

New Inventions.

Machine for Employing the Water-Power of Rivers.

Mr. Joseph Hardie, of Victoria, Texas, has taken measures to secure a patent for new machinery to be submerged in rivers where there is a current, however small, so as to propel machinery on shore by the power of the water. Tidal wheels are old and well known, but very few of them have been employed in our country, and they are not adapted for many of our rivers. What a power there is in the Mississippi river, and yet it flows on to the Gulf of Florida, without applying its giant strength to move—so far as we know—single mill. A machine to apply this power safely and economically is a desideratum: Mr. Hardie has applied his inventive powers to do so. His water motor is submerged, and is connected with a framework on the bank of the river, which can be elevated or lowered by capstan or windlass, according to the height of the river.

Electro-Magnetic Fire Alarm.

Mr. Henry Van Ausdell, of Eaton, Ohio, writes to us saying he has invented a Burglar's Electro Magnetic Fire Alarm, which is peculiar in a number of particulars. It is of such a nature that any number of houses may be embraced in a circuit, and when one is being injured by fire or entered by burglars, the "alarm" is given at any or all the others, and in such a manner that they can know in a moment the precise point of disturbance; its construction is simple, it consists of a series of two or more circuits (operated by the same battery), one of which is closed by closing doors and windows, which, when broken, releases clock-work, driving a signal wheel operating on the key of the other circuit, &c.

Improvement in Carriage Springs.

Mr. Gustavus L. Hausknecht, of New Haven, Conn., has made an improvement in springs for carriages by employing a combination of the C and the semi-elliptic springs, positioned transversely with the axle, the lower part of the spring being attached to the axle, and the body of the vehicle is made to rest on the upper part, or inner extremity of the semi-elliptic spring. A flexible band is also attached to the C spring, and made to pass over the top of it. The point of attachment or support of the carriage body, in relation to the combined spring, is asserted to be such as to insure great strength and flexibility. The inventor has applied for a patent.

Improved Pump.

Mr. Thomas Ling, of Saratoga Springs, N. Y., has taken measures to secure a patent for an improvement in pumps, which is worthy of attention. He employs a water vessel or case named a "Surety Box," situated beneath the plungers, to prevent any leakage of air around the pistons. It is well known that if any air gets under the plungers, the suction, as it is commonly termed, is destroyed, this improvement is to obviate that evil.

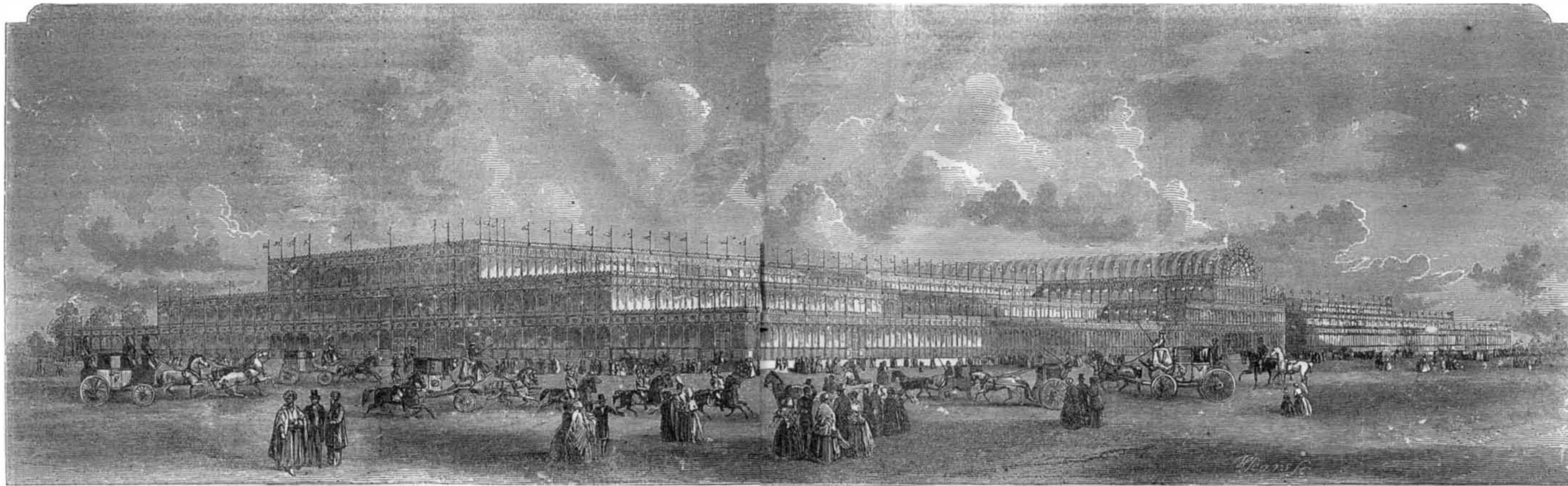
Machine for Printing Oil Cloth.

Mr. Simeon Savage, at the Lowell Machine Shop, has succeeded in the invention of a machine for printing floor cloth, which promises to be of great utility in the manufacture of this most desirable of floor coverings. We will not attempt any description of the construction of this machine, as no patent has yet been obtained for it, although one will be applied for as soon as a model can be built. This machine is capable of printing 2,000 yards of floor cloth per day, in eight different colors at the same time, and by the same principles, twenty colors could be as readily printed. We saw a specimen of floor cloth printed by it, which warranted us in the belief that more perfect goods can be made by this machine, which is worked by power than can be made by hand.—[Lowell Courier.]

Gold Hunters.

We see it stated that hundreds of men are leaving the towns of Gardiner, Hallowell, Pittston, &c., in Maine, for the gold mines lately discovered in Somerset county, in that State.

EXTERIOR VIEW OF THE EXHIBITION BUILDING.



The above engraving is the best view we have yet seen of the Great Exhibition Building, Hyde Park, at least to convey a good idea of its vast extent. We do not intend to say anything about the building itself here, such as its dimensions &c., for by reference to No. 31 all the information required in this respect may be obtained.

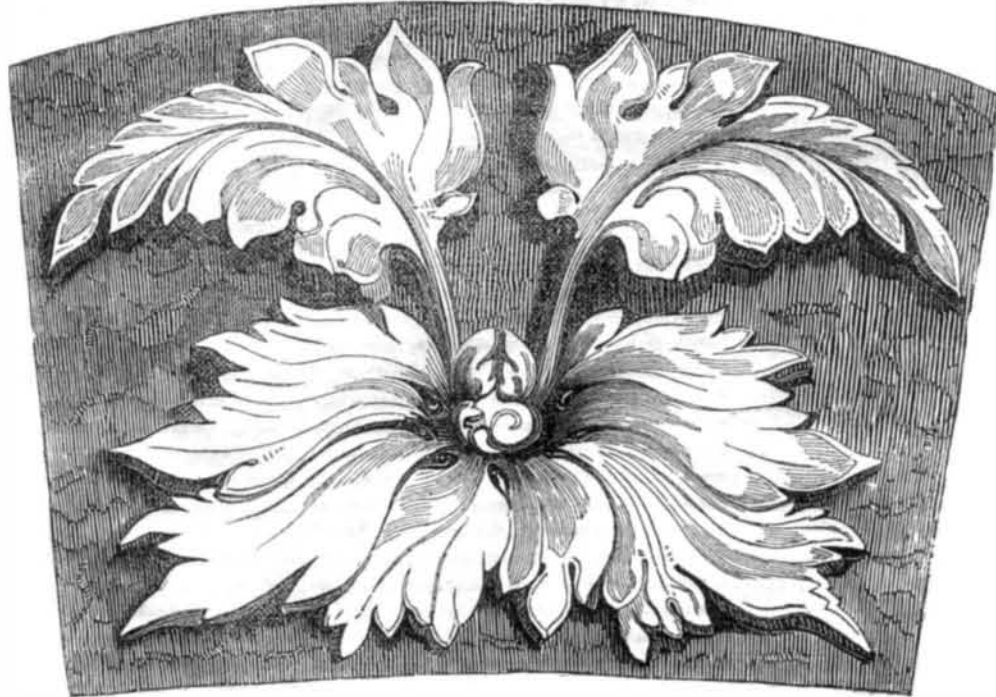
The London correspondence which we have published every week since the beginning of last April, has given our readers a vast amount of information respecting many of the articles, &c., therein exhibited. We will only say a few words about the American department of the exhibition. A very large space was allotted to our country in anticipation of a very great number of exhibitors from the United States. This space is not adequately filled up by the articles which have

been sent there to be exhibited, nor are the articles, the great mass of them, very attractive so far as show is concerned. This has been a fine subject to make a *handle of*, by Jules Janin, the celebrated French letter writer, a royalist wool-dyed and hater of republicanism; it has also furnished a file for the London Times to sharpen its teeth with, but for all this, we neither feel shame, fear, nor melancholy, all will come out right at last. Our commissioner, Mr. Riddle, has written a letter to the Hon. J. C. G. Kennedy informing him that the Queen and Prince Albert had visited the American Department, and had made a careful examination with great apparent satisfaction. Mr. Riddle described the principal articles, and her Majesty took in her hand some of them, although placards at every step informed her that "Visitors are requested not

to touch the goods!" After remaining upwards of an hour in the American section, the Queen expressed to Mr. Riddle the pleasure she had received in her visit.

In agricultural implements, America surpasses all the other nations there, but Great Britain, and stands equal with her. This is gratifying, yes, more, exhilarating, for agriculture is the mother of all arts, and the true thermometer of a nation's solid comforts. Curious visitors, and the journalists who are generally mere literati, without any knowledge of the arts, or machinery, do not appear to take much interest in the American department. The Illustrated London News and the Morning Chronicle are exceptions. The contrast between the plain articles from the United States and the glittering display of other nations is so great, that both critics and visitors make a

ORNAMENTAL BRICKS.



The accompanying engraving represents a style of ornamental bricks, which has recently been introduced into England, and patented by Messrs. Bowers, Challinors & Wooliscraft, of the Staffordshire Potteries. These bricks, or rather they are a kind of pottery ware, are made from a mixture of clay and other ingredients, calculated to vitrify with the clay. They can be painted and grained with the ut-

most facility, so as to imitate any kind of oak, rose, satin, or other woods, or sculptures in stone, or be gilded without injuring the brilliancy of the gold leaf. They may supply the place of wood carving in architectural decorations, and, from their fire-proof nature, add to the safety of the buildings. Some ornamental bricks were employed in this city about ten years ago; how they came to be disused,

we cannot tell, but we think they are worth reviving, for certainly they appear to us well adapted for ornamental architectural purposes, both inside and out, such as for internal and external decorations of churches, public buildings, mansions, houses, and shops, cornices, mouldings, skirting boards, to match in design any style of architecture, or the taste of any private individual.

hasty survey of our bales of cotton, barrels of flour, and agricultural implements. Occasionally groups of intelligent examiners may be seen standing around some particular article, taking notes and consulting together.

The committee appointed to report on the department of machinery recently made a careful examination of several of our machines; Mr. Brunel, one of the committee, expressed his astonishment that the Americans had not forwarded to the exhibition a greater variety of valuable inventions, as he knew that we possessed a great number. He mentioned particularly that we had neglected to send a model of our Dry Docks, which he acknowledged were not surpassed by any in the world. In the department of machinery, he said that the United States were able to compare favorably with Great Britain; and he expressed a hope

that many of the best machines of our country would yet be sent to the exhibition."

This is true, America is not represented at the great exhibition. We have given our reasons why in No. 37, page 293.

The American carriages at the exhibition are unrivalled for lightness, strength, and simple elegance, this is admitted on all hands. Specimens of rifles, manufactured by Messrs. Robbins & Lawrence, of Vermont, are justly pronounced by Englishmen as among the best, if not the best, of any rifles in the world. The critic of the Chronicle says they are of an unpretending style, but are remarkable for a plain, substantial, and perfect finish; that they are strong, simple, and thorough in their workmanship, and eminently adapted for real service.

Philadelphia lamps and chandeliers compare

favorably with those of other nations. The Morning Chronicle says:—"The casting is remarkable for its fineness, sharpness, and uniformity. The branches formed by arabesques, scrolls, profusely ornamented with birds and flowers, delicately sculptured or in bold relief, with centres of richly cut glass, claim particular approval for their elegance and lightness of design. This is among the youngest branches of manufacture in the United States, it being scarcely fifteen years since every chandelier, girandole, mantle lamp, and candelabra used in that country was imported from Europe; and it argues considerable enterprise and perseverance on the part of the manufacturers, that they have attained so much excellence as to be willing to vie in the exhibition with the oldest and most celebrated houses in the world."

Fire Annihilator.

A great fuss is now being made about a fire annihilator which is to render fire companies useless and lay our firemen on the upper shelf of inglorious repose. Our daily papers have been flaming for a few weeks past with wonderful accounts of its extraordinary powers. One of our contemporaries says "it is an English invention and has been strongly recommended by many principal officers in the Royal Navy and well-informed commanders in the merchant service; and Lord Brougham recently said that he hoped before long no vessel would be allowed to put to sea without having some of these machines on board. It is a little singular that an invention which is said to rank in value with that of the steamboat, the telegraph, the cotton gin, and the railroad, has never been introduced here, if it be as valuable as asserted. It would certainly be immediately adopted, if it were discovered to possess value."

This is sensible, but we see that a G. Q. Colton, writing from New York to the Boston Transcript, gives it a most astonishing character, such a one indeed, as would lead us to suppose that one of the fire annihilators, about the size of a pail, would extinguish a seventy-four gun ship in a twinkling. This fire annihilator is the invention of a Mr. Philips, in London, and was patented by him about three years ago. We noticed it on page 237, Vol. 4, Scientific American. The apparatus is only a device to generate, *choke damp*, (carbonic acid gas) suddenly so as to put out the flame. The principle of the invention is old and well known. It is simply a means whereby some sulphuric acid may be poured upon moist chalk or powdered marble to gene-

rate the gas, and let it get among the flames. It is an apparatus that may be very useful to keep in dwellings, but it never can supercede our fire engines, and in London it has failed to accomplish on a large scale that which it seemed capable of doing on a small scale. It would be very useful on ships, but it has been too highly flattered by far.

Patents.

During the past year our patent business has increased very rapidly; this is owing to the promptness with which we attended to our business, and the care we exercised to see that it was well done. We take no personal interest in any invention, therefore we have no selfish partiality: everything is strictly confidential—and our motto is "small profits but quick returns." We have lately engaged additional assistance in our draughting department, and are enabled to invite more applicants for patents to consider the advantages we possess in applying for the same. Our experience is of no ordinary consequence, and if inventors take into consideration that a specification, with its drawings, is like a bill—a legal document—they will see that it requires to be carefully drawn up and correctly executed. If a man will have a patent, let it be well done—a good one. Every week patents are surrendered and re-issued at a vast expense, owing to originally bad specifications. It is better to have no patent at all, than one that is defective in any one point. We are very careful in preparing documents so as to meet all future contingencies.

Tanning Notice.

Next week we shall publish the full specification of "Hibbard's process of tanning."

Crystal Palace for Sale.

The splendid engraving of the Interior of the Great Exhibition Building, London, measuring 19½ by 13½ inches, and printed in No. 31, present volume of the Scientific American, will be sold at the low price of \$25 upon application at this office.

The above engraving cost, to import, over \$150, and the impressions taken from it have not injured it in the least.

The external appearance of the industrial building represented in this week's number and the best and most correct view published, will also be sold to match the Interior View, price \$15, deliverable on the 1st July.

A correspondent of the Builder has communicated a very simple method of preventing damp walls, by the mere outside application of a lather of soap and hot water, and then, as soon as dry, sprinkling the wall with a saturated solution of alum. He states that he prepared several places in this way, and water poured on the wall ran off as from a duck's back, without producing the least effect.

Ruttan's System of Ventilation.

In describing Mr. Ruttan's system of ventilation on page 299, we made a mistake in the name. The name of the inventor is Henry Ruttan not John as we had it. In the vicinity of Boston, there is a school, and dwelling house in the course of erection, which are being built to carry out his system; he would like if there was a school house or small dwelling erected in New York to carry out his system; he would be willing to devote his time and personal expenses, the owner merely paying for the workmanship and machinery for warming the air. He could instruct by let-

ter any person how to put up the building until the floors were laid down, when he would come to New York and personally superintend its completion. This is a generous and manly offer, and exhibits the confidence Mr. Ruttan has in the superiority of his invention. The ventilator illustrated on the page referred to, is for burning wood, but it could be made to burn coal just as well by adding a coal grate. One of these apparatus may be seen in Boston, No. 11 Franklin street.

Application for Extensions of Patents.
U. S. PATENT OFFICE.

On the petition of John and Charles Hanson, of England, praying for an extension of a patent granted to Benjamin Tatham, jr., and H. B. Tatham, as assignees of the said Hansons, on the 29th of March, 1841, for an improvement in making pipes or tubes of lead, for seven years from the expiration of said patent, which takes place on the 31st day of August, 1851. It is ordered that said petition be heard at the Patent Office on Monday, the 18th day of August, 1851, at 12 o'clock, M.; and all persons are notified to appear and show cause why said petition ought not to be granted. Persons opposing the extension are required to file in the Patent Office their objections, specifically set forth in writing, at least twenty days before the day of hearing; all testimony filed by either party to be used at the said hearing must be taken and transmitted in accordance with the rules of the office, which will be furnished on application.

On the petition of Reuben Daniels, of Woodstock, Vermont, praying for the extension of a patent granted to him October 7th, 1837, for an improvement in shearing machines, for seven years from the expiration of said patent, which takes place on the 7th day of October, A. D. 1851. It is ordered that the said petition be heard at the Patent Office on Monday, the 15th day of September, 1851, at 12 o'clock, M.; and all persons are notified to appear and show cause, if any they have, why said petition should not be granted. Persons opposing the extensions are required to file in the Patent Office their objections, specifically set forth in writing, at least twenty days before the day of hearing; all testimony filed by either party to be used at the said hearing must be taken and transmitted in accordance with the rules of the office, which will be furnished on application.

On the petition of Richard Imlay, of Philadelphia, Pennsylvania, praying for the extension of a patent granted to him on the 21st September, 1837, for an improvement in the mode of supporting bodies of railroad cars, &c., for seven years from the expiration of said patent, which takes place on the 21st September, 1851. It is ordered that the said petition be heard at the Patent Office, on Monday, the 1st day of September, 1851, at 12 o'clock, M.; and all persons are notified to appear and show cause, if any they have, why said petition should not be granted. Persons opposing the extension are required to file in the Patent Office their objections, specifically set forth in writing, at least twenty days before the day of hearing; all testimony filed by either party to be used at the said hearing must be taken and transmitted in accordance with the rules of the patent office, which will be furnished on application.

On the petition of John Thomas, of Plainfield, New Jersey, praying for the extension of a patent granted to him on the 26th of December, 1837, for an improvement in drying docks, for seven years from the expiration of said patent, which takes place on the 20th day of December, 1851. It is ordered that the said petition be heard at the Patent Office on Monday the 24th day of November, 1851, at 12 o'clock, M.; and all persons are notified to appear and show cause, if any they have, why said petition ought not to be granted. Persons opposing said extension are required to file in the Patent Office their objections, specifically set forth in writing, at least twenty days before the day of hearing; all testimony filed by either party to be used at the said hearing must be taken and transmitted in accordance with the rules of the office, which will be furnished on application.

THOS. EWANK, Com. of Patents.