## ELECTROTYPING BY LIGHTNING.

In front of the Bibliotheque Imperiale at Paris there exists an open space, ornamented with a large bronze fountain, which was coated with copper by the elecriotype process. The operation was carried on in a work shop, built for the purpose, at the neighboring village of Autcuil. While the upper basin, from which the water flows through sixteen tigers' mouths, was in the bath of sulphate of copper, a violent thunderstorm burst over Paris, and the lightning fell close to the workshop in question. Immediately after the storm had subsided, the electrotyper caused the liquid to be poured off, in order to examine the vase, and to assure himself that the electric fluid had not deranged the deposit. He was extremely surprized to discover that the copper had been deposited on the tigers' heads in streaks or lines, and so happily arranged that they form a veritable tiger's skin, covered with hair, in as perfect a manner as if they had been produced by the hands of a skillful engraver. This curious effect of the electric fluid has accordingly been allowed to remain, and the result is a great addition to the expressive character of the work. The fountain now erected has a square garden round it, in imitation of those of London, and was inaugurated on Aug. 13th, previous to the emperor's fete. The successful completion of this, the largest work ever attempted by the electrotype process, will be followed by an application of a copper deposit on the fountains of the Place de la Concorde, and all the iron and bronze statues in the capital.

## FOREIGN SUMMARY-METALS AND MARKETS.

A method of taking photographs upon plates of polished copper for the purpose of engraving therefrom, has just been made known to the public, through the London Mechianics' Magazine, by Colin Smart, of Sunderland. It is described as follows:-Take some perchloride of iron and pour it over a plate of polished copper (such as is used by engravers), when the plate will at once be affected and its color changed. It is now washed with cold water and dred with a soft cloth, when it is sensitive to sunlight. If a negative picture is placed upon it in the ordinary way and exposed to sunlight, a beautiful black positive picture will be produced on the copper in the course of ten minutes or a quarter of an hour This establishes the fact of pictures bcing taken direct on a copper plate for the purpose of engraving directly from it.
J. Scott Russell, the builder of the Great Eastern, has taken out a patent for constructing vessels of what is called "yellow" or "Muntz metal." Iron plated vessels are liable to become foul under water by the adherence of marine vegetation and minute shells: the object of substituting yellow metal plating for the iron is to prevent such fouling of vessels bottoms. The framing of the vessel is specified to consist of angle bars of Muntz metal and the sheets or plates of the same metal fastened by rivets of similar material-the whole hull, in short, to be made of brass. This alloy is a brass composed of 60 parts, by weight, of the best copper and 40 of spelter. It is well known that copper and zinc combine in different proportions, producing yellow metal of various quallties. The foregoing proportions are supposed to be the best, as it is believed the brass thus made is nearly like iron in its electrical character, and that if the iron of the machinery is placed in contact with it, no electrical action will take place, as when iron and pure copper are placed in contact. This application of brass will never amount to much in a practical point of view. Such metal is fau more expensive than iron, and experiments have proved it to be less durable and vastly inferior in strength.

Prince Albert, as President of the British Association for the Advancement of Science, which lately met at Aberdeen, made an introductory speech which does him great credtt, as he paid the highest possible compliment to those who are engaged in scientific pursuits. He said his election was an act of humility on the part of the members of the association; but although he felt unworthy of occupying his position, yet it would have appeared like pride on his part if he had refused the honor. He acceprted the situation, as the representative of the people and as the husband of the Queen, to testify their appreciation of the labors of the Association for the Advancement of Science. We give the foilowing paragraph from his speech:-" Science is not of yesterday. We stand on the shoulders of past ages, and the amount of observations made and facts ascertained have been
transmitted to us and carefully preserved in the various storehouses of science. Other crops have been cut, but still lie scattered on the field; and many a rich harvest is ripe for cutting, but waits for the reaper. Economy of labor is the essence of good husbandry, and no less so in the field of science. Our association has felt the importance of this truth, and may well claim, as one of its principal merits, the constant endeavors to secure tha econony."

[The above are pr
Wook-American, Saxony fleece, 50c. a 55 c . per lb.; American ull blood merino, 46 c . a 48 c . : extra, pulled, 45 c . a 5 jc .; superfine pulled, 37c. a 41c.; California, fine, unwashed, 24c. a 32c.; California ommon, unwashed, 10 c . a 18c.; Mexican, unwashed, 11c. a 14 c . Z1sc.-Sheeta, 7/4c. a 7 $/ \mathrm{K}$ c. per 1 lb .
The foregong rates indicate the state of the Now York markets up October 12th.

The wool trade is growing into vast proportions, and no better sign could be required than this in regard to our increase in a very stable class of manufactures. The finer qualities are now more sought after, thus indicating progress in the production of superior fabrics. About $85,000 \mathrm{lbs}$. of domestic fleece were sold last week. There were arrivals of 985 bales of native and 284 of foreign wool.
During the week ending the 10th inst., the quantity of boots and shoes exported from New York was as follows: To Danish West Indies, 9 cases, \$447; Cuba, 3 casos, $\$ 600$; Dutch West Indies, 3 cases, $\$ 173$; British West Indies, 3 cases, $\$ 364$; Chili, 58 cases, $\$ 2,946$ : total, 76 cases, $\$ 4,530$; to clothe the feet of the orcoles and others in the West Indics.

Leather has a downward tendency, but the sales have been so limited that the change in prices is not worth noticing. During the month of September, 255, 889 sides of leather arrived in the city.

Flour has increased in price a little over ten cents, owing to a break in the Erie canal, which prevented the usual amount of arríal.

American sperm candles have been in active demand at from 38c. to 50 c . per lb.
The cotton market has been somewhat dull. The arrivals during the week have been 4,476 bales, of which Texas sent 614, Georgia, 2,384; South Carolina, 1,220; Virginia, 41 ; Maryland, 178 ; and the rest foreign.

Well's Commercial Express (Chicago) states that $3,472,289$ bushels of wheat have arrived in that city, this Fall, which is an increase of $1,000,000$ over the arrirals in 1858 for the same period. The crop this year is stated to have been a very large one.
About 35,000 sides of lace leather are used up annually for the manufacture of belting in the establishment of J . Davis, Pawtucket, R. I. The Dunnel Manufacturing Company, of the same place, print from 6,000 to 10,000 pieces of calico per week, by six machines.

There were shipped on the Lehigh canal, during the week ending the 8th inst., 31,000 tuns of anthracite coal, being an increase of 2,850 over the same period in 1858 ; and thus far, there has been an increase of 97,000 tuns over the total export of last year.

## SALE OF PATENTS.

We understand that T. H. Wilson \& Bro., of Athens, Ga. (whose patent horse-power was illustrated on page 256, Vol. XIV., Scientific American), have sold the right for Texas for $\$ 10,000$.
Mr. Theodore Frederick Weil, of New Orlcans, returned from England by the last steamer, having sold $l_{i}$ is English patent on a fish-hook to a Birmingham house for $£ 5,000(\$ 25,000)$. The hook is of the sockdologer kind, and has been pronounced an excellent invention. Patents were secured upon it for the United States, Great Britain and France, through the Scientific American Patent Agency.
We congratulate our clients on their good success.
A Submarine Ofster Saloon.-Mr. E. Maillefert, who removed the rocks at Hellgate, East river, N. Y., proposes to build a mammoth diving-bell, with which to work the mammoth oyster-beds recently discovered in Long Island Sound. Parties may then enjoy the pleasure of taking the oysters from ther beds and devouring them at a depth of six fathoms below the surface of the Sound.

New Cement for Teeth.-Freshly calcined oxyd of zinc, 9 parts; finely powdered borax, 1 part; finely powdered silex, 2 parts; all mixed well together. A correspondent of the Lhruggist states that this makes a firm plastic mass, and that it is used by French and Ger. man dentists.

Native iron has been discovered in but few parts of the world. Specimens have been found in Austria; and in Canaan, N. Y., there exists a seam of native iron, 2 inches in thickness, from which horse-nails have been forged.

