu greet you in the south. Travel north, and various negro tribes are engaged in divers occupations; in one case three supposed criminals are crouching before the "witch-finder," who seeks by his divining knowledge to select the guilty one of the three. Of African animals there is a fine group of a leopard and antelope. The antelope, allaying his thirst at the stream, has beeen surprised by a leopard; in its fright, whilst darting from the water up the bank, the antelope turns his head sharply round in agony, and, accidentally, buries one horn entirely, and the other partially, in the body of the leopard; the latter, in his turn, not only becomes alarmed, as he unmistakeably looks, but, in all probability, has received a deadly thrust, and the carnivorous beast falls, instead of the harmless ruminating animal, upon which he intended to feast. Instances are narrated of lions having been killed in this manner by the horns of the oryx, a large wild antelope of Southern Africa. Then there are the tall giraffe, the unwieldy hippopotamus, the ichneumon and chimpanzee, and the pretty graceful gazelle that always calls to mind the fond complaint of Hinda:—

"I never nursed a dear gazelle,
To glad me with its soft black eye,
But when it came to know me well,
And love me, it was sure to die!"

Pass from Africa into Europe, and imagine yourself in the dense forests of Germany, and there are two fine life-like groups, one representing a stag hunt, and the other a boar hunt. They were both shown at the Great Exhibition, and received deserved praise for the very excellent manner in which the artist, M. Sneyder, had represented the groups.

Cross the Atlantic Ocean, represented by the ornamental basin, and we first visit South America. Before us lies a "brockett," killed by the jaguar who is standing over him; a fierce black brother of the same species is descending from a rock to contest the right to the spoil, and a harpy eagle looks down wistfully from the height, ready to pounce upon the disputed prey when one or both of the savage rivals shall have been placed *hors de combat*. Central America has for its representatives the models of the wretched little Aztecs, which a short time since excited so much curiosity, and led to such a vast amount of learned research and scientific disquisition. They were stated to be the only surviving descendants of some outcast Mexican tribe.

That group of wretched-looking objects, with the blocks of wood inserted in their lower lips, represents some members of the

Botocudo tribe of Indians, which vegetate on the western coast, and in the vast Brazilian tracts of South America. The fashion among these people consists in cutting a large horizontal slit in the lower lip, parallel to the opening of the lips, and penetrating into the mouth, in which they wear ornaments of different kinds, but generally oval pieces of wood a little concave on the two surfaces, and grooved at the edge. The smallest of these additional mouths, seen by Vancouver, was $2\frac{1}{2}$ inches long; the largest $3\frac{4}{10}$ inches by $1\frac{1}{2}$. One of these lip ornaments, brought to this country by Captain Dixon, measured $3\frac{7}{8}$ inches by $2\frac{5}{8}$. It was inlaid with a small pearly shell, and surrounded by a rim of copper. The natives of the neighbouring Fox Islands unite all kinds of these personal embellishments. They make three incisions in the under lip, and place in the middle one a flat bone, or a small coloured stone, and in each of the side ones a long pointed piece of bone, which bends and reaches almost to the ears. They likewise make a hole through the gristle of the nose, into which they put a small piece of bone in such a manner as to keep their nostrils extended, and not unfrequently pierce holes in the ear, and wear in them any little ornaments which they can procure.

The arctic regions of the New World are represented by two fine Arctic white bears, one of them being the largest which has probably ever been seen, and was brought to this country by Captain Inglefield for the directors of the Crystal Palace, upon his return from his recent voyage in search of Sir John Franklin and his missing gallant crew. Near the bears are two Arctic silver foxes, the skins of which are worth an almost fabulous sum, when manufactured into cloaks for Russian noblemen. The skin of this particular fox is valued at forty guineas, and a cloak made of these skins, exhibited in the Russian department of the late Great Exhibition, was valued at no less a sum than 5,000*l*. There are also four small curious-looking Esquimaux dogs, and near them a group of the natives of that desolate region.

It is a curious fact that nearly 6,000,000 of skins and furs are imported into this country, a very large proportion of the more expensive of which are immediately re-exported. We import 50,000 red foxes' skins, 4,000 cross foxes, 1,000 of these silver foxes, 11,000 fisher skins, 17,500 otter skins, 15,000 wolf skins, 1,200 wolverines, 1,200 skunks, and 100 skins of the sea otter, not one of which is consumed at home.

THE CRYSTAL FOUNTAIN.

In the centre of the natural history collection, and in the ornamental basin, will be noticed the world-famed Crystal Fountain, now the property of the Directors of the People's Palace. The glass is of the purest and most brilliant crystal, weighing upwards of four tons. Its curving palm-like leaves are among the largest

of the kind ever manufactured, and the whole is a remarkable example of skilful manipulation associated with and guided by great good taste. The visitor who has not before gazed upon this beautiful work of art, will be able to realize something of those tales of enchantment which, in his earlier days, have been associated with crystal fountains. Thanks to the exertions and enterprise of Mr. Osler of Birmingham, these beauties of poetry have been embodied, and have been made tangible and visible to the admiring gaze of thousands. This fountain is the most appropriate ornament that could be devised for a Crystal Palace, and standing beneath the noble roof of glass, one cannot but feel that the most glowing descriptions of the "stately dome" of Khubla Khan—

> "A miracle of rare device,
> A sunny pleasure dome with caves of ice"—

have been completely dwarfed by the great reality with which the visitor is surrounded.

The principal dish of the Crystal Fountain is eight feet in diameter, and, before cutting, it weighed upwards of one ton, while the shells around the base each weigh fifty pounds. The height of the fountain is 24 feet, and it is supported by metallic framing, the surfaces of which, however, being silvered over, are not visible. The difficulties to be overcome in the casting and construction of such a work as this can only be fully appreciated by those conversant with the critical nature of the annealing and moulding of large masses of glass. Many of these difficulties were overcome by Messrs. Osler and Co., by the experience which they had obtained in the manufacture, a few years since, of two colossal glass candelabra for the Pacha of Egypt—a country from the sands of which it was, according to great authorities, that the crystal metal first flowed.

THE SOVEREIGNS OF ENGLAND.

On the request of the Directors of the Crystal Palace, the Commissioners of Woods and Forests have consented to lend the company the principal portion of the models made by Mr. John Thomas, for the statues intended for the New Houses of Parliament; and these have been placed in the various niches of a screen, designed by Mr. Digby Wyatt, at the south end of the building. Over the large archway in the centre will be seen a fine statue of her Majesty, with an angel upon each side, bearing ribbons with various loyal mottos. The statue, of which this is the model, is now in the large tower of the New Palace at Westminster. The other niches in the screen are intended to receive all the models made for the statues for the central and St. Stephen's Hall of the New Palace—sixty in number—and

representing the sovereigns who have occupied the English throne, from William the Conqueror to William IV. both inclusive. Up to the present time, however, only forty of the models have been completed, but the niches in the screen have been filled up with models of the Saxon kings, and the first and last king under the Heptarchy. At the ends of the screen will be seen figures—eighteen in number—made for the Victoria Tower, which represent the House of Brunswick. Some time since it may be remembered the question was very warmly discussed whether Oliver Cromwell should have a statue among the sovereigns of England; it was finally decided in the negative, and the claims of the Protector of the Commonwealth to a niche among the sovereigns of England have not been recognized by the Royal Commissioners. Though Cromwell has no statue at Westminster, the admirers of the stern Puritan chief will have an opportunity of seeing that justice has been done at the Crystal Palace to the memory of one who, despite his failings and his faults, has been justly described by the greatest of living historians, Macaulay, as "the greatest prince that ever ruled England,"—one who, by his valour, genius, and patriotism, had done as much, or more than any crowned or anointed monarch, to make the name of England illustrious, and to cause its power to be feared and respected by every other nation, whether of haughty foes or commercial rivals. The figure of Oliver was designed and modelled by Mr. John Thomas, and presented by him to the Directors of the Crystal Palace, in order that the guiding spirit of one of the most memorable and important epochs of our history should not be unrepresented in this congress of English sovereigns.

THE TERRACES, FOUNTAINS, AND PARK.

The visitor will now leave the building by the south transept, or by the wings, for the purpose of exploring the 200 acres of park, pleasure grounds, ornamental basins, and terraces, which Sir Joseph Paxton, ably assisted by Mr. Milner, has prepared for purposes of healthful recreation and instruction in botanical science. The princely patronage of such noblemen as the Duke of Devonshire, the Duke of Buccleuch, and others, has of late years contributed immensely to the improvement of the science of gardening, and more particularly to that of landscape gardening. The Italian style of gardening, in which the walks and streams were all stiff, straight, and formal, where

"each alley had a brother,
And half the garden just reflects the other,"

was the only one which some years since could be recognized as correct either in taste or design. The gardens of Versailles were considered as the very perfection of excellence, and they were held up as objects of emulation to all who aspired to the possession of the luxury of a fine garden. According to this style, parterres and flower beds were required to "be embroidered" according to an old writer "in patterns like a petticoat;" and in the celebrated garden of the great Marshal de Biron at Paris, every walk and flower bed was fancifully "buttoned" with two or more rows of red flowerpots. Under such a system the compass and square became of more importance than the gardener. The venerable oak, the romantic beech, the useful elm, the aspiring lime, the regular form of the chestnut, and the beautifully moulded orange tree, were tortured into all manner of fantastic and tasteless shapes, by admirers of a false system of symmetry; shady groves of trees, with their branching and luxuriant foliage, were changed into stiff and shapeless rows which appeared like huge green chests set upon bare poles. Seats of marble and summer houses terminated with the utmost geometrical exactness every vista, and the only semblance of life besides the powdered beau and hooped embroidered belle, who trod with stilted step these formal walks, was the splashing of some fountain, the spray from which served to refresh the panting promenaders. Sir Joseph Paxton has long since abandoned the path of tame servility, and at Chatsworth he has set all the cut and dried rules of his predecessors at most successful defiance, and in laying out the grounds at Sydenham he has shown not only how readily he can take advantage of the natural undulations of the surface to produce the pleasing and picturesque effects of an English landscape, but also with what ease he can produce all the magnificence of a terraced, and the choicest examples of an Italian style.

The series of terraces, which are constructed in the best Italian style, may for extent and magnificence successfully vie with any that exist in the present day, or which were probably ever constructed. The building communicates with the upper of these terraces by means of bold and magnificent flights of granite steps; one at each transept, and one at each wing. The front of the terrace is extended by ten bastions 24 feet square, occurring at intervals of 96 feet, the length of the terrace being 1,608 feet. There is a walk along this terrace of the breadth of 48 feet. The pillars which divide the balustrades of the terrace into compartments of 24 feet, are surmounted by statues and tazzas, a statue being placed at each angle of the bastions, and a tazza at intervals of 24 feet. A double flight of fifteen granite steps 96 feet in width, ornamented at each side with a pair of colossal sphynxes, 14 feet in length and 7 feet in height, leads up to the great central transept. At the north and south transepts and wings, the flight of steps is 48 feet in width, and upon each side is placed a single sphynx. The ground immediately in front of the building is

formed into a grassy slope rising from the walk up to the building.

The lower terrace is 344 feet wide, exclusive of the bastions; it extends along the whole frontage of the building, and is continued for a distance of 72 feet round each wing, the entire length being 1,896 feet, or one-third of a mile and 46 yards. In the centre of this terrace are four bastions, 48 feet by 96 feet each; the end bastion enclosing the wing is 72 feet by 192, and the balustrades are ornamented in the same manner as that of the upper terrace with statues and tazzas. This terrace communicates with the upper one by a central double flight of 18 and 16 steps, 96 feet in width, and two others of 48 feet wide at the ends. A larger portion of the front of the terrace is formed of masonry divided into compartments of 24 feet wide, in each of which are three alcoves, the basins of which will be kept constantly supplied with water from dolphins' heads placed in the upper part of the alcove. The water flowing over these basins is received in a basin or general reservoir which extends the whole distance between the bastions.

On each side of the central walk leading up to the building, there is a large parallelogram-shaped bed, with the farthest angle struck off by the quadrant of a circle. In the centre of this grass plot, is a regular formed basin 120 feet by 48 feet, having, in the centre of each of its four sides, a semicircular extension twelve feet in radius. Around the outer edging is formed a succession of small circular beds ornamented alternately with tazzas, flowers, and the graceful araucaria or Chilian pine, first introduced into this country by Sir Joseph Banks. Beyond these plots, and upon each side, is a regular-shaped sunken grass plot, having in its centre an octagonal basin 72 feet in diameter, with a semicircular extension of eight feet radius, springing from the centre of each of the eight sides. Along the twelve-foot margin of this sunk plot, a similar alternate arrangement of tazzas and flower beds is carried out, statues being placed at each of the angles. At each end of the terrace, we come to a third grass plot, having in the centre a square basin, the sides of which are 56 feet in length, the semicircular extensions on the sides being 12 feet radius. From each wing, a flight of steps, 32 feet wide, leads to the 48 feet gravel walk which runs along the whole front of this terrace.

Descending again a third flight of granite steps, we arrive at the level from which the surface falls gradually away, on each side of the central walk, with the natural landscape and surface formation of the grounds. Between the upper and lower terraces, there is a fall of fifteen feet, and from the foot of the third flight of steps, the entire fall from the base line of the building is 42 feet 6 inches. The visitor will now continue along this central 96 feet walk a distance of 288 feet, with handsome balustrades on each side, and statues and tazzas at frequent intervals, till he arrives at a circular basin 200 feet in diameter, surrounded entirely by a gravel walk of 48 feet in width. The whole of this circle, the

circumference of which is nearly 900 feet, is enclosed by stone balustrades, and is extended by eight semicircular bastions. There are four flights of granite steps, 24 feet wide, which lead up to this elevated circular walk, from the natural level of the ground.

Still continuing on the broad 96 feet walk, the visitor approaches the water temples, one of which is placed upon each side of the walk. These temples or towers are octagonal in shape, and constructed of hollow iron columns and girders, something similar to those used in the Palace. The water is forced up the columns, on to the roof, whence it will flow through a longitudinal slit in a pipe, in the form of a graceful and transparent crystal curtain. Surrounded by these watery draperies, there will be seen in the centre a charming group of the "Three Graces." On the top of each of the towers is a "Mercury." The water flowing from each of these towers falls into a continuous step-like cascade, on each side of the central walk. The head of these cascades is, in form, a square of 72 feet, with semicircular extensions from each side of 18 feet radius. The outfall of the water is 48 feet wide. There are twelve steps over which the water falls, and these are extended a distance of 8 feet upon each side of the general basin. The entire length of the cascade is 545 feet, and at the end of each is a large iron tank supported on arches of masonry, which receives the flowing water. Overflowing these tanks, the water falls in broad translucent sheets into large basins. The visitor, in descending a flight of handsome granite steps, passes into the tunnels upon which the tanks are placed; and through the open arches he may see the water rushing down before him.

On the right and left of the spectator, are now seen immense basins stretching away for nearly 800 feet from the central walk. The basins immediately in front of the cascades, and which receive the water from them, are 220 feet broad, with a large semicircular extension on the outer side. At right angles from these basins, the water passes in a stream 120 feet broad, and 125 feet in length, into the largest basins on the ground. They are circular in form, and of a diameter of not less than 360 feet. On the eastern and western sides of these immense basins, is a central projection of 98 feet by 24, with an extension of eight feet radius; and upon each side of this central projection, are smaller extensions of 56 feet, formed on the same model as the larger one. On the south side of one, and the north side of the other circular basin, a large basin is extended in the form of a parallelogram of 165 feet by 120 feet, with three semicircular extensions in the east and west sides at equal distances, and a large one at the south end, of the same radius as that at the foot of the cascades. From these latter basins, the waste water is conveyed by pipes into the large tidal basin in which the geological islands are placed. The appearance of these large basins, with the ground rising in grassy slopes all round them like a vast amphitheatre; with the parallel circular walks round each lake; the sun shining on the vast

expanse of water; the gigantic outlines of the Crystal Palace on the summit of the hill; the gentle undulations of the other portions of the ground; the rich foliage of the trees; the fairy-like Mount of Roses; the noble steps and terraces seen from this spot, is most enchanting; and while the fatigued visitor recruits his exhausted powers on the inviting turf, we will endeavour to explain the past and present arrangements for the supply of the basins and fountains with water.

That there are no fountains playing in these large basins is a matter of great regret, as it is impossible from their present condition to judge of the appearance which the grounds and arrangement of the basins would present if supplied with its system of hydraulic works. For some of the basins, the designs for the fountains are not even yet decided upon, and the difficulty of obtaining good and suitable designs for the purpose, has been not the least of the many obstacles interposed in the way of the completion of the works. At a very early period, a sum of one thousand pounds was set aside for premiums to be awarded to artists who should produce suitable designs. These designs were not left open to general competition, but a few artists were selected and required to send in drawings, for which they would be paid. The designs of the fountains were to be emblematic of commerce and the peaceful and industrial arts. In due course, the directors received the models and drawings, many of which showed considerable taste, while others were totally unsuited for displays of water, and some were impracticable, and impossible of execution. There were fountains of ancient art, and modern art, ancient poetry and modern poetry, ancient philosophy and modern philosophy:—they were decorated with statues of men eminent in olden and more recent times, in the several branches of art, poetry, and philosophy. Then, there were fountains sacred to agriculture and to commerce; to Flora and to the Graces; to animal life, and vegetable life; to all nations and to all climes. Among the boldest of these designs was one contributed by a famous French artist. It was intended to be a colossal glass globe of seventy feet in diameter, which was to occupy the centre of one of the basins, and the interior of which was to be fitted with walks and galleries. The globe was surmounted by a metal figure of Britannia, 200 feet in height, the head of which would be some feet higher than the top of the great transept of the Crystal Palace. The metal of which the figure was to be constructed was of polished zinc; the form was that of Minerva, and in the top of her helmet was to be placed a bright star formed by an electric light, and which could be distinctly seen for several miles round London. Immense coloured glass banners, bearing the devices of the flags of every nation, were to be grouped around the feet of Britannia, while jets of water, flying in every possible and impossible direction, crossing and re-crossing each other in the most admired disorder, were to play over the head and around the body of this glistening and light-shedding

Minerva. It is hardly necessary to say that the latter design was not accepted, nor were any of the others; and it was finally decided out of the materials afforded to construct some designs which would be considered at once suitable and practicable.

As the fountains are not prepared to play, it is immaterial that the means are not yet provided for supplying them with water. Two tall towers, more than 200 feet in height, were, however, constructed at each end of the building, upon the top of each of which was placed a tank capable of containing 800 tons of water. The water flowing from these lofty reservoirs would have given to the fountains in the lower part of the ground a jet of water of nearly 200 feet in height. The mode in which these towers was constructed was considered, however, by Mr. Brunel, and other engineers consulted on the subject, as one which would not safely stand against the vast amount of vibration which must necessarily take place from pumping the water up to the top, and the rapid descent of the fluid on its way to the basins. Some plans were proposed for giving additional strength and security to the towers, but as the carrying out of these involved an immense outlay, which would be attended with but uncertain results, it was considered advisable at once to pull them down, and reconstruct new ones of still larger dimensions, and of a more substantial and secure character.

These towers having been taken down, new ones are now in course of erection, nearly upon the site of the former structures. They will be 250 feet in height; and in form twelve-sided figures, of a uniform diameter of 40 feet, and the tanks on the top will be made to hold 1,200 tons of water. A perpendicular brick chimney-shaft from the engine-house will run up the centre, and the towers will be constructed of iron columns and girders, on the same principle as that adopted in the building itself. Although these alterations will involve an additional outlay of 30,000*l.*, yet an increase of 30 feet in the height of the water thrown by the largest fountains will be obtained, and the time during which they will be able to play will be extended by nearly twenty minutes beyond that which would have been possible with the towers first constructed.

The water for the supply of these basins is obtained from an Artesian well, which is situated about 100 yards from the lower end of the cascades. This well has been sunk to a depth of nearly 500 feet; and the process of boring is still continued. An engine-house is constructed close by the side of the well, which is fitted with four fine steam-engines. Two of these engines, of 20 horse power each, are employed for lifting the water out of the well; and two others, of 30 horse power, are required to force the water so raised a distance of about 500 yards into a large irregularly shaped basin of $2\frac{1}{2}$ acres in area. Near this basin, which is called the intermediate one, are four large and powerful engines of 40 horse power, which force the water up to the large reservoir at the north end of the building near the Queen's

entrance. This reservoir is about 370 feet square, 12 feet deep, and contains seventeen millions of gallons of water. The water has not yet done its work, and two more engines built close to the wings of the building are required to drive the water from this last reservoir up to the tanks on the top of the wings, and those which will ultimately be placed on the top of the lofty water towers. When in full work, there will, therefore, be required for the water-works the employment of ten steam-engines of an aggregate of 320 horse power.

We will now resume our walk along the side of the northern basin, and following the rising ground we shall shortly find ourselves beneath the shade of a noble avenue of trees, and luxuriating upon the elastic turf of an extensive lawn. The ground here follows the natural level of the land, and presents an admirable example of that style of lawn and landscape scenery which are so characteristic of the grounds around some of our fine old English mansions. The intermediate reservoir on the right as the traveller ascends, forms a charming feature in this portion of the grounds. Near this reservoir, walks branch off to the left, which lead into grounds laid out in the most tasteful and artistic manner. A mound rising up to some height, the top of which is reached by six serpentine paths, affords an admirable point from which to obtain a view of the grounds, and the foot of the sloping, sheltered portion of the ground, is thickly planted with the choicest rhododendrons of all shades of blossom. Passing from these and many other gracefully formed beds, the visitor ascends the steps which lead to the large circular basin on the central walk, and descending on the opposite side, proceeds by winding paths to the Rosarium, or Mount of Roses, corresponding in its general ground plan with the raised mound on the other side of the walk already visited.

The Rosarium, or Mount of Roses, is one of the happiest ideas of Sir Joseph Paxton. It is a circular colonnade situated on an elevated mound, and is approached by six winding paths which meet in an inner circle 48 feet in diameter, within a colonnade formed of 120 columns. Around the circle are twelve arches 31 feet in height and 16 in width. One of the arches spans each of the walks leading into the promenade, and there is one arch between every two walks. The spaces between the twelve arches are filled up with smaller arches, the columns supporting which are 8 feet apart. There is a delightful walk 16 feet in width, round the entire colonnade. The space between the walks which radiate towards the centre, covered with a delicious velvet of turf, will tempt the weary feet, and seats solicit the fatigued traveller to rest himself within the fairy-like enclosure; while, if a gentle shower should pay its unexpected tribute, the fair worshipper in Flora's bower will find shelter provided for her beneath the corrugated iron roofs of the circular arches, round the lattice-work of which, roses climb and blow, and shed their delicious fragrance.

Leaving this charming spot, and the pleasing parterres by which it is surrounded, we will pass round the side of the large southern basin, descend the steps at the end of the cascades, and proceed to the elevated ground, from the top of which a view is afforded of the basins, and of the vast tidal lake in which are the geological islands and the extinct animals. The first sight of these monsters will not be found so alarming as some persons may suppose, for, although they are of vast and gigantic dimensions, there is nothing disproportionate, unnatural, or repulsive, in their appearance.

THE GEOLOGICAL ISLANDS, AND THEIR ANTE-DILUVIAN INHABITANTS.

HITHERTO, attention has been directed to the productions of ancient and modern art, and the results of the industrial skill of the present time. We now pass on to inspect the records of ages, in comparison with which the oldest monuments of Egypt or Assyria, appear in the freshness of youth itself. From the classic temples which soared above the mountains of Greece, or crowned the hills of Rome—the lofty Gothic towers which in northern climes pierced the clouds with their delicate traceries—the works of art which decorate the palaces and mansions of the great and noble—the flowers and shrubs, and grassy slopes, which adorn the face of the earth—and the animals and tribes of man which "live, move, and have their being" among them—we proceed in a downward path to traverse regions where the eye will rest upon representations of forms and creations which existed unaided, and unseen, by the sons of men. In the journey which the visitor now takes, his first step will land him in realms far beyond the limits of recorded time, and below the dust of any of the representatives of the human race; he will find himself surrounded by the relics of a time when passing seasons and fleeting years marked not the lapse of duration; but when those distant epochs were recorded by the successive formations and extinctions of ancient worlds, with their rank vegetation, and gigantic forms of animal existence. To attempt to produce, for the instruction of the world, representations of those extinct species which existed in our globe thousands of ages before the birth of man, was a proceeding not less bold than novel on the part of the Directors of the Crystal Palace. Scientific men who had devoted a long life to the accumulation and study of fossil remains, who had put together the skeletons of these gigantic

monsters, and seen them in imagination roaming over the pathless forests of our island, had never yet beheld the entire animal reproduced before them;—geologists were for the first time to gaze upon the fruit of their industry, and the results of their science;—to pronounce their verdict upon the truthfulness of the portraits, and to state how far they accorded with their preconceived notions. The opinion of Professor Owen has been given, and it fully justifies the directors for the boldness with which they entrusted to Mr. Waterhouse Hawkins—a gentleman who, in the most remarkable manner, combines in his own person an intimate acquaintance with geology, a profound knowledge of anatomy, and an intense love of art—the construction of these extinct animals.

Many of the spectators who for the first time gaze upon these uncouth forms, will be disposed to seek for the authority upon which these antediluvian creatures have been constructed, and to ask if it be possible from a few scattered fossil bones to construct an entire animal. A few years since, the answer to such a question would have involved something of doubt and uncertainty. Now, however, in matters connected with geology, as in many other sciences, brilliant hypotheses, and speculative ingenuity, have given place to well established facts, and clear, well supported deductions from them. The key with which Professor Owen can decipher the records of geological ages, is as certain and as infallible as that with which a Champollion or a Rawlinson can unlock the mysteries of Egyptian or Assyrian inscriptions. The difficulties and seeming contradictions which in its earlier days attached to geology as a science have disappeared, and if some of their retiring shadows still darken the horizon, they will, as the day advances, one by one melt away in the increasing light of science. "Physical, like moral science," says Mr. Andrew Ramsay, "owns no conflicting truths, nor can they ever be opposed. Truth has no discordant elements. Like a perfect instrument of music struck by an unskilled hand, the notes will jar; but touched by him who has mastered its mysteries, it gives voice to infinitely varied and full flowing harmonies."

One of the most remarkable of the many claims which geology has recently put forward to be recognized on account of its truthfulness, was furnished a short time since by that most able and ardent votary of the science, Professor Owen, in his re-construction, from a portion of a fossil bone, of a "gigantic, wingless bird." Although the representation of this animal is not yet completed, and does not appear in the present collection, it affords so remarkable an instance of successful inductive reasoning, and of such profound anatomical knowledge, and bears so strongly on the veracity and value of the other restorations of extinct animals, that the visitor, before making acquaintance with the various antediluvian monsters to which he will be immediately introduced, will be pleased to learn the interesting circumstances

under which this last addition was made to "the happy family." Some time since, Professor Owen received from New Zealand a small box containing a fragment of a thick bone of about a few inches in length. After most careful examination, the learned professor pronounced it to be a portion of the bone of some gigantic bird. The propriety of the decision was called in question by many persons, and it was thought that the science of comparative anatomy had received its death-blow, for it was said to be impossible that an animal which possessed bones of such extraordinary size and strength as this appeared to be, could ever have flown, and the bone could not therefore have formed part of the anatomy of a bird. The professor persevered in his opinion, and to the surprise of the learned and unlearned world, he declared it to have formed part of a "wingless bird," which he called the "dinornis" or monster bird. Could anything be a more preposterous, or a more unlikely animal to exist than a "wingless bird?" and for once, not merely the science, but the common sense of the professor, was derided and called in question. Months rolled on, nothing was heard of the wingless dinornis, except an occasional joke, or piece of raillery, at the expense of the rash man who could venture to outrage all the experience and common sense of the 19th century. The strange announcement of Professor Owen in due course reached our antipodes, inquiry was directed to the subject, and in a short time several boxes of bones collected from the same locality as that where the first small fragment was found, were sent to London; the professor proceeded to examine them, and to put them together, until there stood before him the complete skeleton of the gigantic bird without wings, the previous existence of which he had asserted from the examination of a small piece of bone. Shortly after came information, gleaned from among the natives of New Zealand, that there once existed a great bird which had no wings, and which consequently never flew, and an old man of one of the tribes remembered to have heard a father or a grandfather tell of his having killed the last of these strange birds, called by the natives the "moa," thus completely corroborating the opinion of the eminent geologist. The monsters of an antediluvian age may flee before the approach of man, or disappear amid the convulsions of nature, but from their bones entombed in rocks, or their footprints marked on the soft sandbanks, science can re-construct the extinguished races, and place them before the admiring and astonished gaze of the people of the present age. We may explain, as tending in some degree to show the means by which geologists are enabled to ascertain whether any particular bone belongs to an extinct reptile, a fish, or a bird, that the peculiar texture of the bones, or the forms of cells or molecules of which they are made up, differ considerably according to the animal to which the bones belonged, and aided by this unerring test, the skilful anatomist is enabled not merely to decide to what particular

part of the body any fossil bone might belong, but also the nature of the animal of which it once formed part.

It would be impossible, even if within our province to do so, in the narrow limits to which we are confined, to explain all the varied facts or theories of a science the object of which is to describe the solid materials of the earth which we inhabit, the order and causes of their arrangement, and the various organic remains which are found in them. Leaving untouched the wide field of speculation, and confining attention to the broad facts brought to light by geology, the visitor as yet unversed in the mysteries of this science may, however, be able to appreciate, and readily to understand the illustrations here placed before him.

On piercing the crust of the globe, it has been found that the materials of which it is composed differ in their nature and construction, and deposited upon one another in regular order, they form distinct and clearly marked strata. At present there are about twenty-six different strata or depositions known and classified, and these are all arranged or grouped under three heads, known as "primary," "secondary," and "tertiary," or first, second, and third. Except in instances where convulsions of nature or other causes have upheaved or depressed them, these strata would be found to exist piled up in regular order and succession. The lowest of this series of depositions, so far as science has at present discovered, reposes upon granite, bearing traces of its once having existed in a molten state, or having been acted upon by tremendous volcanic agencies. So great, however, have been the convulsions to which the globe has been subjected, that this granite has been found to force its way through all the uppermost strata, and having in its resistless course overcome the resistance of the earth's crust, has towered on in its unimpeded way into the region of the clouds, where its snow-capped head reposes upon the loftiest of our mountain chains. Basalt and gneiss, of an origin somewhat akin to the hoary granite and other rocks, have also played their freaks with the poor tortured crust of the globe; they have disturbed its repose and the regular order of its stratification, and formed upon its surface

> "Some tall cliff that lifts its awful form,
> Swells from the vale and midway leaves the storm;
> Though round its breast the rolling clouds are spread,
> Eternal sunshine settles on its head."

By the upheaving of these vast rocks, the superimposed strata have been disarranged; earthquakes, too, have lent their desolating influence; water has contributed its rushing or wasting effects, and has hewn deep channels for its passage, or ocean-beds for its reservoirs; fire has sent forth its streams of lava; storms have ravaged the face of the earth; and countless myriads of coralline insects have united their tiny powers to produce vast rocky reefs and

newly-formed islands. Add to all these, the myriad wasting and denuding atmospheric effects, and some idea will have been obtained of the mighty causes which have given diversity to the face of our globe, and introduced confusion into the order of its stratification. The visitor will not therefore conclude, because he may see the various strata regularly piled upon each other in these illustrations, that they are uniformly to be found superimposed with the same regularity upon each other in the wider field of nature. If he were to pierce the earth at the spot upon which he is now standing, and penetrate to a great depth towards its centre, he would probably find in his journey that several of the strata were deficient, but he would observe no departure from that regular order of succession as portrayed in the illustrations by which he is surrounded. The geologist finds chalk strongly marked at Dover, or in the Surrey Hills, the lias in Dorsetshire, the wealdon in Sussex, the oolite in Oxford, the red sandstone in Warwickshire and Devonshire; but whatever strata are below, they will be found to be those which had preceded them in order of time.

THE TERTIARY EPOCH.

From the top of the high mound, forty feet in height, the visitor will see spread before him the extensive "tidal lake," of thirty acres in area, in which are situated several small islands, devoted to the reception and illustration of geological animals and strata. The first island, the Tertiary, is not so far advanced as that devoted to the secondary epoch; but it will be advisable, in our imaginary journey through the crust of the globe, to commence with this latest series. The uppermost of all the tertiary beds, or rather the one which reposes upon the latest of tertiary formations—that upon which the visitor is now standing—is distinguished as the "historical." It is that which has been the theatre of all the great events of history—which has been stained with the blood of battles fought for freedom and national existence; it is the soil from the fruitful bosom of which springs the grain which rewards the anxious toil of the husbandman; it nourishes the grass that decks the smiling hills, and the towering oaks that impart beauty and majesty to the woodland scenery; it is the strata out of which man was formed—upon which the flowers of Paradise blossomed—which trembled as it heard its curse pronounced—which afterwards drank up a brother's blood—and upon whose face toiling millions of the free and the enslaved have, for 6,000 years, expended their lives of weary toil. At the first step which the visitor takes below this mere surface-soil, all traces of human remains and human works cease; and his grave, shallow though it be, will be formed amid the dust of a departed world. Formations of sand and clay, and gravel and limestone, many of them of great thickness, underlie each other; and as we pass through them, the most

familiar of animal forms are found rapidly receding from view, and their places supplied by strange and yet stranger forms, till in the lowest division, where the great secondary epoch is reached, traces of existing species are rarely found, and creatures of strange form and uncouth appearance everywhere arrest the attention as they lie petrified in their rocky cemeteries.

The rocks of this tertiary system are generally spoken of as "basins," as the "London" and "Paris" basins, for they appear to have been formed in great hollows in the surface of the chalk series. The tertiary formations commence immediately beneath all water-moved gravel, river-sand, or mere surface-soil. In these formations, some of the animal remains approach nearly to the existing forms of animal life, and the first traces of ruminant animals, such as the ox, rein-deer, and others, are discovered. Among the fossil remains of gigantic animals discovered throughout these strata, some of them differ widely from, others approach nearly to, existing specimens, and the remains of fossil elephants are very numerous. Mammoths' or elephants' bones and tusks occur throughout Russia in the diluvial formations, and more particularly in eastern Siberia and the Arctic marshes. The tusks are very numerous, and in so high a state of preservation that they even now form an article of commerce, and are employed in the same works as that which may be termed the "living ivory" of Asia and Africa, though the fossil tusks fetch an inferior price. Siberian fossil ivory forms the principal material on which the Russian ivory-turner works. The tusks most abound in the Laichovian isles, and on the shores of the frozen sea; but the best are found in the countries near the Arctic circle and in the most eastern regions, where the soil in the very short summer is thawed only at the surface, and in some years not at all. The first discovery of these curious remains was made in 1799 by a Tungusian, named Schumachoff, who, after the fishing-season of the Lena was over, generally went to hunt and fish at the peninsula of Tamut. He had constructed for his wife some cabins on the banks of the lake Oncoul, and had embarked to seek along the coasts for mammoth tusks. One day, he saw among the blocks of ice a shapeless mass, but did not then discover what it was. In 1800 he perceived that this object was more disengaged from the ice, and that it had two projecting parts; and towards the end of the summer of 1801, the entire side of the animal and one of the tusks were quite free from ice. The summer of 1802 was cold; but in 1803, part of the ice between the earth and the mammoth, for such was the object discovered, having melted more rapidly than the rest, the plane of its support became inclined, and the enormous mass fell by its own weight on a bank of sand. In March 1804 Schumachoff came again to his mammoth, and having cut off the tusks, exchanged them with a merchant for goods of the value of fifty roubles. Some portions of the carcass of this animal were found two or three years afterwards; and when the different bones

were collected together, it was found that the body of the animal was 9 feet 6 inches in height, and 16 feet 4 inches long from the nose to the end of the tail. The tusks were 9 feet 6 inches in length, and weighed 360 lbs.: the head with the tusks weighed 414 lbs. The skin of the animal was of such great weight that it required ten persons to drag it to the shore. More than 36 lbs. of the loose hair of the monster was collected from the ground into which it had been trodden by the bears, who had collected round the carcass to devour the flesh. The entire skeleton of this strange animal is now in the Museum at St. Petersburg, and a part of the skin and some of the hair are deposited in the Museum of the Royal College of Surgeons.

The existence of the mammoth has been traced to a period so recent, that it no doubt approached nearly to, if it has not existed contemporaneously with, man. In what manner, and by what strange convulsion of nature, these animals were destroyed in the freezing latitudes of the Arctic circle, has never been explained, and will probably ever remain a mystery. A humorous writer gives the following theory, which throws as much light on the subject in a few words as is afforded by much more elaborate essays. "One day, ever so long ago, the earth must have been thrown off its axis by contact with some star, or such-like; its poles were reversed, and instantly a change of climate ensued. Now, that big mammoth must have been, just at that time, taking a warm bath in his own country quietly, and all of a sudden he found himself like a fly in amber, and—very cold." Some illustrations of the mammoth, together with the mastodon and other animals of the tertiary formation, are in course of construction by Mr. Waterhouse Hawkins, and will in due course make their appearance in public.

The Irish Elk.—The animals completed include a group of very fine figures of the Irish elk—an extinct creature, the remains of which have been found in many parts of the bogs and marshes of Ireland. These beautiful animals have been produced in all their pristine majesty and strength. The male measures nearly seven feet to the top of his back, and the distance between the tops of his noble antlers is not less than twelve feet. The largest buffalo of the plains would stand but a poor chance in an encounter with this broad-chested powerful creature; the couchant figures by the side are females, and they exhibit great beauty and symmetry of form. Complete skeletons of these creatures exist in the museum of the Royal Dublin Society, and the manner in which these figures have been reproduced is creditable, not less to the anatomical knowledge, than to the artistic ablilities, of Mr. Hawkins.

The Megatherium.—One of the largest animals which have been found in the tertiary deposits is the gigantic megatherium, an animal of the sloth species. His configuration is massive and enormous, his limbs like unwieldly columns, with every characteristic of slow movement and great strength. The megatherium

is a living pyramid, fifteen or sixteen feet high; and he must indeed have been a most extraordinary animal. His fore-feet are about a yard in length, and terminated by powerful claws; the hind legs are shorter, and much more strongly built. The tail is short, massive, and broad, and somewhat resembles an hind leg; and, elevated on these and the tail, as on a tripod, the animal could wrestle with the most gigantic trees, tear them down, and thus gain access to their tender branches and leaves. The breadth of the pelvis or haunches is between five and six feet, the girth round the body about twenty feet, and some idea of his massive frame work may be gained from the fact that the *ossa ilia* of the largest elephant measure three feet and a half, while those of the megatherium measure five. The circumference of the thigh bone of the largest elephant is twelve inches—that of the megatherium is twenty-six. An entire skeleton was found near Buenos Ayres, in South America, from which these measurements were taken.

The Anoplotherii.—The group of four graceful lama-like animals will be examined with interest. They are restorations of animals which once swam in the vast lake in which Paris now stands, and which browsed amid the herbage of its banks, at a period prior to the time when the stone of which Paris was built was formed. Some few bones of these animals were discovered in the gypsum quarries of Montmartre, near Paris, and it was upon their careful examination that Cuvier first evinced his vast anatomical knowledge, by pronouncing them to be the remains of animals of the description here shown, and which subsequent research has found to be strictly correct.

THE SECONDARY EPOCH.

Leaving the latest formations, the visitor will now pass on along the walk by the water's edge, and inspect the restorations of animals which existed during the vast and grand secondary epoch. The illustrations which are in a state of the greatest forwardness are those which represent this series of formations. These were ages when a luxuriant vegetation prevailed, and huge creeping things, and carnivorous monsters, roamed through tangled brake, or pursued their prey along the shallow banks of vast inland seas. Here creatures more terrible and appalling than poet's fancy ever dreamed of, lived and died; and even now, entombed amid their rocky catacombs, though the sleep of countless ages has rolled over them, they still appear to human eyes the strangest and the most terrible of created things. Jaws of monstrous size, all bristling with sharp and formidable teeth, are imbedded in rock, just as they gaped to devour their victim; and the transfixed eye-socket, huge and stony, still glares horridly from its fossil skull, as it once did when overtaken by some resistless convulsion of nature. But let us inspect the strata and their inhabitants more closely.

The Chalk.—The first or upper of the series is the great stratum of chalk—that extensive chalk formation, so prominent in the cliffs of Dover, and in many other parts of our island. This formation abounds with what are popularly known as "flints," but which, it is not so generally known, are, for the most part, nothing but "sponges," which, long ages since, were deposited in soft shallows, in which they became imbedded and fossilized. These once soft, moist, elastic, and absorbent sponges, are now the hardened flint from which a shower of sparks of fire may be obtained, by striking them with a piece of steel; they form one of the principal materials from which the glass of the Crystal Palace was obtained, and the visitor, in journeying along the crowded roads, or borne by steam over the metallic highways of the country, or in traversing the spacious walks in the Palace grounds, has passed over many millions of the fossilized sponges of an antediluvian age. The chalk in which these sponges are imbedded, converted by burning into lime, is used for building purposes; and under the plastic hands of the moulder, it has passed into those forms of art and beauty which, in the Fine Arts Courts, have delighted and instructed the visitor. Among the animals entombed in the chalk deposits are—

The Mosasaurus.—That colossal lizard-like head, with wide gaping jaws, belonged to an animal, a portion of which was found in the valley of the Meuse, in Belgium, hence its name—the lizard of the Mose or Meuse. The head is five feet in length, and the entire length of the beast could not have been less than from twenty-five to thirty feet. He is provided with a row of formidable teeth, and was no doubt an exceedingly destructive animal. The remains of the head were found at the foot of a chalk cliff, at Maestricht; the teeth are casts from the originals, and the whole head has been most carefully and successfully reproduced. It belonged to an aquatic member of the great Saurian family. Remains of animals of the same character have been found in the upper chalk near Lewes, in Sussex, in the greensand of Virginia, and at Woodbury, in New Jersey, United States.

There will be here a very large pterodactylus; a similar creature is also shown in the oolite, and will be there described.

The Wealden.—Next below the chalk lies the extensive Wealden formation, which abounds in Kent, Sussex, and a portion of Surrey, and which, in consequence of the large number of gigantic fossils which it contains, has been called the metropolis of the "dinosaurians," or monster lizards. It was covered with wild and rank vegetation, and abounded with vast fresh water lagoons and deposits. Several restored specimens of these fossil plants are placed in this stratum. They are of a coniferous character, and closely resemble in their structure, ferns and plants of a similar character. The specimens on the island are called cycadeoidea and zamites. The cycade is the one with a cone-like arrangement

of the leaves. The plant of the same species as the cycade which exists in the present day is one which in the East Indies yields a coarse sort of sago; and from the existing zamia of New Zealand is manufactured the finest description of arrow-root. At the head of this formation are placed two illustrations of—

The Iguanodon.—There are two specimens of this animal; one is represented as standing upon its four legs, and the other is lying like a huge lizard upon the ground. It was in the mould of the standing animal that the banquet previously referred to (p. 11) was given on the last day of the year 1853. The iguanodon is a colossal land lizard, thirty or forty feet long. His peculiar formation shows an intimate and beautiful connection and gradation to the pachydermata of the present day, of which the elephant is the type. Dr. Mantell, to whom the honour of his first discovery is assigned, thinks that some of these animals were seventy to eighty feet long. The broad and powerful tail, tapering gradually to a point, occupies more than half the length of the entire beast. The thigh bone measures twenty-two inches in circumference, and the thigh of the largest species is five feet long, the clawed foot extending nearly a yard. The girth round the body is about twenty-five feet. The animal is a true Briton. Numerous fossil remains are found in the Wealden formation in Kent and Sussex. Mr. Holmes, of Horsham, in Sussex, has discovered nearly the whole of a fossil skeleton in his neighbourhood, and the whole of the bones so found were most liberally placed at the disposal of Mr. Hawkins, in order from them to construct the present fine specimens. The animal was a vegetarian in his habits, and he certainly does credit to the system under which he lived and flourished. Very recently Mr. Hawkins, in company with Mr. Bowerbank, examined, by means of a powerful microscope, a portion of the fossil skin of an iguanodon which, with great difficulty, they separated from the rock in which it was imbedded and preserved. After carefully removing the extraneous particles adhering to the piece of skin, they were not less astonished than gratified to find it glistening with scales, and presenting the appearance of bright and dazzling shagreen, thus fully establishing the truth of the previously generally received opinion that the animal was, when alive, covered with a scaly covering, similar to that in which he is now presented to the eyes of the visitor.

The Hylaosaurus.—That colossal, horny, and spiky animal, along whose back is a row of long spikes or "scutes," rejoices in the name of the Hylaosaurus. The rich soil of the Wealden formed the sepulchre of this animal, and, like other great personages of antiquity, his weapons of offence and defence were buried with him, for the long spikes which now adorn his back were found *in situ* with the vertebrata out of which they originally grew, and the present ones are exact casts from the originals. To what particular use these "scutes" were applied by the animal has not yet been decided; they certainly do not appear well adapted for

purposes of attack, and it is probable that they were given to the creature for defensive purposes, and that he had the power of raising or depressing them according as he was affected by emotions of fear or anger. A terrible scene it would have been to have witnessed on the sedgy banks of some old Thames or Medway the megalosaurus hobbling down to the margin of these muddy streams to slake his thirst, and to see this gigantic porcupine slowly raising himself out of the water, cast his saurian eyes over the livid expanse in search of some object which he might drag down with him to his river den, and hear the ferocious howl and roar with which the two monsters would grapple and struggle with each other, till the dark waters were reddened with their blood, and one or both of the combatants sank beneath their wounds. The hylaosaurus is about twenty-five feet in length, the scales on the back from eighteen inches to two feet in height. A large proportion of the bones of one of these strange creatures is to be seen in the British Museum. A small animal of the lizard kind, very closely resembling in general structure this huge creature, but not more than a few inches in length, was very recently brought to this country by Mr. Gould from Australia. The venomous little reptile was covered with horny spikes and shell; it had the same array of "scutes" along the back, and was most appropriately named by its discoverer "Moloch horridus."

The Megalosaurus.—The large beast next in order is one for the knowledge of which the world is mainly indebted to Dr. Buckland, and Professor Owen calls him the most "cantankerous" of all animals, and one of the most savage and destructive which in geological epochs roamed over the chaotic earth. Some bones were first found by Dr. Buckland in that portion of the oolitic groups known as the Stonesfield Slate; some bones of the monster have also been found in the Wealden formation, showing that, unlike most of his gigantic colleagues, he had subsisted during at least two distinct epochs, the oolite and the Wealden. An entire skeleton exists in the museum at Oxford, and this anomalous creature has been most carefully constructed from the data afforded by these fossil bones. The length of the megalosaurus, upon a very moderate and reasonable calculation, could not have been less than thirty-five feet; a thigh bone of one of these beasts now in the British Museum would convey the idea of an animal of nearly double the length of the present specimen. His strong jaws mark him at once as a beast of extraordinary ferocity, and carnivorous to the highest degree. In the expression of his face there is no trait of nobleness or generosity like that which marks the lion of the present day, and no Van Amburgh or Carter of a contemporary age would ever have dared to try his hand in the taming or subduing of this greedy and ferocious monster. The teeth of this animal are most terrific; they combine the qualities of a saw and a knife, and as they curve backward they appear in the mouth of this creature like a double row of sharp and jagged-edged

scimitars placed close together, guarding the entrance to his voracious maw, and ready to crush, to cut, and to tear any creature which might come within the range of this truly "infernal machine." The great depth of the ribs of this creature gives to it an exceedingly awkward and uncouth appearance. The legs appear to grow out of the giant sides, and being curved outwards, make the animal look what is called "bow-legged." The structure of the leg is, however, anatomically correct, the great depth of the beast rendering necessary this kind of "shoring up." The megalosaurus was supposed to have been a land animal, but occasionally to have taken to the water in pursuit of his prey.

What vast changes must have occurred, not only in the climate, but in the character of this country, since these uncouth monsters held undisputed sway over the rank herbage and wild prairies which existed ages before the vast deposits of chalk and oolite were formed! Does the visitor seek to know by what means these vast changes were brought about, and these tremendous extinctions of successive creations effected? Geological science can afford no satisfactory answer; and the stone tablets of creation, the sepulchres of successive formations, afford no guide to the solution of the interesting question. Entombed in the Wealden lies many a great monster, whose roar awoke many an untried echo, and whose tread shook the sedgy and half-formed earth; but you search in vain for the record of the means by which the various giant races became extinct.

THE OOLITIC FORMATIONS.—Next in order come the great and varied oolite formations, comprising the lower, middle, and upper oolites. These formations abound in the centre and West of England; and in the neighbourhood of Oxford, one portion of them is known as the "Stonesfield slate." The yellow freestone of Kettering, in Northamptonshire, the Bath and Portland stones, are good illustrations of oolite. The resemblance of the grains of which the rock is composed to small ova, or the roe of fishes, has given origin to the term "oolite," which is derived from the Greek "*oon*," an egg, and "*lithos*," a stone.

The Pterodactyle.—The two creatures with extended wings are the most extraordinary specimens on the island; and under the name of the "dragon" have been associated with the valorous achievements of St. George, the patron saint of the country. These wonderful creatures were inhabitants of England, and as tradition is in all cases founded upon some degree of fact, it is by no means improbable that a combat with, and destruction of the last of these savage beasts, has conferred immortality upon its vanquisher. The name given to this strange mixture of fish, bird, and beast, signifies a "winged-fingered saurian," and it is so called from the construction of its wings. These wings could be folded back by the dragon, by stretching out what appears like a fifth finger joined to the edge of the wings, and which upon being brought in contact with the ground, could be used as feet for

walking, as upon four legs. By extending his wings, which were nearly 20 feet from tip to tip, he could become a flying dragon. These wings, however, were not provided with feathers, but were formed of a thick membranous substance like leather, and covered with strong scaly armour. The claws, or hind feet, are of the most formidable description, and were capable of supporting him in an erect position, like a bird, when the wings were extended ready for flight. The neck is of considerable length, and of great power, adapted for balancing a large head, in a similar manner to the albatross of the present day. The long beak is armed with a double row of pointed teeth; and whether flying, swimming, or walking, this wonderful creature was no doubt a terribly destructive carnivorous animal. The peculiar structure of the animal, equally adapted as he was for flying or swimming, enabled him to survive those convulsions which destroyed his contemporaries in other formations; and he is one of the animals, the remains of which have been found in more than one stratum, portions having been discovered not only in the oolite, but in the Wealden and in the chalk; and it is by no means improbable that he may have existed for some time cotemporary with, and have been seen by man; and as has already been hinted, finally exterminated by those who were the latest of created beings, and who were placed on earth to have "dominion over the fish of the sea, and over the fowls of the air, and over every creeping thing that creepeth upon the earth." Not less than eight species of this extraordinary animal are known to geologists, varying in size from that of an ordinary snipe to a cormorant.

The Dicynodon is the representative of an animal, the bones of which were found in Africa, and which appeared to have formed the connecting link between the turtle and the walrus, having the shell of the one, and the tusks of the other animal. Some tempting specimens of an animal of a similar kind have recently been found in the Isle of Sheppy, which must have been a vast convenience to the Gogs and Magogs of an antediluvian city of London, had so small an affair existed in these ages. No remains of human bones, however, have yet been found to attest that the solitudes of Sheppy were ever disturbed by the visits of purveyors of turtle for the consumption of the monster aldermen of these geological epochs.

The Lias.—Proceeding downwards, we next reach the extensive "lias" formations, which, in this country, are found to the greatest extent in the county of Dorset, at Lyme Regis, and near Whitby, in Yorkshire. It is a species of clay, and is employed to a great extent in the manufacture of various kinds of cement and concrete for building purposes. The inhabitants of the earth at the period when the "lias" prevailed, were of the "saurian" or lizard kind, or, more properly speaking, animals which combine the properties of fish and lizard.

The Ichthyosaurus, or Fish Lizard.—That gigantic beast,

thirty-five feet in length, lying on the side of the island, probably died of indigestion, having dined or supped too heartily off a young plesiosaurus at Whitby, for by the side of the gluttonous saurian were discovered some mutilated portions of a plesiosaurus, which he was unable to dispose of at his last and fatal meal.

This specimen is a very small one, as from some bones which have recently been found, there appears every reason to suppose that some of the larger animals were at least seventy feet in length—and they must have been perfect tyrants of the seas. He has the long snout of a porpoise, the sharp and closely set teeth of a crocodile, the head of the lizard, the vertebræ of a fish, the sternum, or breast bone, of the ornithorhynchus, with the paddles or flappers of a whale! He has huge glaring eyes, protected by a semi-transparent horny covering of plates, and his whole form is indicative of great swiftness, strength, and power. The jaws, which open wider than those of a shark, are armed with enormous sharp-pointed teeth, set as closely as possible, and interlacing each other when the mouth closes. The tail, which runs out to an enormous length, is terminated by a broad caudal fin, four or five feet in diameter, which balances the weight of the fore part of the body, and which enabled the monster to turn himself with the greatest ease and rapidity. We hear a great deal of the ingenious discoveries of modern science; but the ichthyosaurus is another of the many proofs brought forward that there is nothing new under the sun; for here is a pre-Adamite monster, who may probably be five hundred thousand years old, and who carries a tail which is the exact form of the most improved screw-propeller of the present day. The four flappers, or fin-like appendages, which are placed two on each side of the body, and resemble, in some degree, those of a turtle, were admirably adapted for enabling the animal to make its way through the soft yielding mud.

The Plesiosaurus (akin to Lizard).—That strange-looking animal which appears to answer in part the description of

> "A lizard's body, lean and long;
> A fish's head and serpent's tongue;"

but which has, in addition, a long gracefully-curved serpent-like neck, and four paddles like a turtle, instead of legs, was found at Lyme Regis. The entire skeleton of the animal exists in the British Museum, there put together by Mr. Thomas Hawkins. This strange creature was adapted for paddling or swimming about the muddy shallows, and immense water tracts which once covered a large portion of our country, and though unquestionably a formidable enemy to smaller animals, was unable to contend successfully with the more powerful ichthyosauri, who, no doubt, preyed upon them in the most vigorous manner. It is conjectured that this animal occasionally visited the shore, as the turtle-like extremities fitted it for some awkward kind of locomotion

on land. Its extraordinary length of neck must have impeded its progress through the water, presenting a striking contrast to the organization which so admirably fitted the ichthyosaurus for cutting rapidly through the waves. As it must have frequently required air, it is concluded that it swam upon or near the surface of the water, arching back its long neck like a swan, and occasionally darting it down at the fish that swam within its reach.

The Teleosaurus.—The two frightful looking animals lying next in order, are representations of two animals, which in remote ages found themselves stranded on the lias at Whitby, where their remains were discovered by Mr. Chapman. They are a species of crocodile, represented in our degenerate age by the fierce Gavial of the Ganges. Their immense long mouths, armed with a double row of horrible looking teeth, sufficiently indicate the power and ferocity of these crocodilian monsters; and looking upon them from the spot where he stands, the visitor may well congratulate himself upon the remarkable change of climate and temperature which has rendered this country unfit habitation for this class of animals. They are about thirty feet in length.

The New Red Sandstone.—At the lower portion of the island, called "Frog Point," is represented this last of the series of the secondary formations, one which very generally lies immediately above the coal measures. This order of stratification prevails, to a great extent, in Lancashire, Warwickshire, and Cheshire. The old red sandstone, very similar in appearance to the new, differs from it in this very important respect, that it is found beneath, and not above, the coal-bearing strata. It is very largely developed in the county of Devon, and has, in consequence, obtained the name of the Devonian. The new red sandstone was, until very recently, supposed to contain the first evidence of vertebrate existence in the amphibia, illustrated by the three gigantic frogs which at present hold possession of "Frog Point," and which are now called

The Labyrinthodon.—These interesting specimens of the earliest antediluvian vertebrate existence were first discovered by the prints left upon the rock by their gigantic feet in the same stratum as that upon which they are now placed, and they were in consequence known among geologists by the name of the *Chiorotherium*, a combination of two Greek words, signifying the "hand-beast." Further acquaintance with the structure of this animal, as shown in its fossilized bones, and more especially as displayed in his teeth, has led Professor Owen to give to the beast the name of the Labyrinthodon, a name derived from the beautiful and delicately complicated structure which sections of the teeth present when seen under the microscope. A complete skull of this monster toad, upwards of two feet in width, was found in Warwickshire, and is now in the Museum of the College of Surgeons; several other fragments of bones belonging to this

animal were also found near the same locality. As these fierce carnivorous beasts pursued their prey over yielding morass and muddy shallows, the deep prints of their broad feet were left behind them; the soft muddy soil, which like wax received these impressions, has become hardened rock, the foot-prints have been preserved from destruction, and now, after the lapse of untold ages, they still exist, and these rocky pre-Adamite tablets faithfully record the existence of a class of monsters before which, if now living, the bravest of men would hold his breath with terror.

THE PRIMARY EPOCH.

Still pursuing the downward geological track, the visitor enters the vast and dateless regions of the primary formations, the distinguishing feature of which is their gorgeous and luxuriant foliage and flowers. Emerging from its lifeless granite forms, the first principle of life—vegetable existence—arrayed the youthful earth with its green verdure, and "its herb yielding seed;" and the huge pine, and the tangled forest, found their sustenance amid the ruins and *débris* of the extinct mineral creations which had preceded them. But amid the relics of all that luxurious vegetation compressed in the existing coal formations, the visitor will search in vain for any plant of an existing species; no reptile of those ages has left behind him the print of his foot; no fossils exist to show that animal life ever sought the shelter of the umbrageous foliage of these vast forests, or awoke their deep echoes with their savage roar; and no traces exist to show that the sounding aisles of these primeval forests ever reverberated with the carol or music of birds. Turning by the pathway to the right, a short distance along which a most charming view is obtained of a portion of the grounds, and "the Mount of Roses," the visitor shortly reaches the bank upon which is illustrated

The Coal Formation.—If the primary epoch has preserved for the present generation no remains of its animal life, it has furnished the world with one of the greatest of its necessaries of existence. When the visitor leaves the Crystal Palace, he will be borne along by the steam-engine—the iron steed of the present day—which subsists on the primeval forests of this remote age, and he travels on iron rails, the metal of which was compelled to leave the unwilling ores by a resistless force, still inherent in those vegetable forms; he traverses the streets of the vast metropolis, or of the provincial town, illuminated by a gas obtained from vegetation, from which millions of ages have not yet sufficed to remove its carbon; arrived at home, he seats himself near his hearth, and while enjoying the warmth and comfort of his sea-coal fire, he knows that he is indebted for it to the forests of an extinguished world,—that the soot which forms on his chimney, or, it may be, falls in flakes upon his well-ordered room, is formed mainly of that

carbon which was the principal element in those vast vegetable creations. The primeval forests which have been submerged and compressed in the little island which Englishmen inhabit, have yielded them fuel for centuries; they now supply them with thirty-seven millions of tons of coal in each year; and thousands of years will yet elapse before the announcement will be made that the last trunk of these glorious old forests has been consumed,—ere the "pick" of the miner must be exchanged for the axe of the woodman, or the oaks of our forests be felled for the fires of our descendants.

THE LIMESTONE.—The small channel down which the water flows into the large tidal lake, shows upon each side the limestone beds. These exist in nature of various thicknesses, and they each attest the lengthened existence and final extinction of a creation, for they are composed almost entirely of animal remains. These mountain masses of stone form, not, as in the case of other deposits, the mere charnel house of what were once animal existences—they are made up of the remains of animal life. At the bottom of ancient seas and lakes, testaceous and coralline insects and animalcula lived, died, and petrified, into this hardened rock, of which our oldest bridges are built. Imagination stands aghast at the contemplation of the countless ages necessary for the formation of the vast limestone beds, which abound in so many parts of our globe. How many countless generations of insect life must have passed away, ere a stratum of a few inches could have been formed. Some of the animals which compose this vast limestone rock are so small, that a million of them would only equal the size of a grain of sand! A cubic inch of "Tripoli," a hard species of limestone, contains forty thousand millions of the siliceous coverings of one small insect—forty times the number of the human population of the entire globe. Who shall compute the myriads of sentient existences which lived, performed their functions, and died, in order to form the masses of our mountain limestone. The mind is not merely carried back through immeasurable periods, but "while standing," says an eloquent writer, "amidst the petrified remains of this succession of primeval forests, and extinct races of animals piled up into sepulchral mountains, we seem to be encompassed by the thickest shadow of the valley of death." Of the limestones there are many varieties, extending from the lovely marbles of Pentelicus and Carrara, on which the genius of a Pheidias or a Praxiteles may have been lavished, down to the ironstones of Staffordshire, rich in their mineral ores. Limestone assumes, under different circumstances, every possible hue and shade of colour. Primary limestone is white—combined with clayey or argillaceous substances it is blue; oolitic limestone is yellow; marble found at Tiree is red; Derbyshire and Kilkenny marbles are black; the Connemara marble is green; many kinds of marble combine the most varied of colours, which the skilful polisher is able to bring to light.

THE LEAD MINE.—In the outer portion of the great wall of limestone are shown two small veins of lead and immediately beneath them is a small opening or chamber, thickly studded with the stalactites peculiar to the lead mines of Derbyshire. Passing on a short distance from the coal formation the visitor will, upon descending a few rough steps cut in the solid rock, find himself in the midst of a faithfully correct model of the Matlock lead mine in Derbyshire. This model has been built up by Mr. Campbell, who, for nearly the whole of his life has been engaged in works connected with mines. Every part of the actual mine is shown: there is the little ceaseless stream that is always running in this description of mines, there is the shaft through which the produce of the mine is drawn, and by means of which the miner ascends and descends, the miner's footways and tracks; there is the pick and the tools of the miner, the veins of ore, and everything essential to set up the working of a small mine upon one's own account.

The ore of lead when first extracted from the mine is called "galena," and is found in combination with many earthy matters. The ore is powdered, crushed, and washed, and afterwards smelted in an ordinary furnace, and the molten metal, run off into large iron pans, is called "pig lead." In this state lead always contains a larger or smaller quantity of silver, and many ingenious plans are resorted to for the purpose of securing the more valuable metal at the smallest possible outlay. Until very recently the process employed to obtain the silver was so expensive that it could not be profitably applied except in cases where at least twenty ounces of silver could be obtained from the ton of lead. By a process recently invented by Mr. Pattinson, lead containing only three ounces of silver, may be operated upon with considerable profit. The total quantity of silver thus obtained from the lead mines of the United Kingdom in 1852, according to the valuable mining statistics prepared by Mr. Robert Hunt, of the Museum of Economic Geology, was 818,325 ounces, the value of which at five shillings per ounce was 235,080*l*. The total quantity of lead ore raised during the year 1852 was 91,236 tons, and the lead obtained from this quantity of ore was 64,987 tons.

IRON-STONE.—Near the lead mine will be found specimens of the iron-stone peculiar to the great limestone formations. To have omitted from the illustrations so important a series as the iron-producing strata would have been an oversight indeed, for the varied and extensive uses to which iron is now applied, and the immense amount of interests involved in its production and manufacture, fully justify the application of the name of "the iron age" to the present century. Among other of its uses there are more than 7,000 miles of railway completed in the United Kingdom; and, on a moderate computation, more than 25,000 miles of rails have issued from the mines of this country to form the road for this new system of intercommunication. Here is a veritable

girdle for the earth! Mythology bestowed upon its goddess of beauty the love-exciting cestus; industry and science have given to Terra, the mother of the Titans and the giants, a girdle of iron of from 70 lbs. to 80 lbs. weight for every yard of its length, to say nothing of the "chairs" and "bolts" required to secure this modern "cestus" to its place—a girdle more than sufficient to encircle the globe, while its aggregate weight cannot be less than 1,400,000 tons. Iron also lends its aid in the construction of these great highways of the age by the formation of thousands of bridges, many of them of the most colossal and imposing magnitude. The Menai tubular-bridge required to form its giant sides 3,454 tons, its top 2,962, and its bottom 2,944 tons of iron; while one million iron rivets secure the rigid structure, the entire weight of which is 11,468 tons. But iron now not only forms and sustains metallic highways upon the earth, and creates the ponderous locomotives which traverse them, but, although of greater density than a fluid, it is actively employed in discovering new paths on the ocean; and the iron *Great Britain*, or *Himalaya*, sails and steams speedily to the East or the Antipodes with its burden of 3,500 tons. On the Clyde, 10,820 persons are employed in the construction of iron steamers. Again, while the iron locomotive drags us along the iron road, or an iron steamer conveys us to distant lands, it may be in each case but to lodge us in an iron house for shelter. In 1851, upwards of 5,000,000 persons walked the long aisles and galleries of an iron building in Hyde-park, in which were concentred the industrial products of the world; and that edifice was constructed with and supported by 4,050 tons of iron; while the Crystal Palace which the visitor has just left, and whose colossal dimensions he may now see before him, swallowed up more than 6,000 tons of cast and wrought iron.

To supply the enormous demand created by the wants of the present age, there is produced each year not less than 2,380,000 tons of pig iron, and in order to extract this enormous mass of metal from the ore, there would be consumed 9,500,000 tons of coal, 2,500,000 tons of limestone, and the ores operated upon could not have been less than 7,000,000 tons. And these various blast furnaces would consume a quantity of air exceeding in weight that of all the other materials consumed. One of the large furnaces of South Wales consumes 12,508 cubic feet of air each minute, in supplying the oxygen necessary to the combustion of the fuel. To supply the air consumed on an average in each furnace requires an engine of 25 horse-power. Engines of nearly 12,000 horse-power, are constantly employed to drive the "breath of life" into the glowing masses within the furnaces of the United Kingdom. Each furnace on an average sucks in 17,000 gallons of air per minute, or about five tons weight per hour. The number of furnaces in blast in 1850 was 459; the aggregate weight of air therefore required during that period to keep life in these fiery monsters was not less than 55,080 tons daily, or

20,049,000 tons during the year—a quantity exceeding in weight the totals of the coals, ore, and limestone consumed in the process of smelting.

The districts which produce the largest quantities of iron, are South Wales, Shropshire, Staffordshire, and the northern districts. The clay ironstone beds of the coal measures furnish the greater proportion of the ore required. The carboniferous and mountain limestones of Lancashire, Cumberland, Durham, Forest of Dean, and Derbyshire, contain valuable beds and veins of hematite, from which large quantities of iron are obtained. The greensand of Sussex also contains iron in such quantities as to lead to the opinion that ere long that county will become the seat of a considerable iron trade. Ironstone has also recently been found in the county of Northampton. In Ireland, in the county of Leitrim, and near Limerick, the ores equal in richness those of Staffordshire and South Wales, and closely approach those obtained from the Scottish "Black Band." One of the greatest advantages which this country possesses in connection with the iron trade is the existence, in close proximity to the ore, of the fuel required for its smelting. In the South Staffordshire district, nature has been lavish of its gifts in this respect, as the coal, the iron ore, the limestone for flux, and the refractory clay required for the construction of the furnaces, are all found grouped together in the same locality.

The lower orders of stratification are not yet arranged: they will include the old red sandstone, upon entering which all traces of even vegetable life would be left behind, as the formation of the rocks show that they were formed from the materials of more ancient rocks fractured, decomposed, and slowly deposited in water. Below this old red sandstone, as we continued our progress, we should cross the threshold of the vast silurian system, but even then we should not have arrived half-way towards the foundations of the earth. Far below this would lie the vast and dateless slate rocks which form the Cambrian system. This is a region older than Death, and in these realms the grim tyrant never wielded his sceptre over living forms of any description. Far down into those subterranean depths, the visitor would see piled on each side of him the thick beds of mica or gneiss, which commence the vast pile of stratification. Below these, repose the masses of everlasting granite, the bounds of which no mortal eye shall ever explore; and no geologist shall ever do more than speculate as to what lies beyond and beneath these crystallized masses of matter. Amid these dreary solitudes, all the conditions of life have ceased, and securely fixed to the rocky granite is the eternal bolt which holds the first and lowest end of the wondrous chain of existence.

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