

RECENT AMERICAN INVENTIONS.

**Breech-Loading Cannon.**—This invention relates to the employment, for opening and closing the breech of a piece of ordnance, of a sliding breech-block, having a movement perpendicular to the bore of the piece, and it consists in an improved mode of producing the movement of the said breech-block, whereby it is effected with very great facility. Invented by L. W. Broadwell, of St. Petersburg, Russia.

**Steam Plow.**—This invention, patented by J. W. Fawkes, of Decatur, Ill., consists in combining a stationary and a traction engine with plows or excavators in such a manner that the plows are drawn along through the soil when the engine is stationary, the power being applied direct to the plows, and the plows drawn up to the machine or engine, the latter being then converted into a traction engine, and propelled along, while the plows are stationary, in order that the plows may be again drawn forward by the engine, after the same is converted into a stationary one. The invention is more especially designed for performing heavy work, such as ditching and plowing with heavy gang plows, &c.

**Cloak and Mattress Combined.**—The object of this invention is to combine a cloak or overcoat and mattress or bed in such a manner that the device when used as a cloak or coat may be used as usual and possess all the advantages of the ordinary military cloak or coat, and be capable, when required, of being readily converted into a mattress or bed with suitable covers for the occupant, enabling him to sleep in the open air without a tent. It is designed also that the invention be capable of being used as floats in the construction of temporary or flying bridges, and also to serve, where necessary, as floats to enable the soldiers individually to pass over the moats of fortifications, and like places, in perfect safety. Each cloak or coat when inflated forming a float for its wearer or owner. The invention consists in having a cloak or coat constructed of india rubber cloth or other suitable fabric, in the usual or other proper form, the cloak or coat being provided with an air bag or compartment in its back, which is inflated when the device is used as a mattress or float, the air being allowed to escape when the device is to be used as a cloak or coat. Patented by F. W. Weiss, of Mount Vernon, N. Y.

**Gas Regulators.**—This invention, the merits of which are due to Levi Abbott, of Boston, Mass., consists in making the regulating valve and valve seat of a gas regulator of vulcanized india rubber, upon which, owing to its being a poor conductor of heat, the vapors contained in the gas are less likely to condense than they are upon a metal valve and seat, and by which, therefore, the liability to the choking of the passage between the valve and seat is in a great measure obviated. It also consists in forming a guide for the valve stem, by providing a suitable hole for the reception of the lower part thereof in the center of the screw which is applied at the bottom of the stem to regulate the greatest width of opening of the valve, thereby dispensing with the necessity of a guide across or above the valve seat, and obviating the obstruction which is offered to the passage of the gas by the cross bar which supports or contains such guide.

**Car and School Seat.**—The object of this invention is to obtain an adjustable seat with a reversible back, the parts being so arranged that the seat will be adjusted and inclined at the proper angle by the movement of the back to either side of the seat. The invention also has for its object an independent adjustable rest or back support, so arranged as to admit of the back of the occupant of the seat being properly supported irrespective of the position of the side pieces of the back, thereby enabling the latter to be connected to the framing and supports of the seats at the most convenient point to effect the desired end. Invented and patented by W. H. Joeckel, of New York city.

**Gas Retort.**—This invention relates to upright retorts for the manufacture of gas from oils or other liquid substances, or substances which are rendered liquid by heat. In such retorts it has been customary, and is generally very desirable to use a quantity of coke or other substance in lumps for the two purposes of presenting a large heating surface for the decomposition of the liquid and of collecting the residuary carbon and impurities which would otherwise cake and col-

lect upon the bottom of the retort. This substance requires to be changed from time to time to remove the residuum of the liquid, and has, heretofore, generally, if not always, been removed piece by piece or by shovelfuls at some inconvenience. The object of this invention is to remove the whole of the said substance at once, and to this end it consists in what may be called a coke box or coke basket attached to the cover of the retort for containing the said substance, the whole of which is thereby enabled to be removed at once by the simple act of taking off the cover of the retort. Invented and patented by A. K. Tupper, of Pontiac, Mich.

PATENTS FOR SEVENTEEN YEARS.



The new Patent Laws enacted by Congress on the 2d of March, 1861, are now in full force, and prove to be of great benefit to all parties who are concerned in new inventions.

The duration of patents granted under the new act is prolonged to SEVENTEEN years, and the government fee required on filing an application for a patent is reduced from \$30 down to \$15. Other changes in the fees are also made as follows:—

On filing each caveat.....	\$10
On filing each application for a Patent, except for a design.....	\$15
On issuing each original Patent.....	\$20
On appeal to Commissioner of Patents.....	\$20
On application for Re-issue.....	\$30
On application for Extension of Patent.....	\$50
On granting the Extension.....	\$50
On filing Disclaimer.....	\$10
On filing application for Design, three and a half years.....	\$10
On filing application for Design, seven years.....	\$15
On filing application for Design, fourteen years.....	\$30

The law abolishes discrimination in fees required of foreigners, exception reference to such countries as discriminate against citizens of the United States—thus allowing English, French, Belgian, Austrian, Russian, Spanish, and all other foreigners except the Canadians, to enjoy all the privileges of our patent system (except in cases of designs) on the above terms.

During the last sixteen years, the business of procuring Patents for new inventions in the United States and all foreign countries has been conducted by Messrs. MUNN & CO., in connection with the publication of the SCIENTIFIC AMERICAN; and as an evidence of the confidence reposed in our Agency by the Inventors throughout the country, we would state that we have acted as agents for more than FIFTEEN THOUSAND Inventors! In fact, the publishers of this paper have become identified with the whole brotherhood of Inventors and Patentees at home and abroad. Thousands of Inventors for whom we have taken out Patents have addressed to us most flattering testimonials for the services we have rendered them, and the wealth which has inured to the Inventors whose Patents were secured through this Office, and afterward illustrated in the SCIENTIFIC AMERICAN, would amount to many millions of dollars! We would state that we never had a more efficient corps of Draughtsmen and Specification Writers than are employed at present in our extensive Offices, and we are prepared to attend to Patent business of all kinds in the quickest time and on the most liberal terms.

The Examination of Inventions.

Persons having conceived an idea which they think may be patentable, are advised to make a sketch or model of their invention, and submit to us, with a full description, for advice. The points of novelty are carefully examined, and a reply written corresponding with the facts, free of charge. Address MUNN & CO., No. 37 Park-row, New York.

Preliminary Examinations at the Patent Office.

The advice we render gratuitously upon examining an invention does not extend to a search at the Patent Office, to see if a like invention has been presented there, but is an opinion based upon what knowledge we may acquire of a similar invention from the records in our Home Office. But for a fee of \$5, accompanied with a model or drawing and description, we have a special search made at the United States Patent Office, and a report setting forth the prospects of obtaining a Patent &c., made up and mailed to the Inventor, with a pamphlet, giving instructions for further proceedings. These preliminary examinations are made through our Branch Office, corner of F and Seventh-streets, Washington, by experienced and competent persons. More than 5,000 such examinations have been made through this office during the past three years. Address MUNN & CO., No. 37 Park-row, N. Y.

How to Make an Application for a Patent.

Every applicant for a Patent must furnish a model of his invention. If susceptible of one; or if the invention is a chemical production, he must furnish samples of the ingredients of which his composition consists, for the Patent Office. These should be securely packed, the inventor's name marked on them, and sent, with the government fees by express. The express charge should be prepaid. Small models from a distance can often be sent cheaper by mail. The safest way to remit money is by draft on New York, payable to the order of Munn & Co. Persons who live in remote parts of the country can usually purchase drafts from their merchants on their New York correspondents; but, if not convenient to do so, there is but little risk in sending bank bills by mail, having the letter registered by the postmaster. Address MUNN & Co., No. 37 Park-row, New York.

Assignments of Patents.

The assignment of Patents, and agreements between Patentees and manufacturers, carefully prepared and placed upon the records at the

Patent Office. Address MUNN & CO., at the Scientific American Patent Agency, No. 37 Park-row, New York.

It would require many columns to detail all the ways in which the Inventor or Patentee may be served at our offices. We cordially invite all who have anything to do with Patent property or inventions to call at our extensive offices, No. 37 Park-row, New York, where any questions regarding the rights of Patentees, will be cheerfully answered. Communications and remittances by mail, and models by express (prepaid), should be addressed to MUNN & CO., No. 37 Park-row, New York.



ISSUED FROM THE UNITED STATES PATENT OFFICE FOR THE WEEK ENDING DECEMBER 10, 1861. Reported Officially for the Scientific American.

THE PRINTING OF PATENTS ABANDONED.

The plan adopted by Commissioner Holloway of printing the specification which forms part of the Letters Patent, he has been obliged to abandon owing to the reduced receipts of the Patent Office. Hereafter, for a time, the specifications will be engrossed on parchment as formerly. This change will obviate the great delay which has attended the issuing of patents after sealing, but the papers do not go out looking so neatly. We hope the receipts of the Office will soon justify the extra expense which attended the printing.

\* \* Pamphlets giving full particulars of the mode of applying for patents, under the new law which went into force March 2, 1861, specifying size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

2,869.—Levi Abbot, of Boston, Mass., for Improvement in Gas Regulators :

I claim, first, The construction of the valve and valve seat of a gas regulator of vulcanized india rubber, substantially as and for the purpose specified.

2,870.—J. R. Baylis, of Baltimore, Md., for Improved Double Cone Marine Propeller :

I claim the construction of a double cone propeller, having its oars or blades constructed, and when arranged relatively to the hub or axis, substantially as and for the purpose described.

2,871.—Edwin Bowen, of Meriden, Conn., for Improvement in Mode of Securing Chimneys to Lamps :

I claim the slide, D, fitted horizontally in the lamp top, A, provided with a hook, a, at one end, and having a spring, E, bearing or acting against it within the top, substantially as and for the purpose set forth.

[The object of this invention is to obtain a fastening or catch which will admit of the chimney being readily adjusted on the lamp top, and also readily detached therefrom, the fastening or catch at the same time being capable of firmly securing the chimney to the lamp top.]

2,872.—L. W. Broadwell, of St. Petersburg, Russia, for Improvement in Breech-Loading Ordnance :

I claim the employment for elevating and depressing the breech block, B, for opening and closing the breech of a shaft, g, arms, h, b, and links, i, i, the whole combined, arranged and operating substantially as specified.

2,873.—L. J. Chateau, of France, for Improved Machine for Breaking the Subsoil :

I claim, first, The breaking instrument constructed and arranged as specified.

I also claim connecting the breaking instrument with the carriage by means of a compound reach pole, as described.

I also claim, in combination therewith the regulation, i, in the manner and for the purposes set forth, and I further claim, in combination with the apparatus specified, the hoist for elevating the breaking apparatus, as described.

2,874.—John De Long, of Monroe, Wis., for Improved Washing Machine :

I claim the employment of the adjustable hinged frame, B, forming both a lever and rubber when constructed, and arranged to operate with the box, A, as and for the purpose specified.

2,875.—H. H. Dickinson, of Hartford, Conn., for Attachment to Kerosene Lamps :

I claim the adjustable tube or thimble, C, surrounding the round wick tube of an ordinary lamp, said thimble being of conical form at top, and having points, b, e, and interstices, a, a, at the top and bottom, operating in the manner described for the purpose set forth.

[The object of this invention is to obtain a simple and economical device, which can be applied to any lamp having a round wick tube to adapt it for burning coal oil, kerosene and other carbonaceous fluids, without a chimney, and the invention consists in a thimble attachment to the wick tube of a lamp adapted to deliver a current of heated air to the flame.]

2,876.—G. D. Dows, of Boston, Mass., for Improved Soda Apparatus Combined with an Ice Cutter :

I claim, first, The combination for cutting ice, of one or more cutters placed in a vertical cylinder, when the same are so arranged as to permit the passage downward of the ice, and are in combination with substantially the screw shafts, T and S, nuts, X X, and follower, Y Y.

Second, I claim the arrangement of the ice cutter, substantially as and for the purpose described, when the same is in combination with the enveloping chest, A A A A, sirup vessels, B B, and cream chest, H. Third, I claim the combination of the cream chest, H, the enveloping chest, A A A A, the ice chest, C C C C, and sirup vessels, B B, all arranged, substantially as and for the purpose described.

2,877.—Jacob Early and J. B. Parvin, of Hightstown, N. J., for Improvement in Seeding Machines :

I claim, first, The reciprocating slide, G, formed of the adjustable perforated plates, e, e, in combination with the stationary cut-off brush, F, and perforated bottom, c, of the seed box, E, all arranged as and for the purpose set forth.

Second, The combination and arrangement of the parallel adjustable