New Inventions.

Improved Row-Lock for Boats.

Mr. James Beetle, of New Bedford, Mass., has invented and taken measures to secure a patent for an improved rowlock which is especially adapted for whale-boats. The new row-lock is made with a socket which fits over a spindle on the gunwale of the boat. This row-lock gives with the oar. Oar-locks have been and are made in such a way that the spindle accommodates itself in its bearings to the action of the oar, but owing to the peculiar action of the oar, the spindle soon wears its bearing, and the lock then makes quite a clattering. In pursuing whales it is required that the boats should approach the monster of the deep with as little noise as possible, and this improvement will enable them to move as quietly as if the oars were muffled. There can be no fears of the bearings wearing uneven, therefore, by keeping the sockets of the oar-locks well lubricated, whalemen will be enabled to steal as softly as the sleeping sea upon their prey This improvement makes the act of rowing much easier. Another improvement connected with it, is the securing of the spindle of the oar-lock in a moveable bar of the gunwale. This bar is united to the gunwale by hinges, and is fixed on the top with a button. When the boat comes along side of the ship, all that is to to be done is to take out the oars, turn round the button of the moveable bar and the oar lock folds inside of the boat like a flap. This is a good improvement.

Machine for Greasing and Tarring Spun Yarn.

Mr. Francis Tuffts, of this city, has invented and taken measures to secure a patent for a machine to prepare spun yarn for sail makers, which will be of immense benefit to them. At present sail makers prepare their yarn, for sewing sails, by hand, and every thread takes up about half a minute's time in preparation. The machine invented by the gentleman named above will enable a boy to prepare as much spun yarn in five minutes as ten men could do in one hour by hand. A ball of spun yarn is placed upon a spindle, and the end of it is guided down over a pulley through a small vessel containing the melted grease and tar, then from this, between two cushions, on to a spool. By turning a handle the spool is set in motion, the yarn passes through the material to prepare it, and the cushions spoken of press out and strip off all the superfluous material, when the yarn is received on the spool in the proper state for sewing. The operation can be performed with great rapidity.

A New Kind of Fence.

Mr. John R. Remington, of Montgomery, Alabama, the inventor of the Remington Ærial Bridge, has patented a new and useful invention. It is a cement, for making solid fences, as durable as granite, and at very reasonable cost of construction. The chief ingredient is sand, and it can be easily manufactured by plantation hands. The cement panels are conveyed to the spot where the fence is located, and the two legs of each let into the ground like common posts. The cost of the plaster is estimated at 10 cents per panel of ten feet by five—four inches thick—far cheaper than the wire fence. It does not, or at least should not, detract from the merit of this invention that it hails from Alabama this time, rather than from Maine or Pennsylvania, or that the modest little town of Montgomery ventures competition with the great manufacturing cities of the East for the honor of originating some of the useful discoveries of the age.—Exchange.

[We have seen the above in quite a number of papers. We believe it will be very hard to find the claim for such a patent.

The Electro-Magnetic Locomotive.

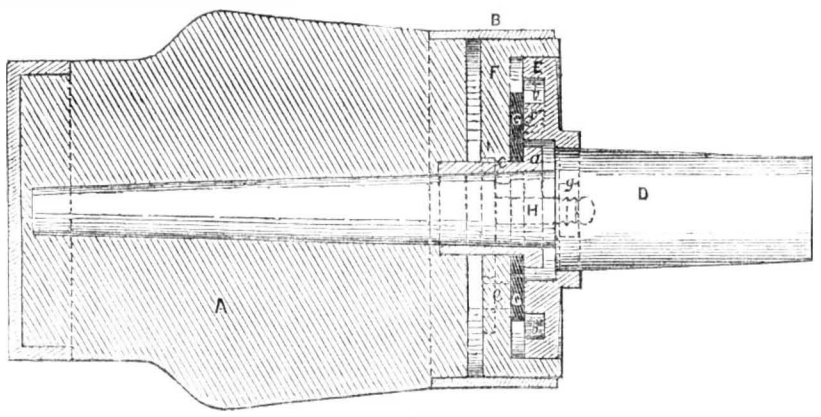
The National Intelligencer of Saturday, says that a preliminary trial of Prof. Page's Electro Magnetic Locomotive was made a day or two before, for the purpose of testing the best mode of attaching the battery, which seems to be a difficult point, owing to the jostling and oscillations of the locomotive. It was run out over two miles, and the best speed on a straight track was ten miles an hour. The locomotive weighs ten and a half tons, and has five feet drivers, with two feet stroke.

Dick's Anti-Friction Press.

Last week, in company with a few scientific gentlemen, we examined one of the largest presses we have ever seen: it was built on the principle of Dick's Patent, by Mr. J. E. Holmes, Jane street, N. Y., for the "Methodist Book Concern." The press is 5 feet 6 inches between the plattens, 24 by 30 feet clear between rods, and has 22 inches movement. It is so constructed that the power applied will produce 860 to 1 through the first 2 inches of motion, and 6,890 to 1 through the last 2 inches. It is intended for 1,000 tons pressure, and can be worked to that pressure in 15 minutes by the application of a two horse power. In every respect this is a great press. Mr. Holmes will be an exhibitor with one of his presses at the "World's Fair."

These presses are manufactured by the Matteawan Co., W. B. Leonard, Esq., No. 66 Beaver st., is Agent.

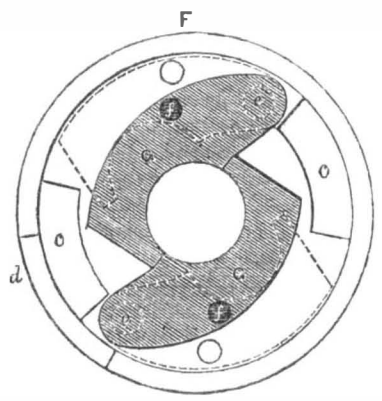
IMPROVEMENT IN WAGON HUBS.---Figure 1.



This improvement is the invention of Mr. Elnathan Sampson, of West Claremont, Sullivan Co., N.H., who has taken measures to secure a patent for the same. Fig. 1 is a longitudinal section of the hub of a carriage wheel, with the axle in the same. Fig. 2 is an inside view detached from the axle; figure 3 is an inside view of a disc, with the end of the axle, D. The same letters refer to like parts.

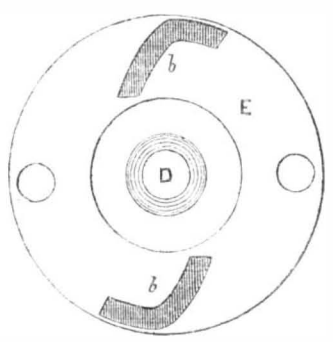
The improvement consists in having locking jaws, whereby the wheel and axle are easily disconnected, and whereby all dust and dirt are prevented from entering the axle box. A is the hub, with a hoop, B, projecting on its inner end; C is a neck projecting from and secured to the hub at its centre, and constituting a bearing for the axle, which is formed with a collar, *a*. D is the axle; E is a disc fitted to it and provided with peculiar shaped grooves, *b b*, on its inner face, and a circular cavity at the centre for the reception of the

Fig. 2.



collar, *a* F is a short box formed with a disc, having a rim projecting at right angles from it, and of such a diameter as to fit closely within the hoop, B. The central aperture is somewhat larger than the collar, *a*. There are segmental apertures in it, marked *c c*, which are bound on their back parts by countersunk indentations for the reception and travel of bolt heads; *d* is a slightly sunk segmental space on its edge. G G are the locking jaws working on pin axes, *e e*, made fast to the box, F. These jaws are of such a form, that when meeting there will be a circular space formed of rather a larger diameter than the neck, C; they are provided on their faces with studs, *f f*, which, when the several attachments, are joined, fit into and travel in the grooves, *b b*. H is a bolt (the other is not seen) which passes in and is secured by the nut, *g*, from the outside. Supposing the box, F, to be seated within the hoop, B, as in fig. 1, and the jaws, G G, occupying the position shown by the dotted lines, fig. 2, the axle, D, being made to enter the hub through the neck, C, the disc, E, also entering the box, F, and its grooves receiving the studs, *f f*, with the bolts, H H, passing through their apertures; then, by slightly turning either the box, F, or the axle and the disc, E, (one of them being kept stationary), the grooves, *b b*, from their peculiar shape and construction, acting upon the studs, *f f*, will cause the jaws, G G, to work towards one another, and close within them the neck, C, whose flange, *a*, prevents

Fig. 3.



the withdrawal of the hub when thus locked. By screwing up the nuts, *g*, on the bolts, H H, all the parts are firmly united. By slacking the nuts and turning the parts spoken of in the contrary direction, the jaws are opened and the wheel can be taken off almost in an instant, either for lubricating or any other purpose. More information may be obtained by letter addressed to the inventor.

Blowing Great Glass Globes.

The secret of blowing great glass bubbles, like the decanter which the French intend to exhibit at the World's Fair, consists simply in moistening the mouth with a little water before blowing. The water is converted, in the interior of the drop, into steam, which vastly aids the breath in extending the dimensions of the "bell."

Telegraph Suit.

The Morse Magnetic Telegraph Co., of this city, had a suit decided against them last Monday, by Messrs. Brooks, of the "Express," to recover damages for not delivering an important message received from Washington, last year, giving an account of the dismissal of the French Minister. The dispatch was withheld because a former debt (a disputed one) of $5,50 would not be paid. The damages awarded were $300. The testimony of editors was admitted to show the damages that might ensue by the Telegraph Company withholding special dispatches.

Scientific Convention at Cincinnati.

The next meeting of the American Association for the advancement of Science will be held at Cincinnati early in May next. This will be the first session of the Association in the West, and it is hoped that there may be a general attendance, particularly from the Western and South-western States. The results of American Scientific research cannot be diffused to any extent byany other organization in this country, and the "American Association," founded upon the model of the British Society from which it derives its name, has already earned a honorable place among scienentific institutions.

The annual meeting will be held in Albany next November we believe.

Great Cavern Discovered in Vermont.

We see by our Vermont exchanges that a large cave was discovered near Manchester lately. The cave is situated upon the southern extremity of the Equinox mountain, about half way from the base to the summit. The individual who made the first discovery was in hot pursuit of a wounded partridge at the moment, and was precipitated without notice. The hunting party of which he was one, then came up and found that it led, by a gradual descent of about thirty feet, into a spacious apartment, measuring thirty-six feet in length, twenty-seven feet in breadth, and thirteen feet in height, and having a bottom as level, and almost as smooth as a floor. From this room, a narrow passage, through which they made their way with great difficulty, and not without bruises, brought them into an apartment far exceeding the former, both in extent and magnificence. The most prominent objects which met their eyes in this second room were three colossal pillars, twenty feet in height and fifteen feet in circumference, of spectral whiteness, and smooth as polished marble. In the third room they found considerable quantities of iron and lead, together with a kind of ore resembling silver.

The Electric Piano.

Mr. Davenport of Salisbury, Vt., we learn, claims to have made an improvement in pianos, causing the musical chord, by means of electric magnets, to continue an equable and free vibration for any length of time. The perpetual and hitherto incurable defect of the piano forte is the impulsive and evanescent nature of its tone, and though great improvements have been made upon it, and various devices have been elaborated to prolong its notes in some degree, yet the want of a sustained vibration is still an inherent defect in that beautiful instrument.

New York Mechanics' Institute.

This Institute has removed to the large building at the junction of Division street and the Bowery, and have tastefully fitted up part of the first floor, as a Polytechnic Exhibition. The Members have exhibited a great deal of spirit, and have gone to a great expense in fitting up their new rooms. It is to be hoped that the mechanics of our city will give it their hearty support. This they can do without any cost to themselves except becoming members, and the fee, $1, is but small. The City of New York should support one of the best Mechanics' Institutes in the world. The sum of $1000 has recently been applied to add new books to the library.

A Chance for Inventors.

The Emperor of Russia has commissioned his agents to purchase every model at the Great Exposition, which may be useful to Russian manufactures. A letter from St. Petersburg announces that the Emperor intends to spend 10,000,000 silver rubles in such purchases.

The Pennsylvania Legislature has passed a law prohibiting the storage of a larger quantity than 100 lbs. of saltpetre in any of the incorporated districts of Philadelphia County. This is a most absurd law.

The hens of Egypt now lay eggs for the Londoners. Thirteen casks were lately landed at Southampton from Alexandria.

Many of the London journals notice the death of Mr. Audubon. One of them characterises him as the greatest ornithologist that ever lived.

London has more population than Greece more than half that of Belgium or Holland, as much as all Hanover, and within half a million of half as much as Bavaria.