

so fit for the day as love making, and all young things, from babies to goslings, are in season, and the faces of the sick are sadder than yesterday, and the sight of a little lame child makes the tears rush to the eyes—and that death should be here in the very bursting and fullness of life, is more than ever a dread and a mystery.—*The Nation*.

[From our Foreign Correspondent.]

THE PARIS EXPOSITION—AS IT OPENED.

PARIS, April, 2, 1867.

AN EMPEROR ON EXHIBITION.

In accordance with the original determination the formal opening of the Great Exhibition took place at P. M. The unintermitted labors of all those concerned in the matter had succeeded in bringing a fair show of order out of the chaos which previously reigned and still exists, to a considerable extent, and the event was not such a farce as many had predicted it must be. Wisely, however, the more imposing ceremony was deferred till a later date, probably the day on which the prizes will be awarded to the exhibitors; that which took place yesterday being of the simplest character. The weather was most propitious, and the thoroughfares along which the imperial party were to pass, were densely filled with people though it seemed to me there was little to reward them for their trouble, as there was no military display, except of course the guards stationed along the route (a sight too familiar in Paris to attract any attention) and as the Emperor does not at any time seclude himself from the public, it is hard to see what was the attraction on this occasion. At all events, the crowd was not compelled to wait beyond the time appointed, for promptly at the hour the Emperor and Empress with their suite entered the Grande Porte and were received by the Commissioners. The price of admission to the public was fixed at 20 francs, and many availed themselves of the opportunity to witness the ceremony. Whether they were repaid or not, each must judge for himself, but as none were allowed to walk about, but when admitted were confined to a single locality, and as the view from any one point is extremely limited, it is certain that as far as the sight of the Imperial party was concerned, the enjoyment was exceedingly brief. On entering the building, the party ascended the stairs to the raised promenade in the center of the outer or machinery gallery, and beginning at the French side made the tour of the building, and were received with cheers as they passed along. Descending from this they passed through portions of the fine arts and other galleries, and at various points were saluted by the Commissioners from the different countries, and the jurors, who were arranged in groups at different portions of the building. This was the whole of the ceremony, and at the close of it the party drove off by the same entrance at which they had arrived. The avenue from the entrance of the park to that of the building was covered over with the rich Imperial green cloth, gold flies hung from a row of masts on each side, from the top of which waved banners of many colors, presenting a very gay appearance.

Most of the machinery was in operation, steam having been got up for the first time in the English department on Sunday, and altogether the affair was a tolerable success. To day the Exhibition is open to the public at 5 francs admission which it is understood will be the price during this week, after which it will be reduced to 1 franc.

STATE OF THE AMERICAN DEPARTMENT.

Except in the machinery department, which must be nearly complete, it would seem that hardly more than half the articles are in place. The American department is particularly empty, except in the picture gallery. This latter bids fair to the most creditable portion of the Exhibition for us. There are Church's Niagara, Weir's Casting of a Parrot Gun, and Bierstadt's Rocky Mountains, besides a number of other good pictures; but of course some pieces of inferior merit detract from the excellence of the collection. As a whole, the display of paintings promises to be one of unusual interest. In the machinery department the Americans are also rather behind hand. There is a Corliss engine just beginning to be erected, which will doubtless do us credit when it is in operation, a good display of tools by Messrs. Wm. Sellers & Co., and Messrs. Bement & Dougherty and others, and a number of pumps and miscellaneous machines, but as far as I have observed nothing is yet in operation. The locomotive sent by the Grant Locomotive Works, Paterson, is placed in the United States Annex outside of the main building and attracts a great deal of attention from its extraordinary appearance, the boiler being cased with German silver instead of the usual Russia iron, and the chimney made of the same material. It is to be regretted that the makers saw fit to send it in this fashion, as our locomotives are already showy enough without any additional embellishment, and no doubt the real merits of the machine will not be as carefully studied by the majority as if the engine came in a more business-like dress. For those, however, who will examine it, there is nothing to be ashamed of in this engine, and in many points it undoubtedly excels any locomotive in the Exhibition, though I fear that will not be the general verdict. The same remark that I have made with regard to this engine applies to almost all the other American machinery exhibited. Fancy painting seems to be thought a necessary qualification for an exhibited article, while all the foreign machinery is painted in perfectly plain colors; generally lead color or some similar hue; and there can be no doubt that the effect is much more pleasing. Our best makers, however, are an exception to the rule, and show the good taste which we ought to expect from them.

In the other American departments there is as yet almost

nothing. Tiffany exhibits a case of very chaste silver plate, with a model of the Vanderbilt also in silver and very neatly done. There is a good display of samples of petroleum oils by Pease, of Buffalo, and some pianos and other articles which are at present covered up; but aside from these there is only emptiness, though no doubt we shall have a better account to give of ourselves shortly. The Norwegian and Swedish department appears to be as nearly complete as any, and presents a very handsome appearance. There is, naturally enough, great difference in the taste with which the departments of the various nations are decorated, and neither ours nor the British will take the first rank in this respect.

The grounds are rapidly progressing toward completion, and now need as much as anything, a week or two of warm sunshine to make them exceedingly beautiful. The amount of work that has been accomplished is an example of the expedition with which the French can carry on such undertakings. On the 25th of Sept. 1865, the Champs de Mars, then a bare parade ground, was delivered over to the Commissioners. On the 3d of April 1866 the first column of the iron building was raised, and just one year from that date the exhibition is opened. SLADE.

An Old "Black Country" Town.

Wednesbury is one of the most important links in the clustering chain of towns and villages, familiarly termed the "Black Country," and is associated alike with the strange traditions and varied industries of this remarkable district. In the Domesday Book it is written *Wodensborough*, a name unquestionably derived from the Saxon god Woden, and it is reasonably conjectured that, in more remote times, it was the site of a Druid temple. In the year 916 the fair Princess Ethelfleda, daughter of King Alfred, built and fortified a castle here, to ward off the troublesome Danes, one of whose valiant "sea kings" cast ever and anon a jealous eye towards the kingdom of Mercia. Early in the twelfth century a church was erected upon the crumbling foundations of Ethelfleda's ancient castle, and henceforth the town began to acquire some degree of importance. Villains and borderers from the surrounding plain found here a market for the produce of their carncates, and proud thanes began to discover and turn to profit the hidden treasures of their broad acres—coal and lime, and ore—those wondrous weapons with which civilization has subdued the world. There is no record to prove when the development of the minerals here commenced, but Wednesbury is, undoubtedly, the first place in the district, if not in the entire Midland coal-field, where, in Leland's quaint phraseology, "men did dig for scoles." As early as the year 1315, Bradeswall, a small hamlet near Wednesbury, was noted for its "coal pits," and appears to have been almost entirely populated by primitive miners. Leland and Camden, in the account of their "surveys," both bear testimony to the increasing development of the coal mining of Wednesbury during the sixteenth century. The latter quaintly expresses his doubt about the propriety of disturbing this mineral wealth. "Wednesbury," he writes, "hath coles digged out of the earth and mines of iron, but whether to their commodity or hindrance, I leave to the inhabitants who better understand it." In the days of Queen Bess the smelting of iron commenced in the neighborhood, but the blast furnaces were unable to produce more than fifteen or twenty tons of iron each per week. They were erected near a stream of water, in a part of the parish known as Broadwaters, and huge water-wheels were made to work the blast bellows. The smelting was all done by means of charcoal, and the wood "two miles in length by one in breadth," referred to in Domesday Book, was soon stripped of every "gnarled and knotted oak," to supply the requisite fuel. Then came Fuller's lament about the loss of British timber, caused by the ironworks which were spreading all over the kingdom. Fuller was a true poet, and he saw more beauty in sylvan dells and shady forest bowers than the iron trade was ever likely to afford. His lament reached the ears of Parliament, and a Government interference stopped the supplies of wood, and threatened for a time the extinction of Britain's iron trade. In this dilemma up rose Dud Dudley, who, after much persecution and loss, proved the possibility of using with advantage coal as a fuel for iron making, and from that time the trade of the district has added, year by year, to its wonderful proportions.

At the time of the rebellion Wednesbury was a town of respectable importance. Its church, thrice re-built, was considerably beautified within and without. The little town beneath was busy with industrial life. Potters, nailers, delvers, weavers, forgers, and bend-ware makers, were, even then, laying the foundation of its modern prosperity, and setting no mean example of skill in handicraft.

Another century rolled around, and steam power began to be applied to the fast increasing industries of Wednesbury. The first attempt to construct a colliery engine was made by Capt. Savary, in 1739, and, like all other "first attempts," it failed. But as succeeding efforts were put forth, and the difficulties were one by one surmounted, a great extension of enterprise took place, and a large population was attracted to the town. The character of these industrial inhabitants about the middle of the last century gave to the town an unenviable notoriety. All sorts of brutal pastimes were indulged in. Superstition was rampant among the toilers of that day, especially among the colliers, who saw in every chamber of the mine a gnome or a hobgoblin. This condition of affairs continued in a milder form until far into the present century, and the artisans of Wednesbury were not unfaithfully portrayed by Mr. Disraeli in "Sybil," about thirty years ago. About that time they commenced to throw aside the brutality and ignorance which at once uprooted their morals and fettered their skill, and every year since then has revealed a sure and steady advancement in their intelligence and ingenuity, and in the

consequent prosperity and importance of the town. Modern Wednesbury contains some 20,000 inhabitants, having nearly quadrupled its population within the past half century. The total number of artisans engaged in the skilled mechanical trades of Wednesbury exceeds 5,000.—*The Engineer*.

Cabinet Portraits Amid Snow and Ice Scenery.

We have recently noticed the admirable winter effects obtained by Mr. Notman, not only in pictorial photographic compositions, but in the backgrounds and accessories of his photographic portraits. A selection of cabinet portraits we received a day or two ago furnishes us with further variety of effect of this kind. We have here figures—ladies and gentlemen—skating in every variety of position and action belonging to this graceful exercise. Some are apparently gently gliding over the ice; others suggest the action of pulling up and arresting extreme velocity; whilst others are apparently flying along at a tremendous pace, poised on one leg, the other being raised ready to descend and give another forcible stroke. A lady, in a charming short-skirted skating costume, just raising one foot while she glides along on the other, is exceedingly graceful. In all these, the snowy background and the perfect effect of ice, secured in the studio, are most wonderful. The figures are partially reflected in the ice, the reflections broken, however, by the cracks or lines, or fissures, cut in every direction by the skates in the ice, and by the snow blown about here and there. Other figures are walking in the snow-covered scenes, their feet sinking deep in the snow; others, wearing huge snow shoes, tread lightly on the surface; others are breasting a pitiless snow storm, which, descending in heavy flakes, seems to half obscure the picture. The variety of winter costume is admirably suited to enhance pictorial effect and add interest to the photographs.

Much curiosity has been expressed as to the mode in which many of the effects have been produced with so much of nature and so little effect of contrivance. And here we find another illustration of an apothegm we never fail, when occasion serves, to press on the attention of our readers; namely, that excellence is due to the man rather than the method; that personal skill is of even more value than perfect formula. The best materials and the best processes are undoubtedly of the utmost value in securing good work; skill, judgment and taste in applying them are not less important.

Mr. Notman says; "To produce the effect of fallen snow, I have tried many ways, such as carded wool, white furs—that from the Arctic fox, for instance—but latterly salt, which I find by far the best, as you can throw it on and about stones, rocks, etc.; and it so easily takes any desired form—such as a drift. When thrown upon the figure, it adheres to the cloth; in fact, as a representative of snow, it leaves nothing to be desired.

"To represent falling snow: after the negative is dried and varnished, I take some Chinese white and mix it with water to the consistency that experience alone can dictate as best suited; put it into a vial, introduce one of those perfume blowers, and blow into the air a shower of the liquid Chinese white, and, as it falls, catch as much of it as is desirable on the varnished side of the negative: by judiciously holding the negative, you can so direct it as to give the effect of a slant to the falling snow.

"To represent ice, I use sheet zinc, over which I have polished plate glass. At first I was in hope that zinc of itself would be sufficient, but a short trial convinced me that the zinc required protection from the action of the salt, which I use to represent the snow on the banks at the side."—*Photographic News*.

A New Mineral from Borneo.

This mineral is found mixed with the native platinum brought from Borneo. It forms small grains or globules of a dark black-gray color, and of considerable luster. Many of these grains show brilliant crystalline facets, which are the faces of regular octahedra. The new mineral is very hard and brittle. Its powder is dark gray. Its density exceeds 6, according to an approximate determination. When heated it decrepitates like galena; it does not fuse before the blowpipe, but diffuses a strong odor of sulphurous acid, and then of osmic acid. It is not attacked by aqua regia, nor by bisulphate of potash. Fused in a silver crucible with hydrate of potash and nitre, it dissolves to a green mass. After cooling, the mass is brown, and it dissolves in water with a magnificent orange color. The solution has the odor of osmic acid, and nitric acid produces in it a black precipitate. From this it may be concluded that the new mineral contains as its principal elements osmium and ruthenium. It also contains sulphur. To estimate the latter I heated the mineral to redness in a current of hydrogen until no more sulphuretted hydrogen was disengaged. The residue was exhausted many times by aqua regia; there remained metallic ruthenium. A portion of this metal was estimated in the orange solution. This was evaporated, then neutralized by ammonia and brought to dryness, and the residue calcined in a covered crucible in an atmosphere of carbonate of ammonia. There remained metallic ruthenium. The osmium which volatilized was determined by difference. From this analysis the new mineral contains—

Sulphur	31.79
Ruthenium	65.18
Osmium	3.03

100.00

These numbers appear to show that the mineral is sulphide of ruthenium, Ru_2S_3 , twelve molecules of which are associated with one molecule of sulphide of osmium, OsS_2 .—*P. Wöhler, in Chemical News*.

GLYCERIN affords an excellent coating for the interior of plaster molds.