

THE International Inventors Exhibition at London, England, has been on the whole a very decided success.

It has been a valuable and instructive concentration of the advancement and scientific achievements of many minds engaged in every conceivable trade and industry, and not the least advantage is—that it has afforded special privileges and facilities to journals to publish and illustrate cheaply many of the inventions.

The Exhibition Buildings are situated at South Kensington, in connection with the great world-renowned Albert Hall. A great feature of ingress to the Exhibition Grounds is a sub-way nearly a quarter-of-a-mile long from the nearest railway station, all lighted up with the incandescent electric light, and the sides and top of sub-way lined throughout with white glazed brick, so popular with the English for public buildings.

The greatest feature of the Exhibition is the completeness with which it has been lighted up by electric lights having globes of all colours, so wonderfully arranged with rockeries and water fountains, etc., as to make the scene one of surpassing artificial grandeur never to be forgotten.

Thousands of people stand round to witness the display of aquatic pyrotechnics, while military bands ensconced in artistic pavillons make the place quite a dreamland.

The most striking edifice is the middle Court where all the prime-movers, steam engines, railway appliances and instruments of destruction are located.

Mr. Maxim, the great American inventor, has four of his guns on view. Mr. Gladstone, some time ago paid him a visit and fired the gun himself; the instrument, it will be remembered by our readers, fires automatically from 600 to 700 shots per minute, and is the most valuable instrument of destruction of its kind. The gun, by a clever arrangement of mechanism, after being started once is able by its recoil to load itself, fire itself and discharge its own cartridges.

Mr. Maxim has been promised fabulous sums for his invention, but he is content at present to wait his time.

The Aeronautic Department is, considering its peculiarity and novelty, fairly well represented—there being steering balloons and flying machines, but it would be better if the inventors would practically demonstrate the value of their appliances, because we believe many of the so-called flying machines are useless, and the same might be said of some of the steering balloons—but we hope ere long this Department may yet prove to be as practical as it is theoretical.

The greatest display is in the line of railway appliances, from the ponderous locomotive down to the delicate electric switch, or in other words "from a needle to an anchor."

The Musical Dept. is very good, being represented by all parts of the world, and although this is the first musical exhibition ever held in Britain, strange to say there are but few really new and important inventions exhibited.

—A large number of men are to be at work on extension of the Florida Southern Railroad from Lakeland to Charlotte Harbor.

—THE machine and car shops of the Alabama Great Southern Railroad are to be located at Birmingham, Ala. Ground 200x1,360 has been secured for the location.

A GREAT disadvantage which has always attended iron ships has been the rapidity with which their bottoms have become incrustated with sea-weed, shells, etc., thereby impeding their progress through the water. Many schemes have been devised for counteracting this tendency, the greater number of which have consisted in coating the bottom with a substance intended to prevent the growth of such bodies.

Although many of these compositions are successful in keeping the bottom clean for a short time, and partially prevent oxidation of the plate, yet they are quite useless in the case of ships which have to keep the sea for a long time, like those of the Royal Navy, often situated in distant stations.

The only satisfactory mode yet arrived at of keeping the bottom free from fouling for any lengthened period, is, first, to sheath it with wood and then with copper or zinc outside all, in fact similar to the old safe and durable plan for many years in practice for wood ships.

Certain precautions are necessary, however, in covering iron ships.

It is well known that galvanic action is set up between copper and iron when immersed in water, if either actually in contact, or if both should be exposed to the water.

The result of this chemical action is a rapid decomposition of the iron; hence the necessity of insulating the two materials by some intervening non-conducting material, such as wood, pitch, etc.

When zinc is used these precautions are not necessary, because the galvanic action results in the decomposition of the zinc.

Indeed, this decomposition is often utilized for the ship's benefit, because the decomposition takes place on the outside, and the wash of the water carries it away along with whatever foreign substances, such as shells, etc., which may have adhered to it.

Hence, when zinc sheathing is used on the wood covering the iron bottom, the wood is not caulked, nor are the fastenings and plating insulated, but rather a free communication is allowed between the zinc, iron and sea-water.

It should be remarked here that notwithstanding the advantages of zinc, copper is often used, because it possesses a valuable property when under water of exfoliating and then carrying with it the substances collected upon the surface.

When copper is used, two thicknesses of wood are used instead of one, as in the case of zinc, and great precaution taken to ensure complete insulation between the inner and outer metal by specially devised fastenings arranged to suit.

—THE Common Council of Minneapolis, Minn., have passed resolutions ordering new walks, curbs, gutters, sewers, etc.; the amount to be expended will foot up into the hundreds of thousands.

THE NAILS.—The growth of the nails is more rapid in children than in adults, and slowest in the aged; goes on faster in summer than in winter, so that the same nail which is renewed in 132 days in winter, requires only 116 in summer. The increase of the nails of the right hand is more rapid than those of the left; moreover, it differs for the different fingers, and in other corresponds with the length of the finger, consequently it is the fastest in the middle finger, nearly equal in the two on either side of this, slower in the little finger and slowest in the thumb. The growth of all the nails on the left hand requires 82 days more than those of the right.