



**Geology.**—The Geological Department in the Crystal Palace is now open; it is in a small room in the south east corner—entrances from the Machine Room. We do not know why so much delay was experienced in the completion and opening of this branch of the Exhibition; the reasons, no doubt, are good. If the value of this department were measured by its extent, it would be estimated at a very low figure, as it is embraced within a few feet square, but in one single small case, there is enough of gold to purchase most of the machinery in the Exhibition. Gold is here to be seen in coins, in blocks and bars, in lumps pure but water worn; in beautiful volcanic feathers mixed with quartz, dust in numerous vials, and scattered in glittering grains; all giving evidence of those treasures in our new dominions on the Pacific, which have allured so many thousands from their old homes and parents, to establish new and powerful States beyond the Rocky Mountains. This case of gold, as is quite natural, is continually surrounded by a group of wondering admirers, but there are other cases possessing more interest to the man of science who reads the history of our earth in the stony language of ganoid, placoid, cycloid, and ichthyosaurus.

There are some beautiful specimens of ammonites obtusus from the aolitic system of England in one case, and in another we have the evidence of a time when volcanic agencies were busy in the now quiet bosom of Maryland. From every State, we think, there are specimens of its minerals, such as copper and silver from Lake Superior; lead from Illinois and Wisconsin; iron from Missouri and Ohio; Cannel coal from Virginia; the famous oil stones of Arkansas; Alabama marble; chrome and coal from Maryland; anthracite coal and iron from Pennsylvania; copper and iron ore from New York; iron from Massachusetts; brass from Connecticut, and mica from Vermont and New Hampshire. The specimens are choice selections, and convey a most excellent idea of the richness and varied mineral wealth of our country. The United States of America are richer in mineral resources than any other country of the same extent in the world. We are positive, as we have heretofore asserted on more than one occasion, that our country, in every respect, is soon destined to be the most powerful nation in the world; it is, indeed, second to none now—but soon it will be "the first." Let every visitor examine the Geological department with care and a desire to profit. To the Superintendent let us give a word of advice: label your cases with more care, for instruction—especially the specimens from Germany. If a few words of explanation were added to each name, the majority of visitors would derive an additional benefit to the mere feasting of eyes.

**Straightening Railroad Iron.**—A very valuable machine for straightening railroad iron is exhibited at the south end of the Machine Room, by George Williston & Co., of Brunswick, Me. Its object is for straightening curved railroad iron, as it lies upon the track, by which no less than seven-eighths of the labor is saved from the old method for this purpose. Of this we have no doubt from the nature of its operation, viz.—screw pressure and a straightening bar.

**American Wire.**—In many branches of iron manufacture, our country has advanced with rapid strides, and now maintains a distinguished position; this is especially the case with the manufacture of iron wire. There are some packages of wire on a table near the middle of the Machine Arcade, on the east side, which deserve more than a passing glance from every visitor. They were manufactured at the Trenton Iron Works, Trenton, N. J. In quality they are unsurpassed, and in variety they show the perfection of machinery used in their manufacture, and the ductility of the metal employed. There are some specimens, we should judge,

about half an inch in diameter, while there are others so fine and beautiful, that they resemble silver hairs. In one package of 2 lbs. there are 6000 yards; and in another package of one pound 12 oz., there are 4000 yards—or 143½ yards in a single ounce of iron. We do not know what iron this wire is made from, but it must be excellent. These works supply the wire now used for the new suspension bridge over the Niagara river, below the Falls—the engineer of which is John A. Roebling, of the works where the wire is made.

**Imitation of Russian Sheet Iron.**—Above the wire from Trenton, N. J., are some fine samples of American sheet iron manufactured at the McKeesport Iron Works, Allegheny Co., Pa., by the patent process of Messrs. Wood.—This sheet iron is good, but not to be compared to the real Russian. The improvement which has been made by the Messrs. Wood is an evidence that other improvements can be made in our country, and it may be reserved for the McKeesport Iron Works, to come up in every respect to the genuine Russian. It is very sin-

gular, that although the discovery of the Russian process is said to be known to different persons in our country, still no article has been manufactured to prove the full truth of such allegations. In our list of patents last week, one was for machinery—planished rollers—to give sheet iron the mottled appearance of the Russian; whether it will do so or not, we cannot tell; we can only say, from the samples we have seen, that a great stride has yet to be made before any of our manufactures will rival the original.

#### FRENCH BRONZE PITCHERS.



These illustrated Pitchers are from the establishment of M. Villemens, of Paris, worker in bronze, and manufacturer of church ornaments; the latter branch of business, especially, being largely carried on by this house. At his extensive show rooms in Paris, there exist a vast va-

riety of objects, exhibiting, more or less, taste in composition, and ingenuity of workmanship; these are principally executed in bronze, and in brass, adapted as well for the embellishment of the private dwelling as for purposes of ecclesiastical use and decoration,—statues, vases,

chandeliers, candelabra, delicate rail-work, &c. The three bronze vases and dish engraved are distinguished by beauty of outline and elaborate ornament, approaching very closely to the best antiques. In the manufacture of such articles the French are pre-eminent.

**Inventors' Meeting.**—As stated by us last week, a number of inventors having articles on exhibition at the Crystal Palace, have commenced the organization of an association named "The National Inventors' Union." They held four sessions, Mr. Clayton, of Va., in the chair, and passed the following resolutions:—

Resolved, That we, the inventors of the United States, do form ourselves into an Inventors' Union, to be known as the "National Union of the United States," inventors only entitled to membership. Honorary membership may be conferred on others by a vote of Society.

Resolved, That the objects of the Union shall be to assist each other by defining our rights and maintaining them; and, secondly, by righting our wrongs, by seeking redress from our unjust grievances.

Resolved, That as an original idea is transcendantly more difficult to invent than to improve thereon, we mutually pledge ourselves to protect original inventors in their inventions, and that we will strive to obtain a more protective patent law than at present exists for said above purpose.

Resolved, That as civil governments are institutes for the protection of their citizens in the entire use of property, we do not see the justice or propriety of a discrimination as to what a man shall call his own, whether he obtains it by his inventive genius or the labor of his hands. We, the inventors here assembled, regard the one as much as the other, and he ought to have the benefit of it. [The words "for ever" were originally appended, but were subsequently dropped.]

Resolved, That as the Patent Office is created expressly for the benefit of and supported by inventors, its laws ought to harmonize with their wishes, and render all facilities in forwarding their designs, and that we will use all hono-

nable means to make it what we believe it ought to be, namely, a reflection of the inventive genius of this great Republic.

Resolved, That all inventors of the United States are requested to become members of this Union; as our interests are one, it is hoped that our concurrent action will be mutual.

Clinton Roosevelt offered the following amendment to the 5th resolution:—

Resolved, That as the Patent Office was established for the general benefit and protection of inventors in their discoveries, and as those objects ought to be accomplished, but the laws have failed heretofore, an entire revision of the Patent Laws is demanded, as well by the public interest, as by those interested in the Patent Laws.

This was rejected.

In the discussion of the different resolutions as presented for adoption, much bitter feeling was expressed against the Examiners in the Patent Office. One inventor declared that "many of them were not competent; that there were too many doctors, and too few mechanics, and that in the appointment of the corps in the Patent Office, he considered that injustice and injury had been done to the mechanics of our country."

The fourth resolution as originally proposed and the views expressed in its discussion, show to us that there are many who have not correct views of the property of patents. They claim for an invention that it should be like real estate, and be the property, forever, of the inventor and his heirs. Now, the property of inventions is entirely different from that of real estate, and the two should never be compared together.—The property of real estate is in the tangible material, that of invention is not in the material, but in the idea developed, and this is the light in which the law views it. If a man makes a machine like that of another man who has a pa-

tent for one like it, and although it may have cost the former a million of dollars in construction, and the latter nothing, yet the maker dare not use it, because it embraces, in construction, the ideas first developed by the patentee; it is not so with real estate. We might say more to illustrate this point, but we forbear at present. We wish to impress the minds of inventors with correct views upon such matters, as we are confident that wrong views do more to injure inventors, than anything else.

Whether the inventors at the Crystal Palace will be able or not to form a permanent Inventors Union, we do not know; neither are we prepared at present to pass an opinion upon what may be anticipated; but unless the association is formed of a different class of inventors than what have attempted similar objects before, we predict the same results will follow, viz.—that the Inventors Union will end in smoke.

**Topographical Map of the Crystal Palace.**—H. L. Stuart has just issued a very comprehensive and excellent map of the Crystal Palace, which must prove valuable to every visitor, as it shows at a glance the different departments, and points to all the most attractive objects on exhibition. It has evidently cost the author much labor and care in its preparation, and is sold for the trifling sum of 6¼ cents.

The stock of the Crystal Palace Association sold on Saturday last at \$55 per share; nine months ago it sold readily at \$165. So much for injudicious management on the part of the Directors.

The number of admissions to the Crystal Palace on Saturday was nineteen thousand nine hundred and forty-five, of which 17,525 were single admissions.

An extensive mine of plumbago, or black lead, has been discovered on the lands of O. P. Newell, in Nelson, N. H.