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GENERAL INVESTIGATION

AND REPORT

ON THE

PROGRESS OF THE

RESEARCH

CONDUCTED BY

THE

COMMISSIONERS OF THE

LAND OFFICE

IN

1881



DICKINSONS'
Comprehensive **P**ictures
of
The **G**reat **E**xhibition
of
1851,

From the Originals Painted for H. R. H. Prince Albert,

BY MESSRS. NASH, HAGHE, AND ROBERTS, R.A.

Published under the Express Sanction of His Royal Highness Prince Albert,

PRESIDENT OF THE ROYAL COMMISSION,

to whom the Work is, by Permission, Dedicated.

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WAITING FOR THE QUEEN.

THE sun rose bright on the morning of the 1st May 1851, substituting the brilliancy of an Italian sky for that canopy of mist which so continually hangs over the metropolis of England. The birthday of the Exhibition of Industry of all Nations had arrived, and from early day-break, the note of preparation was sounded, announcing the interest which all classes of the population took in the inauguration of that great undertaking.

If a stranger, unacquainted with the cause of this unusual agitation, had found himself for the first time in the streets of London, on that bright morning, he would have been amazed at the unprecedented appearance presented by the modern Tyre; for the gates of the docks were closed, the voice of the steam engine was mute, the mansions of Lombard street were as empty as the palaces of Venice, and the immense population of the Capital were wending their way, in one uninterrupted stream, towards Hyde park.

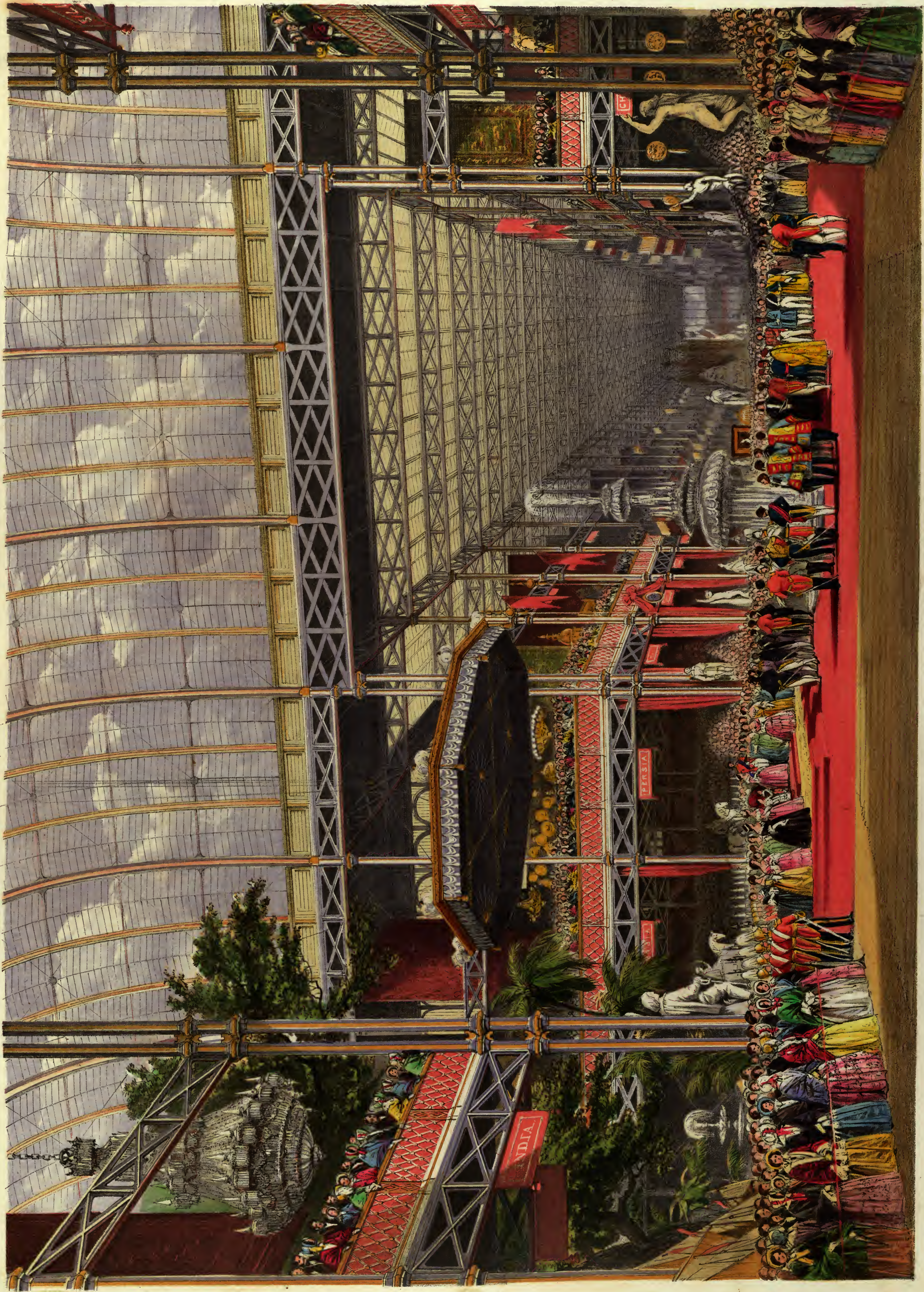
A Palace realizing in its decorated architecture the most glowing conceptions of an oriental imagination, and gorged with treasures more costly than even the mind of a Monte Christo could have conceived, was thrown open to the public;—a Temple filled with inventions, the solutions of problems studied by myriads of intellects, teeming with fashions destined to satisfy the ever-changing caprices of the human will, and adorned with ideal works of art attesting the existence of national and individual spiritualism, even in this utilitarian age, was reared up to Industry; and the beloved Sovereign of an Empire upon which the sun never sets, was to do honor to the realized idea of her Royal Consort, by opening in state the Great Exhibition of 1851.

Brilliant and solemn was the spectacle which is depicted in the accompanying plate. An assemblage composed of the magnates of England, and of Continental Europe, of the aristocracies of birth, of intellect and of wealth, was "waiting for the Queen." The talented orator astounding Parliaments with his eloquence, the wily diplomatist playing with the destinies of Empires, the illustrious in war, in literature, in science and in art, were gathered together upon that platform "waiting for the Queen." Around them and above them a girdle of female beauty, such as even the glowing pencil of a Sir Peter Lely would have failed to depict, encircled the building from north to south, and from east to west. The Englishwoman, calm in the possession of her chaste and aerial loveliness, the animated Parisienne, rich in her indescribable grace, and the daughter of the South, with her restless and impassioned gaze,—each and all contributed their charms to lend enchantment to the scene.

It is related of one of the Kings of Spain, whose taste for the arts led him to spend immense sums for the embellishment of the Museo del Rey at Madrid, that he would pass whole days in the old curiosity shops of his Capital, alleging as his motive for so doing, that he considered the motley collection to be found therein, to be a truthful essay on the life of nations, and on many of the great events of history, and to be a poem more useful and valuable than all the writings of a Calderon or a Lopez de Vega. The contemplation of a Virgin painted by Murillo would plunge him into an ideal world peopled with saints; a statue by Michael Angelo would carry him back to those glorious ages when the arts flourished, pure and undisfigured, under the Popes; and the enamelling of a death's head by Benvenuto Cellini would remind him of the spirit of *la Renaissance* profanely intruding on the soil of Italy.

A similar effect must have been produced on the mind of many a thoughtful observer, standing in the Transept of the Crystal Palace, before the arrival of Her Majesty. At one glance, he could embrace the industrial position of the East, represented by the productions of India, Persia, Turkey, Egypt and China. In the gorgeous luxury of oriental habits he could trace the germs of the Mahomedan creed so grateful to the senses; and in the prim formality of Chinese manners he could detect the injunctions of Confucius against mirth and laughter; in short, in all these he could see the gradually fading image of the Past, whilst in the dazzling display of the contributions of our own land, of France, and of Germany, he could read all the glorious promises which these nations are holding out to the world, of a resplendent Future. Above all, in that vast concourse, he could behold the loyalty of the English people and their love for the Sovereign of their land, a love which was never more enthusiastically manifested than when Her Majesty's entry was greeted by the sublime music of our National Chant.





L. Noel

The Inauguration

M. G. S. G. S.





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1876



GREECE.

In a novel called "Arria Marcella," lately published in France by Mons. Gautier, is a fanciful episode of a young man who visits the buried ruins of Pompeii, and falls in love with the beautiful form of a woman moulded out of a block of lava extracted from the resuscitated city. Half-cursing fate for merely placing within his grasp the cold passionless stone, robbed of its warm heart and lips which might invite and return a pressure, he reclines against the fragment of a prostrated column and falls asleep, revelling in the frenzy of his new-born and strange passion. In his dream the fossil town reconstructs itself; the broken porticoes are perfectly re-established; the white marble pillars rear their capitals, and again afford support to the architectural magnificence above them; in a word, walls, forum, temples and fountains—all are rebuilt, and the sleeper finds himself in the actual presence of the Roman town, in all the circumstantial reality of its existence 2,000 years ago: in fact the impression is so vivid and intense, that he even himself becomes an actor among the multitudes which again throng the streets and theatres, and again occupy the no longer voiceless chambers. Darkness vanishes, solitude is peopled: Pompeii no longer lays mournfully slumbering in her shroud, but has again started into life and youth, pure as before the Vesuvian torrent had consumed her: the needle of Time had gone back twenty centuries on the dial of eternity.

In the midst of this fantastically restored city our hero meets the graceful form, whose angelic loveliness, lastingly imprinted on the fragment of lava, had thrown him into such ardent reveries,—he finds Arria Marcella as startlingly beautiful as in the day when she was engulfed by the sulphureous torrents of the volcano. He sees her with a rosy and life-like cheek, a sparkling eye, a sweet and tender smile; he speaks to her and tells her that it is his love, his frantic, unearthly love, which has recalled her to life: he inebriates himself, by her side, with the silver tones of her voice, and with the soft caresses with which, notwithstanding all her maidenly reserve, she cannot help rewarding the ardent expressions of his affection.

Suddenly, however, an aged man appears to interrupt the eager intercourse of the two lovers: it is Marcella's father. He approaches and gazes on the happy pair, who seem moulded for one another, and who are yet in reality separated by 2,000 years. He entreats his child to leave the young man's side, not to drag the living from their sphere, and to let her lover return to the life which God had appointed him to lead. But all in vain; Marcella with the common wilfulness of youth refuses to obey the old man's commands, when he stretches forth his attenuated hand and touches her—the graceful draperies which enveloped her form fall, her laughing voice is hushed, and the nocturnal visitor sees only by his side a heap of crumbling ashes, mingled with a few calcined bones, and the abodes of art, of luxury and of taste, whose resurrection had been so strange, again become the tombs of their momentarily-waked residents.

It was with feelings of a nature somewhat similar to those which animated the enthusiastic fancy of Arria Marcella's lover, that we wandered into the small space devoted to the display of the articles contributed by Greece to the Great Exhibition of 1851. Her contributions were so few, so inferior to the gorgeous and dazzling collection which we may conceive she would have produced, had the Exhibition been held in the glorious days of Pericles, during whose brilliant reign Athens gloried in the name of "the country of literature and the arts," that we longed to throw back the shroud of years and reinstate the land that once was "Freedom's home or Glory's grave" in the mighty rank which she held before her downfall: to disinter the noble Past, and in its effulgent lustre, to dissolve away the ignominious Present. Could our dream have been realized, and could Greece have gathered the world around her to admire her revival, we might all then have enjoyed the exquisite happiness, short-lived though it might have been, which crowned the passion of the ardent enthusiast, who could not have desired the animation of his Marcella of stone with greater eagerness than we do the restoration of the glory of Athens.

As we traversed the aisles of the Crystal Palace there was much of sobering and humbling thought, when we looked calmly about us, after the first bewilderment which the gorgeous display of the collective industry of the world was calculated to produce, to remember that England perhaps only now holds that rank among the other nations of the world which Greece held centuries ago. It is Commerce which has put into the hands of northern Europe, whose inhabitants clothed themselves in skins and painted their naked bodies with woad, all the arts, the inventions and the comforts which then exclusively flourished in the south, and were enjoyed by its people alone. Greece was the first European country who prided herself on her civilization, her literature and her industry, and the monuments which she yet retains in every branch have shed a glory upon her sons that almost obscures their military fame—and what is she now? That very Greece had the smallest display in the Exhibition of 1851: her power, her riches, her glory had dwindled, so that she was not ashamed to send, in reply to the courteous invitation addressed to her by England, whom she considers a Protectress, a few boxes containing only some specimens of raw produce, with three contributions to the fine art department, unworthy of this once renowned country. From these facts the lesson which we learn is that there has been a steady march northward of commerce and her concomitant power and glory, and that ruin seizes those whom she abandons:

"More unsteady than the southern gale,
Commerce on other shores displays her sail;
And nought remains of all that riches gave
But towns unmanned and lords without a slave."





Joseph M. ...

St. Petersburg

(Proof)



RUSSIA.

From the opening of the Exhibition until the middle of June 1851, the Russian Department was the most unattractive on the Foreign side of the building. To the visitor who had recently left the gorgeous Sevres court, or had just returned to the Nave after contemplating the masterpieces of the Milanese Sculptors, the scantily filled area allotted to Russia seemed as barren and uninviting as the wastes of Siberia must appear to the traveller who has been dwelling amid the richly varied landscapes of Southern Europe.

At length however the day arrived when the commercial and artistic resources of Russia were to attract as much attention amongst the thronging multitudes in the Crystal Palace, as its political position does amongst the Cabinets of Europe. Novelty was the great feature of the Russian collection, and for this attribute it was mainly indebted to the articles in Malachite, exhibited by the Messrs. Demidoff. The Roman and Florentine Mosaics, which adorned the Italian Department, were familiar objects to the accomplished traveller and patron of the Fine Arts, and although the Malachite ornaments which enrich the various Palaces of the Continent had long attracted admiration, yet the inlaying of this mineral had never been carried to such perfection, and developed on so large a scale, as in the specimens manufactured at the Works of the Messrs. Demidoff at St. Petersburg.

Malachite is a green carbonate of copper, the residue of a cupriferous solution, and which, in accordance with the mysterious laws of nature's geometry, assumes the crystalline structure of stalagmites. It was long thought that this rich mineral was to be found exclusively in Siberia; but since 1845, when the great impulse was given to copper mining in South Australia, some very fine specimens of the blue and green carbonates of copper have been discovered in the Burra Burra mines.

The best kinds of Russian Malachite are extracted from the Nijny Tagilsk copper mines of the Messrs. Demidoff, on the Siberian slopes of the Ural mountains. These mountains, which form the north-eastern barrier, or *girdle* as the Russian word signifies, between the European and Asiatic possessions of the Emperor of Russia, are, in a geological point of view, the most interesting in the world. Amongst their other mineral productions are reckoned gold, silver, platinum, copper, lead, diamonds, jasper, and porphyry.

The manufacture of the Malachite doors, which form so prominent a feature in the accompanying plate, is said to have occupied thirty men working day and night for a whole year. The inlaying of this mineral is a most tedious operation, and it is curious to contemplate the patience displayed by the rude workman of the North, who flings away piece after piece until he at last meets with one of the suitable hue, and intersected by the proper veins, beguiling meanwhile the monotony of his labour by humming one of the national ballads of his country.

The jewellers of St. Petersburg enhanced their world-wide reputation for elegance in design and superiority in the setting of precious stones, by the splendid diadems and other jewels, which were the cynosure of all eyes, and pronounced by the fairer portion of the community, the best judges in such matters, to be exquisitely tasteful.

All classes of society in Russia have a fondness for ornaments, and the merchant's wife at an early hour in the day will be found adorned with rings, bracelets, and necklaces, many of which amongst our middle classes would be considered

"An India in itself."

It is related of the late Emperor Alexander, who was considered an excellent judge of female loveliness, that he seriously objected to any of the high-born ladies of his court,

"The trembling lustre of whose hair
Was radiant, radiant gold,"

encircling their light coloured tresses with a tiara of diamonds. He considered that the brilliant effect of these gems was only shown to perfection when contrasted with the glossy brightness of raven locks. This fact was, however, not stated by the present Emperor's jeweller, who was the principal exhibitor of the magnificent tiaras of diamonds, mingled with emeralds and opals of the largest size, and the fair-haired beauties who came to admire his sparkling works were left to follow their own taste, and were not called upon for their opinion on the justness of the Czar's invidious distinction.





Joseph Nash

1876

Illustration from the New York Herald

Joseph



NORTH GERMANY.

THE five great Northern States of Germany were very small contributors to the Exhibition. Hanover was represented by ten exhibitors, who supplied specimens of some of the productions of the kingdom. Although mining is the most extensive branch of Hanoverian industry, and silver, copper, and lead are found in large quantities, no specimens were exhibited; and it appears that the fault was to be traced to the Government, which retains the few mines actually at work in its own hands, instead of farming them to private speculators, who would have a greater stimulus to increase their productiveness, and who would employ a larger number of workmen. Thus it is that many existing mines in the Upper Harz, the produce of which might enrich the kingdom to a very great extent, and give occupation to the inhabitants, are left unexplored, to languish and decay. The only natural production exhibited from Hanover was asphaltum, one of the varieties of bitumen, of which there were samples in a raw state, and also prepared for covering roofs and pavement, for which it is very extensively used.

Among the few manufactured articles must be mentioned the lustre, in gilt bronze, which forms a prominent feature in the accompanying Plate. It was made to hold sixty candles, and though apparently too elaborate and heavy, when lighted it proved a very handsome piece of furniture, and deserved to be adopted by the Fine Art Class. Under this head, and in the same metal, was a bust of his Majesty Ernest Augustus, the late King of Hanover, and a statuette representing the painter Holbein. The most interesting of all the contributions, however, was an electro-magnetic telegraph, with the exhibitor's additions and improvements on the system of the American Professor Morse. It was a variety of the Registering Telegraph, and its peculiar arrangements may be thus described: a long strip of paper passed slowly from off a paper roller on which it was wound, under the point of a pencil, which was in connection with an electro-magnet; a straight line was in this way traced on the paper as it was unrolled, until an electric current through the wire, threw the magnet into action and changed the position of the pencil. A sign was thus made on the paper, and it must be apparent how easily this principle, once attained, can be put into practice for communicating intelligence.

From the other States two contributions must be noticed: the first on account of its local interest, the second because of its absurd incongruity. An exhibitor from the Grand Duchy of Mecklenberg-Schwerin showed a distilling apparatus, which formed a very appropriate link between the collection of different kinds of charcoal and the pyroligneous acid, which is produced by the distillation of wood, and is used in medicine, chemistry, and in the arts; while from Oldenburgh was sent a model of the famous Castle of Heidelberg, carved in cork! The material was an ignominious one in which to represent these stupendous ruins. The mind which could wander back into that vast area of the architecture of all ages, where every stone seems to whisper the history of a fallen empire, and where man feels overpowered with awe, as he beholds the mighty tomb where past power and magnificence lie buried, was indignant at the desecration, and would hardly stay to bestow a scornful smile on the artist's work.

The contributions from the Hanse Towns (included also in this Plate) were very varied. The brass-wire cages were sent from Hamburg, and were intended for parrots and other large birds. On the same stand may be remarked a small picture in a very elaborate frame; this was a portrait of the Queen and of his Royal Highness the Prince of Wales, embroidered in hair. The minute stitches of the work proved that the executor had a capital eyesight, but it is doubtful how far her Majesty was flattered by the likeness to herself. Quite forward, in the main avenue, was a Phaeton, of which the panels were in rosewood, much carved, and the springs in bronze.

The eye of the lover of legends and romance wandered away, however, from all these objects, and after one glance at a very good bas-relief in plaster, illustrative of Northern Mythology, fixed itself long and admiringly on a graceful model by which the Exhibitor had attempted to define the form and paint the beauty of the far-famed Lorley. For the information of those not learned in the legends of the Rhine, it may be as well to state that near Coblenz lies a sharp, oval-shaped rock, which juts forward into the Rhine at a spot where the current is excessively rapid, and thereby causes, at its base, the formation of a whirlpool of considerable extent. The legend says that the Lorley, a beautiful syren with golden locks, sits mournfully on this rock, striking a small harp, from which proceed sounds so harmonious and entrancing, that mariners are irresistably forced to raise their eyes and gaze on the syren's face, neglecting thereby to take the requisite precautions against the dangers of the flood. Sweetly and softly she sings—nearer and faster dashes on the sailor—until, at last, amidst a burst of triumph and derision from the Lorley, he is engulfed within the vortex and is seen no more.





of steel

Holland!

(Crest)



HOLLAND.

To the lover of the picturesque, the aspect of Holland is exceedingly uninteresting. Viewed from the top of a tower or spire, the country appears like one vast plain diversified by neither mountain or hill; its surface being intersected by an immense network of canals, which are there as numerous as roads in England, the purposes of which, indeed, they for the most part, answer. There are, however, some features of interest which relieve the dull monotony of this prospect; in the south and central provinces, rich meadows of wide extent and of the most beautiful verdure, are seen covered with large herds of well-fed cattle, the rearing of which is a much more important source of national wealth than tillage; in the north, especially, are numerous lakes, clusters of trees, and in the vicinity of the large towns, elegant villas, surrounded with gardens and parks, decorated with busts and statues.

The Government has long been anxious to encourage manufactures, and as no country can display more striking proofs of the energies which man can exert in overcoming the physical evils or difficulties of his situation than Holland, whose bulwark

"Spreads its long arms around the watery roar,
Scoops out an empire, and usurps the shore,"

there is every reason for affirming that the same success will now crown the spirit of industry displayed by the Dutch, which attended the construction of those stupendous dykes for shutting out the sea, which extend throughout the provinces of Friesland, Zeeland and Guelderland, and in general wherever the coast is not protected by a natural barrier from the encroachments of the sea, which is above the level of a considerable portion of the country.

The collection sent to the Great Exhibition from the Netherlands was valued at about £ 6,000, and comprised objects which represented every class of raw produce and manufactures. Among the chemical substances may be remarked, a newly invented colouring matter, the Polychromate or Chrysammic acid, which is produced by the action of nitric acid upon powdered aloes. Obtained by this process, Chrysammic acid appears in golden crystals, and its compounds are remarkable for the brilliancy of their colour: specimens of dyed silk were shewn as examples of the several different colours which the acid appears capable of communicating, without any other colouring matter, but simply by the application of various corrosive processes.

In the Machinery department was a very ingenious apparatus, exhibited by Mr. G. Goosseus, the Commissioner for the Netherlands, for the manufacture of percussion caps. This machine was completely automatic, producing eight thousand caps an hour; in a single operation these caps are loaded with fulminating powder, pressed, covered with varnish and exposed to the air to dry. Among the philosophical instruments was to be seen a dynamostater, to be used as a dynamometer for ploughs. The dynamometer is an instrument intended to measure the muscular strength of men and animals; in drawing a burthen which encounters a variable resistance, such as a towed ship, owing to the changes in the hygrometric condition of the atmosphere, these ordinary spring dynamometers are found incapable of procuring the required indications; in many cases also, their sensibility is insufficient to shew the alterations of straining which follow in quick succession: the inventor of the dynamostater, Mr. Cavaux, asserted that his instrument supplied all these deficiencies.

A large folding fire screen, ornamented in the Chinese or Japanese style, formed the most remarkable object among the furniture exhibited, and in which the execution of the various details was excellent. In their Report the Jury remark the redundancy and inappropriateness of much of the ornament applied to the European specimens of Japan ware, and direct attention to the better examples of this work from Japan and China, where, in the subordinate parts, the ornament is kept subdued and simple, thereby giving more effect to the principal features.

The celebrated Dutch setters of precious stones were represented in the Exhibition by M. Romain alone. His contribution consisted of a beautiful *corsage*, made of rose diamonds and pearls of fine quality, arranged in the form of flowers and scrolls, around a portrait painted in enamel. It was so constructed, that it could be divided into three parts by the alteration of certain clasps, and worn either as a stomacher, a head-dress, or a chatelaine. Two very valuable additions were made to this department by the Duke of Devonshire and Mr. A. J. Hope, M.P.. His Grace exhibited a very interesting work of jewellery made to commemorate the reconciliation of two noble Dutch families many years back, who were before in fierce enmity. It was in the form of a hawk, and of the size of the living bird, studded all over with various fine gems, rubies, turquoises and amethysts; and within was contained the gold drinking cup from which the hostile Counts pledged each other at their reconciliation. Among the jewels in the fine collection contributed by Mr. Hope was the largest known pearl in the world, resembling somewhat in shape a clenched fist; the handle of Murat's sword made of a single beryl, which was an exceedingly interesting relic of the handsome soldier; and a sapphire having by candlelight the colour of an amethyst, being the identical "Saphir merveilleux" formerly in the possession of Philippe Egalité, upon which was founded one of the beautiful tales by Madame de Genlis.





Joseph W. ...

Belgium

Belgium



BELGIUM.

THE important position which this country has occupied in the political, military, commercial, and agricultural history of Europe—its former celebrity in manufactures and the fine arts—and its present rapid progress in every industrious pursuit and social improvement, gave a peculiar interest to the contributions received from upwards of five hundred exhibitors. These productions furnished a very complete view, not only of the state of manufacturing industry, but also of the material operated upon; and this was doubtless due to the fact, that the idea of the Exhibition was by no means new to the Belgians, who have sustained and encouraged for many years the progress of science, learning, the fine arts, and literary taste by numerous national exhibitions taking place alternately in Brussels, Antwerp, and Ghent.

The accompanying Plate represents that portion of the Main Avenue of the Building which divided the space allotted to Belgium into two wings, and in which were grouped the contributions of the distinguished sculptors who sent their works to the Exhibition. The chief feature of the Belgian School of Sculpture is a tendency to the picturesque, which is in conformity with the whole character of the nation in art; but though in many ideal subjects the effect of this treatment may be very attractive, yet in those in which the movement must be depicted as bold and natural, the sculptor falls into an affectation of it insensibly to himself, following in the steps and imitating the style of Canova. This want of reality was very apparent in the colossal figure of Godefroy de Bouillon, by E. Simonis, which was, however, placed too near the spectator to appear as the artist designed it. He was represented on horseback, grasping a standard in his right hand, and raising it high above his head; while, by the expression of his countenance, which was full of life and animation, he appeared to be invoking the blessing of Heaven on the sacred emblem which was to lead his army to Jerusalem. The careful execution so apparent in the rider was, however, sadly wanting in the horse, which was clumsy in the extreme. It seemed as if the artist had taken for his model a specimen of the heavy Flemish breed, and exaggerated all the outlines so that there might be no want of proportion between the rider and his steed. Although Mr. Simonis may have departed too far from nature, his wish, in the execution of this work, was to compensate for the optical diminution which causes statues placed in the open air to appear meagre and deficient in mass. After this explanation, every one was ready to bestow almost unbounded admiration on the whole character of the figure which so ably represented the "Baron of the Holy Sepulchre," whose lofty and animated expression was well calculated to carry back the spectator seven hundred years, so as to imagine himself in the very presence of that noble leader of the First Crusade who refused to wear the diadem where the "King of Kings had received a crown of thorns;" but this unhappy departure from the principles of Plastic Art could not be overlooked in the awkward steed, a side view of which revealed two parallel lines, which would have been carefully avoided even in a child's toy. This work was cast in plaster from the original one in bronze, which is placed in the Place Royale at Brussels. Mr. Simonis was eminently successful in a small statue which was placed at the foot of the group which has just been described; and in the class of subjects called "Genre" there was scarcely anything in the Exhibition to equal it. It was called "The Unhappy Child," and represented a little fellow who by his vigorous blows had broken the vellum of his drum: the miserable expression of his face was so natural, the eyes closed and the mouth opened to its full extent, that it seemed almost surprising that the cry of anguish was unheard.

M. Jehotte, an artist of considerable merit, exhibited a statue intended to represent the torments of Cain overwhelmed with the curse just pronounced against him by Heaven, when he said unto the Lord, "My punishment is greater than I can bear." The attitude of the figure seemed, however, to be rather that of the murderer horror-stricken at the sight of the dead body of his brother, the very consciousness of his guilt rendering him unmindful of the punishment, and crying,

"Pain, heap'd ten hundredfold to this, were still
Less burthen, by ten hundredfold, to bear,
Than were those lead-like tons of sin, that crush'd
My spirit flat before thee."

Leaving the statues of Venus, Psyche and Cupid, &c., which are prominently represented, and in a great measure tell their own story, we must bring forward a group by G. Geefs, called "The Lion in Love," which allegorically represents the power of beauty over savage nature. The monarch of the forest, unable to resist the seducing loveliness of a nude female who is seated on his back and fascinating him with her eyes, is quietly submitting to be deprived of his claws. To explain the illustration were the lines—

"Amour, amour, quand tu nous tiens,
Ou peut bien dire—adieu prudence."

The group was in plaster, and the execution was soft, pleasing and very careful.

All the artists, of whose works we have been giving a description, received medals from the Jury of the Fine Art Class; and though, perhaps, they were not in every case adequately represented by their contributions, justly might Belgium be proud of the position into which she was raised by them.





Austria No. 9

Ernst

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AUSTRIA I.

THE suite of rooms containing the articles contributed by Messrs. C. Leistler and Son of Vienna, was a very interesting feature in the Austrian department, and presented an imposing picture of the luxurious furniture of the nobility of Austria. In each of the four rooms the flooring was inlaid on the principle of what is called, in cabinet-work, marqueterie, only on a bolder scale: woods of different colours being cut to pattern and inlaid one in the other, or so arranged as to produce a very beautiful effect for floors. On entering from the Transept the first division was furnished as a dining-room: it contained a table made of zebra-wood, long enough to accommodate forty persons, a set of thirty-six chairs, and a sideboard. Next to this was the drawing-room, containing several small and occasional tables, a very prettily designed revolving picture stand, easy chairs, and two loo tables, of which the larger measured eight feet ten inches in diameter, and was said to be made of a single piece of zebra-wood. On the north side was a handsome mahogany folding door, leading to the bed-room, which attracted more attention perhaps than any of the other apartments, as it contained, besides many articles combining elaborateness of manufacture with fitness and comfort, an immense state bedstead, eleven feet long by nine feet wide, and thirteen feet high, sumptuously carved in zebra-wood. Although every portion of this bedstead was an isolated beauty, and every part was grouped with admirable skill to obtain relief by shadow, it was impossible to say that it combined the requisites of a first rate piece of furniture—namely, lightness, elegance and durability. The canopy, in which the most horrible torments of nightmare seemed to be lurking, was like a vast cavern roof; indeed, as a whole, the bed appeared just fit for a *parvenu* Cræsus, who has more money than taste, and looks upon quantity as more valuable than quality.

Mr. Redgrave, R.A., than whom we can find no better authority on all matters relating to design, thus expresses his opinion with reference to this cumbrous mass of rich material: "The bed looks more fitted for a corpse to lie in state on than for a place of repose: it is a congeries of parts without an object: the footboard is so high and solid that it shuts in the sleeper as in a prison, and completely impedes the free circulation of air: the footposts rise from massive purposeless bases, and dwindle into mere sticks as they approach the heavy canopy; the wood selected is unsuitable for carving, its party-coloured grain blurring the ornamental forms."

In the library, which was the fourth and last room of the suite, was placed a gothic book-case, carved in oak, presented to the Queen by His Majesty the Emperor of Austria. It was designed by M. Bernardo di Bernardis, Architect, assisted by M. Joseph Krauner of Prague, and its construction was light and elegant. It was partly filled with some very fine specimens of Austrian bookbinding, the most remarkable of which were those exhibited by M. Habenicht of Vienna, consisting of three albums of the most costly and elaborate description: one was in dark blue velvet, with silver mountings; another in green, with delicately pierced work in ivory; and a third in tortoiseshell, with gilt and silver inlaid embellishments. These very beautiful covers were from designs by Professor Raesher, and were of superior workmanship.

We must not leave this department of the Exhibition without mentioning the Eau-de-Cologne fountain, which is so prominently represented in the accompanying plate. This delicious perfume was so liberally distributed, that the supply in charge of the attendant was exhausted before the jury had made the awards, so that only the residue left in the fountain was submitted to them. As the specimen had evidently lost much of its perfume from exposure to the air, the reporters, at the request of the Austrian Commissioner, Mr. Charles Buschek, and with the sanction of the Executive Committee, examined, subsequently, a fresh sample, which was taken from a cask of Eau-de-Cologne which had remained under the care of Her Majesty's Customs, and which had been overlooked by the attendant. This sample was found to be equal in quality to the Eau-de-Cologne contributed in other departments by three other persons, each bearing the same name as the liberal exhibitor in the Austrian furniture court—namely, Jean Marie Farina. All four Farinas claim to be the original, and it appears that speculation is carried to so high a pitch in Cologne, that any child entitled to the name of Farina is bargained for as soon as born, and christened Jean Marie: at times this event is even anticipated.





(Proof)

Austrian Exhibition

f. No. 1



AUSTRIA II.

THE Milanese Sculpture-room in the Great Exhibition has been so much abused by many well qualified to pass an opinion on the merits of the groups which it contained, that it requires some boldness to express admiration for any particular statues, lest we should thereby expose ourselves to the charge of ignorance or want of taste. It has even been said that the clever way in which the gallery was darkened had for its object the concealment of many instances of careless execution from the eyes of the public, who, it was thought, would not, in general, give themselves the time or the trouble to think much about it. We would fain hope, however, that those who expressed their opinion that in the best examples in the room there was scarcely a feeling or appreciation of the word beauty, and that conceptions of the very worst character abounded, were merely rival sculptors, actuated, no doubt unconsciously to themselves, by a slight feeling of envy while passing their judgment; and that the masses who crowded in a continuous stream into the Austrian Sculpture-room, rendering an examination, and even an entrance, a matter of considerable difficulty will, in memory, look back with pleasure on those pieces of sculpture which have been selected to form the subject of the following remarks.

It was somewhat a melancholy sight to see a whole gallery of statues, the works of Italian artists, exhibited under the Austrian flag, and guarded, as it were, by a bronze figure of Marshal Radetsky, leaning on his sword. Well may Lord Byron's lines be applied to Italy, still fair, but now fallen,

" Enough—no foreign foe could quell
Thy soul, till from itself it fell;
Yes, self-abasement paved the way
To villain-bonds and despot-sway."

Raffaele Monti, of Milan, exhibited several works. Eve who, after the fall, arrived at the full consciousness of her crime, sat " silent, and in face confounded," was beautifully conceived and carefully executed. The " Two girls fishing " formed a delightful group: but we think the expression of the upright figure almost too divine, considering that it was a portrait; but this remark is perhaps invidious or unjust, as the Minna or Brenda, whom it represented, may have had that pure and angelic face. There was however another statue by Monti, which was more generally admired by the public than either of those alluded to: it represented a girl kneeling, with a thin veil thrown over her face. Many spectators were completely deceived by the effect produced, for the folds of the veil were so truthfully sculptured, and the features beneath so delicately shown, that the first impulse was, invariably, to lift off the gauze which seemed to have been placed over the work as a protection from dust. A severe, correct and highly refined taste would, of course, at once pronounce this innovation, an entrenchment upon the artificial and meretricious; but it had its admirers among those who did not think that the artist had renounced the only means by which beauty, character and expression can be distinctly rendered in the countenance. The workmanship was dexterous, and we do not think that it showed want of taste, to deviate from the old principles of art, as practised by the Greeks, and to ramble from the path of those who confined their work to an undisguised representation of the human features.

The " Fainting Ishmael," by Strazza, represented the " Son of the Bondwoman," left lying in the desert and perishing with thirst. The figure was such a truthful copy of attenuated nature that it almost conveyed the idea of its being a cast taken after death; it was painful to look upon the form so expressive of loneliness as well as suffering, for the dying boy is represented without his mother, whose agonized sympathy for her child must add much to the pathos of the story: we think this omission was a mistake. The same subject was, with respect to this latter point, better treated by Emanuel Max, of Prague; in his group Hagar is represented with her hand thrown open, as in the act of supplication, and resting upon the bosom of the prostrated Ishmael, whilst the steadfast and imploring look which she directs to heaven reveals her helplessness and her anguish.

Innocenzo Fraccaroli, of Verona, showed a statue of David in the act of slinging the stone at Goliath: the figure was spirited, and the features had a lofty expression. But this sculptor's master-piece was the " Wounded Achilles," whose attitude was striking and effective, whilst the expression of pain and horror in the face, as the hero views his wounded heel, was well depicted. The statue showed such a thorough knowledge of anatomy, and such a clear decided style of modelling, that it has been suggested to have a cast of it placed beside the antique statues in the Royal Academy, as it would lose nothing by the contact, and the students might be the better for it. The value of accessories, which, when chosen with judgment, always help to carry out the effect, was well understood by Fraccaroli; the drinking cup at the feet of Achilles, was all that was needed to suggest the scene of the event.

A somewhat colossal bust of the poet Vincenzo Monti deserves attention before we leave this subject. It was the work of A. Sangiorgio, of Milan, who showed a very spirited conception in the masterly and careful execution of it. The head seemed in fact to be pregnant with the poetic spirit, now so finely tuned to the living thoughts of the age.





Joseph Meissner
Carl Meissner

Proof



ZOLLVEREIN.

THE Zollverein, or "Great Customs' Union," is the most extensive of the three commercial groups into which Germany may be divided. It was constituted in the year 1820, on the invitation of Prussia, but the arrangements for perfecting the Union were in progress for many years, and only came into practical operation at the beginning of 1834. It was then that twenty-six states, forming the centre of the vast Germanic region, agreed to destroy all the custom-houses on their frontiers, and to give perfect freedom of intercourse to the subjects of the different governments. The free introduction of merchandize from foreign countries and the states not comprised in the Union is not allowed, and duties are collected at one uniform rate at custom-houses built on the exterior boundaries of the frontier-states. The Zollverein embraces an area of above 174,000 square miles, and is bounded on the north by the Kingdom of Hanover, the Grand Duchies of Mecklenburg Strelitz and Mecklenburg Schwerin, the Duchy of Limburg, and the Netherlands, and extends southwards as far as Switzerland and the provinces of the Empire of Austria.

Since the establishment of the Union, industry and commerce have been in a satisfactory state of progress; and notwithstanding the manifold impediments to trade under which the country laboured for so many years previously, the inhabitants became so well aware of the immense advantages they derived from a community of interest, that giant strides were made towards the improvement of all their productions, and when they were invited by England to enter the field of honourable competition, they found that they could place themselves on an equal footing with other nations which had for ages past enjoyed the blessings of which they had been deprived. There were upwards of 1700 exhibitors (nearly equalling in number those from France), and they filled a space of 77,184 superficial feet with many important and interesting contributions, the total value of which was about £61,000.

The objects included under the head of Fine Arts were such as will not soon be forgotten: many were of great beauty, and indicated elaborate care in the manufacture and finish.

The principal group in the accompanying view is the Amazon, by Professor A. Kiss of Berlin, and is so well known that it is hardly requisite to describe it. A tiger has just sprung upon the horse and buried its claws into his neck. The Amazon, surprised but undaunted by the attack, has her eyes fixed sternly on the wild beast, and firmly grasping her lance with her right hand, is thrown back from her seat to give greater force to the blow by which the contest is to be decided. This beautiful work, cast in zinc, and bronzed over by a peculiar process, the invention of M. Geiss of Berlin, was a copy of a group cast in bronze in 1839, presented by a number of amateurs to the King of Prussia, and placed by his Majesty's command at the foot of the steps in front of the Royal Museum at Berlin.

In the nave, at the foot of the statue of the Amazon, was placed a Globe in relief, 4 feet in diameter, on a pedestal. It was constructed of papier-mache; and in the execution regard was not only paid to the summits of the mountains, but to all highlands, rivers, and towns. In the globes which M. Kummer, the exhibitor, has made for the instruction of the blind, the names of the smallest places are also in raised characters; and these proved so useful, that the Prussian Government testified their approbation of the services of M. Kummer in assisting to ameliorate the suffering condition of his helpless fellow-creatures, by conferring a diplomatic title on him.

Messrs. J. Wagner and Son, jewellers, of Berlin, exhibited a table-ornament of oxidised silver, in the shape of a fruit-dish, on a stand $4\frac{1}{2}$ feet high. The design is intended to represent the gradual attainment of civilization by mankind. A short description will perhaps not be uninteresting, as some of the ideas are original and clever. On the base, Man is represented in a nomadic state, his pursuits being confined to hunting, fishing, and cattle-breeding; Nature has not yet submitted to his will, and the Arts are still unknown. The stem is in the form of an oak, which, by reason of its utility in agricultural purposes, leads Man to gardening and the cultivation of the vine. With wine enthusiasm awakes, and the nobler works of Man commence; Architecture, the Arts and Sciences, Mining, Machinery, Trade, and Navigation, subject all Nature to his rule, insomuch that the pursuits of his forefathers (racing and hunting) become his pastimes. All is not yet, however, complete; Man has to obtain self-knowledge and a victory over himself. The artist has represented the attainment of this conclusion by a genius standing on a palm-tree, with a conquered serpent in his left hand, while with his right, he is raising a torch towards Heaven. On the cover of the bowl beneath are the words: "He who conquers himself, frees himself from the power which binds all men."

In the gallery was placed an Organ, by Messrs. Schulze, which occupied very little space, and was remarkable for its great power, delicacy of tone, and simplicity of mechanism; its chief peculiarity consisting in the deepness of the tones which it could produce, and in having an apparatus attached for accelerating the transmission of sound.





Empire

Chaque

(Puff)



OCTAGONAL ROOM.

THERE was perhaps no portion of the Foreign Department of the Great Exhibition which received a greater number of separate visits of inspection from each individual composing the many thousands of persons who daily crowded the crystal avenues, than that octangular space in which were so tastefully displayed the best productions of art which the German States composing the Zollverein could assemble together. Those who had travelled on the Continent and had developed their taste for the beautiful by the contemplation of the *chefs-d'œuvre* of foreign artists, found in this spot food with which to refresh their recollection of the magnificent Galleries of Munich, of Dresden and of Berlin, while to those who had never gone further than the National Gallery and the British Museum, and whose ideas of perfection were consequently limited to the Works of Art exhibited in them, the collection in the Octagonal room served to shew that somewhere at least, far away from England, were to be found a keener perception of beauty and form, and a superior taste in design, composition and ornamentation, not only in the larger examples of wood carving, bronzes and statuary, but also in those numerous small articles for which every nation is indebted to the increasing refinement of civilisation, and which, for want of a suitable expression in our own language, must be classed under the general head of objects of virtu.

At one entrance was placed a marble statue of a child reclining on a cushion; and as the position was very natural, and the face very roguish and pretty, it was of course always surrounded by a knot of unmarried ladies, who had made an immediate rush towards it, as if they wished it to overhear their "O! the little love," which they seemed to consider to be as much *de rigueur* on this occasion, as if it had been a real live darling exhibited to them. In a recess were several little house-clocks, each of them less than an inch in diameter, which were said to be exhibited as specimens of "beauty and execution:" but as each clock seemed to have its own notion about keeping time, the passer by wisely confined his admiration to the rapid motion of their diminutive pendulums, which generally excited a smile of amusement at their apparent hurry and industry. But we must not dwell on the ridiculous, when almost every part of the room, represented in the accompanying plate, was filled with the most beautiful specimens of works in gold, silver and bronze. Every eye was irresistibly attracted to a truly magnificent chess-board and set of men, exhibited by Messrs. Weishaupt of Hanau. The board itself was composed of alternate squares of tortoiseshell and mother-of-pearl, and was surrounded by a frame in silver and gold, ornamented in the *renaissance* style with enamel, precious stones and pearls; one set of the chess-men were made of gold, the other of silver, and were splendidly ornamented in the same style as the board. The contributors desirous of adding novelty to magnificence, carried out in this work the comparison which has been so often made between the vicissitudes and dangers of the human career, and the game of chess; and the selection which they made among the heroes and heroines who have figured in the past history of the world, for the purpose of giving them an opportunity of disputing and fighting their battles over again for an indefinite number of times, did credit to their judgment. The principal figures of each of the opposing sides were portraits of personages who really have played their part in the game of life; the two kings representing the Emperor Charles V, and Francis I, King of France, and the two queens Margareta of Parma, daughter of Charles V, and Margaret of Valois, sister of Francis I.

Without moving from the spot where the chess-board was placed, the visitor had but to raise his eyes and gaze on all the dazzling beauties conspicuous in every article before him, to realize all that we have written above with regard to foreign taste in ornamentation. The paintings on porcelain by Messrs. Henneberg and H. Bucker, the statuette in bronze of Beethoven, the figures exhibited by Julius Franz, one representing Victory standing upon a rock and throwing a wreath to the conqueror, and the other, Victory writing down in the book of history the names of those victors whom she has crowned, which carried off a prize medal "for the scrupulous accuracy of their execution," and were afterwards purchased by the Queen, all contributed to render the Octagonal Room one of the most attractive and beautiful departments of the Exhibition, and certainly the most complete repository of Fine Art which had ever been seen in this Country.





Joseph Mouch

Paris 1855

Europe



FRANCE, I.

LYONS is to France what Manchester is to Great Britain, and still maintains her rank as the first silk manufacturing city of Europe, notwithstanding the very active competition of Switzerland and England, who have entered the arena against her. Not long ago, people came from all parts of the world to purchase what Lyons and the neighbouring towns could alone produce, but now that England draws from her vast Colonial possessions the raw material in such great abundance, the struggle for supremacy has commenced. As yet France triumphs; a highly cultivated taste both in the combination of colours and the beauty of design in all its detail exercises a powerful influence over the demand and supply; but when once England has succeeded in educating her workmen, so that they produce designs which will carry off the *prestige* which now attaches itself to the productions of the looms of Lyons, the superiority of France will be at an end, and vain and fruitless will be her efforts to sustain the struggle against an empire which can produce cheaper and more abundant raw material, supposing the perfection of machinery and the excellence of workmen to be the same on both sides.

With one exception, silk weaving at Lyons is not conducted in large buildings or factories belonging to the *fabricans* (silk merchants), but, on the domestic system, in the houses of the master-weavers, each of whom has usually from two to eight looms, which, with the fittings, are his own property. He and his family work as many of these looms as they can, and employ *compagnons* or journeymen weavers for the remainder. The fabricans supply patterns and silk to the owners of the looms, to whom is entrusted the task of producing the web in a finished state. In the town of Lyons has been built an establishment called the *condition publique*, consisting of large warehouses, in which an even temperature and dryness are always maintained. All bales of unwrought silk which are intended for the trade are brought here, and as soon as they are considered to be reduced to an equable dryness, or, as it is called, submitted to the *condition*, they are weighed, and the result determines the market price. This proceeding has been found necessary, because the silk absorbs the moisture of the air so readily as to vary considerably in weight, according to the hygrometric condition of the atmosphere.

The Lyons silks were displayed in a series of cases which extended along the Gallery, nearly the whole length of the space devoted to the French department, and a careful examination of these gorgeous productions impressed every Englishman with the conviction that, however sharply we may be engaged in the contest with France, she still keeps in advance of us in all matters appertaining to taste and delicacy of colouring.

It is not possible here to give details respecting all the silks which deserved attention. From the richer portion may be selected the contributions of the Chamber of Commerce of Lyons, which consisted chiefly of pictures woven in silk; none claimed more notice, perhaps, than a portrait of Joseph Marie Jacquard, the inventor of the beautiful apparatus for figured weaving, which bears his name. He was born at Lyons in 1752, of humble parents, both of whom were engaged in operations connected with weaving; and though he had to struggle against much opposition from the Lyonese weavers, he had the satisfaction of knowing before he died, in 1834, that his ingenious invention had become extensively employed.

The chef-d'œuvre of the silk looms of Lyons was, however, the "Victoria robe," designed by Charles Candy, and was one of the greatest triumphs of industrial skill in the whole Exhibition. The design represented the appropriate emblems of England, Scotland, and Ireland—the rose, the thistle, and the shamrock—surrounded by the garter, with its motto, "*Honi soit qui mal y pense*," clearly and prominently woven, which united the group into "one harmonious whole."

In the accompanying Plate are represented some articles, chiefly appertaining to drawing-room decoration, which must not be passed over. The designs for this purpose in the French department were in great variety, and it was difficult not to appreciate the results of a refined taste and a rich fancy. The frontispiece, by M. Victor Cruchet, was a handsome piece of ornamentation in carved wood and *carton-pierre*; the subject of the design related to field-sports, and consisted of dead game, in well arranged groups, and illustrations of the chase. M. Ringuet-Leprince exhibited a drawing-room cabinet in ebony and gilt-bronze, with medallions in carved ivory; and an ebony table, inlaid with tortoise-shell, brass, silver and ivory, and ornamented in gilt-bronze, with nine historical portraits—Louis XIV. and his ministers Colbert and Louvains, surrounded by the great poets, philosophers, and generals of the age.





401
443, NEW

FOURDINOIS
Sculpture Médailles

MINISTRE DE LA GUERRE,
PRODUITS DE L'ALGERIE

Joseph Muehl

Francis Ford

Joseph



FRANCE II.

THE accompanying Plate represents that part of the French Department which formed the entrance to the Sèvres Court, and contained the finest illustrations of French Sculpture which were sent to the Great Exhibition.

The statue of Phryne, in white marble, by J. Pradier, was a masterpiece of sculpture, uniting gracefulness of form, with beauty of feature. Phryne was a celebrated Athenian courtesan, mistress to the sculptor Praxiteles, and the French Artist succeeding in giving to his work that subtle refinement and sprightliness which corresponded with the name which he had bestowed on the youthful female figure. The chiselling of the surface was perfect, and the only fault which could be laid to the charge of the artist, was the bad taste of ornamenting the hem of the garment with a red border, and the fingers with gold rings, which contrasted painfully with the otherwise colourless marble.

So much vituperation has been bestowed upon the work of J. Clesinger, of Bésançon, that it becomes almost an act of audacity to praise even the excellent points in the masterly chiselling of the artist. His figure represents a Bacchante rolling in a state of drunken excitement on a bed of vine leaves and grapes. The expression of the face was beautiful, and the position of the hands, the cup and the fruit was very powerful, and the whole figure displayed a knowledge of anatomy which was not to be found in any other work in the Exhibition. The artist has been accused of allowing "his imagination to be perverted and degraded to the service of a low sensuality," while he only showed a want of judgment in the choice of a subject on which to indulge his fancy. Greek art has exercised its influence over the sculpture of every part of Europe, from the earliest period of its existence even down to the present day, and the materials of nearly all modern sculptors are drawn from Grecian mythology; is it then just to say that an artist's mind is "essentially gross, and saturated with vice," because he does not copy the Venus of Praxiteles, or the Minerva of Phidias—because he carves an historical reality in preference to a fabulous conception? Clesinger succeeded in faithfully representing a Bacchante, after the celebration of orgies in honour of the God Bacchus, of whom she was the priestess; had he wandered from the graphic descriptions of Ovid, he would have been as much blamed for his mediocrity, as he now is for his extravagance.

The sideboard carved in wood, by A. G. Fourdinois, was considered by the Jurors worthy to rank as sculpture. The four principal figures which adorned the pilasters, instead of being the ordinary repetition of the emblems of the four quarters of the globe, were representations of Tea, Coffee, Wine, and the Dessert, and the artist moreover succeeded in expressing clearly what each figure was intended to illustrate; altogether the work showed a happy invention, and great power of execution, and would be nearly faultless, were it not for the want of taste displayed in supporting such a mass of human figures and animals on the heads of six hounds, which all look as if they had been taught to remain in that stiff and unnatural position, and would run away as soon as they no longer beheld the whip.

"Le Premier Berceau," of Debay, represents Eve in a sitting posture, clasping her right knee with her hands, so as to form a kind of cradle of her lap for her two sleeping children, Cain and Abel. The great beauty of the group consisted in the countenance of Eve, which admirably expresses the tenderness of a mother, unwearied, while watching her helpless infants.

Close to this spot were exhibited an interesting group of objects from Algeria, which chiefly consisted of raw materials and produce. From the collection which was shown, the mineral wealth of the country seemed to be considerable. Vegetable productions, which will doubtless become hereafter valuable as textile materials, together with medicinal substances and agricultural produce were also well represented. Besides awarding medals to several individual exhibitors from Algeria, the Jury presented a Council Medal to the French Minister of War, for the part taken by him in exhibiting this valuable collection of raw products.





L. Hoyer

Stamm No.

Prof.



SEVRES COURT.

THE history of the manufacture of porcelain in France may be divided into two distinct eras; the first commencing in 1695, and extending over a period of about seventy years, during which the porcelain known by the epithet *tender* was fabricated; and the second beginning in 1768, after the discovery of a vein of clay at St. Yrieix, near Limoges, which brought about material changes, ending in the establishment at Sèvres of a manufacture of *hard* porcelain on a considerable scale.

A curious anecdote is related respecting this discovery: Madame Darnet, the wife of a surgeon residing at St. Yrieix, while wandering in a valley in the neighbourhood of that town, found a white unctuous earth, which she considered might prove a good substitute for soap in the washing of linen. With this object she shewed it to her husband, who immediately took it to a chemist residing at Bordeaux, and requested his opinion on the subject. This man, having heard of the researches which were being made to obtain a proper clay for the manufacture of *hard* porcelain, and suspecting that the earth submitted to him possessed the necessary qualities, forwarded the specimen to the chemist Macquer, at Paris, who was then occupied in experiments on the improvement of porcelain. Macquer pronounced it to be the true kaolin, and went himself to St. Yrieix for the purpose of ascertaining in what quantities the clay could be obtained. Having satisfied himself that a large vein existed, he established at Sèvres the manufacture of hard porcelain, which has now assumed a national character, and is carried on under the direction of the French government. The conclusion of this anecdote is not uninteresting. In 1825, an aged woman presented herself to M. Brongniart, who was then the director of the establishment at Sèvres, and supplicated him to bestow some temporary relief, to enable her to return to St. Yrieix, whence she had come. Having put some questions to her, he found that this woman was Madame Darnet, who had sixty years before discovered the precious kaolin of Limoges. The aid she had asked for was immediately given to her, and M. Brongniart afterwards obtained for her, from Louis XVIII., a small pension, which she enjoyed until her death.

All the Sèvres porcelain in the Exhibition was of the kind called hard, the other manufacture having been discontinued for the last fifty years: but, according to M. Ebelman, who, on the death of M. Brongniart, succeeded to the direction of the establishment, all the materials and processes for the fabrication of the *tender* porcelain are still preserved at Sevres, and it will be easy to reproduce articles made of the clay in use before 1768, whenever it is considered desirable to do so. The collection of paintings and vases exhibited by the National Manufactory of Porcelain and Stained-glass, at Sevres, was most valuable and splendid; with these magnificent productions England was not able to compete, notwithstanding the very great progress made in this country in painting on porcelain.

That portion of the French department in which this collection was displayed, also contained specimens of the tapestry produced at the three great national manufactories of France. That of Beauvais, established by Colbert in 1664, when the Louvre, the Tuileries, and other royal palaces, were receiving their rich decorations, contributed a variety of carpets in different styles, and materials for covering chairs, sofas, &c. In this manufactory a certain quantity of carpets is made for public establishments, and the surplus is sold, but at a price so large as effectually to prevent a very general demand for them.

The Gobelin family sold their carpet manufactory to Colbert, in the year 1677; foreign artists and workmen were engaged, laws were enacted for the protection and government of the establishment, and the chief direction given to the renowned artist, Le Brun, who caused tapestry to be made from the finest designs of the Italian painters. Specimens of velveteed tapestry, called *de la Savonnerie*, were exhibited, and proved to English weavers that there is much yet for them to learn, before they can equal the magnificence of these productions. But let them learn, at the same time, what to avoid, as well as what to imitate, and consider, before they take a Gobelin carpet for their model, "whether or not the various scrolls, panels, flowers, mouldings, armorial bearings, flags, and other details of the carpet, are really fitted to cover a floor;—whether, viewing the question in a philosophical point of view as to the abstract question of beauty,—fitness in articles of use being an essential element—these objects are the decorations most suited to a floor or a ceiling. There can be little doubt that every unprejudiced mind would at once declare in favour of the ceiling, and that the artistic stumbling-blocks and pitfalls above enumerated would be better if fixed overhead, except from some latent fear that their own ponderosity would bring them down upon the spectator." This idea may appear somewhat fastidious, but it emanates from one eminently qualified to express an opinion on the subject,* and perhaps is more true than has been as yet generally admitted.

The third national manufactory of carpets is situated at Aubusson, a town in the department of La Creuze, and was formerly much more extensive than at present. In the early part of the seventeenth century, upwards of two thousand of the inhabitants were directly engaged in the carpet trade; but, being mostly Protestants, the revocation of the edict of Nantes, by making a great number emigrate to foreign countries, gave a blow to the manufacture from which it never recovered. M. Sallandrouze de Lamornaix, the great manufacturer of the Aubusson tapestries, exhibited a large carpet evidently designed for the current year, bearing the royal arms in the centre, and the names and emblems of the principal seats of manufacture in England and France in the panels on the sides. The observations made above with respect to the Gobelin carpets, apply with still greater force in this case—for, if objections be made to flowers on a carpet, who could reconcile to himself the idea of treading pictures under foot?

The late National Assembly being desirous of testifying its appreciation of the benefits likely to accrue to France from the reception of her manufactures into the Exhibition, presented one of the most valuable of the Gobelin carpets exhibited, illustrating the massacre of the Mamelukes, to Her Majesty; while to Lord Granville and Mr. C. Wentworth Dilke, the two most active and untiring members of the Royal Commission, were sent over cases containing tastefully selected specimens of the finest Sèvres porcelain.

* The head-master of the Birmingham School of Design.





f. Stahl

France 1877

(Stahl)



FRANCE IV.

THE Great Exhibition afforded an opportunity of observing one great distinction between the works in precious metals exhibited by Great Britain, and those contributed by French exhibitors. The English gold and silversmiths seemed to have valued their work by its weight of metal, while their foreign rivals wisely considering that art would give a more real and permanent value than mere material, seemed to have attempted to attain perfection in design and workmanship with the smallest expenditure of metal possible. It is to this deficiency of our countrymen in the treatment of the precious metals, as the medium of art, that a clever writer on the subject has recently attributed the many paltry inventions which are found in the imitative manufactures. He says: "If we contemplate some of the inventions of the artists, and some of the thoughts which they have wrought out, we shall be indeed surprised that such puerilities could be dwelt on long enough to execute them as Works of Art, and still more, that manufacturers, so shrewd as they generally are, should be found to engage in their production, were it not sufficiently evident that there is a large and wealthy public whose taste does not rise above such *art*, proved by its becoming patrons and purchasers." He then goes on to say that it is such art in the more precious metals, employed on such thoughts, which leads to examples like "Rachel at a well in a rock under an imitative palm tree, drawing—not water, but ink; Burns' Shepherdess finding the same black fluid in the formless well at her side; the milk-pail on a maiden's head containing, not goat's milk, as the animal by her side would lead you to suppose, but a taper." From this we may infer that the blame is not to be attached so much to the producers of English Works of Art, as to those who, as large purchasers, keep the market stocked with articles suited to their own bad taste: the gold and silversmiths of Great Britain may design with as great ability, and model with as much knowledge as their foreign brethren, but it cannot be denied that the taste of the class who purchase these works abroad must be higher than that of the corresponding class in this country.

We feel a further justification for what we have just stated when we glance at the reports of the jurors on the works in precious metals shewn in the Great Exhibition. It appears that there were a hundred and twenty-two English exhibitors in that class, among whom six council and fourteen prize medals were distributed, while out of forty-five French exhibitors, six received council medals, and thirty-one out of the remaining thirty-nine were judged worthy of prize medals.

Foremost among those represented in the accompanying plate stood Messrs. Marrel, who, besides seals ornamented with beautiful little figures, scent bottles and snuff boxes in the most varied styles and of the most exquisite workmanship, exhibited a large vase of silver, representing the combat of Theseus with the Amazons, after the celebrated picture by Rubens. It was executed in the Louis XIV style, by order of the late Queen of France, for the Duc d'Aumale, whose arms it bore. The variety of articles exhibited by J. F. Rudolphi and by A. Gueyton, bears witness to great fertility of invention and a happy application of old as well as of new processes: from the contributions of M. Rudolphi we cannot make a better selection than a beautifully executed little group representing two gentlemen in doublets, of the epoch of Louis XIII, fighting a duel, with sword and dagger, their bodies being composed of irregularly shaped pearls; and we believe the best article exhibited by M. Gueyton was a silver vase, cast and chased, in which, in seven medallions, was represented the history of the horse, shewing the ancient, mediæval, and modern race-course.

We must not conclude without bearing testimony to the tasteful magnificence of the silver-gilt toilet table, beautifully chased and ornamented in precious stones, executed by M. Froment-Meurice, and presented by subscription, on the occasion of the marriage of H. R. H. Louise Marie Thérèse of France, and H. R. H. Charles Ferdinand de Bourbon, Infanta of Spain. The Duchess of Parma kindly allowed the toilet table, glass, and all the *et ceteras*, to be placed in the Exhibition, as a splendid specimen of a most delicately finished work of art, feeling most justly that this object alone, apart from the many other meritorious contributions by the same gentleman, was sufficient to raise M. Froment-Meurice to the first rank among his brother artists.





Spain & Portugal

(C. Wright)



SPAIN AND PORTUGAL.

PERHAPS the most remarkable point in the character of the collection sent from Spain to the Great Exhibition was the contrast presented between the number, the variety and the richness of her raw materials, and the absolute insignificance of her manufactured articles. The mineral productions were deserving of a very close inspection, although the series were by no means complete. The most valuable of the Spanish mines are those of lead in Granada, which extend in greater or less abundance into nearly all the provinces, differing chiefly by the various combinations of other bodies with the ore, such as antimony, iron, zinc, and above all, silver, which is often found in large quantities. The quicksilver mines of Almaden in La Mancha, are extremely productive, and supply the greater part of the mercury imported into this Country, and into the United States. The specimens exhibited shewed the quicksilver in the different states in which it exists, pure, and combined with sulphur.

Spain was once the sole possessor of that breed of fine woolled sheep called the Merino, which the French invasion of 1808 dispersed over the Continent of Europe, breaking up the best flocks that remained and mixing them with others of inferior quality, so that the Merino breed until quite lately has been found in much greater perfection in most other countries than in Spain. Much pains have however been taken by the Spaniards to regain for the wool of their sheep the celebrity which it used to enjoy. Some very fine specimens were contributed by M. Justo Hernandez, who has been energetically engaged in ameliorating the Merino flocks. He first introduced the custom of warmly clothing the sheep from December to the beginning of June, and the experiment proved in every way most satisfactory. The wool of his sheep grew very much finer, and the improvement was plainly perceptible by comparing the wool on those parts of the animals which had been effectually covered, with that on those which had remained bare.

With every advantage which nature can lavish, Spain did not, or perhaps would not, rank as a manufacturing country in the Exhibition. It has been said by some of her own countrymen that the manufactured articles transmitted from Spain conveyed but an exceedingly incomplete and fallacious notion of the character, the condition, and the extent of her industry, and they adduce as a proof of the negligence and apathy that must prevail among the industrial classes of Spain, the fact that the province of Catalonia, whose connexion with what they call the cotton industry of the country represents a capital in buildings and machinery of 83,000,000 of francs (£ 3,320,000), had not sent a single sample of her numerous products to the Exhibition in London.

An English writer gives the following reasons for the unsuitableness of the Spanish character to success in Agriculture and Manufactures; he says: "During the prolonged struggle with the Moors, a taste for daring adventures, and for an irregular predatory mode of life, was widely diffused throughout the nation; and the discovery and conquest of America, which occurred nearly at the same time that the power of the Moors was annihilated by the conquest of Granada, afforded a new and boundless field for the exercise of the peculiar tastes and talents formed in the Moorish wars. In addition to the means thus afforded of arriving at wealth and distinction by a more compendious and less laborious, though more hazardous route than that of sober industry, those honorary distinctions of which the Spaniards are extremely fond, were conferred only on those who followed the profession of arms, and who could shew that their ancestors had not degraded themselves by engaging in the debasing pursuits of agriculture, manufactures and commerce!"

The space allotted for the display of the Spanish collection was, however, not wholly destitute of manufactured articles of a very remarkable and interesting character. The Royal Ordnance of Toledo exhibited sword and sabre blades richly enamelled and otherwise ornamented. The temper and flexibility of the Toledo steel are well known as being unrivalled in the world, and were well illustrated by the contribution of Don Manuel de Ysasi, who transmitted to the Exhibition a sword of such extraordinary flexibility that it could be thrust into a metallic scabbard twisted in the form of a serpent, and when drawn out it immediately became as straight as an arrow.

The collection sent by the Portuguese exhibitors resembled that which we have just described, inasmuch as it was extremely rich in raw materials and produce, and shewed that considerable efforts had been made to represent as far as possible the natural resources of a country, the manufacturing capabilities of which remained still to be developed. We may mention, however, the extensive assortment of various qualities and descriptions of snuff exhibited by the Royal Tobacco Contractors of Lisbon. The Company have obtained from the Portuguese Government a Royal Charter, which secures to them the exclusive manufacture of soap and tobacco. The Jury awarded an honorable mention for the delicate flavour of these snuffs: but the Company, by their liberality, constituted all the visitors to the Crystal Palace jurors, and were able to judge of the high appreciation which the latter evinced for the quality of the tobacco, by the rapid manner in which whole casks were emptied.



Franklin Street



Schweizerland!

St. James



SWITZERLAND.

SWITZERLAND is a federal State composed of twenty two Cantons, which were finally united in a confederation for mutual defence at the peace of 1814, each, however, being independent and having an internal administration of its own. Since 1850, they have submitted to a systematic tariff of customs equally enjoyed by the whole of the confederation, and have adopted a uniform currency, which is called the federal franc, and is of the same value, and admits of the same subdivisions as the franc of France. They have also been lately considering the advisability of establishing a uniform system of weights and measures, and in all probability they will choose the decimal system as adopted in France and Belgium. The Swiss have indeed shewn themselves most earnest in the cause of improvement and reform, and the Great Exhibition afforded gratifying proof that their industrial products are sufficiently varied and valuable to allow full scope to their laudable exertions.

Switzerland is almost wholly a pastoral country; the crops are precarious and scanty, and only nine Cantons produce sufficient corn for the supply of their own inhabitants; the remaining thirteen Cantons are therefore obliged to import the cereals from Germany and Lombardy. The breeding and care of cattle is one of the most ancient pursuits of the Swiss, and with the exception of the inhabitants of the manufacturing towns, cows, goats and sheep constitute their principal wealth—the goats, in a great measure, supporting the poorer class, while the richer farmers derive their limited wealth from the cheese supplied by the cows.

Notwithstanding the geographical disadvantages of Switzerland, the inhabitants have carried several branches of manufacturing industry to a considerable state of advancement, and their contributions to the Exhibition incontestably proved to all the assembled nations of the earth, what could be effected by energy, economy, patriarchal industry, and patience. Notwithstanding the difficulty of internal communication, and the want of navigable rivers, Switzerland is the only country in Europe in which certain products, for which there is an immense and ever increasing demand, can be procured at the lowest price at which they have ever been manufactured.

If we draw a line in a north east direction across the Canton of Friburg, we shall divide pretty accurately the French from the German population; each portion of which is distinguished by its own characteristic manufactures. In the German Cantons of Switzerland the cotton and silk fabrics form the chief employment of the inhabitants, and the towns most remarkable for their manufactures are Bâle and Zurich: while in the French Cantons, the watches, musical boxes and jewellery of Geneva and Neuchâtel need apprehend no rivalry. The raw silk is drawn from various foreign States, but chiefly from Lombardy, where the climate is well adapted for the breeding and rearing of silk-worms, and in the Canton of Zurich alone, the manufacture of silks, taffeta and ribbons, gives employment to between 12,000 and 13,000 people. In the Great Exhibition the Swiss manufacturers of silk ribbons exhibited a very large number of specimens in twenty one glass cases, and the elegant way in which they were displayed excited universal admiration. Like the French manufacturers of Lyons and Mulhouse, they sent their contributions in a collective form, so as to bring into notice the importance of the manufacture, rather than their individual merit; wisely concluding that as in union there is strength, they could not do better than sacrifice their personal pretensions to superiority, to the industrial reputation of their country.

The watchmaking trade is of very great importance, and the Cantons of Geneva, Neuchâtel, Vaud, and Bernese Jura, are calculated to manufacture two-thirds of the watches in the world; it is estimated that about 1,200,000 are made there annually. The beauty of the workmanship which is lavished on the watch cases would almost induce us to separate them from the interior movements, and class them under the head of jewellery, particularly as nearly every ornament, rings, bracelets, gold purses and walking sticks, contained a watch of the smallest dimensions. We may mention especially the miniatures of the Queen, and Jenny Lind, beautifully set with brilliants, and a portrait of the Queen of Holland surrounded by diamonds, each of which served to encase a fine gold watch. As a specimen of delicate manipulation, besides many watches of the most minute description, which were warranted to go with precision, M. Louis Audemars exhibited a pistol composed of twenty distinct pieces, which would act perfectly, and yet which only weighed half a grain!

In the Swiss Department there were several specimens of very excellent wood carving. The subjects they represented were chiefly connected with the happy pastoral life which the inhabitants lead high up amid the rich pastures of the Alps, where the air is perfumed and the water pure; much of the furniture, however, illustrated other points of nationality, such as the costumes of the twenty two Cantons, which are still kept completely distinct amongst the rural population, while here and there was seen the chapel of William Tell, at Altorf, testifying to the enduring character of the devotedness of this brave and primitive people to their noble and patriotic champion.





Empire-Museum

Italy

Italy



ITALY.

UNDER this general title, the accompanying Plate represents the contributions from the Papal States, the Grand Duchy of Tuscany, and the Kingdom of Sardinia, among which were to be found some of the most attractive objects in the Exhibition.

It is deserving of notice, that the greater number of the fifty-seven exhibitors who formed the Roman collection, contributed only to the first and last sections of the Exhibition—the raw materials and the fine arts; for though the manufactures serve almost entirely for home consumption, they are in the most depressed and backward state; and truly has it been said, that many a town of Great Britain, of only 30,000 inhabitants, produces a greater quantity of manufactured goods than the three million inhabitants of the Pontifical States.

This reproach must, however, be at once retracted, when attention is called to the sculptures, the cameos in onyx and shell, and the beautiful mosaic work, which, notwithstanding that many of the most distinguished artists of Rome (and especially Tenerani, the greatest living sculptor of Italy) sent no specimens of their works to the Exhibition, served to render the Italian court one of the most attractive to all classes.

In the Nave were placed two marble figures; the nymph Glycera, and another nymph, both by the late R. J. Wyatt, of Rome. Glycera was a beautiful courtesan of Sicyon, who lived about 350 B.C., and who was renowned for her skill, and the elegance of her taste in the arrangement of flowers for chaplets and garlands. The painter Pausias became enamoured of her, and from copying nature as displayed by his mistress, was soon highly celebrated for his skill as a painter of flowers. The last effort of his genius was a picture of Glycera herself, seated, and in the act of arranging a wreath. A production, to create which admiration, talent, and love lent their aid, could not fail to be a masterpiece, and it was bought by Lucullus for no less a sum than two talents. Eminently successful was Mr. Wyatt's conception of this nymph, in a statue representing a girlish figure, slight, and full of simple grace; the symmetry, the exquisite softness of the flesh surfaces, the winning attitude, the smiling beauty of the face, the classic proportions of the head, the good taste displayed in the treatment of the drapery, all gave to the design a peculiar charm, evidencing the highest genius, and the nearest approach to artistic perfection.

The group of "Rinaldo and Armida," in marble, the subject of which was taken from Tasso's *Gerusalemme Liberata*, was executed by Signor Rinaldi of Rome. Armida, in the act of stabbing herself with a dart, was arrayed in a graceful Turkish costume, and was finished with considerable roundness and beauty, whilst Rinaldo, who arrests her hand, stood stiff and unwieldy in a coat of mail; the leggings, shield, and helmet, being brought to a degree of polish which spoke highly of labour misapplied.

H. Cassin exhibited a group representing the horrible fate of Laocoon and his two sons as related by Virgil. Laocoon was a son of Priam and priest of Apollo, who attempted to dissuade the Trojans from bringing into the city the fatal wooden horse consecrated to Minerva. He was soon punished for his temerity; for while sacrificing a bullock to Neptune, two enormous serpents issued from the sea, and seizing Laocoon and his children, squeezed them in their complicated folds until they died in the greatest agonies.

The Grand Duchy of Tuscany is rich in mines and quarries, which were represented by numerous specimens. The collection of agricultural produce was not so complete as might have been expected; but there were many superior samples of Boracic Acid, of Tuscan origin, which used to be solely imported from the East Indies. Dr. Bowring, in his "Report on the Statistics of Tuscany," describes a remarkable boracic acid lagoon, spread over a surface of thirty square miles, which emits a dense and stinking odour, inducing the peasants for a long time to deem it an entrance into the infernal regions, and to regard it with great superstition.

To the Fine Arts Class, Professor Nencini, of Florence, contributed a very spirited statue of Bacchus reclining in an easy, graceful attitude, whilst he was squeezing the juice from a bunch of grapes into his mouth; but the great attractions in the Tuscan collection were the mosaics, of which the two most splendid specimens, representing the ruins at Pæstum, were exhibited in the Nave. The origin of mosaic work is very ancient: Rome was taught by Greece, who had herself received her artists from Asia. At the fall of the Roman empire, this art, like all others, was lost, and only recovered in Italy in the fourteenth century. The Sovereigns of Tuscany appreciating its high importance, founded at Florence a celebrated school, which has produced the eminent artists of the cities of Italy. The ancient or Roman mosaics differ essentially from what is called Florentine work; the former are made with minute pieces of coloured marble or glass, more or less opaque, and of every variety of hue which the subject may require, and as each separate piece is of the same colour throughout, the graduation of tints can only be obtained by an immense number of small pieces, of which those contiguous to each other exhibit scarcely any perceptible difference to the eye; while the Florentine mosaics are composed of slabs of marble, or other hard stone of different colours, carved out according to the design which it is intended to produce. The tables and table tops exhibited by Tuscany were, for the most part, executed in Florentine mosaic, while the ruins of Pæstum, already referred to, were specimens of Roman work, and each picture is said to have occupied the artist fifteen years. Napoleon attempted to establish in Paris a school similar to the one at Florence, and placed M. Belloni, whose beautiful compositions are to be seen in the Louvre, at its head. Circumstances, however, prevented the accomplishment of the Emperor's views, and, except the production of a few mosaic artists, with considerable talent, who were M. Belloni's pupils, the school has disappeared without leaving a trace of its existence.

The insular portion of the Kingdom of Sardinia supplied specimens of its mineral wealth, including some spathic iron ore, and rough and manufactured slates. Samples of raw and thrown silk, and fine specimens of the products of the velvet looms of Turin and Genoa, formed a valuable part of the collection; but most attention was paid to the silver filigree work, exhibited in the North Central Gallery, and especially to the composite column intended to celebrate the era of the Great Exhibition of 1851. It was placed on a pedestal, which was ornamented with a likeness of the Queen, the British flag and other devices, surrounded by a group of sea-horses, intended to convey the idea of the Sovereignty of the ocean, and surmounted by a globe on which stood a figure of Fame. The only contribution in sculpture from the Sardinian States was a small statue of a Bacchante in marble, by a Genoese artist.





8 Nov

Sweden & Denmark

Chicago



SWEDEN AND DENMARK.

As the number of exhibitors from Sweden, Norway and Denmark, the contributions from which three countries were all placed close together in the Crystal Palace, and are therefore all included in the accompanying plate, did not amount to two hundred, it is impossible to think that they properly represented the productive power of these northern kingdoms of Europe, but it was easy to perceive what effect habits of economy and frugality, as remarkable in these regions as in Switzerland, had upon the articles which were displayed by them. Food and raiment and shelter hardly costs anything to the Norwegian and the Swede, and the severity of the climate hardens them against privations such as our countrymen would be unable to endure, and they are thereby freed from the many, often factitious, wants which are considered indispensable by the inhabitants of more southern latitudes.

When first the contributions from these countries were talked of, we confess to having confined our expectations to seeing tons of iron and steel, suggested by the name of Sweden, and bushels of wheat and other agricultural produce from Norway. There were of course many specimens of both, and such contributions proved both interesting and instructive: but articles to attract the fancy and please the eye were by no means wanting, and the jurors thought fit to reward with a prize medal a collection of wooden vessels for various domestic purposes, ornamented with carvings done by the native peasantry. The proprietor also of a very good statue in marble, representing a shepherd, placed it in this department, as a specimen of the skill of Mr. Molin, a Swedish sculptor, who had executed it at Rome.

The superiority of the Swedish iron for conversion into steel has been considered to arise from the presence of a certain portion of manganese, and this metal has accordingly been introduced into the melting pots of our manufactories; its effect is to render the iron harder, whiter, and more brittle. There are, however, two unquestionable causes which render the Swedish iron best adapted for making steel: the first is, that the ore used is the magnetic iron ore, and the second that mineral fuel is not employed in the process of smelting. Both Sweden and Norway also exhibited specimens from their copper mines, which are scarcely less celebrated than their iron mines. In woven fabrics and other manufactures there were several exhibitors, but none of them were remarkable for any peculiarity requiring description.

The articles exhibited by Denmark, though far from numerous, were chosen to illustrate the four great divisions of Raw produce, Machinery, Manufactures and Fine Art. Under the first of these heads were included agricultural produce, wool, and lamb and goat skins; under the second were many philosophical instruments, and an interesting specimen of mechanical ingenuity by Mr. S. Hjorth: this latter was a working model of an electro-magnetic engine, illustrating the practical application of the electric current, to the development of mechanical force through the induced magnetism of certain masses of soft iron. The Royal Porcelain manufactory at Copenhagen contributed figures, busts, and bas-reliefs, on sacred, allegorical and mythical subjects, modelled after Thorwaldsen—but the specimens were so very small, that they scarcely conveyed more than a general impression of their designs, which was to be regretted the more, as the eye of the English public is but little acquainted with the productions of that artist, though his name sounds tolerably familiar to their ears.

But Denmark had a right to be proud of the high position to which she was raised by her sculptors, who contributed to the Fine Art department; and although with the name of Jerichau is immediately associated his finely conceived group in marble of the Hunter and Panther, we would pass over it and turn our attention to another group in plaster, by the same artist, which we believe to have been a better composition and which was but little noticed, while plaudits were being showered upon the Hunter with the ill-proportioned legs, animadverted on by the jurors. How beautiful was the attitude of Eve after the fall, leaning on the shoulder of the desponding Adam, seated at her feet: both feeling guilty, she could only comfort him by weeping because he wept! The group is now in the Danish department of the New York Exhibition, and its merits are calling forth from the Americans the admiration which the English public were so slow in bestowing upon it. Ere we conclude we must mention a master-piece, by another sculptor, H. W. Bissen. He described it as "Orestes, the Avenger of his father, at the moment when the Furies appear before him." The figure of Orestes was represented brandishing a sword and was full of life and energy, while the momentary character of the action was rendered to perfection.





Joseph Nash

London

1853



TUNIS, I.

TUNIS, situated in a province of the same name, which forms one of the states of Barbary on the northern coast of Africa, has been a nominal dependency of the Turks since A.D. 1570, but has regained its independence by the gradual decline of their empire, the Bey merely receiving the caftan with the dignity of Pacha of Three Tails from the Sultan. The town is principally populated by Jews, Arabs, and Turks, the proportion of Christians being very small. Though much fortified, it is not strong, and is chiefly celebrated in history for having been so many times besieged and taken.

On entering the gates there is little to admire, for the houses, though generally built of stone, are mean and dirty, and the streets narrow and often obstructed by heaps of filth and mud. The most handsome buildings are the mosques, one of which was converted into a Roman Catholic cathedral when Tunis was occupied by the Spaniards. For an English visitor, some interest must necessarily attach itself to the palace of the late Bey, which was occupied by Queen Caroline, during the time she sojourned at Tunis, when visiting the most celebrated spots on the coast of the Mediterranean: within, the decorations are magnificent, the rooms being paved with marble, and all opening upon marble courts, in the centre of which beautiful fountains throw up their waters in jets, bringing vividly to the remembrance Moore's description of the Eastern Harem chambers:—

"Where nothing but the falls
Of fragrant waters, gushing with cool sound
From many a jasper fount are heard around."

There are many bazaars in which almost every article procurable in Tunis is to be disposed of, and a theatre in which Italian operas and comedies are performed. In the walls which now surround the town are several gates, and it is outside one of these, called the *Bab-kartajinah*, or Carthage-gate, that there has been for some time a Protestant burial-ground. This fact would appear to intimate that the mortality is great; but this is not the case, for, on the whole, the climate may be said to be healthy as well as pleasant. It is true that the plague is not an unfrequent depopulator, but its advent is to be attributed far more to the uncleanly habits of the Tunisians than to anything unfavourable in the climate. The heat is never so very great as might have been supposed, the thermometer seldom rising above 96° in the summer months, or falling below 52° in December or January. What is commonly called the rainy season commences in October, and continues, more or less, until May.

The many resources which Tunis possesses, both on account of the great fertility of the soil in many parts, and its numerous natural productions, have never been fully studied or turned to profit, as the inhabitants, of an inactive and unenterprising character, never cultivate more of their land than will absolutely suffice for the maintenance of their families and to pay the taxes; the cause of this, no doubt, is to be traced to the rapacity of the assessors, who seize upon every possible pretext for overvaluing the produce of the land, and thereby increasing the amount of their returns to the government exchequer. It was therefore interesting to find that this comparatively little-known country should, on the invitation of England, immediately consent to take a step calculated to increase its commercial importance, and to incite its people to bring forth their peculiar productions for comparison and competition with those of the rest of the world. His highness Mushir Basha, the present Bey, took considerable interest in the Great Exhibition, and under his directions a collection was formed, with the concurrence of the producers and manufacturers of the province, who liberally contributed their goods, and despatched to London, where, no one can deny, it formed one of the most remarkable and curious features of the whole display.

This collection was sent to England under the care of his highness's commissioner, Signor Hamda Elmkadden, who, being unacquainted with our language, was accompanied by an interpreter, M. Santillana, a native, for many years attached to the British Consulate at Tunis, and also by an Arab attendant, called Saido Belais, who, from his picturesque costume, loud talk in Arabic, and energetic gestures, attracted no little attention, and was considered a far more important personage than his grave master by the majority of the visitors, who will no doubt remember Saido long after the costly draperies, of which he had the care, have been forgotten. His portrait was taken, and he appears in the foreground of the accompanying view, squatting, as was his custom, on one of the counters.





Joseph W. Hart

Exhibit No. 3

Joseph

Illustration of the interior of the Great Exhibition of 1851



TUNIS, II.

HIS Highness Mushir Basha, Bey of Tunis, received from the Royal Commissioners a medal on account of the whole collection exhibited by him; and at one of their meetings it was resolved that this award should be considered a separate and distinct gift of the Commission, in token of gratitude for the trouble taken by the Bey in getting together such an interesting collection in illustration of the Industries which it was intended to represent. The goods from Tunis were valued at £8,988 8s., and consisted not only of specimens of the raw produce of the land, but also of a selection of all the manufactured articles which were most interesting in this country. Among the vegetable products were the leaves of the Henna, which

"Imbue
The fingers' ends with a bright roseate hue,
So bright that in the mirror's depth they seem
Like tips of coral branches in the stream,"

and which are very extensively used for this purpose by the Tunisian ladies. The plant grows to a height of ten or twelve feet, and puts out clusters of small flowers, which have an odour of camphor; the leaves are picked twice in the year, and after having been dried and powdered, are sent to all the markets of the East. To use the dye, it is requisite to make a paste with the powder, which is then applied to the part which it is intended to colour, and bandaged round.

Among the manufactures every article of Tunisian dress was represented. The *beretti*, or red caps of Tunis, which were shown in so many varieties, are famous throughout the Mediterranean. Their brilliant dye is obtained from the kermes, and it is considered that the peculiar properties of the water of Zaghwan, an inland town where the dyeing is chiefly conducted, conduces to render the colour permanent. The manufacture of these skull caps is said to have formerly given employment to more than 50,000 persons, but the opposition which the trade now meets with from Leghorn and Marseilles, where rival manufactories have been established, has very greatly reduced the demand for them from Tunis.

As an illustration of the decoration of the interior of Moorish rooms, was a carved and inlaid door with a curious lock and key. Wood and ivory were both used to form a beautiful and regular open pattern, behind which was glass stained in different colours, which threw a kind of subdued glow on all the surrounding objects.

Complete Moorish dresses, for both men and women, were shown with all the ornaments and jewels worn by both respectively, and were indicative of the peculiar characteristics of Oriental taste and design. The white burnouses, made of wool and silk, with a hood and long tassel behind, were very much admired, and so sought after, that the supply was totally inadequate to the demand, and the few that were exhibited were sold, in some instances, for four times their actual value.

It was impossible not to remark the richness of the gold embroidery applied both to human apparel and to the decoration of the caparisons of the horse. The Arab is well known to have so much affection for his horse, that he treats him with more tenderness and care than he vouchsafes even to his own children, and it quite seemed, on an examination of the beautiful velvet saddles exhibited, as if the designer had thought that it was not possible to make them too valuable for the purpose for which they were intended.

The most prominent object in the accompanying Plate is the Arab tent, made of goats' hair, which represents the ancient and simple method by which the Bedouin Arab is protected from the weather while wandering in the desert: when packed up, such a tent occupies but little space, and is easily carried on the back of a camel. On the outside of it were stretched skins of the lion and the panther, which appear to be almost the only wild animals now to be met with in Barbary. The gigantic brood of reptiles, of which Livy writes, seems to have entirely disappeared. It was on the banks of the Bagrada that an enormous serpent, 120 feet in length, is said to have opposed the progress of Regulus and the whole Roman army; but it is now impossible to consider this tale in any light except that of a fable, for no serpents exceeding 12 feet in length are ever seen in the present day. Within the tent was exhibited part of the large collection of the African dates, which were sent from Tunis in baskets made of leather and plaited straw; the date tree belongs to the family of the palms, and its fruit is as important an article of food to the Eastern nations as wheat is to inhabitants of the West.

The space around the Arab tent was fitted up so as to represent one of the Bazaars of Tunis; the shops on one side containing large straw hats, burnouses, blankets, leather slippers, and belts, and on the other, dried figs, raisins, dates in jars, and large bottles of olive oil, laid out in a manner most calculated to tempt purchasers. It must be admitted that for a characteristic display of the native productions of Tunis, which were in themselves indicative of the peculiarity of the manners and customs of the people, it would have been impossible to have contributed a better selected collection of goods; and the gratitude of the world, and not only of the Royal Commission, is due to the Bey for having illustrated his own country, comparatively little known in the North, with so much success.





Joseph W. M. M.

China - 1876

China



TUNIS, III.

THE accompanying Plate represents that portion of the Transept and Main Avenue of the Exhibition in which were displayed those peculiar productions of Tunis, China, and Brazil, which were selected from the mass as calculated to excite the greatest amount of interest. Since the contributions from Tunis have already been alluded to, we pass at once to those of the Chinese, who, from their antiquity, their exclusiveness and their numerous clever inventions, have ever been regarded as a wondrous people; while their manners and customs, differing so totally from those of the western nations of the earth, have excited a curiosity in gratifying which no perfect success has yet been obtained.

The collections of Chinese productions and manufactures in the Exhibition was formed from the contributions of about forty individuals residing in England, while her Majesty's consul at Shanghai sent a very complete set of specimens of the raw products of Japan; and it is a somewhat surprising fact that notwithstanding the rich display of silks and porcelain, these minerals alone received honourable mention from the Jurors.

On a counter were arranged the various Teas imported from Canton. The tea-plant, called by the natives *cha*, rises from four to five feet in height, and bears a strong resemblance to the myrtle, but the flower is not unlike small white hedge-roses, and whatever may be the number of varieties, owing probably to peculiar culture or preparation, they are divided by Europeans into the two general heads of Black Tea and Green Tea. It has been for some time ascertained that the green colour is merely an adulteration, and not the natural tint of the leaf: in the Exhibition was a bottle of the materials used for colouring teas, and it has already been suggested that its contents might with advantage be analysed, to ascertain whether they do or do not contain any deleterious ingredient. The leaves are gathered three times in the year, and for the finer descriptions of tea, very careful manipulation is necessary before they are exported. They are first immersed into boiling water for the space of about half a minute, when they are laid out so as to dry them a little. Then they are rolled between the fingers, till they acquire the forms in which we see them here, and finally they are placed in a kind of stove, where they are kept constantly in motion until they are perfectly dry. Very often they are made to receive a perfume which they do not naturally possess, and for this purpose the Chinese use chiefly the flowers of the *Olea fragrans*, and the *Magnolia glauca*.

The origin of the introduction of tea into Europe is comparatively recent: on September 25th, 1661, Pepys wrote in his Diary, "I sent for a cup of tea (a Chinese drink), of which I had never drank before:" it was probably first brought to Amsterdam by the Dutch East India Company, and from thence exported to London. The consumption of tea in the United Kingdom is now enormous (in 1850 upwards of 51,000,000 lbs.), and it is this little shrub which has succeeded in bringing China into nearer contact with foreigners than her sages ever desired; for they have ever foreseen, in a free intercourse with other nations, the destruction of their own power.

One of the most prominent objects in the accompanying Plate, is a representation of an Idol in bronze, said to have been cast before the deluge, which was used by the worshippers of Buddha or Fo, as the deity is called by the Schamans or Chinese priests. It was brought to England by Major Edie, who obtained it from the Schamans in whose charge it was placed, by bribing them with a certain quantity of opium. The figure was not quite perfect, there being several perforations in different parts of its body, which originally held precious stones and other ornaments.

A curious contribution was made by Mr. Thoms, in the form of an original address presented to his excellency Hwang, on his being appointed the deputy Governor of the Province of Canton, during the reign of the Emperor Kang He, about A.D. 1684. This address, which was signed by 776 merchants and tradesmen, was written in a poetical and quaint style, and measured seven feet nine inches in length, and six feet in width, contained two thousand three hundred and twenty-eight Chinese characters, beautifully worked in gold on silk, and was lined with Chinese embossed velvet, surrounded with a gilt border.

Messrs. Hewett exhibited two specimens of Chinese umbrellas, which were only remarkable from the great number of their ribs, which amounted to forty-two; they were covered with oiled-paper painted and varnished. The umbrella is still a mark of high rank in China, though no longer exclusively so; it is not, however, so much used among the middle classes as it is in England, while the poorer inhabitants depend solely on appropriate clothing to protect them from the sun and rain, wearing either coats made of skin, usually with the fur outside, or thatching themselves in with a coat made of straw, and a hat composed of split bamboo, which are sufficient to defy the heaviest rain.

The habit of smoking in China is common to both sexes in all classes of society, and at almost all ages—for even little boys and girls are often seen with a pipe in their mouths, and when a visit is being paid, it is always customary for the host to offer a cup of coffee and a pipe to his guest. These pipes are used in every variety of form, but generally have a very small bowl made of a white metal, with a long stem. There was only one opium pipe in the collection, which, with its appurtenances, was contributed by Dr. Berneastle.

Brazil was represented by only four exhibitors, and in the accompanying Plate may be seen the contribution of Mr. Adamson, which was certainly the most attractive. It consisted of a beautiful bouquet of flowers, made of the feathers of Brazilian birds, with the exception of a few composed of beetles' wings in their natural colours. The bouquet was constructed expressly for the Exhibition, and comprised specimens of the Cotton, Coffee, and Tobacco Flowers.





Amphitheater

St. J. M. M.

St. J. M. M.

Illustration for the book 'The Grand Tour' by J. M. M.



TURKEY, I.

TURKISH manners and customs are so completely opposite to our own, that the bay at the North East Angle of the Transept of the Exhibition, where the collection formed by order of the Sublime Porte was displayed, attracted large numbers of the visitors, who inspected the highly interesting contributions with great interest and curiosity. These visitors, doubtless, might well have been divided into two classes, having very different motives for their eager and curious examination of the gorgeous illustrations of the habits and usages of the Turks: some looked back into the past, and remembered how the peculiar doctrines of the Koran made a profound impression upon the ferocious, ignorant, and superstitious minds of the Turks, after they had embraced the Mohammedan faith, when they literally believed that the sword was the key of Heaven, and that to fall fighting in defence of the true faith was the most glorious of deaths, and was followed by the largest portion of eternal felicity; that not more than three centuries ago, all Europe quaked with terror at the name of the Grand Turk, and that Solyman the Magnificent was even a more powerful sovereign than his contemporary the Emperor Charles V.—but those who sought to increase the interest excited by the contributions of the Ottoman Empire, by referring to the history of its past grandeur, were the few: thousands knew but little of all this, but they had read the “Arabian Nights’ Entertainments,” and from being already familiar with the sayings and doings of the heroes and heroines of its tales, in the guarded city of Bagdad, from the weary porter, with his heavy burden, to the Caliph himself surrounded by his Vizier and attendants,—they longed to see with their own eyes the numerous illustrations of domestic manners of which their conception had previously been but imaginative, however accurate the description.

We have stated that Turkish usages differ very much from our own, and this is exemplified in various ways. Our close and short dresses, calculated for promptitude of action, appear in their eyes to be wanting both in dignity and modesty. Their national dress is loose and flowing: that of the women, with the exception of the turban, differing but slightly from that of the men. The shape and colour of the turban serves to distinguish the different orders and ranks of the people and the functions of public officers. Among these, there is one privileged order, called *oomra*, or *ameers*, who are authorized to wear green turbans; they are the descendants of Mohammed by his daughter Fatima. Inasmuch, however, as they are very numerous, *oomra*, like Brahmins in India, are often found in the most abject condition of life. Latterly, it has become fashionable at Constantinople to imitate the dress and manners of other European nations, though the former is inconvenient on account of the numerous ablutions which the Turk is forced to perform according to the precepts of the Koran.

Turkish ladies have, in general, very white and delicate complexions, caused, no doubt, by their sedentary mode of life, and their habit of veiling themselves whenever they leave the house. Their habits and their great addiction to the bath, render them rather disposed to *embonpoint*; but it is absurd to say that this constitutes a Mussulman’s *beau ideal* of beauty: were it so in reality, the Circassian and Georgian women would never have been selected for the “Lights of the Harem.” In all the houses, which are often mean and dirty on the outside, the apartments appropriated to the exclusive use of the women are sumptuously fitted up, and such is their privacy that, unless on very rare occasions, all males are excluded from them, except the master of the family. The Turkish women are in general excessively ignorant, for education is not considered necessary for a girl; and even the men, though they do not universally neglect learning, must be regarded as an illiterate people.

This ignorance has a very great effect on their character and dispositions, in which two great faults are always to be traced: they are excessively proud and excessively sensual. It is their ignorance which is the parent of the former disposition, and the latter is a consequence of the peculiar nature of the Mohammedan paradise, which, though it does admit of spiritual pleasures, appears to confine them to such alone who obtain a superior degree of honour and felicity, while the happiness of the greater number of those who have succeeded in passing the *Al Sirât*, or the bridge which is said to be laid over the midst of hell, and described to be finer than a hair and sharper than the edge of a sword, consists wholly in corporeal enjoyments. It is, therefore, but natural, that Mohammedans should wish to realize in this world some portion of that felicity which is to be the reward of the faithful in the next. The doctrine of predestination is doubtless the cause to which must be ascribed the contempt of the Turks for the inventions and discoveries of other nations, and their conviction of the inutility of those instruments without which the researches of the acutest natural philosopher would be imperfect, and which are either entirely unknown to them, or only used as playthings to excite the admiration of ignorance, or to gratify a vain curiosity.

The above sketch of Turkish manners and character, which must be taken into consideration by those who examine the contributions which were made by the Ottoman Empire to the Exhibition, if they desire to appreciate the fitness of many of the articles for their intended purposes, and their peculiar value to those who use them, will serve as an introduction to a future description of the most remarkable portions of the collection, which was valued at £9,500.





Empire

July 18

Empire



TURKEY II.

NOTWITHSTANDING the efforts made by the present Sultan to revive the manufactures which once existed, and to introduce at his own private cost immense working establishments for the manufacture of broadcloth, silk, cotton, glass, and metal goods, the display of Turkish productions in the Great Exhibition forcibly reminded the spectator that the glory of that nation had passed away, and he involuntarily placed her, with Persia, in the category of those Powers which represent ages gone by, contrasting so strongly with the United States and Australia, the summit of whose career must incontestably be sought for in the future. In the collection however were to be found evident signs of a determination to aspire to the rank of a progressing civilized nation. The immense resources in raw materials which Turkey possesses within her own territories will, if she only learn how to use them, soon emancipate her from the difficulty under which she has so long been labouring, that of relying upon foreign supplies for the commonest necessaries required by her people; and much honor is due to the young Sultan for having recognized the importance of an intimate acquaintance with the condition, prospects, and influences of the commercial policy of the countries with which he is in relation, and for having sent, with this view, into England, France, and Germany, a number of young men to acquire a knowledge of manufacturing, social and political matters, which conduce so much to the progress and prosperity of an Empire.

The collection sent from the Levant was arranged with infinite taste; the whole resembling one of the Turkish Bazaars, where the goods are displayed after the Eastern fashion. Those persons who had previously visited the famous shops of Adrianople, of Constantinople, and of Smyrna, were not prepared to see the variety and the richness of the articles which were exhibited by order of the Sublime Porte. Among the specimens of Oriental pomp and luxury were to be seen the little silver coffee cup-holders, shaped like our egg-cups. Much pains are taken to ornament these cup-holders in silver and other materials: they represent a custom peculiarly Eastern, for, as is well known, coffee is served out to every visitor, without milk or sugar, much in the same way as a person making a call in England would be invited to take a glass of wine. The care taken in the manufacture of the Narguilles or hookahs, beautifully ornamented with silver, shews how indispensable an article of luxury the pipe is to the Turk; indeed he would hardly be recognized as such were he not luxuriously reclining on soft cushions, and dreamily listening to the "hubble, bubble" noise made by the passage of the fragrant smoke of the tobacco through the scented waters.

In the accompanying view of the Turkish collection are also prominently represented the embroidered saddles and trappings which attracted so much attention. For embroidery and other gorgeous work, common in Oriental countries, Turkey has long been distinguished: but in every article, however magnificent, was discernible a leaning towards a richness of display in the material, while the workmanship remained almost totally neglected. Although characteristic of a wealthy Power, magnificence is no longer considered its test, and the Turks must learn to turn their attention to the production of their raw materials, and above all of the materials for dyeing, which they have in such abundance. As they cannot excel in manufactured goods, in which they were found to be so far surpassed by other European countries, let them devote all their energies to improve their natural productions, and become thus a great commercial nation. Turkey stands in the position of the most favored of nations with regard to the facilities of communication, and her numerous ports are in the most advantageous situations; Smyrna is already accounted one of the most important commercial cities in the world,—all conduces to render easy the exchange of her own natural productions for the necessaries required by her people, which can be supplied by foreign powers.

Such, we trust, was the lesson taught the Turks when they were in a position to compare their collection with those of other nations. If it was appreciated by them,—if they recognized where lay their inferiority, and where their excellence, they will have been at once started in a new career, and will forget that they are heroes of the Past, in their efforts to supply what they want so as to live in the Future; and what the Great Exhibition has revealed will hinder them from wasting capital on an industrial *Utopia*, totally regardless of agriculture, and of those numerous products which their country so richly provides.





Joseph M. Ward

Chambers

Chambers



CHINA.

WHEN the Portuguese first visited China, they were astonished at the beauty of the country and the opulence of the inhabitants, whom they found both industrious and civilized. Nor were the Chinese less surprised to behold a people who equalled them in skill and in every branch of knowledge, while on many occasions they were forced to acknowledge that they were surpassed by them. The travellers from Europe who have visited them, still retain a portion of this admiration, and continue to speak with enthusiasm of the great number of cities which flourish over every part of this immense empire, of the enormous population, and of the prodigious wealth which they possess. The manufactures, agriculture, mines, canals, public roads, and the encouragement given to the arts and sciences, have excited the applause of the more western nations, and made them feel that the Chinese, who had known, many centuries before Europe, the art of block-printing, the composition of gunpowder, and the use of the magnetic compass—those three so highly celebrated and valuable discoveries of European skill—were entitled to a high, or one of the highest places among civilized nations. It is, however, curious to contrast inventions of such high utility and importance with the very small progress the Chinese have made in the sciences, as astronomy, geography, and mathematics, for which they were not ashamed to be indebted to European missionaries.

With regard to astronomy, the Chinese make but little use of the knowledge they have acquired except for the purposes of divination, although the Imperial Observatory which adorns Peking, the metropolis of the whole empire, is considered by them as unparalleled in the universe, and some French mathematicians have represented it as one of the greatest prodigies of art and ingenuity, as well as of beauty and magnificence. In this establishment five astronomers are employed night and day, each in a different apartment on the top of the tower, to observe the different astronomical appearances; one is continually looking towards the zenith, and the others to the four points of the compass, so that nothing may escape their notice. Their attention, however, is not confined to the heavenly bodies, but extends to all objects connected with meteorology: the results of their observations on this head are carefully entered in their journals, and an account of them is every morning submitted to the surveyor of mathematics, who registers them in his office.

Their knowledge of geography is very limited, and they consider China to be the centre of the earth. They are consequently, very ignorant of the art of navigation, and although their imperial and mercantile navies are extensive, they are inefficient, except in those parts to which the pilots have been accustomed, and where they have a perfect knowledge of the various localities. The Junk, which arrived in England in 1851, and was for some months an object of great interest to visitors, was the first Chinese vessel that had ever performed the voyage; and notwithstanding that she was found to be a most beautiful and easy sea-boat, never having shipped a drop of water, or leaked, since the day she left China, the crew had very considerable difficulties to overcome before she reached her destination, it being found sometimes necessary to employ twenty men to steer her. That mathematical science is at a low ebb, is evinced by an Imperial edict, published in the Peking Gazette of May 1800: it announced the intended marriage of one of the Princesses, and charged the Tribunal of Mathematics to select a fortunate day for the celebration of the nuptials.

The celebrated French Orientalist, Abel Remusat, describes the Chinese as remarkable for the utmost polish and refinement of manners, which, in many respects, almost equal those of European nations. In their present fashions, however, we find many things utterly at variance with our own taste and feelings: we may mention among others the assumption by the Emperor of the magnificent titles of "Son of Heaven, Lord of the World, Sole Governor of the whole Earth, Great Father of the People"; their admiration of corpulency, which they think is a sign of a good conscience, and is often the means of promoting a Chinese to the rank of Mandarin; and the practice in women of rank of compressing their feet to a most artificial diminutiveness, which prevents their walking, or at least gives them a mincing gait, and a languid, delicate and interesting air. A Chinese woman to be accounted handsome must not be tall, but very upright. In vain is she blessed with a vivid complexion and fine colour; custom commands her to efface the healthful bloom as a mark of immodesty, and to rub herself with a whitish powder, which renders her pale and sickly-looking.

Allusion has been already made to the strange collection sent to the Great Exhibition from the Celestial Empire. The curious workmanship of many articles bears witness to the sort of instinctive leaning which the Chinese have for the most difficult and delicate manual labour; but we need envy nothing that they have, unless it be the abundance of some natural productions, especially silk. Their porcelain has been known from time immemorial, and in every thing else the Chinese are so stationary, that they may be considered as the most ancient workmen on the earth. Among the articles which they displayed, were some which were produced at a period nearly as remote as that of the deluge, and which, in truth, did not appear to be very dissimilar to those which they manufacture at the present day.





Joseph M. ...

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UNITED STATES.

THERE were two causes which gave to the productions of American industry displayed in the Great Exhibition a character totally distinct from that which is found in those of many other countries. In the first place whole districts are solely devoted to the pursuit of agriculture, disregarding mining, trades, and manufactures; and secondly, in the United States, it is rare to find wealth so accumulated as to favour the expenditure of large sums upon articles of luxury. The Americans pride themselves upon their numerous inventions, the larger number of which however, as might be expected, are devoted to improvements in agriculture: still, much ingenuity has been shown by them in increasing the speed of their steam-engines, and in making printing-presses capable of throwing off as many as twelve thousand impressions in an hour. As an illustration of the facility with which they could diffuse knowledge through the press, a case containing a number of American newspapers was exhibited, and these, by the cheapness of their production, went far towards supplying what every community must feel to be a very urgent want.

The collection of minerals, both metallic and non-metallic, was very valuable: the specimens of iron especially showed the probability of America becoming eventually one of the greatest iron-producing countries in the world. Besides the recently-discovered gold mines in California, the United States are rich in both the precious and useful metals: a large lump of zinc ore, weighing sixteen thousand four hundred pounds, was exhibited from New Jersey. This specimen of the red oxide of zinc derived some interest from the difficulties which had to be overcome by the New Jersey Exploring and Mining Company, before the heavy mass could be exhibited in London. It was found impossible to employ the usual means for transporting the ore to New York, for the Morris Canal was closed by the ice. It therefore became necessary to transport it by land to Dover, the nearest railway terminus; but three ranges of high mountains had first to be crossed, and heavy teams of horses and oxen were required to draw the truck in which the ore was placed up the sides of the mountains, while in descending it had to be held back by strong ropes fastened to the trees on the road side. However, it was safely shipped on board the United States frigate, *St. Lawrence*, and landed at Southampton, from whence it was liberally transported to London, free of all charge for carriage.

In the centre of the accompanying Plate is a representation of the full-sized model of Rider's improved Suspension Truss Bridge, said to be remarkable for its durability and economy. The model was surmounted by a "trophy" of vulcanized India rubber, exhibited by the Goodyear Rubber Company.

The great attraction in this Department was the statue, in white marble, of the Greek Slave, by Hiram Power; the figure belonged to Mr. Grant, who kindly permitted it to be placed in the Exhibition, as it was the production of one of the few sculptors the Americans possess. During the early Greek revolutions the captives were exposed for sale in the Turkish bazaar, under the name of "slaves;" the artist has delineated a young girl, deprived of her clothing, standing before the licentious gaze of a wealthy eastern barbarian. Her face expresses shame and disgust at her ignominious position, while about her lip hovers that contemptuous scorn which a woman can so well show for her unmanly oppressor. It is a hard thing to produce a perfect work, and many faults were soon found to injure the well-merited reputation of the statue. The manner in which the right hand was made to lean upon the trunk of a tree, while the whole weight of the body was thrown upon the left leg was, however, the only grave error committed by the sculptor; and the greater number of those who daily swept past this happy effort of his genius, felt disposed to reply to all the merciless critics—

"If to her share some minor errors fall,
Look in her face, and you'll forget them all."

The organ in the gallery was not a contribution from the United States; space had been in the first instance allotted to the builders, Messrs. Gray and Davison of London, at the northern end of the Transept; but it was found impossible to leave it in that position, as, when the instrument was played, so large was the crowd which assembled to hear its magnificent tones, that the passage in the gallery was soon completely blocked up, and all circulation stopped.





L. von
Chapman, Nov.





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The Crystal Palace

Rowlandson





Joseph Wash

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INDIA I.

A PECULIAR value and interest were attached to the collection exhibited by the East India Company in the Great Exhibition, from the fact that it was impossible to find it reproduced in any other place. The greater part of the Indian articles were not suitable to European tastes, and few are ever sent here, because we are generally backward in perceiving that with some very slight modifications they might be adapted to our wants. There were, for example, several gold and silver tissues which a very little alteration would so transform as to render them conformable to the most delicate and refined female taste. Let white silk be substituted for the silver, and yellow silk for the gold, and all would be accomplished, without the loss of those perfect designs, the opportunity of studying which has been stated to have been "a boon to the whole of Europe."

Indian art truly deserved the preference which has been given to it; it resembled that of no other nation. It has not the strange wildness which appears to be inherent to Chinese taste, nor the regularity of Greek and Roman designs, nor that staring vulgarity so commonly found at the present day: it is an art by itself, independent, and seems never to have altered, or to have borrowed its principles. It was evident that the weaver's skill had risen to high perfection in India: even putting aside the Cashmere shawls which have become the types of fashion and good taste, everything exhibited by the East India Company formed a collection of master-pieces. Muslins embroidered with gold, scarves of every colour and of the most exquisite taste, table-covers enamelled with flowers, tissues of every description, shaded with emerald green, saddles, cloaks, stuffs for hangings and curtains, kerchiefs of every hue which nature has lavished upon the wing of the butterfly, all were to be found in this brilliant collection, which could only be formed by a company as powerful as that which reigns supreme in India;—the command went forth and the East came.

Among the objects represented in the accompanying plate is the crown or *tui* as worn by the King of Oude; but it was exhibited divested of its jewels. His kingdom was for a lengthened period so despicably mismanaged by its native authorities, that, from being one of the richest states of Hindostan, it became, a few years ago, one of the poorest and most wretched, being especially distinguished for anarchy and disorder. The people were so independent of the royal authority, that they only yielded a very imperfect obedience, and as lately as 1830, Oude was the theatre of a civil war between the Sovereign and his military chiefs. The province is now under the protection of Great Britain, and secured from foreign aggression; and it is to be regretted that our government did not also interfere in its internal administration, so far as to introduce some regularity and efficiency into the management of the native concerns by the King, and aid him through the intervention of the British Resident at Lucknow, to repress the disorder of the people.

The present of the Rajah of Travancore to the Queen, consisting of a splendid ivory chair of state, with a foot-stool, beautifully carved and ornamented with jewels, was greatly admired. It was used by His Royal Highness Prince Albert, at the ceremony which took place immediately before the closing of the Exhibition, when Lord Canning, the President of the Council of Chairmen of the Juries, presented to him, as the Head of the Royal Commission, the several Reports drawn up upon the subjects which had been submitted to the thirty-four Juries, composed of the most eminent men of all nations, together with the names of the Exhibitors whom they had judged entitled to rewards.

In this representation of the Indian Collection will also be seen a suit of native apparel, consisting of a gold figured muslin turban and a waistband to match, a pair of kinkob trowsers, and a muslin vest. Such appears to be the usual dress of the Rajah of Boondie who contributed them. His Rajahship is in the province of Rajpootana, and under the protection of the British Government: although small, this state is important, as it contains the principal passes from the south into Upper Hindostan.

The large collection of saddles, howdahs, and parasols, which fill up part of this view, as well as of the others of the Indian Department, show a more decided European influence in their details than the shawls, to which we have alluded above, and have much similarity with the specimens sent from Constantinople. The devoted admirers of the shawl patterns of India would, of course, exclaim against innovation or alteration of the designs, and therein lies the chief cause that in the manufactures of Norwich or Paisley, the peculiar, tail-like figure, known as the "pine," is elaborated *ad nauseam*, while other Indian details, and the tasteful selection of the proper colours, are wholly neglected. In the Exhibition, however, there were numerous attempts to escape from the trammels of this Hindoo conventionality, which on its first appearance in Europe was thought so little of by one fair lady, to whom a specimen was presented, as to induce her to make it useful as a substitute for an "ironing blanket," in the getting up of linen; and by another, as to cause her to declare that it was only fit to make into an under petticoat! One celebrated French house went so far as to present a grand architectural façade, with columns, trees, and flags, all woven in the most approved manner and in the legitimate colours; yet all these were for the adornment of the back of a lady, in a scrambling effort after that novelty which the admirers of this very article say is impossible.





British Museum

India 1851



INDIA II.

THE rich collection of articles of Jewellery exhibited by the East India Company was displayed in glass cases, enclosed within iron railings, on the North and South sides of the Nave and near the Transept. The accompanying plate only represents one of these cases; we shall not however confine our remarks to that alone, but select the most splendid and interesting objects contained in them both, and which were so splendid as to attract the attention of all visitors to the Crystal Palace.

The most valuable gem was the "Durria-i-Noor," or Sea of Light, set as an armet, and surrounded by ten smaller diamonds: the jewel although of large size and great purity, has lost much of its value by having been very ill-cut. Raised immediately behind it was a gorgeous coat of a Sikh Chief, made at Delhi: the robe is composed of *kinbob* or cloth of gold, with very large epaulettes in pearls, and on each, two valuable emerald drops, and a deep border of rich gold embroidery, beautifully overlaid with pearls, rubies and emeralds; the value of each epaulette was estimated at £5,000. In front of this State dress were placed the trowsers also made of kinbob, and the cap of an Indian Chief. On each side lay a pair of "Moorchals," in embossed and filagree gold, containing a sort of fan of the feathers of the Bird of Paradise. These costly and elegant ornaments are in India the insignia of the highest offices, and according to the native custom only a few of the Indian potentates are entitled to bear them in the presence of the Governor General. Among the Princes of India privileged to use them are the Emperor of Delhi, the King of Lucknow, and the Nabob of the Carnatic.

The golden girdle of a native Chief studded with nineteen emeralds, each about an inch and a half square, must have been of enormous value, for, besides the emeralds which were all cut thin and flat, and had various inscriptions from the Koran engraved upon them, (a proceeding which, although it would greatly depreciate their value in this country, would render them almost invaluable in the eyes of a Mahomedan Chief,) the girdle was surrounded on the top and bottom by a row of very fine diamonds. It is probable, however, that even the value of this magnificent ornament was surpassed by a pair of armlets, containing three large rubies uncut, but just sufficiently polished to shew their extreme brilliancy and depth of colour. These rubies were formerly the property of the Emperors of Delhi, and gained some additional value by the traditional legends attached to their possession.

Close by lay a pearl necklace consisting of two hundred and twenty four large pearls, and another shorter one ornamented with four very fine spinelli rubies, set in exquisitely wrought gold, the very pattern of which, almost resembling the edges of point lace, seemed to harmonise with the stones.

The two Views of the Indian Department from the Transept include the collection of arms from various territories in India, and the models of ships, netting, and fishing-tackle, as used in the far off Eastern seas. What numerous implements of destruction! What various forms for guns, cannons, pistols, swords, daggers curiously jewelled, with straight blades and curved blades, carved, gilt or enamelled—nearly all with a view to destroy, few intended as tools to produce! It would almost lead us to suppose that life is found to be too long in our Indian possessions, and thought to be an evil which could not be done away with too soon. On the other hand the models of the vessels employed by the natives, conveyed the idea that they were constructed rather for piratical expeditions, than to carry on commerce with the neighbouring States. The Collection in the Exhibition included the well-known Catamarans of Madras, remarkable for their buoyancy, which enables them to pass through the surf at different parts of the Coast, while the boats of this Country could not live on the waves: the long Snake-boat of Cochin, and the Dingee or Bum-boat of Bombay, employed in carrying persons to and from vessels in the harbour, and which are generally hired by the captains of ships with a view to keep their own boats from being knocked about.

At the intersection of the Western Nave with the Transept was placed one of the numerous allegorical representations of Satan vanquished by the Archangel Michael. In this group, the sculptor Mr. Lough, attempted to illustrate the moment when

"Satan first knew pain,
And writhed him to and fro convolved;
* * * * *
Gnashing for anguish, and despite, and shame,
To find himself not matchless;"

while the Archangel, having overcome the Evil one, raised his hand to Heaven, and gave God the glory for the victory which he had just obtained. Although the two figures were, perhaps, not quite well combined, the form and attitude of the victorious Michael were both grand and noble.





Great Exhibition

India

Great



INDIA. III.

WE have before alluded in general terms to the case of jewellery exhibited by the East India Company, and as the accompanying plate presents a view of the Indian Department as seen from the Transept, we will take the opportunity of giving a few descriptive particulars with reference to the Great Diamond, called "Koh-i-Noor," or "Mountain of Light," which was exhibited by Her Majesty in the Main Avenue of the Eastern division of the Exhibition Building.

The Koh-i-Noor has long enjoyed both European and Indian celebrity, and has accordingly been made the subject of traditionary fable, as well as of historical record. Hindoo legends declare that it was found in the Mines of the South of India about four or five thousand years ago, during what is called the Great Indian War, and was worn by one of the warriors, Karna King of Anga, whose spartan valour and glorious death are immortalised in a heroic poem of great antiquity, called "Mahábháráta." During an interval of nearly three thousand years, we find no authentic account of the Great Diamond, but it appears that in the year 56, before Christ, it became the property of Vikramaditya, the Rajah of Ujayin, from whom it descended to his successors, the Rajahs of Malwa, until the principality was subverted by Mohammedan conquerors, into whose hands it fell with other spoils of infinite price, and who estimated its value at half of the daily expense of the whole world. The Mohammedans in their turn, were subjugated in the year 1306, by the armies of Ala-udin, the Sultan of Delhi, and according to the autobiography of the Sultan Baber, whose book is of undoubted authenticity, the jewel became with other treasures the property of the Sultans of Delhi.

The Pathan Kings of Delhi were supplanted by the Moguls of the house of Timur in the beginning of the 16th century, and the great diamond fell into the hands of Baber the first Sovereign of that dynasty, and passed eventually into the possession of the ruling family of Kabul. Nadir Shah, on his occupation of Delhi in 1739, compelled Mohammed Shah to give up everything of value which the Imperial Treasury contained. According to the family and popular tradition, Mohammed Shah was in the habit of wearing the jewel in the front of his turban, and on the first interview between himself and his wily conqueror, the latter insisted upon exchanging turbans, as a proof of regard and friendship. However this might have been, we need have little doubt that the great diamond was in the possession of Mohammed Shah at the time of the Persian invasion, and if it was, it most certainly changed masters, and became as is universally asserted the property of Nadir Shah, who is also said to have bestowed upon it the name of Koh-i-Noor. Upon the death of Nadir, the diamond which he had wrested from the unfortunate representative of the house of Timur, became the property of Ahmed Shah, the founder of the Abdali dynasty in the Kingdom of Kabul. Having thus traced the Koh-i-Noor to Kabul, there is little difficulty in giving a history of its subsequent fortunes. The jewel descended to the successors of Ahmed Shah, and in 1813 Shah Shuja was compelled to resign it to Rungeet Sing, whose nominal guest and actual prisoner he then was, for a lakh and twenty five thousand rupees, or about £12,000 sterling. Rungeet Sing was highly elated by the acquisition of this valuable gem, and wore it as an armet on all state occasions. At the annexation of the Punjab by the British Government, the Civil Authorities took possession of the Lahore Treasury, under the stipulation previously made that all the property of the State should be confiscated to the East India Company in part payment of the debt due by the Lahore Government, and of the expenses of the War. It was at the same time stipulated that the Koh-i-Noor, being a State jewel and not readily convertible into rupees, should be surrendered to the Queen of England. Lord Dalhousie sent it to England in charge of two Officers, and on the 3rd of July 1850, it was presented to Her Majesty by the Chairman of the Court of Directors of the East India Company—an appropriate and dignified close to its eventful career.

The truth of all this strange history has been denied, as it is impossible to prove the identity of the Koh-i-Noor, with the diamond acquired by the Conqueror Ala-udin, to whom we have made allusion above: this fact is, however, invariably affirmed by the members of the ruling family of Kabul, and by the jewellers of Kabul and Delhi.

The Executive Committee found great difficulty in exhibiting the Koh-i-Noor in a satisfactory manner, as on a close examination the facets appeared to have been cut in a most inartistic manner, and by no means to bear the high polish which a diamond of its great purity ought to exhibit. Since the close of the Building, the Koh-i-Noor has been re-cut under the superintendence of Messrs. Garrard, and its appearance has been much improved. It is almost impossible to estimate the value of the famous gem, but the following argument has been used: "the Koh-i-Noor cost one million sterling, so many years ago; if this sum had been allowed to accumulate with the interest thereon, it would amount to-day to fifty millions—therefore the diamond is worth fifty millions." It is impossible to admit this calculation, notwithstanding the fact that ladies do appear to consider the attractions of diamonds as ornaments, quite irresistible. An old Spanish aphorism says "Love in youth, in old age, respect:" these possessions are prized too—would that they were more so, for they are far less expensive than brilliants!





Joseph M. M. M.

Indian No. 4

1874



INDIA.

ENGLAND owes to the East India Company the possession of this vast and important country, celebrated throughout all ages for its natural riches. It was in the year 1599 that an association was formed, with the title of "The Governor and Company of Merchants of London trading to the East Indies," and with £30,000 only as capital. Having obtained a charter from the crown, they commenced operations, and the result of their first adventure, and of those of several subsequent years, was a commercial profit of about 150 per cent. In 1624 the King of England gave authority to the Company to exercise the functions of government in the territories which they had acquired, power being granted them to punish their servants either by civil or martial law. The three principal Presidencies into which British India is divided—Bombay, Madras, and Calcutta—had each its president, and a council of about twelve members, appointed by commission of the Company, as early as the year 1707. Several amalgamations with rival companies took place, and the capital was gradually increased to £6,000,000, which is the nominal sum on which dividends are now paid; but nevertheless the East India Company, since the whole trade has been thrown open to individual enterprise, have never been able to compete with private traders, chiefly on account of the large standing army they are obliged to keep, and the costly way in which their trade is conducted. Such is a brief view of the origin of, perhaps, the most remarkable commercial company in the world, who have established themselves in the land which has, from the earliest historical times, exported its far-famed and valuable productions into the Western nations of the earth. Although no longer the powerful body they once were, their dominion may soon be taken from them altogether; for the time is rapidly approaching when a new Charter must be applied for, and then will the question be warmly discussed whether the Home Government could not, by taking the management of affairs into its own hands, dispense entirely with the intermedium of the Company.

The gorgeous display of the contributions from the East Indies impressed every visitor with the importance such possessions must be to Great Britain; and legitimate was the pride with which our countrymen wandered through the large space which the rich Indian productions filled, when they remembered that they were exhibited, by England, and not by any foreign land. In the autumn of 1849 the Directors of the Honourable East India Company decided upon contributing, as largely as time would permit, to the Exhibition, and by January, 1850, Dr. Forbes Royle, to whom the task had been confided, had completed the lists of raw products and manufactured articles, which it was considered most desirable to obtain from India. These lists were sent to the different Presidencies, and translated for distribution among the natives; the Court at home, at the same time, calling the attention of the Supreme Government to the occasion when "an opportunity will be afforded for the latent resources of distant provinces, and the skill of the least known artist, to compete with the produce of the most favoured regions, or the works of the most successful genius." Central committees were formed at Calcutta, Madras, and Bombay, and numerous local committees in many of the principal towns were presided over by men notorious for their exertions in the great cause, and the success of their efforts is to be measured by the satisfaction with which the man of science, the merchant, the manufacturer, and the artist studied the contributions most new and interesting to them; admiring, on the one hand, the well-chosen specimens of the natural productions of the land, and on the other, the ingenuity and delicacy of the workmanship of the manufactured articles.

In the centre of the accompanying Plate is represented the Howdah, a kind of state palanquin, in ivory, which was exhibited by her Majesty. This howdah, with magnificent trappings worked in gold and silver, (intended to be borne on the back of an elephant,) was sent to the Queen by the Nawab Nazim of Moorshedabad. The Commissioners finding that no artificial contrivance would answer the purpose, sought for a long time in vain for a stuffed elephant on which to display this howdah: at length it was discovered that the Museum of Saffron Waldon could boast of a specimen, and a trusty messenger was forthwith despatched to negotiate with the authorities for the loan of it; they agreed to allow the animal to be taken to London for the purpose, and though not a large one of its kind, it was a very great additional attraction.

The Nawab Nazim sent her Majesty, at the same time, a magnificent reception seat with a canopy of purple velvet, embroidered in gold, and supported on a framework of silver, with two "moorchals," or emblems of dignity, used by the princes of India on state occasions, made of pure gold, and containing feathers of the Birds of Paradise: part of the native throne is represented in this view.





Joseph Mendel

London, N.Y.

Joseph

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INDIA V.

If the East India Company had conceived the idea of fitting up a large portion of the Exhibition Building with the machines and implements employed by the Hindoos, and had, at the same time, imported the native workmen to use them, and grouped Indians of every caste around as spectators, they could not have better succeeded in portraying the peculiarities of oriental costume and habits, than by exhibiting those interesting models in clay and wood, illustrative of many ceremonials and customs of a novel and characteristic description. They did not merely represent machines and men, but had so much life and sprightliness infused in their every attitude, that they looked more as if they were intended for models of *manners*, if we may be permitted to use the expression, and the visitor almost expected the Lilliputian groups to move and speak, and really perform their several avocations, not as automatons, but as intellectual men and women.

One of the best and most complete of these models was contributed to the collection by Mr. Mansfield, of the Civil Service. It represented a Collector of Revenue making his annual settlement with the cultivators. The official has pitched his camp near a small village, in which are seen rows of houses, with shops displaying all kinds of wares for sale. On the banks of the river, which flows close by, are groups of women filling their pitchers with water and washing their clothes; while, in the fields around are luxuriant crops of corn and the sugar-cane. The Collector is seated in a tent, surrounded by other revenue-officers of the district, and about the entrance are a body of ryots, with petitions for the remission of part of their revenue payments. The horses of the servants and others, forming the officer's escort, are picketed at a short distance, and near them are the camels engaged for the transport of the tents and baggage. The three hundred figures which compose these characteristic groups, were all removable at pleasure; and a numbered list of them, denoting their position on the platform, of nine feet square, was sent by the Exhibitor to serve as a key for arranging the whole.

In the back-ground of the accompanying view of the Indian Department, are represented two magnificent specimens of Eastern furniture, which deserve notice. Deo Naryn Sing, of Benares, exhibited a royal bedstead, the covering of which was in silk and velvet, and the mattress in velvet; but the bedstead of enamelled silver from Cashmere, was still more splendid and, at the same time, more tasteful. The hangings of the latter were of Cashmere shawl, gracefully festooned, and the material of the pillows and mattress were of the finest description. However, the difficulty of regarding both comfort and grandeur in the manufacture of their couches, was as apparent as in some of the regal resting places in our own country; and the Indian bedsteads were more calculated to gratify the eye by their gorgeous splendour, than to tempt the wearied limbs to seek repose beneath their glittering shelter.

The Hindoos are fond of carving in wood, horn, and ivory; the first they must have practised from very early times, probably for their idols; and they have now arrived so near perfection, that even the best English houses might well be furnished with such chairs, sofas and book-cases, as were exhibited from Bombay, elegantly carved in black wood. The ivory carvers of Berhampore contributed a variety of specimens of their work, and deserved much credit for elaborateness of detail and truth of representation. To illustrate the facility with which they could carve the most minute objects, as well as those of large size,—there was an elephant enclosed in the shell of a pea,—and that they were capable of doing new things, when required, was shown in the set of chessmen carved from the drawings of Layard's "Nineveh."

Many other materials, some of them of the most opposite kinds, are employed by the Indian carvers, on which to exercise their skill. All the elaborate detail of the richly ornamented Hindoo architecture of the south of India, was brought out in the soft and yielding pith of the marsh-plant; while necklaces for men, and bracelets for women were manufactured out of hard white shells imported into Calcutta from Ceylon.

On the walls that enclosed the objects which have just been noticed, were suspended a number of both large and small carpets, of which mention has been made elsewhere.



Joseph W. Smith

1847



Smith



INDIA. VI.

IN the accompanying Plate the artist has represented that part of the space devoted to the East Indian Collection which was set apart for the display of the Raw Materials produced by that extensive peninsula. These were so numerous that the mere enumeration of them occupied several pages of the closely-printed catalogue; we therefore feel that it is impossible, in this short sketch, to give anything like a detailed description of the natural productions of our Indian territories, and must confine the following remarks to a few generalities of peculiar interest.

From the mineral kingdom, which was largely and well illustrated in the Exhibition, we may select iron and coal as the most remarkable productions. It has ever been a subject of surprise how so primitive a people as the Hindoos could have overcome the difficulties of smelting iron and of forging steel. A couple of natives will in a few hours construct a furnace of clay, from four to five feet high, leaving an opening in front about a foot or more in height, which is built up with clay at the commencement, and broken down at the end of each smelting operation. On each side of this opening are inserted tubes of clay in connection with the bellows, which are either made with the leaves of the forest, or a goat-skin stripped from the animal without ripping open the part covering the belly. As soon as the process of smelting the iron is concluded, the temporary wall in front is broken down and the bloom removed with a pair of tongs from the bottom of the furnace. When the iron is to be converted into steel, a quantity is packed into crucibles (about a pound in each) with materials producing carbon, and subjected to heat, urged by blast for about two hours and a half, when the process is considered to be completed; the crucibles are then taken out of the furnace and when cool are broken, and the steel is found in the form of a cake at the bottom. We find in a passage in Ezekiel a confirmation of the fact of the Hindoos having discovered the way of making steel at such early periods, where Dan and Javan are described as bringing "*bright iron, cassia, and calamus,*" which are all Indian products, to Tyre.

The steel prepared by this simple method has long been an article of commerce from the west of India to the Persian Gulf, since it has proved itself admirably adapted for the fabrication of all cutting instruments. Mr. Heath, at one time the managing director of the Indian Iron and Steel Company, even goes so far as to say, "We can hardly doubt that the tools with which the Egyptians covered their obelisks and temples of porphyry and syenite with hieroglyphics, were made of Indian steel." There can be no doubt that its use was highly valued in the time of Alexander the Great, for we find that King Porus made him a present of thirty pounds of steel after his victory and generosity of conduct.

The Great Indian coal field which runs for sixty-five miles in length and twelve in breadth, is supposed to cross the Ganges and to extend to Cachar, from which place have been brought numerous specimens of coal. Mr. Jones, an English miner, opened the first colliery in India in the year 1815; three pits were sunk to the depth of ninety feet, and seven beams of the mineral were met with, one of them of the thickness of nine feet. Calcutta now consumes large quantities of coal, but chiefly for forges and steam navigation.

Among the vegetable productions we must remark the specimens of cotton, which is grown in every latitude in India. Generally speaking Indian cotton is very inferior to other kinds brought into the markets of Europe: but it is believed that this is not owing so much to the incapacity on the part of India to produce good cotton, as to the want of care in selecting the seed and in the culture of the plant.

England now obtains sheep's wool with other productions of the animal kingdom of British India; very few years ago such an idea would have been ridiculed. Several specimens were in the Exhibition; some fine Merino wool from Mysore, some from Lahore, and other kinds from the dry and cold climate of Thibet. Many of the animals there are furnished with a fine down, under the coarse outer wool: it is this which is chiefly employed for the Indian shawls, so well known for their useful qualities, and so admired for the elegance of their designs and their beautiful colours.





Joseph Meade

India N. 7.

Prof.



INDIA. VII.

MONSIEUR BRONGNIART, the ex-director of the porcelain manufactory at Sèvres, once remarked that Pottery affords the best record of the early ages of the human race, just as bones do of the earth. The antiquity of the art of fashioning clay into vessels of various shapes, and hardening it by the action of heat, renders it an object of especial interest. The allusions to the Potter's Wheel in the Old Testament indicate the prevalence of the art at an early epoch in the history of man, and this is abundantly confirmed by the annals of oriental nations, and by the material evidence of cups and other vessels of baked clay which are found in old tombs among the ancient cities of India, and in those of other parts of the world.

Little is known of Indian Pottery; indeed, the specimens preserved in our national collections have given birth to the very general idea that it is hemispherical in shape. The Great Exhibition proved that, although some of the vessels are certainly so formed for the convenience of being carried on the head, the Hindoo could, with his naked hands and the aid of the ancient potter's wheel, fashion vases which many of the best judges greatly admired for their elegant and even classical gracefulness of form: it has also been suggested that some of these beautiful shapes were of Etruscan origin, but there is no reason to believe that the Hindoos have ever had anything but their own unerring taste to guide them. Among the specimens of the Ceramic manufacture of India was a small statue of the Queen, by a native artist, which only served to show that the Hindoos have not attained any excellence in the art of making statues and busts, "although," as Dr. Forbes Royle very justly observes, "the opportunities are great of seeing the human figure as well at the ordinary occupations of life, as in their gymnastic schools, and they have had considerable employment in sculpturing the figures, though grotesque, of their gods and goddesses. Yet that they are capable of excelling in this as in many other arts, is evident from the admirable representations of the different castes and trades in the clay figures from Kishengurh in Bengal, as from Gokak, near Belgaum."

Although working in stone does not strictly come under the head of this subject, we must mention as worthy of notice the floating stone swans and fish which were sent by the Rajah of Johdpore. These were carved in the white marble of the country, and yet could swim on water, showing that the Hindoos are not ignorant of the buoyant effect of air when enclosed in a substance so much heavier than water.

On the wall space of that part of the Indian Collection which the artist has represented in the annexed Plate, were suspended cotton and silk carpets, and illustrations of Indian dresses manufactured by the natives. Although carpets seem more calculated to cover the floors of houses in cold and wet climates, yet their invention originated in eastern countries, where they are not so much used in doors, as to spread over the sandy and dusty earth in the open air under the shade of trees, where the native loves to sit. The Persians undoubtedly first employed what we call tapestry, although skins were used long before for similar purposes, and this was probably introduced into Turkey, and there manufactured into rugs and prayer-carpets for the Mahomedan to kneel on in his devotional exercises. The carpets of India are made of two materials, cotton and silk: the former are stout, serviceable, and handsome, and are made of all sizes. They are generally striped blue and red, but often other colours are used in squares or stars. It is a question of some interest whether our manufacturers at home might not make these carpets with profit to themselves for the bedrooms, &c., of the poorer classes: and whether they might not exhibit their skill in improving the designs, and exporting small carpets for individuals, and large ones for halls and tents, into all parts of the world, not excepting India itself.

A splendid specimen of a silk carpet was contributed by Maharajah Goolab Sing, and was described as being as remarkable for "variety in the pattern, brilliancy in the colouring, as well as pleasing harmony in the whole, as any in the Exhibition." In the great Tent which was pitched outside the Building, at the eastern end, was a large carpet which deserved attention from the fact of its having been manufactured by the reformed Thugs in the Government School of Industry.

The accompanying View gives a glimpse of the Transept, in which is seen a fountain in cast-iron, bronzed, the jet of which was formed by a group of "Cupid and the Swan," designed by Mr. John Bell: the figures occupied the centre of a tazza, ornamented with a decoration of the white and yellow water-lily. The fountain was cast by the Coalbrook Dale Company.





Joseph Meach

Colonial Products

Prof

Illustration by Joseph Meach



WEST INDIES.

CONTRIBUTIONS for the Exhibition arrived from nine of the West India Islands, and as much interest is felt by many persons in the prosperity of these dependencies of Great Britain, a considerable amount of attention appeared generally to be given to the specimens which had been selected, as the best illustrations of their productions. With one exception, however, they all were very inadequately represented—the value of the whole collection not exceeding £300. Still it must be borne in mind that these contributions consisted almost exclusively of natural productions, of which only small specimens were sent, the manufactured articles being very few.

The exception was Trinidad, whose collection was one of much value and interest. From this Island there were a variety of specimens of pitch, some taken from the centre, and some from the shores of the Pitch Lake, which is the most singular natural phenomenon of Trinidad. It is about a mile and a half in circumference, and is nearly surrounded by volcanoes which vomit mud and clay. In the centre of the lake the pitch is soft, becoming gradually harder and colder as it approaches the sides. It is much used for pavement, not being suitable for other purposes, since it requires the admixture of a large quantity of oil. "The origin of the Great Pitch lake," says Mr. Robert Hunt, "has been the matter of much conjecture; by some it has been referred to volcanic action, by others to a decomposition of an anthracite bed. Be this as it may, the petroleum springs as they issue, yield a product containing a large quantity of volatile matter; as it flows down the lake in a plastic condition, towards the sea, it becomes less and less bituminous, and eventually nearly all that is left is an impure mass of carbon. This is the character of much that is sent to this country." The strong smell emitted from the lake, which is situated on the highest land in Trinidad, is sensible at a very considerable distance.

Tortoise-shell was exhibited as forming one of the articles of export. The shell of the turtle which is caught on the coasts of Trinidad and the Gulf of Paria, differs from all others from the fact of the scales overlapping one another like tiles on a roof. Among the agricultural products were specimens of sugar, shown by Mr. H. Warner, of this island, who is making strenuous endeavours to improve the quality of this staple product of the colony; woods for ornamental and other purposes, among which should be specially mentioned the tecoma, which is hard and durable, of a peculiar colour, and capable of receiving a fine polish; and lastly those beautiful seeds, originally introduced from the East Indies, which are used for beads of different kinds. Those commonly known as Job's Tears are the fruit of a tropical grass, called the *Coix lachryma*, and lustrous as pearls, are generally mixed with others of a brilliant red hue to form necklaces and bracelets.

The most remarkable of the contributions from the other West India Islands, were groups of tropical flowers, vegetable products and fruits, modelled in wax. Very considerable interest necessarily attached itself to them, as the plants were thus brought under the eye of those to whom they were unknown, in all the vividness of colour and the fulness of form which characterises them when freshly and luxuriantly growing in their native clime.

The accompanying view includes two stands which were covered with the products of the South Australian mines. They consisted of copper and stones of copper ore, chiefly from the Burra Burra mines, near Adelaide. Some of the specimens were very fine, the ore yielding generally from 30 per cent. to 70 per cent. of copper. These mines have been altogether very successful: they have been only worked since September 1845, and in 1850 had produced nearly 56,500 tons of metallic ore. They have been found to furnish also the carbonates of copper or malachites, which were so much admired in the Russian Department of the Exhibition. The Australian malachites have not yet, however, been very extensively used on so large a scale, being chiefly employed in small ornaments, and the more minute decorative purposes, the specimens obtained from these mines being more brittle than the Russian malachites used at the Imperial Copper Works at Perm.

In the back-ground has been introduced the rough wood carving of an Indian chief, intended for the figure-head of a ship, which was sent from New Brunswick, with the view of showing how greatly the art of ship-building has improved in the colonies in America.

It was close to this spot that originated, on May 8th, the only fire which occurred during the whole time the Exhibition was open to the public. It was caused by the over-heating of a draft-pipe attached to a gas stove in the office of Messrs. Fox, Henderson and Co., which ignited some papers in a box under the counter on which were displayed the New Zealand productions; it was instantly discovered and extinguished. When the awful consequences of a fire, or even an alarm of fire, among the crowds which have filled the building are considered, it invests this incident with a greater interest than would, under other circumstances, be due to it. All those who were on that day calmly wandering through the different avenues and passages should, indeed, feel grateful to the Royal Commission for having made the precautionary measures against fire so complete as to have prevented its spread, and thus averted a calamity which, by its effects, probably would have ranked with the most deplorable of the disasters of any age of the world.





Joseph Wood

Exhibition and Jersey, Malta and Ceylon

Chief



GUERNSEY AND JERSEY—MALTA AND CEYLON.

THE Channel Islands have been in the possession of Great Britain since the Conquest, and though the French have repeatedly tried to wrest these islands from us, which, by their proximity to the coast of France, seem to be their natural property, they have invariably failed. The trade of Guernsey is very inferior to that of Jersey, which has increased rapidly during the last fifty years, and its commercial relations, formerly confined to England and France, now extend to the chief countries of Europe, the West Indies, and South America.

An interesting and characteristic collection of articles was supplied by about fifty exhibitors. The Local Committee, which was formed there at an early date after the official announcement of the Exhibition, arranged a collection of the granites, which are quarried chiefly at Mount St. Mado in Jersey, and are very valuable; and Colonel Le Couteur sent specimens of some of the most approved varieties of wheat cultivated in the island. Among the manufactured articles from Jersey, two must be selected as most worthy of attention. Peter Jouhaud exhibited a "carriage gun," which could readily be taken to pieces and used as a rifle, a fowling-piece, or a pistol, while a secret spring in the lock prevented any accidental discharge: the barrel was curiously wrought and inlaid with gold and silver. The chiffonnière, or sideboard, by G. Le Feuvre, was carved in oak, having inside fittings of satin-wood, and the panels in tapestry, representing the emblems of England, Scotland, and Ireland: the back was formed by an elaborate carving, the subject being King John signing the Magna Charta.

The most important contributions from Guernsey were the raw silk, the produce of the island, and the samples illustrating the manufacture of iodine and hydriodate of potash. Experiments have been repeatedly made in England to introduce the culture of the silkworm, and though they have been attended with partial success, the climate of Great Britain has always proved the insuperable obstacle. In the Channel Islands, however, the introduction of the mulberry of the Philippine variety, which has been found best adapted for the food of the worms, would no doubt be attended with success, as there is seldom any frost in winter, and the climate is consequently very mild. The raw silk exhibited was the first sample obtained by the Guernsey Silk Growers' Company, lately established in the island, and was interesting, as attracting attention to an important and probably ultimately, a profitable direction for the outlay of capital. Iodine is extracted from the ashes of several varieties of the fuci and algæ, which grow abundantly on the north and west coasts of the Island of Guernsey. These marine plants, called "varecs," are first dried in the sun on the sea-shore, and then burnt in large trenches cut for the purpose. The fused mass, containing salts of soda in many varieties, is then broken into fragments, and washed; the result of a long evaporation is a deposit, which combines iodide of potassium with several other salts, and which must be chemically treated before a complete separation can be effected.

The Island of Malta was conferred in 1525 by the Emperor Charles V. on the Knights Hospitallers of St. John of Jerusalem, who had a short time previously been expelled from Rhodes, and remained in their hands until 1798, when the treachery of the French knights rendered its capture by a fleet from their own country comparatively easy, and the Order of Malta was then virtually extinguished. The English took possession of Valetta in 1800, and have since retained it by virtue of the treaty of Paris, in 1814, by which it was definitely annexed to the crown of Great Britain.

The local manufactures of Malta were represented by thirty-four exhibitors, the only specimens of raw material sent being some pieces of Maltese stone oiled for pavement and in their natural state, and some samples of cotton and silk of native production. The most prominent part of the collection was, however, formed by the vases sculptured in Maltese stone, which is of a rich cream colour, and being soft, is easily carved. As it is not susceptible of polish, and would soon yield to the influence of the moisture of the atmosphere, it is unfit for external decoration. The carvers of Valetta have long been celebrated for their works, and those in the Exhibition, in various styles, but chiefly after the antique, were all beautifully executed, and evinced great softness of finish and very tasteful design.

From the Exhibition the Island of Malta has obtained a prize of far greater value than the medals conferred by the juries; for, in consequence of his numerous services, and especially for those rendered while he acted as Chairman of the Executive Committee, Sir William Reid was sent out, when the Building closed, as the Governor of Malta. His whole career has been one of benevolence and usefulness, evidences of which are chiefly to be found in the field where he was most able to exercise them—in the Island of Bermuda, where he represented his sovereign for many years, and where he is still remembered as the "Good Governor."

Before leaving the Mediterranean, a glance must be bestowed on the contributions of certain individuals, who kindly came forward and offered to exhibit such articles as they had in their possession, in order to represent the manufactures of the Ionian Islands. We are told that, owing to some misapprehension, the Ionians were without knowledge of the objects and purports of the Exhibition of 1851, until it was too late to provide articles fit for display. Madame Mavrojanni exhibited an apron of crochet-work, remarkable for the beauty of the pattern and execution. These aprons are the ordinary work of the peasant girls of Corfu, and are always worn by them. It is a curious fact, that the crochet-work, which has recently appeared in England as an accomplishment, has been for ages the every-day work of the Ionian peasant girls.

Lord Seaton sent, amongst a variety of contributions, a large silver brooch of elegant and curious design, and of the finest workmanship, combining in the centre the Lion and Crown of England, as a large medallion, with seven medallions, containing the arms and emblems of the seven islands, depending from it.

The Island of Ceylon, though in such close proximity to the continent of India, does not form any part of the dominions of the East India Company, but is in direct dependence on the Crown of England. Ceylon was not fairly represented in the Exhibition, as there was scarcely anything furnished in the art for which the natives have been justly celebrated—that of carving in wood and ivory. To ensure the arrival in London of the goods by the prescribed time, only six months could be granted for the production of articles which required at least a year, as it is quite impossible to persuade a Cingalese carver to work faster than is his custom: he will not depart from long-established usage.

A curious sample of Arack, a spirit distilled from the sweet juice of the cocoa-nut tree, called "toddy," was exhibited: it had been upwards of thirty years in bottle, and came originally from the cellar of the last Dutch Governor of Ceylon. Arack is well known in England as forming the chief ingredient of *Vauxhall punch*: it is said, however, that this "Vauxhall nectar" is a mock arack, made by dissolving flowers of benzoin in pale Jamaica rum.





Woolf & Munnich

Canada

Woolf



CANADA.

It was impossible for any of our fellow-countrymen to wander, without pride and gratification, into the space devoted to the display of the productions of the English possessions in North America; at the same time, they were impressed with an awful sense of the power and responsibility of England in ruling, and in having ruled, for nearly a century, so immense a tract of land, peopled by emigrants from many parts of Europe, not more than one-sixth being her own legitimate subjects. In the Eastern province, or Lower Canada, the inhabitants are chiefly French, and are now almost as much a distinct people as they were at the time that Canada was ceded by France to Great Britain. There is hardly any communication between the English colonists and *La Nation Canadienne*; a deep-rooted antipathy appears to subsist in many parts between them, and the tranquillity of the colony is, from time to time, disturbed by the efforts of the one race to gain the ascendancy over the other.

Canada boldly and promptly answered the summons which England put forth, and, from the comparative proximity of the colony to the mother country, it was more fully represented in the Exhibition than any other of our possessions, with the exception of India, the value of the natural and manufactured produce sent over, being nearly £2,500. Canada is strictly an agricultural country, three-fourths of its inhabitants, on the lowest computation, being engaged in farming operations. But, as a science, agriculture is almost unknown; no method or definite system is pursued in husbandry, and, though the soil is eminently fertile, the produce is generally inferior to that of more favoured climates.

The late Geological Survey, under the superintendence of W. E. Logan, Esq., has been the means of pointing out the mineral wealth of the colony. From his report, it appears that the country abounds in the ores of iron, and, in many parts, copper, silver, and lead, have been found to exist. Gold has been discovered in several localities, and specimens were exhibited from the workings of the Chaudière Mining Company weighing from a few grains up to a quarter of a pound. However, the precious metal has not been found in sufficient quantities to render the search for it desirable, in comparison with that for other metallic ores.

In the commerce of Canada, the exportations of timber form no inconsiderable item. The numerous forests abound in many kinds of the most valuable trees, but it is chiefly the white and red pine which is sent to England, the United States, and other parts of the world. In the main avenue, immediately opposite Canada, was erected a kind of trophy formed of planks cut from the trees, which grow in such luxuriant abundance. It may be seen on the left, or north side of the accompanying view.

The manufactured articles sent to the Exhibition from Canada showed that the inhabitants, in general, pay more attention to the useful than to the ornamental; and it was somewhat curious to see the mixture of the works of a savage population with the clearest evidences of English civilization. The canoe which was slung up between the two galleries was one of the largest class used, and calculated to hold a crew of twenty men, with their stock of provisions and necessaries. It was made from the bark of the white birch, and was so light that it could be carried with ease by its crew, to avoid the falls and rapids which occur so frequently in the American rivers. The sleighs exhibited were very light and elegant, and of two kinds—the single and the double. They are generally drawn by four horses, who madly gallop at full speed over the ice and frozen snow, urged by their drivers, who, wrapped in the warmest furs, participate in their exhilaration and excitement, which a pure air and brilliant sky cannot fail to produce, even though the thermometer be thirty degrees below freezing point.

The fire-engine, which occupied a large space nearly in the centre of the Canadian department, was very ingeniously constructed, and could throw a jet of water to a height of 180 feet, only requiring from twenty to thirty men to work it.

Lastly, as an illustration of the beauty and aptness of the native woods for cabinet-work, six chairs, elaborately carved in the style of the fourteenth century, the coverings of which were worked by the ladies of Montreal, were sent over and exhibited previous to being presented to Her Majesty.





J. H. P. H. W.

Medieval Court.

J. H. P. H. W.



MEDIAEVAL COURT.

THE exhibitors who contributed their several productions to form the Mediaeval Court had in view the illustration of a style of decoration now almost totally neglected, except in Roman Catholic churches; and well was their design carried out. On his entrance, the visitor was struck with the awe which is so often felt in a sanctuary: the place was, as it were, set apart from the rest of the Exhibition, looking dark and solemn, for the display of the taste and art of dead men; and, indeed, when a comparison was attempted with the things without, the mind was not always able to award the higher praise to the latter. Several gentlemen undertook to make a selection of the most eligible of the contributions offered, and to superintend the arrangement of the space placed at their disposal by the Royal Commissioners, which could not exceed 2,304 superficial feet (to include both passages and exhibiting space), and the ornaments were therefore unavoidably much crowded together.

The accompanying view was taken so as to embrace the contributions of as many of the exhibitors as possible, several of which deserve particular notice. On the eastern side were placed some of the most beautiful specimens of stone and wood carving to be met with in the whole Exhibition, by Mr. G. Myers, of Lambeth. His sculptured Font in Caen stone was raised on three traceried steps, and in the panels round the bowl were bas-reliefs representing the Fall of Man, St. John Preaching in the Wilderness, the Baptism of Christ, and the Crucifixion; while around the base were effigies of St. Mary, St. John, St. Peter, St. Paul, and the four Evangelists. The cover was richly carved in oak, the niches being filled with figures of angels in the attitude of prayer. When the Font was required to be used, the cover was so arranged as to slide upwards in the canopy above it, the height of the whole being about 28 feet.

Mr. Myers also exhibited a sculptured Tabernacle, with richly carved gables, niches, and flying buttresses, surmounted by angels bearing musical instruments, and also a canopied niche, in which stood a statue of the Virgin and Child. Quite in the background is seen a large Rood Cross, carved in oak, and of very peculiar workmanship. The whole surface of the arms and support of the Cross was entirely covered by a rich network of tracery, fleur-de-lis, and other ornaments. This was also one of Mr. Myers's contributions.

On the northern side of the Mediaeval Court stood a large Stove in Terra Cotta (literally *baked clay*), which was exhibited by Messrs. Minton and Co., of Stoke-upon-Trent. The important difference which distinguished this from the common German stoves was, that the pieces or tiles of which it was composed were made by the compression of clay in the dry powdered state. This process was invented and patented by Mr. Richard Prosser, of Birmingham, and has been applied to various purposes of an useful nature, in addition to the stove under notice. The Gothic designs of these Tiles were by Mr. A. W. Pugin, and they are enamelled in the style of Lucca della Robbia, which is perfectly novel in this country, and, indeed, has not been elsewhere attempted since the 16th century, until it was revived by Mr. Minton in the decoration of these tiles, friezes, garden-vases, &c., for the Great Exhibition. Stoves of this description emit great warmth, without producing the dryness so often complained of in iron stoves.

Mr. Minton has been occupied for many years in bringing to perfection those Encaustic Tiles which excite such well-merited admiration. With great zeal and unflagging perseverance he collected and improved the old designs of Mediaeval times, and has now enlisted the first talent of the day in the production of new ones. Notwithstanding the success which has attended his efforts, Mr. Minton is not yet contented; his interest in the subject remains unabated; improvements are constantly being made, new colours being employed; and now any special design an architect may desire can be produced. The tiles have been used by Mr. Barry in the new Palace at Westminster; and some very beautiful specimens have been laid down in the great central hall at the entrance of the House of Commons. The tiles for walls, which Messrs. Minton also contributed to the Mediaeval Court, are ornamented by a patent process of printing from the surface, by which several colours may be transferred at one operation. The process is likely to come into extensive use, and has been already applied to the decoration of pottery in general; tiles thus ornamented have been ordered for the smoking-room of the House of Commons, and have been much used for the fireplaces in other parts of the new Palace. Specimens of them were exhibited as forming the pans of flower-pots, the gilt iron frames of which were furnished by Messrs. Hardman, of Birmingham. These latter gentlemen also sent some very valuable contributions to the Mediaeval Court, consisting of church-plate and ornamental brass-work; while the greater part of the decorations and furniture were supplied by Mr. J. G. Crace, of Wigmore Street, and Messrs. Pugin, with whom originated the idea of collecting together these specimens of Mediaeval Art.





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PAINTED GLASS.

THE art of painting and staining glass is undoubtedly very ancient, being, in the first instance, directed only to the production of a design resulting from the separation of different colours by metallic lines. Soon, however, it was discovered how greatly the effect could be increased by the addition of mere black lines drawn on the glass, and fixed by the action of heat, so as to render them unchangeable, and from this point, the art advanced step by step towards that perfection which it attained in the twelfth and thirteenth centuries, and which men have since vainly endeavoured to equal.

The great difference between the painted glass of the present day and that produced four hundred years ago, appears to be that the former requires a close inspection before its real beauties are ascertained, every part taken singly being beautiful in itself, but the effect of the whole not being such as this examination would lead you to anticipate; while the latter, notwithstanding its great imperfections and quaintness of design, invariably succeeds in expressing the action and the sentiment of the subject it represents. With fewer colours than are possessed by the artist of the nineteenth century, the old painters on glass produced beautiful and harmonious results, which have never since been equalled, and it was consequently thought that the cause lay in the better quality of their colours; but the real secret which has not yet been discovered, is the artistic arrangement, contrast, and combination of the different shades. These mellow tones and harmonious effects have certainly been increased by the finger of time, which has softened certain hues, and as it were, blended the whole; and the faithful imitators of the mediæval designs have not failed to find a means of copying these peculiarities. Such a process is evidently invaluable when it is requisite to repair old stained glass, and to replace broken portions of it; but if glass is produced to-day, having that appearance of age, a few years will suffice to overdo the effect, and render the painting gloomily obscure.

In England, the art declined after the Reformation, which gave birth to ideas little in favour of the application of painted glass to the decoration of churches, and was almost entirely confined to the production of plain borders and rosettes, which were used for the windows of the halls and libraries of private houses. Though long dormant, it was never extinct, and has since revived so rapidly that it seems no element is wanting to throw a brilliant lustre on the achievements of any artist, provided he combine in his own person two gifts—he must be a good glass manufacturer, and a skilful designer.

In the north-east gallery of the Building were exhibited the specimens of stained glass of all nations. The transparent roof was darkened, and the whole space enclosed with heavy drapery, so as to only admit the light from the north side, against which had been placed the panels, windows, &c., arranged in the order of the countries which produced them.

Among the French artists entitled to particular notice, must be mentioned Messrs. Maréchal and Gugnion, of Metz, who exhibited two works of very great merit: the famous portrait of the Burgomaster, was one of the finest paintings on glass ever produced, while the imitation of the glass-work of the sixteenth century, in St. Charles administering the Sacrament to the Plague-stricken, was a subject treated with a masterly hand: it may be contended, however, that in the latter it was the magnificent painting which excited admiration, and that the work was not produced under those conditions which are inherent to the true manufacture of stained glass.

Monsieur Prosper Lafaye, of Paris, exhibited a window, the upper part of which was in imitation of the mosaic paintings of the thirteenth century, and produced a beautiful effect: in the centre was a scriptural group in a later style, and which might perhaps be objected to on account of the too great finish of the figures; but it was evident that M. Lafaye was a talented artist, and felt unwilling to confine himself to mere outline.

Not far from these, Mr. G. Baillie, of London, exhibited an original historical picture, enamelled on glass, representing Shakespeare reading a Play to Queen Elizabeth and her Court. The merit of the execution of this work lay both in the general harmony of the whole, and also in the perfect success attained in the representation of the velvet and other materials of which the dresses were composed. The only fault was, that to be properly seen, the painting required the concentration of all the available light behind it, leaving the spectator in perfect obscurity.

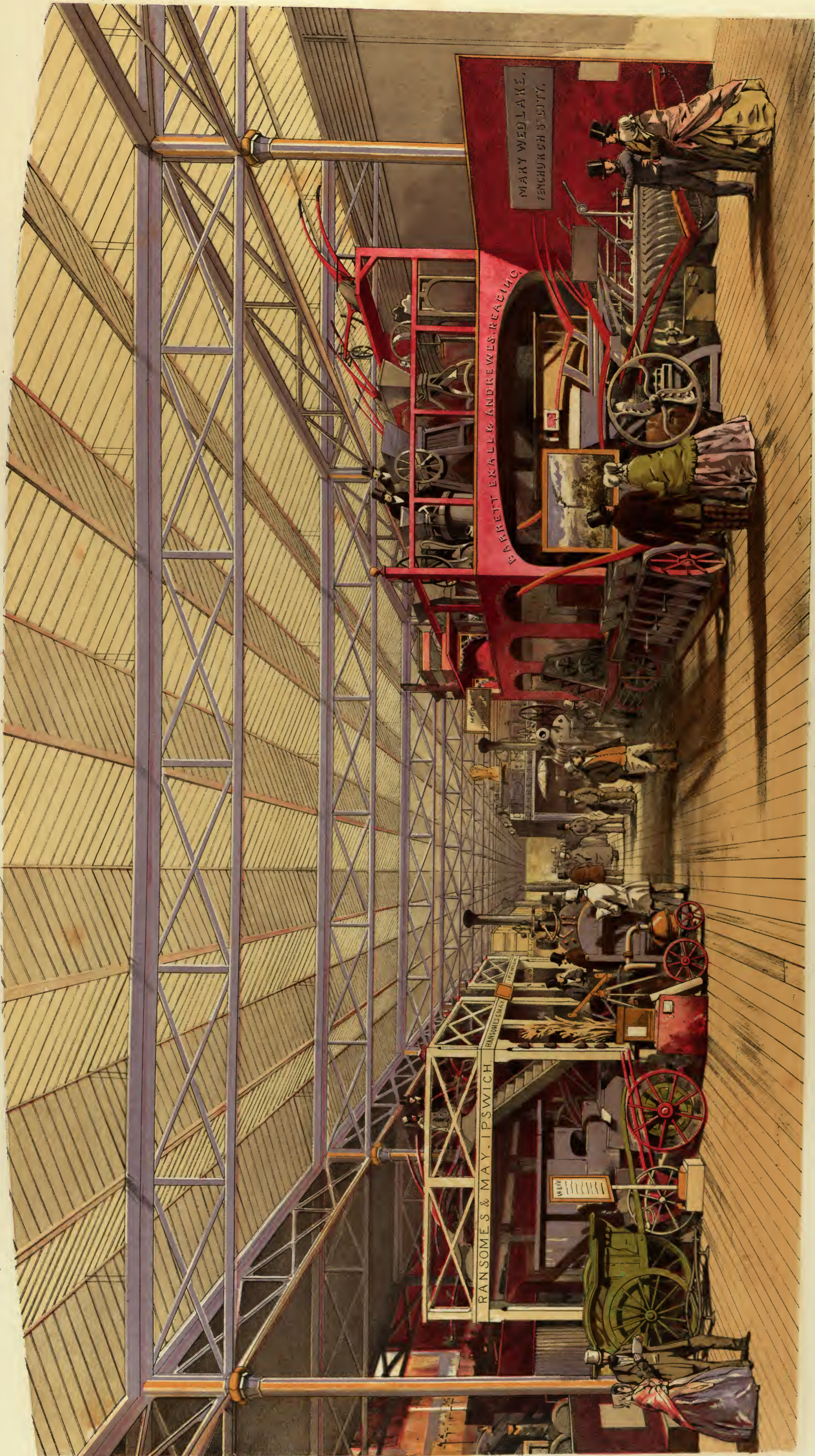
Messrs. Chance, Brothers, & Co., of Birmingham (the firm which alone produced, in addition to their ordinary business, the four hundred tons of glass, requisite for covering the whole surface of the Building), exhibited numerous specimens of ornamental work in different styles, among which should be noticed the decorations prepared for the Church at Leamington, which resembled those of the thirteenth century, without, however, descending to copies of them. Close to them was a window composed of national emblems, designed by Luke Limner, and executed by the St. Helen's Plate Glass Company, exhibited mostly with the view of showing to architects the extent to which they could colour plates of glass. The window was executed in a single piece, and was an illustration on the largest scale of the successful application of design by heat to glass.

It is impossible to enter into details respecting the whole of the numerous English and foreign exhibitors in this Class, who certainly, by their fine works, proclaimed a revival of the art—the modern character of which they did much to redeem; but on leaving the gallery, and entering the main avenue, we find ourselves immediately opposite the immense work of Bertini, of Milan, which requires some notice. In the Official Catalogue, it was called “Dante, and some of his Ideas.” Dante was made to occupy the centre of a large painted window, and was represented in one of his forlorn moods, as if he had just then passed the threshold of hell, and had himself relinquished “all hope”—or, as if he was composing in exile his laconic epitaph:

“Hic claudor Dantes, patriis extorris ab oris.”

Though there was much merit in this work, the fine effect produced was mainly attributable to the complete obscurity which surrounded the spectators. It had too much of the character of a painting about it, requiring thereby the use of very large pieces of coloured glass in its manufacture—many of which had been broken, and the fractures were very distinct in several parts.





(Engl.)

Agueda



AGRICULTURAL IMPLEMENTS.

AMONG the Agricultural Implements in the Great Exhibition were to be found numerous specimens of those which were used by our most advanced agriculturists, as well as some new appliances, for the first time introduced to the notice of the public. The Exhibition was no novelty to the agricultural implement makers, who have long been accustomed to periodical displays of this branch of mechanical adaptation, under the patronage of the Royal Agricultural Society: and they had but little to fear from the rivalry of foreign nations; for, although considerable merit was observable in the contributions from the United States of America and from Belgium, they all had one strong family likeness, that of being remarkably heavy, while the English manufacturers have ever had in view to reduce the weight, as much as they were able, without impairing the solidity and strength of the implements.

The most remarkable feature in the agricultural operations of the present day, is undoubtedly the rapid introduction and use of small portable steam engines for agricultural purposes, especially noticeable in connection with the combined thrashing, straw shaking and dressing machines, unknown until within the last two years, on account of the non-efficiency of "horse-power" application to the working of such apparatus. Machines of this description are now made so efficient, that with a six horse-power engine, a farmer may thrash in the open field, if required, two large stacks in a day, at considerably less cost per quarter than by any other means. Thrashing, separating the straw and the chaff from the grain, and dressing the grain itself, can now be performed all in one operation and with a considerable diminution of labour; and therefore these machines are becoming more and more appreciated by farmers, who are in earnest seeking after all such means as can be adopted to diminish the cost of production.

Although it is difficult to select from the number of curious looking machines, which were crowded into the space devoted to the display of Agricultural Implements, any special one more worthy of attention than another, yet it would seem an important omission if the various improvements shown to have been effected in the manufacture of that most ancient of all machines—the plough—were to be overlooked. Notwithstanding that Pliny considered the original machine used by the Egyptians, the Greeks, the Etruscans, and the Romans as perfect, and looked with contempt upon all efforts to improve its construction, experience has taught the farmer that even his own plough, combining the improvements of a Jefferson in America, a Duhamel de Monceau in France, an Arbutnot in England, and of many others in almost every country of the earth, is yet open to a charge of imperfection.

This was apparent when the trial of the ploughs exhibited took place before the Jury at Pusey: those which worked best in small depths were not those which gave the most satisfactory results when put to work at an extra depth. It appears, therefore, that it is to the form of the share and furrow-turner that most attention is now requisite, with a view to their adaptation to soils of varying tenacities and degrees of resistance. After the most severe tests, the two or four horse plough exhibited by Mr. William Busby showed its superiority over the others; it is right, however, to observe, that this exhibitor had applied to his plough the moveable nose-piece, invented by Messrs. Ransomes and May, the eminent firm of Ipswich, who are indefatigable in their attempts to bring to perfection every machine employed in agricultural pursuits. Moreover, the judges considered the working of the ploughs shown by Mr. Ball and Messrs. Howard very satisfactory.

Since the introduction of Sherwood's patent metal mills, which are well adapted for grinding agricultural produce, farmers are turning their attention to the advantage to be derived from grinding for themselves, instead of sending to the millers such materials as they require for their own use. Messrs. Ransomes and May, mentioned above, are the only makers of these mills, which carried off a prize at the Great Exhibition, and several others since then, at local Agricultural Shows, in various parts of the Kingdom.

The success which attended the trials of Mr. McCormick's Reaping Machine has convinced English farmers that it can be economically employed; it is therefore probable that, within a very short time, similar implements, or some improvement on the American invention will be very generally used throughout the country. In Agriculture, it appears that the machine will be as important as the spinning-jenny and power-loom in manufactures.

Steam-ploughing must be the next great step in agricultural operations, but at present there are no practical means of attaining the end in view.





St Mark

Sheffield & Hardware

(Proof)

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SHEFFIELD HARDWARE.

SHEFFIELD may well be termed the Metropolis of the manufacturers of articles in steel; in the particular department to which her productions are chiefly confined she stands pre-eminent, and many times were her sons gratified by hearing the well merited praise which the magnificent display of hardware called forth, lavished by the foreign visitors, upon the tasteful and well designed grates, the admirable cutlery, and the brilliant plated goods. "Your countrymen," said a French gentleman, "are proud of all this variety, this richness; I would fain exclaim '*what cheapness*;' but the English have now so long known the advantages of Free trade, that they forget to utter that cry with me. Would that it re-echoed from east to west, and from north to south in France, for if once our manufacturers could procure iron and steel at more reasonable prices, we should be able to do as well as you. O, that the French Government would not close its eyes to that which this very exhibition demonstrates so clearly—that nothing will be wanting to establish the superiority of our manufactures from that day, when Industry being released from the charge which presses so hardly upon her, under the colour of protection, she will be allowed to exercise her powers with full freedom, without submitting to grievous burdens which retard her progress, and without imposing any such herself."

In the beginning of the seventeenth century, Sheffield was little more than a large village; now it displays all the features of a manufacturing town of the first importance. The contrast between the town itself and the surrounding country is very great: the smoke arising from the numerous forges, steam-engines, and factories, gives a dingy mean appearance to the houses, while all around, the beautiful scenery is diversified by the handsome villas of the opulent merchants and manufacturers, and from a distant view the spectator conceives only that he is gazing upon a very lovely spot. And so it was with the gorgeous splendour which dazzled the visitor to the Palace of Industry; few could distinguish beneath it the ghastly misery which lay there gilded over and hidden. The Exhibition was glorious, but how much of that glory was shared by the workman, pale with sickness and grim with want? When admiring an exquisite piece of cutlery or a chastely carved design, how many thought of the dreariness of our manufacturing districts to those who are compelled to eke out their living there, where everything is dingy—the streets, commerce and morality,—where a thousand chimneys incessantly throw up their soot against the skies, to fall back, darken the atmosphere, and begrime the human wretchedness compelled to move in it,—where the brightest and most beautiful productions contrast strangely with the haggard and consumptive producers,—where the rich spinner weaves into his stuffs the hopes, affections and longings of the workman,—and where the ministers of religion preach no other gospel to the poor man than from that melancholy text, "In whatsoever state it has pleased God to call you, be ye therewith content."—Oh! this is a sad picture, and to those who are willing to gaze on it, it may teach many a useful lesson, and especially, it may induce us sometimes to consider how and by whom, and at what cost of human hopes and heart yearnings, the wonders we admire were produced.

The commercial importance of Sheffield industry is known in every part of the world where English goods penetrate, and it would be difficult to enumerate all the various articles manufactured in this busy town, made principally of steel, which were represented in the Hardware Department of the Great Exhibition. We may especially mention two of those firms whose stands are the most prominent in the accompanying plate, and who proved that the manufacture of drawing-room and other grates and fenders, and decorated stoves, is in a most promising condition in respect to advancement in tasteful design. Messrs. Stuart and Smith contributed specimens of Sylvester's patent grates, which were meritorious as for novelty of principle, design and workmanship. The distinguishing character of Sylvester's plan is that the combustion takes place on a metal plate which is not raised above the surface of the floor, thus obviating an objection very generally expressed against the grates of modern construction, which are placed so high as to leave the feet of the occupants of the room in a cold stratum of air. Messrs. Hoole and Robson's grates had less burnished surfaces than those just mentioned, and they deserved great credit for substituting for them castings in the state in which they leave the mould: these contrasted beautifully with the brass ornaments, and prevented the charge which was sometimes brought against Messrs. Stuart's productions, that they were too fine for use, from being applied to the goods of Messrs. Hoole and Robson.





Am. Mus.

Exhibition

Illustration by J. M. W. Turner, 1851

1851



HARDWARE.

THE space devoted to articles of Hardware in the Great Exhibition was occupied by an exceedingly miscellaneous collection, for it was found very difficult to limit the range of Class XXII to objects of an entirely distinct nature; for, on the one hand, it was intimately associated with Class I, as representing the results of human labour exercised upon mineral productions, and, on the other, in the cases of metallic sculpture, its identity with Class XXX rendered the task of defining the limits between ornamental art and fine art, by no means easy. When the Jurors commenced their scrutiny of the articles classed under the general head of Hardware, they accordingly laid down the following rules, which we will also take as our guide in bringing into notice the objects most deserving of attention, and which were selected as the most appropriate to form the subject of the accompanying plate: "The objects comprehended in Class XXII, may be divided into those intended to supply the necessary and absolute requirements of large industrial populations, and generally to minister to the conveniences of society; and those which, either partially or wholly are created to meet the demands of taste and refinement among the wealthier classes of the community."

It is a curious fact that the greater part of the articles commonly manufactured at Birmingham, are not the production of large factories, where extensive machinery has been erected at an enormous expenditure of capital. Nearly all the small wares are made by workmen who, each in his particular line, undertake to execute the orders which they have received from the agents in the town who are in correspondence with the great wholesale establishments which are to be met with in every part of the United Kingdom. In Birmingham there are numerous buildings containing a large number of rooms of various sizes, each of which is furnished with a lathe, benches, tools, and all the other requirements and conveniences as are suited to the various branches of manufacture for which the rooms are intended to be used: a steam-engine on the ground floor is connected by working shafts with the machinery placed in each workshop, and can when needed set the whole or any particular part in motion. When a workman receives an order which he calculates will take him a week or a month to execute, he hires for that period one or more of the apartments containing the conveniences which he requires, stipulating for the use of a certain amount of steam power. In this manner he realizes all the advantages which he would enjoy by the possession of a steam engine of his own, and as there is a great competition between the several owners of these buildings, the charge for the accommodation of a workman has been brought very low.

There are, however, many extensive establishments in Birmingham which employ a large number of workmen of their own, and which contributed some very fine specimens of their manufacture to the Exhibition. Messrs. Winfield's collection was remarkable for variety and novelty: their plain and ornamental tubes, which are applied in so many ways for domestic purposes, differed from all others in the manner in which they were produced; their application of glass in the form of blossoms, leaves and fruit, to stamped brass-foundry, and particularly to upholstery decorations, was highly artistic and original; but perhaps nothing was entitled to greater commendation than their patent metallic bedsteads, richly and elegantly ornamented. These bedsteads are fast superseding those of wood, and are so portable that the possessor of one of them may literally "take up his bed and walk." The finest display of metallic manufactures in the whole of this class was perhaps made by Messrs. Messenger and Sons, whose establishment is one of the oldest in the trade in Birmingham, having been in existence upwards of fifty years. These gentlemen recognised at an early period the importance of the union of art with manufactures, and it is to the skill of a Flaxman and a Chantrey that are due many of the beautifully designed objects which were produced in the workshops of Messrs. Messenger. On their stall were to be seen groups of the Queen and the Prince of Wales, in bronze and or-molu, beautifully modelled by John Bell, a bronze statuette of the Duke of Wellington on his charger, and a portion of a chandelier in bronze, designed by Grüner for the pavilion in the gardens of Buckingham palace, which was remarkable both for the quality of the metal and the high finish of the work.

Although not belonging to Class XXII, we must not omit to mention the collection of very beautiful papier-maché furniture exhibited by Messrs. Jennens and Bettridge, which the Artist has introduced into the view of the Hardware Department, with which it was in close proximity. Among the many inventions of modern times for diffusing the luxurious elegancies, and even the conveniences of life, there are few which have greater claims on our admiration than papier-maché, and its now very general application is the result of experiments made within the last fifteen or twenty years, and which are principally due, we believe, to Messrs. Jennens and Bettridge. Articles in papier-maché are manufactured in two different ways; by pasting paper in sheets upon models, and by pressing in dies, numerous sheets of paper reduced to a pulpy state. The former process produces articles of a better quality than the latter, but many causes conduce to render them very much more expensive.



3. 11. 1854

Furniture



Illustration of the Exhibition of 1854



FURNITURE.

It would have been difficult to select any department of the Great Exhibition which could compare with Class XXVI, as an evidence of our national prosperity. The contributions to this section included every species of decoration, for churches, for palaces and for private dwellings, upholstery and paper-hangings, japanned goods and papier-maché, and while exhibiting the taste and skill of the workman, they displayed no less distinctly the wealth and domestic refinement of those classes of the community for whose use, comfort or luxury the greater part of the articles were manufactured. Here, was a chair low, warm and soft, constructed so as to afford the largest possible amount of repose to the limbs of the ponderer, while his mind was actively engaged on his own state, or on the destiny of others, thus unquestionably materialising the idea of the poet who believed that nothing was so conducive to beautiful and true thought, as a fit place in which to think: there, was a *causeuse* temptingly opening its arms, and offering every facility for carrying on a nascent flirtation in its doubly-luxurious lap: on every side, in short, was some article of furniture, a beautifully decorated state bed, a brightly polished dining-room table suggesting the most convivial ideas, or a tastefully carved buffet, well meriting a close inspection. Still this magnificent display gave birth to one legitimate regret, that amidst all the ornamental works in furniture, collected at the Exhibition, there were to be found so few specimens of ordinary furniture for general use; for of course a great number of the articles having had unlimited labour lavished upon them, called for such extravagant prices as few have the means of paying, and everybody felt that it would be very desirable to expend some taste in the manufacture of those more ordinary objects which are daily used by the middle class of society.

Several of the beds united all the requisites of finished pieces of furniture; they were light and elegant, and certainly very attractive. Among the contributions of Messrs. Jackson and Graham was a sideboard of English oak in the *renaissance* style, the pilasters of which were formed by figures representing hunting and fishing, summer and autumn, and which was certainly one of the most admirable contributions of the kind in the class: it was hardly even surpassed by the Kenilworth Buffet, by Messrs. Cookes and Son, of Warwick, which was considered worthy of a place in the Fine Art Court, and ranked as a specimen of sculpture in wood. The origin of this latter piece of furniture, on which was carved the story of Amy Robsart and the Earl of Leicester, has been described as follows: "In the month of April, 1842, a colossal oak tree, which grew near Kenilworth Castle in Warwickshire, measuring about 11 feet in diameter, and containing about 600 cubic feet of wood, was levelled, and afterwards purchased by the exhibitors, who, at the period of Prince Albert's happy conception of a grand industrial competition, resolved upon creating from the fallen tree a monument upon which the skill and ingenuity of our native wood-carvers should be fairly developed. Impressed with this patriotic desire, and regardless of expense, anxiety and toil, the projectors of the Kenilworth Buffet, with commendable taste, devoted the tree, which for long ages had stood near the famous castle of Kenilworth, to recal to future times the memorable events that had transpired within its walls. Fiction with its most enticing charms contributed, poetry and romance, such as the genius of Sir Walter Scott could alone evoke, blended with history, offered materials for a work of art, such as few subjects could equal. Accordingly, the Kenilworth pageant of 1575, in honor of Queen Elizabeth's visit to the Earl of Leicester, so quaintly described by Laneham and Gascoigne, two attendants on the Queen in this 'Royal progress,' and so vividly reproduced by Scott, was resolved upon, and the result was before the world at the Exhibition of 1851."

Those who wish to recal to memory this rich and elaborate piece of carving will find the Elizabethan Buffet minutely described in the Official Catalogue, but there was one important feature connected with the beauty and accuracy of this production which deserves special notice. Mr. Walter Cooper introduced most satisfactorily the application of what sculptors call *pointing*, which had never before been successfully carried out in wood-carving: by this process the workman was enabled to copy the plaster models of the designer with far greater nicety, than could have been attained by any other means.

The contributions from the continent in this branch of industry were singularly rich and diversified, but an examination of the decorated furniture by our own manufacturers, established beyond contradiction the fact, that not only for truthfulness of execution, but in many instances for beauty of design and superior quality of the material they stood pre-eminent, when compared with foreign productions.





J. Waller

W. Waller

W. Waller



WOOLLENS.

THE importance attached to the woollen manufactures of this country, is proved by the stringency of the measures that were formerly taken by guilds of merchant tailors and woolstaplers, in directing its operations, and the earlier records on this subject, present a most disgraceful picture of the now exploded fallacies by which the restrictive policy of our legislators attempted to support certain trades. These exist no longer, and in the Crystal Palace the manufacturers of Great Britain exhibited to the gaze of all the assembled nations of the earth, our oldest and our most recently introduced fabrics; each one of which had its own peculiar excellencies, and for the production of which thousands of workmen are now employed, under an extended system, which has sprung from that freedom of thought and action, which has been the characteristic of the industrial communities of modern times, in contradistinction to the despicable exclusiveness of an epoch now happily for ever passed away.

We cannot, perhaps, do better than give an outline of the process by which a fleece is wrought into a piece of cloth, of which there were so many admirable specimens in the Woollen department of the Great Exhibition. After having been cleansed from marks and stains, the wool is put into the hands of the wool-comber, who with an iron-spiked comb, the invention of which is attributed to St. Blaise, draws out the fibres and brings them into a state fit for the spinner. The latter forms the wool into threads, which are more or less twisted, according to the manufacture for which they are designed: the more twisted forming *worsted*, the looser *yarn*. The kinds of stuff made wholly or partly of wool are extremely various, and it is perhaps impossible to surpass the English broad-cloth with respect either to beauty or utility. The threads in it are so concealed by a fine nap or down raised on the surface and curiously smoothed or glossed, that the fabric looks more like a rich texture of nature's forming than the work of a weaver. Wool, in common with other animal substances, takes a dye better than any vegetable matters, and the cloths are therefore made of every possible hue; but, in order to fit them for the dyer, it is necessary to free them from all foulness and greasiness, which is by no means an easy operation. It is effected by a process called *fulling*, in which the cloths are beaten by heavy mallets as they lie in water, with which a quantity of fuller's earth has been mixed, and which unites with the greasy matter and renders it soluble in water: the operation of fulling has the further effect of thickening the cloth and rendering it more firm and compact, by mixing the threads with each other, something in the manner of a felt.

In the annexed view of the Woollen department the artist has introduced the stall of Messrs. Brett, Brothers, and the case of Mr. J. T. Clay. Mr. Henry Brett was appointed a juror, and the firm was thereby disqualified from receiving any special mark of approval from the jury of Classes XII and XV, but we cannot pass over the goods they exhibited, which were principally adapted for general consumption in this country, and yet were suitable for the Colonies and the United States, without remarking the introduction which they made of a new fabric, for which there has since been a considerable demand. They called it the "Clouded or Wove Doeskin," and thus describe the process of manufacture. The yarns are first dyed the colour required, then put into hanks, and the part which is to retain the original colour placed in a block and closely screwed down, and the whole is then immersed in the dye vat;—the parts projecting beyond the block take the new colour required, and the two distinct colours thus produce the effect of a clouded doeskin.

The woollen trade of Great Britain was established in the reign of Edward the Third, in the year 1336, and has continued in the same districts where it appears to have been first located: the principal of which are the West of England, (Gloucestershire, Somersetshire and Wiltshire), which claim the precedence in many respects, and the West Riding of Yorkshire, where the manufactures carried on at each town have their own peculiar characteristics: thus, Leeds is remarkable for its woollen products; Bradford is celebrated for its *worsted* fabrics, introduced by the Flemish weavers, whom the cruel persecutions of the Duke of Alva in 1570 drove to seek for refuge in this country; and Halifax stands unrivalled in the artistic elements which characterise all its productions.

The revolving lighthouse in the Nave was exhibited by Messrs. Chance. To resist the prolonged action of the atmosphere, the glass was made of as hard and unalterable a nature as possible, but the exhibitors then could only accomplish this object at the expense of the colour of the glass, a difficulty which they have since overcome, and their efforts to obtain a glass of a perfectly colourless nature have been crowned with success. The compound lenses, made of a number of concentric rings, as used in the dioptric apparatus, were first suggested by Sir David Brewster, and the chief advantages which they present over the old system of reflectors are, greater effect from the same light, the use of an unalterable material, and a greater facility for producing varieties of revolving lights.





Crystal Palace

John C. Brown

(Engraved)



FLAX.

THE plants selected in Europe for the purpose of making thread and cloth from the fibres are chiefly Hemp and Flax. They both undergo the same general preparation before they are consigned to the weaver; but the former is of a stronger and coarser texture than the latter, and is commonly employed in the manufacture of canvas and cordage, while flax is used for articles of clothing.

Flax is an annual plant, with a green stem about two feet high, crowned with handsome blue flowers, which are succeeded by globular seed-vessels, containing ten flat oblong seeds of a brown colour, from which is expressed the linseed oil so extensively used in the arts, particularly for painting. The plant is suffered to grow until the seeds are ripe, and it is then plucked up by the hand, and laid on the ground to dry in little bundles, two and two obliquely across each other. Soon after this, these bundles are collected, deprived of their seed-vessels, and placed horizontally in shallow pools and ditches of stagnant water to rot. The purpose of this part of the process is to dissolve a mucilaginous matter, which holds the fibres together, and is a very disagreeable operation, as the smell arising from the flax while rotting is extremely offensive and prejudicial to the health. When the steeping is effected, the bundles are taken out and untied, and the flax is spread out upon a piece of clean smooth grass, which has been mown or fed off close, and there it is allowed to remain until the woody part becomes brittle: it is then beaten with mallets, which knock off the pieces of wood still adhering to the fibre, without breaking it, heckled, and so prepared by various other operations that the long fibres are got by themselves, clean and loose, in which state they are called *flax*; and the shorter and coarser fibres, separated during the process of combing, are called *tow*.

The operation of spinning, which the flax next undergoes, consists in drawing out, with the fingers, several of the fibres together, and twisting them. The result of this spinning is thread, which is more or less fine according to the dexterity of the manipulator, and the nature of the material. Some thread twisted more closely than the rest is kept for needle-work, but the greater part is made up in bundles, called linen-yarn, and committed to the weaver.

There are several varieties of flax cultivated, and in Mr. P. Claussen's collection which he contributed to the Great Exhibition, were to be found specimens of flax grown in England, France, Russia, and Holland. The English plant is considered to produce the best fibre, and the foreign the best linseed. Mr. Claussen has introduced many improvements in the "handling" of flax, and can so modify its substance as to make it susceptible of being spun by the usual cotton machinery: and this result has been obtained through microscopic researches into the structure of the flax plant, and the application of chemical knowledge to the improvement of old processes for preparing it for use. The ultimate result of these experiments can scarcely be foreseen, but it is to be hoped that soon some extensive trials in the cultivation of flax in this country will be made, for as a manufacturing material it would prove exceedingly valuable, and render us more independent of the United States, which supply us with nearly all the cotton used in our textile manufactures. Since the failure of the potato crop, Ireland and Scotland have been in a position to seize eagerly upon any new culture which promises moderate success, and since the repeal of the corn laws, many landowners in England have been urging their tenants to turn their attention to the culture of flax.

At a meeting of the British Association at Edinburgh in 1850, an able paper was read on this subject by the late Mr. G. R. Porter, Secretary to the Board of Trade, who said: "Hitherto we have in this country been greatly dependent upon our foreign importation for supplies of flax. While the law imposed restrictions upon the importation of grain for human food, there existed a kind of impediment in the way of increasing our home growth of articles for any purpose not of equal primary necessity. That impediment is now removed; and there can be no reason why our fields should not be henceforth used for the production of any article that promises an adequate profit to the farmer." The chief seat of flax manufactures in England is Barnsley; in Scotland, Dundee; and in Ireland, Belfast: the export of linen goods is already very considerable, but is certainly on the increase, as a large quantity of land is now sown with flax seed every year in Somersetshire, Lancashire, and other parts of the United Kingdom.

One of the prominent objects in the accompanying plate is the fountain, in artificial stone, exhibited by Mr. Seeley, and described as "suitable for a market place in a provincial town." We were not before aware that the inhabitants of our country towns were so utterly devoid of taste, as to render it necessary to design such ugly things to adorn their public squares: and we think that it was injudicious of the Royal Commissioners to deface the Exhibition of Industry of all Nations, with a huge object which only excited the well merited criticisms of those who had been accustomed to enjoy the skilfully designed fountains of Italy and France.



Joseph W. Munch

Chicago





FURS.

ALTHOUGH in the most barbarous ages men clothed themselves in furs, the same materials, under certain modifications, are, now that the world has attained a high degree of cultivation and civilization, considered among the most precious of garments. The earliest mention of skins is made in Scripture, where occur the words, "Unto Adam also, and to his wife, did the Lord God make coats of skins and clothed them." On those valuable sculptures lately sent to England from Assyria, which bring to light records of the manners and customs of a mighty nation, whose history might otherwise have remained buried in its original obscurity, men are portrayed in fur garments; the Persians, Greeks, and Romans were familiar with their use as articles of clothing and trophies of victory; and in our own country rich furs have often been the friendly offerings of princes to each other, and the tokens of grace and privilege to their favourites, high rank and distinction being marked according to the kinds worn.

In the accompanying Plate is represented the very extensive display of Furs which were contributed by Messrs. Nicholay and Son, the Court Furriers, to whom, besides, the Hudson Bay Company entrusted the produce of their territories in the Polar regions. Among the most interesting of the skins exhibited, may be remarked that of the Black Fox, valued at £50 each, and of which is composed the celebrated pelisse, belonging to the Emperor of Russia; manufactured and undressed specimens of the Fur Seal, resembling the richest velvet, and of the Beaver, which was in former years one of the Hudson Bay Company's most valuable productions; while along the front of the gallery were hung the skins of lions, bears, royal tigers, buffaloes, &c., &c., dressed to a beautiful softness, and adapted for carriage and sleigh wrappers, table-covers, and many other useful and ornamental purposes. Messrs. Nicholay exhibited in their collection a specimen of the Ornithorhynchus, a native of Australia, which appears to be the connecting link between bird and beast, having the bill and webfoot of the duck, and the body and claw of a beast. The skin resembles that of the otter, and seldom exceeds twelve inches in length. The male is furnished with two spurs on each hind leg, like the game-cock; the female lays eggs, which she hatches, and then suckles her young brood. Altogether, from the description given, which must be credited on account of the unimpeachable authority* on which it is based, this animal appears to be one of the most extraordinary in nature.

The Hudson Bay Company's annual importation of skins is sold by auction twice a year, in March and September, and these sales are attended by merchants from the most remote parts of the world. In the olden time, when the fur trade was carried on under the stringent regulations of the Skinners' Company, the skins were sold in a very singular manner, namely, by the candle. The following was the mode of proceeding: a small piece of wax taper was supported on a tripod, and placed on the long table, round which were collected the buyers; as soon as a lot was put up, the candle was lighted, the bidding commenced and continued until the taper burnt out, and as it fell down, the last bidder was declared the purchaser.

The class in which Furs were placed also included Feathers, and Messrs. Nicholay exhibited under a glass case a muff and boa, which excited much well-merited admiration. They were made of the down from the feathers that are used for state and military plumes, known as the Aigrette, and which are procured from a bird of the Heron species, called the Egret. The costly nature of the material is such, and its rarity so great, that three other sets only have been made during the present century; viz., for the Empress of Russia, for the Duchesse de Berri, and for Madame Adelaide, sister to the late King of the French.

The principal display of feathers, however, was by Messrs. Adcock and Co. Of the various kinds employed as plumes for head-dresses, the most important are those of the ostrich, which were exhibited in all the variety of forms in which they have been worn during the last fifty years. There was a fine collection of the feathers of the Birds of Paradise, among which some were dyed several different colours. The difficulty of this process in certain cases will be conceived, when it is considered that naturally the plumage of the Bird of Paradise is of a golden bright hue. Many of the feathers in this case were very scarce, and some of the most valuable were mounted in gold and silver.

The large astronomical telescope in the Nave, mounted on a cast-iron stand, nearly eleven feet high, was manufactured by Mr. A. Ross. The diameter of the object-glass was eleven and a half inches, and being provided with equatorial movements and other adjustments, was a fine specimen of the kind of instrument, which, with its minute and rather complicated machinery, is requisite for penetrating into the regions where the eye cannot travel unassisted. At the foot of this telescope were a number of other optical and philosophical apparatus, invented and manufactured by Mr. A. Ross.

* Sir H. Hallford.







MOVING MACHINERY.

IMAGINATION is as essentially necessary to the man of science as to the poet; all scientific objects are promoted by experiments, and these cannot be contrived without the aid of imagination: it must be stated hypothetically that such and such a combination produces a certain result, and then experience is nothing more than the realisation of that supposition. This faculty is the great spring of human activity and the principal source of human improvement; those who possess it can never be perfectly satisfied with their present condition, or with their past attainments, but are continually urged on to discover some untried enjoyment, or some ideal excellence. Once convinced of the importance of imagination, we never can contemplate the experiments of scientific men as a waste of time, or as the mere gratification of a worthless curiosity, but we will look upon them as the germs of those improvements, by which civilization, knowledge and morality may be more extensively diffused among the various nations of the world.

If, then, it be granted that imagination is essential to the inventions of scientific men, we will advance further and uphold the opinion that imagination may be of service also in teaching a useful lesson to those, for whose comfort or convenience human ingenuity has been exerted. Will the idea be stamped as utopian, that after the Almighty had crushed Adam under that awful anathema, "cursed is the ground for thy sake; in sorrow shalt thou eat of it all the days of thy life: in the sweat of thy face shalt thou eat bread, till thou return unto the ground," He should mercifully put it into man's own power to restore himself to his pristine happiness and excellence; and that when He planned the Redemption He should, with a view of accomplishing His own scheme, inspire one man with the spirit of science, another with the spirit of literature, another with the spirit of art, all contributing to build up the edifice of man's re-established perfection?

We believe that the inventions of men have a tendency to remove a great part of the curse which has tormented the world for nearly six thousand years. On every side we see the *effects* of that curse; we cannot, and we do not flatter ourselves that we are emancipated from its consequences, or that the punishment of Adam was a mere threat. On the contrary, where we find the curse, there we also find a fierce war waged by man against his acknowledged foe; where there is disease, we find the physician who has devoted his life to the discovery of antidotes: where there is famine, we find agricultural science labouring to increase the treasures of the soil: where the lightnings of heaven ravage the earth and destroy men's lives, there we see the long tapering conductors drawing off the electricity of the thunder cloud, so that the lightnings shall no longer prove destructive to man, and to the labour of his hands.

All the inventions of human ingenuity and skill, and the diffusion of general knowledge, may be looked upon as preparing the earth for that millennial era which is prophesied in the Revelations. But we need not seek further than the accompanying plate for an illustration of the idea, that the more we are able to diminish the labour of man, which God intended should be his chastisement, the further we remove the curse, and the nearer we approach to our original perfection. Take for instance Whitworth's Stand of Engine Tools: his peculiar genius has enabled him to effect such a convenient arrangement of the different parts of each, that his machines are almost self-acting, leaving nothing for the workman to do, except to fix his work and keep his tools sharp: consequently Mr. Whitworth can produce better work by comparatively raw hands than formerly could be done slowly by the most skilful workmen at very high wages. Then turn to Appold's Centrifugal Pump, which was an excellent example of the modern religion of mechanics,—making a small machine do a great deal of work by running it at great speed, thus saving a large outlay in the cost and size of the apparatus, and dispensing with a vast amount of human labour. Thus it is that we would look on all scientific men as instruments in the hands of Providence, working for the melioration of the human race; and we feel that we cannot better conclude, than by awarding our tribute of admiration to him who was the chief of this cohort, the originator of all the improvements in modern science; for it would be in vain to attempt to value the debt we owe to "the man whose genius discovered the means of multiplying our national resources to a degree perhaps even beyond his own stupendous powers of calculation; bringing the treasures of the abyss to the summit of the earth; giving the feeble arm of man the momentum of an Afrit; commanding manufactures to arise, as the rod of the prophet produced water in the desert; affording the means of dispensing with that 'time and tide which wait for no man;' and of sailing without that wind which defied the commands and threats of Xerxes himself."







MACHINERY.

THE immense display of machines of every description in the Great Exhibition, raised England to a proud position amongst the rival nations, as all her contributions stood pre-eminent for novelty, for usefulness, and for perfection of workmanship. Here, were marine steam-engines with four cylinders, of seven hundred horse power, which were said to be the largest yet made for vessels with screw-propellers: there, were new and gigantic locomotives with eight wheels, after Crampton's designs, which could run with perfect ease at the rate of seventy miles an hour, from the peculiarity of the position of the driving wheels, the axle of which was placed behind the firebox, an arrangement which gave great comparative steadiness of motion, especially at high speeds. In front, was reared the Great Hydraulic Press, which was remarkable not only for its size, but for the various contrivances for holding the chains by which the tubes of the Britannia Bridge were raised over the Menai Straits, that triumphal arch of modern engineering, under which a line of battle ship can pass with all her sails spread to the wind; while on every side, around these stupendous apparatus, thousands of little machines, which well deserved the epithet of beautiful, were hard at work, and ingeniously occupied in the manufacture of all sorts of useful articles, from knife handles to envelopes. In this Department, which might well be called the great park of machinery, a thoughtful observer could easily discover the distinctive character of the English nation, as regards political economy;—Englishmen employ their capital, but are ever seeking for mechanical means to work it.

According to the classification of Dr. Lyon Playfair, which was adopted by the Royal Commissioners, Machinery formed one of the four great divisions into which specimens of all the objects that could be exhibited, were distributed. This division was sub-divided into six classes:—1. Machines for direct use; 2. Manufacturing machines and tools; 3. Mechanical, civil engineering, and architectural contrivances; 4. Naval architecture and military engineering; 5. Agricultural and horticultural machines and implements; 6. Philosophical, musical, horological, acoustic, and miscellaneous instruments. This classification gave to the word "machinery" a far more extended application than it ever received before; but whether Dr. Playfair was right or wrong, in comprising under one head articles which until then had always been classed separately, the above arrangement was certainly exceedingly convenient for the immediate object which he had in view, and he therefore deserves infinite praise for having been bold enough to make the term machine so comprehensive, as to include every engine or implement which conveyed, in a modified form, the power, whether animal, or of artificial production, applied to it.

The artist has been as bold as Dr. Playfair, and has crowded into the accompanying plate such a multitude of heterogeneous apparatus, that we find it most difficult to determine which to select for remark. Foremost stands Nasmyth's steam hammer, which is too well known as having superseded the old tilt hammer to need that anything further should be said in its praise, as by it most heavy forgings are now made. The only curious fact in connexion with it, which may not be generally known, is that as far back as the year 1784, James Watt mentioned, in his specification delivered with his application for a patent, that the thought of using steam-power in connexion with a hammer had occurred to him; but he had never worked out the really useful mode of applying the hammer, that of attaching it to the piston-rod itself: and it is to the genius of one of our own times that is due the carrying out of this important step.

Amongst the numerous fire-engines and pumps, the water-ram, by Messrs. Easton and Amos, may be mentioned as an exceedingly simple and effective apparatus, by which many country mansions are now supplied with water; the only indispensable requisite being the existence of a small stream in the neighbourhood. Close by, stood the model of Maplin's light-house, founded on Mitchell's screw piles, the plan of which is admirable for sandy bottoms where piles are driven in with great difficulty. Lastly, we would wish to add one word of commendation to Messrs. Ransome and May's water-crane, intended to be used on railways, which was very ingeniously arranged with a rising hinge, so that it moved itself out of the way of the trains, when not required for filling the tender. But no description of the Machinery Court can give an adequate idea of the importance of its contents to those who did not visit it: a week's examination was insufficient to exhaust all its treasures; how then can we hope to do more than assist the memory to recall more vividly a scene which once beheld can never be forgotten?





Joseph Meach

Miners

(Joseph)

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MINERALS.

GREAT BRITAIN is the most favoured country in the world for the development of mineral industry, from two highly important conditions. In the first place, fuel, the indispensable agent in the treatment of metalliferous ores, and the most powerful element in the production of motive force, is found in abundance in several districts of England, Scotland, and Ireland; the value of some of these coal basins is greatly increased by the abundant distribution of the ores of iron among them, and each one so circumstanced has become the centre of a metalliferous district, where numerous works produce iron at a cost so trifling as to annihilate at once the chance of a successful competition by any other nation in the world. Secondly, the insular position of Great Britain is favourable to the cheap transmission of coal not only to those places on its own coasts where it is not found, but also to every part of the world.

Mines were worked in our own country by the Romans, but during the reign of the Saxon kings they were much neglected, and subsequently to this period they were chiefly "exploited" by Jews. In the reign of Queen Elizabeth encouragement was given to German miners, long celebrated for their skill, to settle in England, as their aid was found necessary to revive so important an art fallen into decay. A great stimulus was given to the working of mines by the introduction of the use of gunpowder for blasting; the ore being originally broken down with the "pick" only, which was a very laborious and often an almost impossible process: and the invention of the steam-engine was early rendered applicable to mining operations, and contributed to the present perfect state of the art. In the beginning of the eighteenth century the rich copper mines of Cornwall were first worked, and it is there that now the most powerful engines are employed, and the greatest encouragement given to all mechanical improvements.

The contributions of the five hundred exhibitors in this department afforded a very complete display of those objects that have reference to the production of metals of daily usage; but to the greater number of visitors the mineral court presented few attractions. Notwithstanding their immense utility, the raw materials are deprived of all that brilliancy and variety of colour which gratifies the eye, and it is only when their singular forms and colossal dimensions arrest the attention and excite surprise, that a research into the peculiar conditions of their production becomes a subject of interest.

Among the smaller specimens the illustration of lead mining contributed by Mr. Beaumont's mines at Allenheds, in Northumberland, must be specially remarked. They were arranged by Mr. Thomas Sopwith so as to illustrate the peculiar mineral products of the Durham and Northumberland mining districts, the processes of dressing the ores of lead for the market, and the progress of conversion into pig lead. A case collected by the working men of Nentsberry fully showed the metallic and some of the earthy minerals from the mines in which they were employed. The main feature was however the exemplification of lead dressing, every stage of the process being illustrated, from the ore as found in the lode to the production of commercial pig lead. The separation of silver from lead, by Mr. Pattinson's process, was shown by Mr. Pattinson himself, who exhibited a cake of silver weighing 3,000 ounces, and Mr. Beaumont contributed one still larger, the weight of it being 12,162 ounces.

The process alluded to consists in separating the crystallizing lead as it forms during a process of slow cooling, and is founded on the peculiar physical fact that silver remains fluid at a temperature at which lead solidifies. These crystals of lead, as they are formed, sink to the bottom of the vessel, and on being removed are found to contain much less silver than the original lead,—hence the last portion left in the crystallization pots is exceedingly rich in silver. By this process it is commercially profitable to separate three ounces of silver from the ton of lead, whereas by the old oxidizing process it was not found worth the cost of extraction, where the lead contained less than twenty ounces of silver to the ton.

The contributions of the Duke of Buccleuch contained some very beautiful specimens of the rarer carbonates of lead, and some of the arseniates. The Official Catalogue contains a very full description, by Col. Lloyd, of the system adopted for the purpose of obviating the noxious effects of the fumes passing from the shafts of the furnaces, and poisoning the neighbourhood, which appears to have been quite successful.

The specimens of lead ore exhibited by the Arkansas Mining Company contained a hundred and fifty ounces of silver to the ton, a degree of richness scarcely ever to be met with, and this gave a peculiar physical structure to the ore, which did not break up into cubes, as lead ore generally does, but into lamina. Close to these specimens was a section of the Devonshire lode from the Grassington Mines, and was very remarkable as showing the mode of metalliferous deposit in a mineral vein; lead usually occurring in beds of limestone. The cubes of galena (sulphuret of lead) from Laxey, in the Isle of Man, were certainly the largest ever produced.

On the tables in this Section of the Exhibition, were many remarkable illustrations of Cobalt, of Barytes, and the ores of Bismuth, Antimony, and Tungsten, besides numerous other specimens of lead ores from different localities in the north of England and of Wales, but it has been thought advisable to confine the attention to the objects more immediately brought under notice in the accompanying View of the Mineral Court.





Impresso

Liverpool

(Proof)



COTTON.

WHILST the inhabitant of the northern regions is obliged to exercise much labor and ingenuity in procuring his clothing from flax and hemp and the stalks of other plants, the native of the fruitful south enjoys the benefit of a material produced in greater abundance, and in a state requiring much less preparation before it is rendered fit for the manufacturer. This is Cotton, a filamentous down contained in the seed-pod of a family of plants called by Linnæus *Gossypium*.

This substance appears to have been imported into this country as far back as the year 1298, but it was exclusively used at that period for candle or lamp wicks. Whether it was known to possess those properties which render it so peculiarly suitable for articles of clothing is uncertain; and even many years after, it required the aid and enterprise of men of genius and perseverance to draw down upon it public attention. The manufacture of cotton, now the most important of all our branches of industry, does not date earlier than the 17th century, and for a long period it was carried on upon a very limited scale; the weavers for the most part working at their own homes, purchasing from time to time the materials upon which they worked, and then selling the produce to the dealers in the nearest market. It is not more than a hundred years ago that the Manchester merchants began regularly to employ the weavers, furnishing them with the requisite materials and paying them wages for their work.

The rapid extension of the cotton trade, which had increased so much as to export goods to a considerable amount, induced the ingenious John Wyatt to turn his attention to the advisability of improving the machinery used in the manufacture, which until his time had consisted of nothing more complicated than the wheel and spindle, every single thread requiring the undivided attention of one person; the consequence of which was, that it was impossible to obtain a sufficient quantity of the cotton twist to supply the demand of the weaver. However the manufactory established by Wyatt failed, and it was reserved for the genius of Sir Richard Arkwright and Samuel Crompton to perfect the original contrivance.

The fabrics made from cotton are probably more various and numerous than from any other material. They comprehend stuffs of all degrees of fineness, from the transparent muslin of a robe or a turban, to the thick plush and warm bed-quilt, and there are upwards of 320,000 men and women employed in the cotton factories of England, Scotland and Ireland, producing materials, uniting elegance and cheapness in an unusual degree, for clothing people of all ranks, from Russia to Guinea.

Many requirements are necessary to arrive at perfection in the art of calico-printing; chemistry, mechanism, and above all, taste must be brought into play, and there is perhaps no branch of industry that has made more demands upon the ingenuity of man, and has quickened his intelligence in a greater degree, than the art of printing colours upon woven fabrics. To produce a piece of printed cotton, even such as is seen used by the poorest of the people, the secrets of nature have been explored by the geologist and the botanist, the mysteries of science have been revealed to the chemist, and the mighty power of machinery has been developed by the greatest engineers the world has created. The duties of the chemist are perhaps the most important, for not only must he be acquainted with the nature of all dyeing materials and their effects when combined, but also he must study the nature of the vegetable fibres of the cloth, and the degree to which they will retain or combine with those drugs. One of his greatest difficulties is so to mix his colouring agents as to produce what is called a *fast* colour: this is a desideratum considered to be of very great importance in all the first establishments. In the Exhibition were displayed innumerable specimens of the dyes employed, showing the difference of their appearance and quality, when produced from different sources, and Messrs. Black, of Glasgow, in addition to a very beautiful collection of printed goods, prepared an elaborate series of specimens to illustrate nearly every style of calico-printing.

For a long period the cotton manufacture of France was greatly in advance of that of Great Britain, and it was not until 1836, when a School of Design was established at Somerset House, and taken under the direct control of the Board of Trade in 1848, that England was able to produce any printed calico which could at all compare with that of France as regards the display of taste in the colouring and designs. Schools, treating of art in its relation either to manufactures or to science, had existed in France for many years, supported partly by the state and partly by municipalities, and the advantages which resulted to the manufactures of that country in every department requiring the display of taste, particularly as exhibited in the silk manufactures of Lyons, induced the merchants and manufacturers of this country to secure similar advantages for England: we trust that the Department of Practical Art—that branch of the Board of Trade which is at the head of all the Schools of Design established throughout the United Kingdom, will not disappoint their expectations; under judicious management, a great deal may be accomplished, but we grant that the difficulty of accomplishing it quickly, is insuperable.





1861

Embroider

(Signed)

Painted by J. M. W. Turner



EXTERIOR. COALS, ETC.

GREAT and noble achievements are always of slow growth, and the Exhibition of the Works of Industry of all Nations was not an exception to that rule. To say that it did not arise out of the wants, necessities and aspirations of the present age, is to say that it was born out of season, and that its foundations had not been thoroughly and well laid, prior to the erection of the immense superstructure which sheltered the productions of all the nations of the earth: the Crystal Palace did not spring into existence like Minerva, fully grown, armed and accoutred from the head of Jupiter, but was the result of a full and complete perception of the innumerable advantages which were to be derived from the accomplishment of a proposition emanating from the mind of His Royal Highness Prince Albert, and it was to his zeal and talent in superintending and working out its details, and his thorough earnestness in its promotion under many serious discouragements, and under an active and well-planned opposition, that is due the success which attended the development of an idea originating with the Society of Arts, of which His Royal Highness had become President.

It can readily be imagined that the subject of a building suitable for the purposes in view, was one of early and anxious deliberation on the part of the Royal Commissioners; and of the innumerable and complex difficulties which they had to overcome, this must assuredly have been one of the most insurmountable. Great as was the difficulty, however, it was requisite to grapple with it: and the Committee appointed to act in all matters relating to the building, issued a document which invited all the architectural talent in the world to provide designs for competition in the great work. This document called forth designs from two hundred and thirty-three competitors, thirty eight of which were contributed by foreigners, and the rest by residents in England, Scotland and Ireland. The Committee did not bind themselves to accept any one of these designs, and found that although many of them were remarkable for elaboration of thought and elegance of execution, they all failed to combine the many requisites which various considerations rendered essential. Under these circumstances the Committee prepared a design of their own, availing themselves of the suggestions contained in several of the plans contributed for competition, and having submitted it to the Royal Commissioners, it was adopted and they were authorised to proceed with the necessary drawings and specifications.

Fierce war was, however, waged against the proposed structure outside the walls of the Commission room: the time of both houses of legislature was consumed night after night in preposterous discussions, until at length worsted there by overwhelming majorities, foiled in the courts of law, and covered with ridicule everywhere, this discreditable opposition died a natural death, and in disgusting all reasonable men with its factiousness, rendered probably no little service to the cause it aimed at undermining. Then it was, that Mr. Joseph Paxton, (since knighted) known as a practical botanist and gardener to the Duke of Devonshire, was quietly engaged at Chatsworth in elaborating plans for a building destined in a greater degree to elicit public approval, and singular to say, he succeeded against the united talents of three of the most eminent engineers, and three of the most remarkable architects of the country!

Sir Joseph Paxton has thus described his labours: "Gigantic as the building was, it was conceived and framed by him in a small space of time. He need not, however, state that it was not done without a great deal of forethought, aided by the experience he had in constructing other great buildings. . . . He asked the Executive Committee whether they were so far committed to the plans, as to be precluded from receiving another; the reply was, 'certainly not.' This was on Friday the 11th of June. From London he went to the Menai Straits to see the third tube of the Britannia Bridge placed, and on his return to Derby, he had to attend to some business in the board-room, during which, however, his whole mind was devoted to his project; and whilst the business proceeded, he sketched his design upon a large sheet of blotting-paper. . . . He sat up all night until he had worked it out to his own satisfaction, and by the aid of his friend, Mr. Barlow, he was enabled to complete the whole of the plans by the Saturday following, on which day he left Rowsley for London." The public have long known what followed: Sir Joseph Paxton's glazed Palace was eventually chosen unanimously not only by the Building Committee, but by the Royal Commission.

Within the space at the western end, outside the building, were gathered a collection of such things as could not be well placed in the building. Large masses of coal, cement and concrete, and several examples of the Welsh, Cornish, Scotch and Irish slates and flags, were exhibited on the south side: while on the north, were several atmospheric apparatus for recording meteorological observations, admiralty anchors, and granite columns and obelisks. The object which attracted most admiration was placed at some distance outside the western end of the building: there, Richard Cœur de Lion was grasping his uplifted sword with energy and determination. In this bronze statue by Baron Marochetti, the figure, expression and attitude of the rider are grand and commanding, but the horse, though its head is animated, is defective in its hinder quarters, and appears quite unequal to bear its lofty and important burden.





7 Nov

The British Museum

Printed





1851



CLOSING CEREMONY.

On the 15th October 1851, the Exhibition of the Industry of all Nations was finally brought to an end. After more than five months of glorious existence, after having been inspected and enjoyed by above six million visitors, who flocked to the Metropolis of England from every quarter of the globe, the Royal Commissioners decreed that the great work was accomplished, and that it was time to close the splendid and gorgeous arena, where twenty-six different nations had displayed their various productions to compete in peaceful rivalry for the prizes to be awarded to all meritorious contributions, by men of the most exalted rank, and of the most eminent reputations in statesmanship, in science, in literature, in manufactures, in commerce, and in the fine arts, from all parts of the world. Then it was that Viscount Canning, who had acted as President of the Council of Chairman of the Juries, submitted to His Royal Highness Prince Albert and the other Commissioners, the principle on which the numerous awards had been made, and which had only been adopted after the most mature deliberation, as in no department of the vast undertaking had there been greater difficulties to overcome.

Everybody knew that the Exhibition had been an "immense success;" that so far from entailing a call on the Government for pecuniary assistance, a large surplus was in the hands of the Commissioners: everybody had experienced great personal pleasure and profit during an examination of the collections of machines, manufactures or fine art, and felt deeply how useful and interesting, and at the same time, how elevating the spectacle had been to the multitudes who came to study or to admire: everybody had felt it so obligatory to go and see for himself, to gain a knowledge of things of which he was ignorant, to admire in all their perfection, productions with which he was well acquainted, and to compare them with those of other nations, and then to feel that experience had given him a right to praise their excellent points and to decry their deficiencies, and so universal was the affirmative answer to the great question of the day, "Have you been to the Exhibition?" that it became almost possible to point to the solitary individual who would remain blind to the advantages of the undertaking, however patent they might be made to him, and who refused to look upon the whole enterprise in any other light but that of a "vast humbug."

It was when the Palace of Industry was to be closed that men turned to the question of how these various contributions which had been so long displayed for their improvement and their gratification, were to be distinguished from one another, how the world was to learn the grounds on which the productions of one nation were superior to those of another. From the 1st of May to the 15th of October, a period of twenty-three weeks, during which the Exhibition remained open, the Queen accompanied by H. R. H. Prince Albert, paid thirty-five visits to the different departments, and carefully examined every object of interest and beauty contained within the crystal walls. The Exhibitors appreciated Her Majesty's kindness, and as far as personal feeling might extend, they probably would have been satisfied with the honour, and treasured up for their own gratification, the expressions of approval and admiration which fell from her lips. But this was insufficient for the world at large, and while it was gazing in wonder and delight, a body of world-renowned men devoted themselves to the thankless and arduous task of delivering judgment upon at least a million articles.

The difficulties which at first sight appeared to them insurmountable, were overcome, and certainly if any accidental omissions did occur, they could not be attributed to want of care or diligence on the part of the Jurors. With a few exceptions their decisions gave great satisfaction, and the Exhibition closed with a harmony as perfect as had previously prevailed both within and without its walls, and which cannot end with the event which produced it. "Let us," in the words of H. R. H. Prince Albert, on that day when he saw the undertaking which his own genius had so brilliantly carried out, brought to a happy close, "receive this harmony as an auspicious omen for the future; and while we return our humble and hearty thanks to Almighty God for the blessing He has vouchsafed to our labours, let us all earnestly pray that that Divine Providence which has so benignantly watched over and shielded this illustration of nature's productions, conceived by human intellect and fashioned by human skill, may still protect us, and may grant that this interchange of knowledge, resulting from the meeting of enlightened people in friendly rivalry, may be dispersed far and wide over distant lands; and thus by shewing our mutual dependance upon each other, be a happy means of promoting unity among nations, and peace and goodwill among the various races of mankind."













