

ation with the wire, D, and foundation rail, C, in the manner and for the purpose substantially as set forth.

Also the bends, C, in the wire, D, to operate in combination with the oblique kerfs, a, in the pickets, substantially as and for the purpose described.

[This invention consists in the employment or use of pickets provided with an oblique kerf at or near their top ends and with dove pins or tenons projecting from their bottom ends to be used in combination with a wire stretched from one post to the other, and with a longitudinal foundation rail in such a manner that by causing the oblique kerfs to catch over the wire and inserting the dove pins in appropriate sockets in the foundation rail, the pickets are steadied on top and bottom, and a light, durable, and cheap fence is produced.]

45,299.—Harness Snap.—Charles H. Palmer (assignor to George Edwards), Newark, N. J. Ante-dated Nov. 16, 1864 :

I claim the tongue constructed as described and the combination of the spring therewith, in the manner and for the purpose set forth.

45,300.—Bearing for Flyers of Spinning Machines.—Blaney E. Sampson, Boston, Mass., assignor to himself and George N. Towbridge, Rollinsford, N. H. :

I claim the application of the green hide collar or its equivalent to the flyer neck bearing, in the manner or by the mode substantially as hereinbefore specified.

I also claim the improved flyer neck bearing as made with the annular chamber, e, for reception of the raw hide collar, d, and with the opening or passage, e, leading laterally out of the said chamber, in manner as specified.

45,301.—Paper Envelope.—Richard Shepard, Brooklyn, N. Y., assignor to Fitch, Estee & Co., New York City :

I claim the strips, A A A and B, substantially as and for the purpose set forth.

45,302.—Rockers for Furniture.—Abraham Strawbridge (assignor to himself and Michael Sehnman), Covington, Ky. :

I claim the combination of the dove-tailed grooves, B, rubber strips, C, bosses, D, D, and screws, b, b, all constructed, arranged and employed in the manner and for the purpose specified.

45,303.—Composition for Preventing Incrustation in Steam Boilers.—Alonzo Temple (assignor to himself and J. L. Fitch), Bridgeport, Conn. :

I claim the within-described composition for preventing or removing incrustation of steam boilers.

45,304.—Device for Packing Dry Goods Boxes.—Thomas Webber (assignor to himself and Volney Rusco), Chicago, Ill. Ante-dated Nov. 25, 1864 :

In combination with the foundation, A, and windlass, B, I claim the chains, h, h, and claw-rods, i, i, or their equivalents, arranged and operating substantially as and for the purpose set forth.

45,305.—Water Wheel.—James White, Cleveland, Ohio :

I claim, first, The combination of the stone with the hoop, b, supported by a rim, a, and the tram screws, c, for the purpose of adjusting the position of the bed stone with reference to the shaft, substantially as shown and described.

Second, I claim the arrangement of the levers, p, extending from the arcular piece, p', the arms, n, rods, n', the gates, m', which when moved causes the openings through which the water passes to the wheel to be larger at the periphery than at the inner portion of said gates, whereby to use the water with economy, and regulate the power to suit the work to be done by the stones, as herein shown and described.

RE-ISSUES.

1,826.—Grain Separator.—Jonathan L. Booth, Rochester, N. Y. Patented Sept. 20, 1859. Re-issued Sept. 25, 1860 :

I claim the combination of the zig-zag screens and boxes, B, C, when the same have a lateral shake motion or one at right angles to the passage of the grain in such a manner as to have the grain pass consecutively over and through them, and arranged relatively with each other to operate substantially as and for the purpose herein set forth.

I also claim the series of zig-zag screens and boxes, B, C, with or without the troughs, E, and having a lateral shake motion in connection with the fan, G, and spout, H, substantially as herein set forth.

1,827.—Machine for Grinding and Amalgamating Gold and Silver.—W. H. Hepburn & G. K. Peterson, San Francisco, Cal. Patented April 19, 1864 :

We claim, first, The pan, B, with a concave bottom in combination with a corresponding shaped muller, in shell form having openings in the hub and shell sufficient to allow the pulp to pass freely to the grinding surfaces arranged with or without the ribs, m, substantially as described and for the purpose set forth.

Second, The arrangement of the shoes, P, provided with curved beveled edges and attached to the under side of the muller, H, so as to form oblique or spiral curved grooves, p, in reverse direction to relation of muller, for the purpose specified.

Third, The spiral flanges or ribs, m*, on the upper side of the muller, as described.

Fourth, The arrangement of the hand-wheels, O, N, thimble, L, and tubular screen, M, substantially as described and for the use and purposes as herein before set forth.

1,828.—Shirt Collar.—Wm. E. Lockwood, Philadelphia, Pa., assignee by mesne assignments of Walter Hunt, New York City. Patented July 25, 1854 :

I claim a shirt collar composed of paper and muslin, or its equivalent, and polished or burnished, substantially as and for the purpose described.

1,829.—Machine for Making Horse-shoes.—Barney Mee, Troy, N. Y. Patented June 9, 1863 :

I claim combining with the rotating male mold around which the rod of iron is bent, the vibrating lever for pushing the rod when bent away from the front or toe end of the mold, and the sliding bar with its diagonal groove for operating the said vibrating lever, substantially as herein described.

1,830.—Manufacture of Sugar.—John Findley Riggs, Fremont, Nebraska Territory. Patented Jan. 26, 1864 :

I claim refining sorghum or other sugar by applying a liquid to dissolve the gum, and removing the same by pressure.

EXTENSIONS.

Sewing Machine.—Allen B. Wilson, Waterbury, Conn. Patented Nov. 12, 1850. Re-issued Jan. 22, 1856. Extended Nov. 12, 1864 :

I claim, first, The method of causing the cloth or material to be sewed in a sewing machine to progress regularly by the joint action of the surfaces between which it is clamped and which act in conjunction, substantially in the manner and for the purposes herein specified.

Second, I claim holding the cloth or other material at rest by the needle or its equivalent, in combination with the method of causing it to progress regularly, the whole substantially as herein set forth.

Third, I claim arranging feeding surfaces, substantially such as are herein specified, in such relation to the needle as herein set forth, that they or one of them shall perform the office of stripping the cloth or material from the needle as it rises or recedes from it, as herein described.

Fourth, I claim so mounting and attaching one of the feeding surfaces to some other part of the machine, that it may be removed or drawn away from the other surface at pleasure, substantially in the manner and to effect the objects herein set forth.

Sewing Machine.—Allen B. Wilson, Waterbury, Conn. Patented Nov. 12, 1850. Re-issued Dec. 9, 1856. Extended Nov. 12, 1864 :

I claim, first, The combination in a single machine of these three following parts, namely, a table or platform to support the material to be sewed, holding it for the action of the needle and presenting it properly to the grasp of the feeding apparatus; a sewing mechanism proper consisting of a needle and shuttle, or their

equivalent, and a mechanical feed automatic, and causing the cloth to progress regularly, to which the cloth is not attached, and so grasping the cloth that it may be turned and twisted by the hand of an operator, such twisting not interfering with the regular progression of the cloth, and the whole being constructed and acting together and in combination with each other, substantially in the manner and for the purposes herein specified.

Second, I claim moving a shuttle so shaped and held by its race, that jaws may embrace it, by means of two jaws which are alternately in contact with the shuttle and are constructed and move substantially in the manner herein set forth, making and breaking their contact without any aid from cams or springs or the equivalent of such devices.

Third, I claim a double pointed shuttle, substantially such as is herein specified in combination with jaws for driving it, substantially such as are described whereby the shuttle may be thrown alternately from opposite directions through loops without practically disturbing the loop thread.

Valve for Governors.—Junius & Alfred Judson (assignor to Junius Judson), Rochester, N. Y. Patented Nov. 5, 1850. Re-issued Jan. 10, 1854. Extended Nov. 5, 1864 :

We claim making the opening or openings controlled by the governor valves of steam engines of gradually increasing capacity from the closed towards the open position, substantially in the manner and for the purpose specified.

And we also claim interposing a spring between the valve cover and the set screw or its equivalent, which determines or sets the position of the face of the valve to its seat, so that the tension of the said spring shall resist the pressure of the steam on the valve cover, and thereby produce an increased flow of steam to the cylinder, substantially as specified.

And we also claim the employment of the valve lever, adjustable to the steam of the valve, in combination with a fixed indicator, substantially as specified for the purpose of setting the valve in any required position without opening the valve box, as set forth.

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In connection with the publication of the SCIENTIFIC AMERICAN, have acted as Solicitors and Attorneys for procuring "Letters Patent" for new inventions in the United States and in all foreign countries during the past seventeen years. Statistics show that nearly ONE-THIRD of all the applications made for patents in the United States are solicited through this office; while nearly THREE-FOURTHS of all the patents taken in foreign countries are procured through the same source.

MESSRS. MUNN & CO. — I take pleasure in stating that, while I held the office of Commissioner of Patents, MORE THAN ONE-FOURTH OF ALL THE BUSINESS OF THE OFFICE CAME THROUGH YOUR HANDS. I have no doubt that the public confidence thus indicated has been fully deserved, as I have always observed, in all your intercourse with the office, a marked degree of promptness, skill, and fidelity to the interests of your employers.

Judge Mason was succeeded by that eminent patriot and statesman, Hon. Joseph Holt, whose administration of the Patent Office was so distinguished that, upon the death of Gov. Brown, he was appointed to the office of Postmaster-General of the United States. Soon after entering upon his new duties, in March, 1859, he addressed to us the following very gratifying letter.

MESSRS. MUNN & CO. — It affords me much pleasure to bear testimony to the able and efficient manner in which you discharged your duties as Solicitors of Patents, while I had the honor of holding the office of Commissioner. Your business was very large, and you sustained (and I doubt not justly deserved) the reputation of energy, marked ability, and uncompromising fidelity in performing your professional engagements.

Hon. Wm. D. Bishop, late Member of Congress from Connecticut, succeeded Mr. Holt as Commissioner of Patents. Upon resigning the office he wrote to us as follows:

MESSRS. MUNN & CO. — It gives me much pleasure to say that, during the time of my holding the office of Commissioner of Patents, a very large proportion of the business of inventors before the Patent Office was transacted through your agency; and that I have ever found you faithful and devoted to the interests of your clients, as well as eminently qualified to perform the duties of Patent Attorneys with skill and accuracy.

PERSONS HAVING CONCEIVED AN IDEA WHICH THEY THINK MAY BE PATENTABLE, are advised to make a sketch or model of their invention, and submit it to us, with a full description, for advice. The points of novelty are carefully examined, and a written reply, corresponding with the facts, is promptly sent, free of charge. Address MUNN & CO., No. 37 Park Row, New York.

As an evidence of the confidence reposed in their Agency by inventors throughout the country, Messrs. MUNN & CO. would state that they have acted as agents for more than TWENTY 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 they have taken out patents have addressed to them most flattering testimonials for the services rendered them; and the wealth which has inured to the individuals whose patents were secured through this office, and afterwards illustrated in the SCIENTIFIC AMERICAN, would amount to many millions of dollars! Messrs. MUNN & CO. would state that they never had a more efficient corps of Draughtsmen and Specification Writers than those employed at present in their extensive offices, and that they are prepared to attend to patent business of all kinds in the quickest time and on the most liberal terms.

PRELIMINARY EXAMINATIONS AT THE PATENT OFFICE. The service which Messrs. MUNN & CO. 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 they may acquire of a similar invention from the records in their Home Office. But for a fee of \$5, accompanied with a model, or drawing and description, they 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 the Branch Office of Messrs. MUNN & CO., corner of F and Seventh streets, Washington, by experienced and competent persons. Many thousands of such examinations have been made through this office, and it is a very wise course for every inventor to pursue. Address MUNN & CO., No. 37 Park Row, New York.

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 pre-paid. Small models from a distance can often be sent cheaper by mail. The safest way to remit money is by a draft on New York, payable to the order of Messrs. 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.

Patents are now granted for SEVENTEEN years, and the Government fee required on filing an application for a patent is \$15. Other changes in the fees are also made as follows:—

Table listing patent fees: 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 \$20, On application for Extension of Patent \$50, On granting the Extension \$50, On filing a 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 Patent Laws, enacted by Congress on the 2d of March, 1831, now in full force, and prove to be of great benefit to all parties who are concerned in new inventions. The law abolishes discrimination in fees required of foreigners, excepting natives of such countries as discriminate against citizens of the United States—thus a lowing Austrian, French, Belgian, English, 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. Foreigners cannot secure their inventions by filing a caveat; to citizens only is this privilege accorded.

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REJECTED APPLICATIONS. Messrs. MUNN & CO. are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. The close proximity of their Washington Agency to the Patent Office affords them rare opportunities for the examination and comparison of references, models, drawings, documents, &c. Their success in the prosecution of rejected cases has often been very great. The principal portion of their charge is generally left dependent upon the final result.

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SEARCHES OF THE RECORDS. Having access to all the official records at Washington, pertaining to the sale and transfer of patents, MESSRS. MUNN & CO., are at all times ready to make examinations as to titles, ownership, or assignments of patents. Fees moderate.

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EXTENSION OF PATENTS. Many valuable patents are annually expiring which might readily be extended, and if extended, might prove the source of wealth to their fortunate possessors. Messrs. MUNN & CO. are persuaded that very many patents are suffered to expire without any effort at extension, owing to want of proper information on the part of the patentees, their relatives or assigns, as to the law and the mode of procedure in order to obtain a renewed grant. Some of the most valuable grants now existing are *extended patents*. Patentees, or, if deceased, their heirs, may apply for the extension of patents, but should give ninety days' notice of their intention.

Patents may be extended and preliminary advice obtained, by consulting or writing to MUNN & CO., No. 37 Park Row, New York.

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Parties sending models to this office on which they decide not to apply for Letters Patent and which they wish preserved, will please to order them returned as early as possible. We cannot engage to retain models more than one year after their receipt, owing to their vast accumulation, and our lack of storage room. Parties, therefore, who wish to preserve their models should order them returned within one year after sending them to us, to insure their obtaining them. In case an application has been made for a patent the model is in deposit at the Patent office, and cannot be withdrawn.

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.



L. M. R., of Ohio.—No chemist has ever been able to make butter; it is formed in globules in the body of the cow. The temperature of the cream is very important in churning. If it is below fifty degrees, the cream may be churned for days without separating the butter, and if much above sixty degrees, a portion of the casein will be mixed with the butter, giving it a white appearance and cheesy flavor. Milk absorbs the odor of turnips or other roots kept with it in the same cellar; it should be kept by itself in a cellar of the most immaculate cleanness, and of uniform temperature.

J. H., of Maine.—The plan of melting quartz to extract gold has been tried many times. The most plausible plan is to make the quartz into soluble glass by fusing it with an excess of soda, and it is claimed that this method is practical. A fatal objection to a gunpowder engine is the accumulation of sulphide of potassium in the cylinder. A carbonic acid engine would doubtless be sufficiently powerful to propel a flying machine a short distance.

A. A. K., of Minn.—As water under a head exerts an equal pressure in all directions, there is no objection to making a water-wheel to work by pressure. Water engines have been made essentially the same as steam engines but with larger ports. There was one employed at the waterworks at Washington and it was said to yield 94 per cent of the power, a larger proportion than any wheel.

H. H. S., of N. Y.—The attraction of magnetism is in inverse proportion to the square of the distance, the center of power being within the magnet a short distance from the end. As your bar, B, is much nearer the magnetized wires than the bar, C, the attraction of the wires for B will be several times greater than for C, and will tend to resist a motion of the bars instead of causing them to revolve.

E. L., of N. J., and S. M., of Mass.—Pyrolygneous acid is a waste product in the manufacture of gunpowder, being distilled from wood in making the charcoal. Some of the powder manufacturers purify it for market and some do not. It is also manufactured at works specially erected for the purpose in different parts of the country; there is one at Green Point, Long Island, and another near Ithaca in this State. It is used principally by dyers.

J. S. B., of N. Y.—The object of writing is to communicate the ideas of one person to another, and to accomplish this it is important that the ideas should be presented in their proper order, and one at a time. When a writer uses a parenthesis, he begins to express one idea, and interrupts the expression of that to give utterance to another. It is better generally to make a complete and separate sentence to convey the idea contained in the parenthesis.

B. T. S., of Ill.—Water is very slightly compressible, and is therefore a little more dense at the bottom of the ocean than at the surface. Hence a body that would barely sink at the surface might be arrested before it reached the bottom. This would not be the case with metals, stones, and other substances the specific gravity of which is several times greater than that of water.

A. R. C., of Ill.—We do not know of any work that has every variety of steam engine illustrated; most of the common varieties are given in "Bourne's Catechism." Steam engines are being invented every day, and it would take a large work to hold the several varieties, good, bad, indifferent, and those of no value whatever.

J. D. L., of Ky.—Of two wheels running together the smaller is the pinion. Ask your customers whether the wheels run together, and the diameter of both, then you will know which is the pinion. Some pinions on the monitor turrets are 3 feet in diameter.

E. P., of Cal.—Your communication is interesting, and is written in the clear style which is always desirable, but we are forced to reject it on account of its great length. This is one of the worst faults that an article can have for our paper.

G. J., of Minn.—You do not forfeit your patent by any delay in bringing it before the public. You are not obliged to do this.

Money Received

At the Scientific American Office, on account of Patent Office business, from Wednesday, Nov. 23, 1864, to Wednesday, Nov. 30, 1864:—

H. E. G., of N. Y., \$25; C. E. R., of N. Y., \$30; T. B. T., of N. Y., \$25; G. & H., of Pa., \$20; W. B., of Mass., \$45; G. F. B., of U. S. A., \$20; L. DeL., of N. Y., \$30; W. F., of N. Y., \$22; M. H., of N. Y., \$15; M. F. R., of N. Y., \$10; G. H. G., of N. Y., \$10; W. F. G., of N. Y., \$15; C. S., of N. Y., \$15; A. L. G., of Mo., \$20; E. B., of Ind., \$16; P. C., of Ill., \$15; A. R. D., of N. H., \$15; C. B. & W. T. B., of Ill., \$16; J. D., of Mich., \$15; D. S., of Mass., \$75; G. B., of N. Y., \$35; S. R., of Pa., \$25; D. M., of U. S. A., \$16; C. C., of N. Y., \$25; J. C., of N. Y., \$15; S. & S., of Ohio, \$16; B. J., of N. J., \$25; J. K., of N. Y., \$25; G. E. W., of N. Y., \$25; J. M. M., of N. Y., \$25; W. P. M., of Wis., \$20; J. M., of N. Y., \$15; R. & C., of Ohio, \$20; J. S., of N. Y., \$45; J. B., of N. Y., \$40; L. W., of Conn., \$20; A. M. W., of N. Y., \$15; W. T. L., of N. Y., \$15; J. W. P., of Ill., \$20; F. I., of N. Y., \$20; H. T., of N. Y., \$20; W. W., of N. J., \$15; J. R. S., of Ill., \$10; J. R., of Ind., \$16; H. W. W., of Pa., \$25; J. N. A., of Iowa, \$25; D. C. A., of Iowa, \$26; T. M. L., of N. Y., \$25; A. K., of Pa., \$76; L. D. H., of Ill., \$25; S. W. W. & Co., of Mich., \$31; F. M. G., of N. Y., \$15; L. & G., of Pa., \$25; E. H., of Ind., \$25; H. J., of N. Y., \$30; A. L. A., of N. Y., \$12; J. J. G., of Ohio, \$30; C. B. H., of Ill., \$20; F. S., of N. Y., \$15; F. H. P., of Conn., \$20; A. D., of La., \$20; A. H., of N. Y., \$20; P. W. P., of England, \$20; G. W. P., of N. Y., \$22; A. W. C., of Conn., \$20; W. H., of Del., \$15; J. W., of N. Y., \$55; S. & T. of N. Y., \$16; I. A. P., of Ill., \$15; H. E., of Pa., \$15; I. C. P., of Ill., \$30; Mrs. S., of Ill., \$16; D. F. V., of Ky., \$16; S. W. F., of Mass., \$25; S. & L. R., of Pa., \$16; W. H. L., of Texas, \$25; J. E. M., of Ill., \$30; S. J. C., of Conn., \$15; W. N. B., of Ind., \$15; J. J. R., of Ill., \$16; A. & G. W., of Iowa, \$20.

Persons having remitted money to this office will please to examine the above list to see that their initials appear in it, and if they have not received an acknowledgment by mail, and their initials are not to be found in this list, they will please notify us immediately, stating the amount and how it was sent, whether by mail or express.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office, from Wednesday, Nov. 23, 1864, to Wednesday, Nov. 30, 1864:—H. E. G., of N. Y.; G. E. W., of N. Y.; J. J. G., of Ohio; T. M. L., of N. Y.; J. N. A., of Iowa; L. D. H., of Ill.; B. J., of N. J.; G. W. P., of N. Y.; J. K., of N. Y.; A. L. A., of N. Y.; D. S., of Mass. (3 cases); P. C., of Ill.; S. R., of Pa.; D. C. S., of N. Y.; E. H., of Ind.; J. W., of N. Y.; H. J., of N. Y.; T. B. T., of N. Y.; F. & D., of Mass.; D. C. A., of Iowa; G. N. B., of Mich. (2 cases); J. E. M., of Ill.; W. F., of N. Y.; C. E. R., of N. Y.; J. M. M., of N. Y.; G. B., of N. Y.; H. W. W., of Pa.; C. C., of N. Y.; J. B., of N. Y.

TO OUR READERS.

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.

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 are required to accompany the petition, specification and oath, except the Government fee.

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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 enclosing \$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.

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