

Money Received

At the Scientific American Office on account of Patent Office business during one week preceding Wednesday, March 5, 1862:—

J. H. of Scotland, \$29; L. W. of Conn., \$43; F. E. B. of N. Y., \$45; G. and M. of N. Y., \$20; C. P. B. of Conn., \$20; A. C. of Mass., \$20; F. G. L. S. of Wis., \$20; A. B. of Conn., \$40; W. G. of Ind., \$15; J. S. H. of Cal., \$50; T. C. of R. I., \$75; W. F. of Hanover, \$30; J. B. S. of Prussia, \$15; R. H. of N. Y., \$28; J. McH. of O., \$15; D. C. D. of Ind., \$25; F. G. J. of L. I., \$225; R. J. S. of N. Y., \$30; H. H. E. of Conn., \$15; J. H. L. of Ill., \$15; B. F. S. of Vt., \$15; G. and C. of Conn., \$15; L. C. C. of Mass., \$20; C. G. M. of Vt., \$15; J. H. of N. Y., \$25; M. S. S. of O., \$15; S. T. D. of N. Y., \$15; J. McH. of O., \$15; E. D. W. of Pa., \$50; J. P. W. of N. Y., \$25; C. E. S. of Md., \$45; D. G. of N. Y., \$20; D. B. of Conn., \$20; A. B. of N. Y., \$15; C. S. of N. Y., \$20; C. O. P. of Mass., \$45; F. C. of N. H., \$20; J. F. H. of Cal., \$10; E. S. N. of Iowa, \$15; C. H. and W. G. D. of Pa., \$15; T. H. A. of Ill., \$20; J. I. of Pa., \$15; W. H. L. of Mass., \$15; C. G. P. of Ind., \$15; A. S. L. of N. Y., \$125; R. and C. of N. Y., \$100; H. O. P. of N. Y., \$15; W. B. of Iowa, \$15; A. C. of Cal., \$15; W. O. of N. Y., \$15; J. H. R. of Ill., \$15; G. and J. of R. I., \$15; P. S. C. of N. Y., \$15; I. McD. of Iowa, \$15; J. K. H. of Ind., \$15; W. P. of Md., \$15; D. W. H. of Cal., \$25; J. W. B. of N. Y., \$25; J. A. W. of N. Y., \$25; T. Y. of Cal., \$20; J. B. S. of Conn., \$32; J. H. of N. Y., \$20; S. and R. of N. Y., \$45; E. and A. B. of N. Y., \$20; C. B. S. of Mass., \$45; A. O. C. of N. Y., \$20; W. R. B. of Mich., \$20; W. and F. of Wash. Ter., \$298; D. W. H. of Cal., \$20; L. S. of Mass., \$15; B. S. and J. M. of Pa., \$25; J. R. G. of Ill., \$10; P. and B. of Mass., \$15; L. W. P. of Mass., \$53; J. M. of N. Y., \$15; W. H. of Iowa, \$15; A. H. and J. A. B. of Pa., \$15; J. H. of O., \$15; W. H. P. of N. Y., \$15; J. S. T. of N. Y., \$10; S. E. S. of N. Y., \$15; W. C. of O., \$15.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office from Feb. 26, to Wednesday March 5, 1862:—

L. W. of Conn.; J. B. S. of Conn.; H. M. H. of Pa.; J. H. of Cal.; E. D. W. of Pa., two cases; R. J. S. of N. Y.; L. W. P. of Mass.; J. H. V. of Mass.; J. P. of Ind.; W. B. B. of Mich.; B. T. and S. M. of Pa.; R. H. of N. Y.; W. O. H. of Pa.; T. C. of R. I., three cases; J. A. W. of N. Y.; J. W. B. of N. Y.; E. P. of Cal.; A. B. of Conn.; J. P. W. of N. Y.; J. H. L. of Ill.; J. H. of N. Y.

TO OUR READERS.

Models are required to accompany applications for Patents under the new law, the same as formerly, except on Design patents, when two good drawings are all that is required to accompany the petition, specification and oath, except the government fee.

INVARIABLE RULE.—It is an established rule of this office to stop sending the paper when the time for which it was pre-paid has expired.

PATENT CLAIMS.—Persons desiring the claim of any invention which has been patented within thirty years, can obtain a copy by addressing a note to this office, stating the name of the patentee and date of patent, when known, and inclosing \$1 as fee for copying. We can also furnish a sketch of any patented machine issued since 1853, to accompany the claim, on receipt of \$2. Address MUNN & CO., Patent Solicitors, No. 37 Park Row, New York.

RECEIPTS.—When money is paid at the office for subscriptions, a receipt for it will always be given; but when subscribers remit their money by mail, they may consider the arrival of the first paper a bona fide acknowledgment of our reception of their funds.

NEW PAMPHLET IN GERMAN.—We have just issued a revised edition of our pamphlet of Instructions to Inventors, containing a digest of the fees required under the new Patent Law, &c., printed in the German language, which persons can have gratis upon application at this office. Address MUNN & CO., No. 37 Park-row, New York.

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For further particulars, address—

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FULTON'S COMPOUND, FOR CLEANSING STEAM BOILERS OF SCALE.—This article is powerful to remove scale and will not injure the boiler. Western agents, WALKER, THURGOOD, BARD & CO., Chicago, Ill. Sole proprietor, E. H. ASHCROFT, No. 82 Sudbury street, Boston, Mass. 9 1f

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MESSIEURS LES INVENTEURS.—AVIS IMPORTANT. Les Inventeurs non familiers avec la langue Anglaise qui prefereraient nous communiquer leurs inventions en Francais, peuvent nous adresser dans leur langue natale. Envoyez nous un dessin et une description concise pour notre examen. Toutes communications seront regues en confiance. MUNN & CO., SCIENTIFIC AMERICAN Office No. 37 Park-row, New York.

NEW YORK OBSERVER FOR 1862.—IN ASKING the aid of all who may desire to extend the circulation of the New York Observer, it is proper for us to state distinctly the position it occupies with reference to the present condition of public affairs in our beloved country.

Having always maintained the duty of good citizens in all parts of the land to stand by the Constitution, in its spirit and letter, when that Constitution was assailed and its overthrow attempted, we accordingly at once gave a cordial support to the Government in its patriotic endeavor to assert its lawful authority over the whole land. Believing secession to be rebellion, and when attempted, as in this case, without adequate reasons, to be the highest crime, we hold

- 1. That the war was forced upon us by the unjustifiable rebellion of the seceding States.
2. That the Government, as the ordinance of God, must put down rebellion and uphold the Constitution in its integrity.
3. That every citizen is bound to support the Government under which he lives, in the struggle to reestablish its authority over the whole country.
4. That the Constitution of the United States is the supreme law of the Government as well as of the people; that the war should be prosecuted solely to uphold the Constitution and in strict subordination to its provisions; and the war should be arrested, and peace concluded, just so soon as the people now in revolt will lay down their arms and submit to the Constitution and laws of the land.
5. The distinctive features of the Observer are:
1. It is printed on a double sheet, so as to make two complete newspapers, one devoted to secular and the other religious matters; and these may be separated so as to make two complete journals, while the price for both is no greater than is charged for many papers smaller than either one of the two.
2. It gives every week a complete synopsis of the most interesting events in all the denominations, including those that are called Evangelical and those that are not; as every intelligent Christian wishes to be well informed respecting all of them.
3. It gives a well-digested epitome of the News of the Day, Foreign and Domestic, prepared with great labor and care, so that the reader is sure to be put in possession of every event of interest and importance to the public.
4. The foreign correspondence of the Observer is unrivaled, and has long commanded the admiration of intelligent men.

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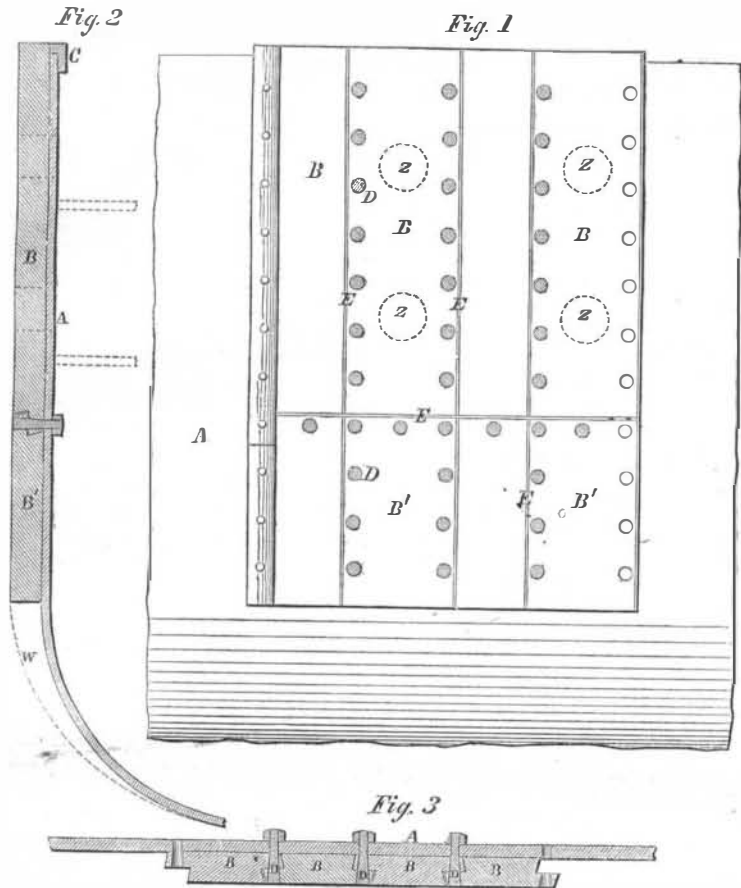
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Improved Mode of Fastening Armor Plates on War Vessels.

It is difficult to realize the enormous weight of iron, $4\frac{1}{2}$ to $5\frac{1}{2}$ inches in thickness, of sufficient extent to cover the sides of a great ship; and it is still more difficult to fasten such plates to a vessel so as to hold them securely while the vessel is rolling and

proper positions. It is believed that this is a more simple and effective mode of securing iron armor plates than any heretofore devised, and that it presents the great advantage of making the joints perfectly water tight.

The patent for this invention was granted Oct. 22, 1861, and further information in relation to it may



LOVE'S MODE OF FASTENING ARMOR PLATES TO WAR VESSELS.

pitching in a heavy sea. And if to this difficulty is added the necessity of so securing the plates that they will bear the concussion of the heaviest cannon balls fired against them, the problem is certainly one of the most formidable that has ever been presented to engineers. Our inventors have entered boldly upon this task and it is our intention to present an illustrated history of their efforts in its accomplishment.

The plan here illustrated consists essentially in rabbeting the plates together at their edges, and then passing bolts through both plates where they lap, and through the sides of the ship; securing the bolts upon the inner side by nuts.

Fig. 1 is a view of a portion of the side of a vessel partly covered with plates, as proposed. Fig. 2 is a vertical section of the side, and Fig. 3 is a horizontal section.

The plates are represented in a vertical position in two series, the upper series, B B B, being, say 16 feet long, 4 feet wide, and of the desired thickness; the lower series of the same width and thickness, but only 8 feet long, or of sufficient length to clothe the side of the vessel to the desired depth. The edges of the plates are rabbeted as shown in Figs. 2 and 3, and tapering bolt holes are drilled through them at the laps, and through the side, A, of the iron ship. As the bolts, D D, are made tapering they can be driven flush with the outside of the plates; leaving no projecting head to be knocked off by the enemy's shot. The inner ends are secured by nuts.

The plates are placed together and the holes drilled straight through them, but before the bolts are driven, a thin piece of packing, E E, consisting of sheet iron or other suitable material is placed in the joint so that as the bolts are driven home, they may draw the plates together with great force, thus forming a water-tight joint and so binding the plates that they will materially strengthen the sides of the ship.

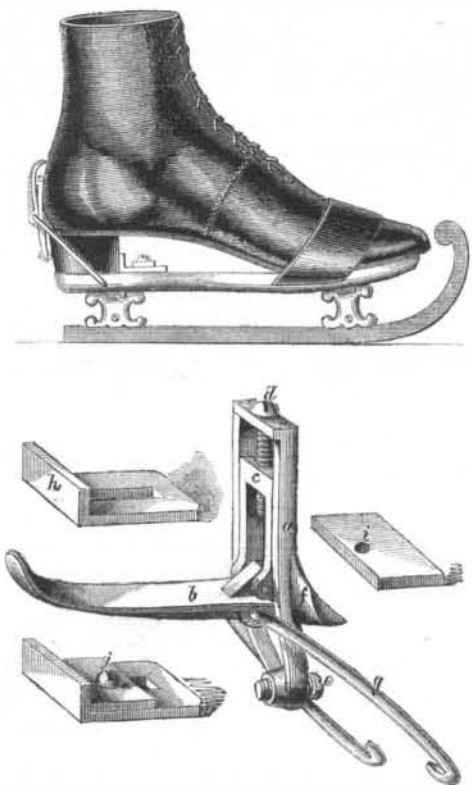
At the upper edge of the ship's side, a hook, C, is riveted to the inner side of the plate, in such manner that it may catch over the edge, as shown; thus securely fastening the upper edges of the ship's side, and the armor plate securely together.

Port-holes, Z Z, are cut through the plates in the

obtained by addressing the inventor, John B. Love at the southeast corner of Front and Market streets, Philadelphia, Pa.

PLIMPTON'S SKATE FASTENER.

The fashion of skating continues to prevail, and we suppose as long as the art is popular improvements in



skates and skate fastenings will continue to come from the fertile brains of our inventors. The invention here illustrated is of unusual novelty, and displays more than ordinary ingenuity. It is a device for fastening the skate to the foot in a remarkably secure manner, and is instantaneous in its action.

A block, a, of brass, is fashioned to fit against the boot or heel, with a claw or projection, f, to enter the groove above the heel. The block, a, is secured to the skate by a bent rod, g, in such manner that the rod may be instantly tightened to bind the skate to the heel of the boot, and instantly loosened to take off the skate. To effect this the rod is connected at its ends by pivots to each side of the skate, while at its middle it passes loosely through a lever, b. This lever is pivoted at the end to a brass block, c, which is connected by the screw, d, to the block, a. It will be seen that when the lever, b, is turned up in the vertical position shown in Fig. 1, the rod, g, is tightened, and the skate is bound firmly to the boot heel, while by simply turning the lever down, the rod, g, is loosened and the skate drops off.

The fastener is adjusted to heels of various heights by varying the height of the block, c, by means of the screw, d.

The heel is prevented from sliding forward on the skate by the block, h, which is secured to the skate by a set screw, j, passing through a long slot, in order that the position of the block upon the skate may be varied to suit boot heels of different sizes. A plate, i, is placed across the block, h, above the slot, and through this the set screw passes. By the screw, e, the fastener is adjusted to the slope of the heel.

The toe strap is made adjustable in any approved mode, and all of the adjustments are arranged by the skater before leaving the house, so that upon arriving at the ice the skate can be attached in one second.

Beside its unparalleled rapidity of operation this fastener has the advantage of dispensing with a strap over the instep, which is uncomfortable and injurious, from its compressing the foot and obstructing the circulation of the blood. As this fastener takes hold of the upper surface of the heel it prevents the tendency to tear the heel apart, and it holds the skate with remarkable security. This fastening may be applied to most of the skates in use.

The patent for this invention has been ordered to issue, and the claim will undoubtedly appear in our next number. Further information in relation to the invention may be obtained by addressing the inventors, H. R. and J. S. Plimpton, at No. 145 Tenth street, corner Fourth avenue, New York City.



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