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, except in 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 it 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.

Caveats.

Persons desiring to file a Caveat can have the papers prepared in the shortest time by sending a sketch and description of the invention. The government fee for a Caveat, under the new law, is $10. A pamphlet of advice regarding applications for Patents and Caveats, in English and German, furnished gratis on application by mail. Address MUNN & CO., No. 37 Park-row, New York.

Rejected Applications.

We are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. The close proximity of our Washington Agency to the Patent Office affords us rare opportunities for the examination and comparison of references, models, drawings, documents, &c. Our success in the prosecution of rejected cases has been very great. The principal portion of our charge is generally left dependent upon the final result.

All persons having rejected cases which they desire to have prosecuted are invited to correspond with us on the subject, giving a brief history of the case, inclosing the official letters, &c.

Foreign Patents.

We are very extensively engaged in the preparation and securing of Patents in the various European countries. For the transaction of this business, we have offices at Nos. 66 Chancery-lane, London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eperonniers, Brussels. We think we can safely say that THREE-FOURTHS of all the European Patents secured to American citizens are procured through our Agency.

Inventors will do well to bear in mind that the English law does not limit the issue of Patents to Inventors. Any one can take out a Patent there.

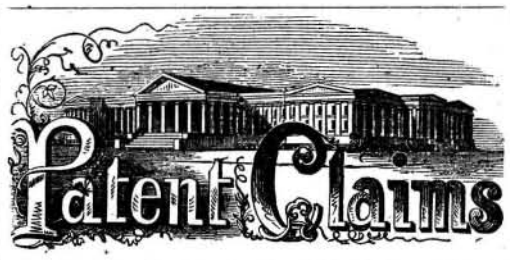
Circulars of information concerning the proper course to be pursued in obtaining Patents in foreign countries through our Agency, the requirements of different Patent Offices, &c., may be had gratis upon application at our principal office, No. 37 Park-row, New York, or either of our Branch Offices.

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 NOVEMBER 26, 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.

2,766.—Charles H. Alsop, of Middletown, Conn., for Improvement in Revolving Firearms :

I claim, first, In combination with a breech pin applied as described, the shoulder, i, so formed in the chamber by counter boring that the force of the explosion acting upon it will tend to press forward the cylinder or chambered breech into contact with the barrel, while the force acting against the breech pin will tend to press it back against the recoil shield or its equivalent, substantially as described.

Second, In a revolver or many-chambered firearm, I claim forming recesses, f f, in the sides of the breech pins, to fit to the peripheries of the adjacent ones, substantially as and for the purpose specified.

2,767.—W. H. Andrews, of New Haven, Conn., for Improvement in Variable Cams :

I claim the variable cam, composed of a hub, A, ring, B, spring, D, and nut or adjustable collar, C, the whole combined and operating substantially as specified.

2,768.—Achille Berthond, of New York City, for Improvement in Apparatus for Advertising :

I claim giving to the band an intermittent motion of alternate, advancing and resting, as described.

2,769.—Mills L. Callender, of New York City, for Improvement in Vapor Lamps :

I claim the relative arrangement of the two burning wicks, d d and c c, by which the wick, d d, is set to burn higher than the wick, c c, and two or more wicks can be simultaneously raised or depressed in by one ratchet wheel or one wick tube, in the manner and for the purpose specified.

2,770.—A. C. Chamberlain, of Newport, R. I., for Improved Method of Growing Plants and Fruits :

I claim the construction of a basket or vase for growing fruits and plants, with a perforated plate, C, to receive and hold the plant, and a receptacle below the plate for holding the substances from which the plant is to derive nutriment, substantially as shown and described.

I also claim the employment of a filling tube, D, with said plate and basket, as and for the purposes set forth.

[An engraving of this invention appeared on page 243 of the present volume.]

2,771.—A. S. Davis, of Boston, Mass., for Mode of Attaching Blocks to Belts of Printing Apparatus :

I claim the attaching of engraved or indented wooden blocks, a x, to their endless belt, G, by means of straps or loops, b x, substantially as shown and described, when said blocks and belt are used in a machine for printing addresses on newspapers, as set forth.

2,772.—I. H. Dennis, of Louisville, Ky., for Improvement in Equalizing Beams and Levers in Railroad Cars :

I claim the equalizing beams, H, connecting the disturbing beams, F F, and operating in combination therewith, in the manner and for the purposes shown and explained.

2,773.—Bridge Frodsham, of New York City, for Improved Material for Mattresses, Cushions, &c.:

What I claim as a new article of manufacture, forming an elastic material for cushions, &c., is the fine polygonal strips of cork, formed as specified.

2,774.—W. O. Grover, of Boston, Mass., for Improvement in Sewing Machines :

I claim, first, The combination of a supporting table, and an eye-pointed piercing needle, with a lower needle, having motions in six directions, substantialy such as described, and for the purposes specified, the combination being substantially as set forth.

Second, I claim imparting motions in six directions to a lower needle, by means of an inclined crank pin, substantially in the manner specified.

And lastly, I claim in combination a tension apparatus, a check spring and nippers, when they are relatively arranged and combined, substantially as described, so as to operate substantially in the manner and to produce the effects set forth.

2,775.—S. C. Granger, of Chicago, Ill., for Improvement in Preparing Mash for Brewing :

I claim the combination of common malt, crushed raw indian corn or indian corn meal and pulverized or granulated carbonized z major and water in the mash for brewing ale, beer and porter, substantially and for the purposes, as described.

2,776.—Kendall Gibbs, of Berwick, Maine, for Improvement in Cattle Fastenings :

I claim the swivel shackle and attached ring, or their equivalents, in combination with the neck rope and button, substantially as described.

2,777.—R. K. Hawley and W. W. Maughlin, of Baltimore, Md., for Improvement in Portable Wooden Tents :

We claim the construction of a wooden tent, substantially in the manner and for the purpose described, the same consisting in the combination of the gables, constructed and united as shown, with the side pieces and ridge pole, to receive a roof, in the manner specified and represented.

2,778.—R. P. Henry and G. W. Fox, of Akron, Ohio, for Improvement in Tombstones :

We claim the shield, C, lock, M, and catch, J, in combination with the stone, A, when arranged and applied, to the purposes set forth.

2,779.—J. G. Holt, of Chicago, Ill., for Improvement in Casting Seamless Screw Nuts :

I claim, first, A seamless screw-threaded sand core, the seamless thread being on the outer circumference of the sand core, for the purpose set forth.

Second, The production of nuts and other tubular articles, with a seamless screw thread on their inner circumference, from seamless screw-threaded sand cores, substantially as set forth.

2,780.—R. W. Huston, of Providence, R. I., for Improvement in Stove Cover Lifters :

I claim the described article of manufacture, constructed and used in the manner and for the purpose specified.

2,781.—Anthoni Iske, of Lancaster, Pa., for Improvement in Fire-Escape Ladders :

I claim, first, The independent ladders, five or more in number, suspended by their upper ends, on pivots, between the elevating cross levers, one above the other, successively narrowed, with their stay catches, x x, in combination with the rope, v', attached in the manner and for the purpose specified.

Second, The truss or supporting frame, B, with its jointed side pieces, E F, when the same is held on pivots, o, between or inside of the frame, A, of the hose carriage, with the reel, Y, operated by means of the windlass, D, and by straps, d, or their equivalent, for the purpose of inclining the ladders, in the manner and for the purpose specified.

2,782.—Ira Leonard, of Lowell, Mass., for Improvement in Railroad Chairs :

I claim, first, A wrought-iron suspension chair, constructed of one piece, with an elastic or U-shaped sustaining rib under the rail, for the purpose, substantially as described.

Second, In combination with a wrought-iron suspension chair, having an elastic-sustaining rib, I claim the wooden cushion, E, or equivalent, for the purpose and substantially as described.

2,783.—H. F. Mann, of Laporte, Ind., for Improvement in Breach-Loading Ordnance :

I claim, first, The combination of the oscillating cannon, A, slotted bracket, E, and crank shaft, F, the whole arranged and operating in the manner and for the purpose described.

Second, The combination of the longitudinally-sliding breech piece, C, with or without a sharp edge, stirrup, B, screw, D, or its equivalent and oscillating cannon, A, the whole arranged and operating, substantially in the manner and for the purpose described.

2,784.—S. L. Marsden, of Westville, Conn., and S. R. Burrell, of New York City, for Improvement in Candlesticks :

We claim a portable candlestick, formed of a metal socket, A, and a spike or screw, B, or a spike and screw combined, substantially as described.

[This invention consists in having a metal socket of sufficient dimensions to hold a candle, provided with a spike or screw, or both combined, so that the socket may be readily secured to any wood work, such, for instance, as the center pole of a tent, the frame of a window, or any frames arranged specially for them.]

2,785.—A. R. Miller, of Attica, N. Y., for Improvement in Carriage Springs :

I claim constructing elliptic springs with double bearings, b b, and leaving the centre thereof detached from the axle and spring bar, substantially in the manner and for the purposes shown and described.

2,786.—John M. Muller, of Richmondville, N. Y., for an Improved Process of Tanning :

I claim the employment or use, for the tanning of leather, of tansey, in combination with hemlock or oak bark, substantially as set forth.

[This invention relates to an improvement in tanning leather, whereby the work may be very expeditiously done, and leather of a very superior quality produced.]

2,787.—John Mulvaney, of New York City, for Improvement in Lamps :

I claim the employment or use of perforated or wire-cloth disks, a b, in the tube, C, and air or draught chamber, B, of a camphene lamp, when said disks are used in combination with the glass chimneys, I, provided with a lower globe portion, c, and without the ordinary draught cone, J, which encompasses the upper part of tube, O, substantially as and for the purpose set forth.

[This invention has for its object the converting of ordinary camphene lamps into coal-oil lamps by an extremely simple and economical modification.]

2,788.—O. H. P. Orendorff, of Bloomington, Ill., for Improvement in Portable Field Fences :

I claim making the panels of a portable fence in such a way that the end ports thereof shall set back from the end of the rails, leaving the ends of said rails projecting past the posts a short distance, thereby forming an angle into which the end of the adjoining panel may enter, then uniting the panels by inserting the end of one panel into the angle formed as described, and fastening the panels when thus united by hooks and staples attached to the same, the whole being constructed and arranged as and for the purpose described.

2,789.—C. E. Paxson, of Salem, Ohio, for Improvement in Corn Plows :

I claim the fenders, B B, hinged forked bars, C C, hinged handles, D D, with the guard, F, and draft beam, A, when combined, arranged and operating in the manner described.

[This invention is designed for cultivating in between rows of corn, and it consists in a peculiar construction and adjustment of parts whereby the implement is brought under the perfect control of the operator, and adapted to follow and cultivate with equal facility opposite sides of two straight or crooked rows at one operation.]

2,790.—B. D. Pease, of Madison, Pa., for Improved Butter Worker :

I claim the combination of a rotating bowl, B, with a rotary beater, E, formed of radial wings or blades, g, the outer edges of which are parallel with the inclined or concave bottom, i, of the bowl as and for the purpose set forth.

I further claim attaching the guard or fender, G, to the device by means of eyes, m m, fitted on vertical rods, n n, at the upper part of the upright, c', in connection with the key, E', for securing the jour-

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pal of the shaft, D, in its bearing in upright, c', whereby the guard or fender, shaft, D, and beater, E, may be readily detached when necessary for cleaning purposes.

[This invention consists in the employment or use of a horizontal rotating bowl, in connection with a rotary heater, arranged in a novel way to effect the desired end.]

2,791.—J. D. Potts, of Pittsburgh, Pa., for Improvement in Retrackers for Railroad Cars :

I claim, first, The construction of the adjustable track or retracker, inclined, and resting on and secured to a horizontal base, substantially as described to operate in the manner and for the purposes set forth.

Second, I claim the device of points on the under side of this base, whereby the track can be secured in any position desired, by forcing said points into the ties, or other wooden support of the rails, either by bringing on the adjustable track the weight of the car or engine to be put on, or by other means.

Third. In retrackers constructed substantially as described, I claim the combination of inclines and levels, whereby when the wheels are brought thereon, they are so moved that the wheel lying entirely outside the rails has its flange first lifted above the rails of the road, and then gradually lowered, so that it touches said rail ; and that the wheel, lying between the rails, has its tread raised above the rail of the road, and then gradually lowered on to said rail, and by the action of its own gravity, guided by the incline, is forced towards said rail, thus bringing its own and the tread of the opposite wheel into their proper positions on the track, and placing the two wheels as nearly simultaneously as possible on their proper rails.

Fourth, I claim the arrangement whereby the flanges of the wheels are guided by coming against the sides of the retrackers to the track on which they are to be placed.

Fifth, I claim the lip which, by projecting over the rail of the road, prevents the flange of the wheel from going between said rail and the adjustable track.

Sixth, I claim the arrangement whereby each of the two adjustable tracks, constituting a set, is arranged so that it can be used for either wheels between the rails, as is required.

Seventh, I claim the devices whereby the incline and base are united, as shown.

2,792.—A. D. Puffer, of Somerville, Mass., for Improvement in Soda Fountains :

I claim passing the pipes which convey the soda and sirups to the draught cock, within the trough, F, where they are cooled by the water from the melting ice, as set forth.

Second, The arrangement within a single draught stand of the compartments, B C and D, all in contiguity with the central cooler communicating with each other by the air passages, h, and closed by tight-fitting plugs, z, whereby, while the sirups are kept separate they are all ejected by the operation of the same force pump, as set forth.

2,793.—W. F. Quinby, of Stanton, Del., far Improved Apparatus for Navigating the Air :

I claim, first, The employment, in combination with the boat-like car, of oscillating wings, A d d, constructed and applied to operate substantially as and for the purpose set forth.

Second, The combination of the wings, A d d, the screw propeller, C, and the spiral-bladed wheels, I I', the whole operating together substantially as and for the purpose specified.

2,794.—J. W. Shipman, of Springfield Center, N. Y., for Improvement in Presses for Hops, Hay, &c. :

I claim the combination of the cam piece and socket, H', and toggles, I I, with the box, F, hinged rack bar, E, and bars, D D, as shown and described.

[The object of this invention is to obtain a press of simple construction, which may be operated manually and with great facility for compressing substances for baling.] ;

2,795.—Philander Shaw, of Boston, Mass., for Improvement in Hot-Air Engines :

I claim, first, The combined arrangement in a caloric engine, operating substantially as shown and described, of the cylinders, pistons, reservoir and furnace. The cylinders and their accessories acting together to rotate one shaft, and the cylinders being located partly within and partly without the reservoir which contains a supply of compressed and heated air, and a furnace which heats the said supply, which, with the gaseous products of combustion, passes through the engine.

Second, The combination of the finished or upper part of the cylinder, with its head, piston and trunk therewith connected, all operating together, substantially as described, and with inlet and outlet valves, and suitable packing round the said trunk, to form an annular air pump.

Third, The chamber or groove around the cylinder, arranged and operating substantially as specified, at or near where the lower part of the piston comes at the termination of its downward movement.

Fourth, The isolated oil trough within the chamber or groove around and within the cylinder, for the specified purpose.

Fifth, The inwardly projecting flange, s, arranged and operating substantially as shown and described.

Sixth, Admitting into the cylinder comparatively pure and cool air, from a reservoir in which it is constantly maintained compressed, at the place and times and by suitable valve gearing, substantially as and for the purposes specified.

2,796.—Suspended.

2,797.—J. H. Shotwell, of Rahway, N. J., for Improved Air-heating Apparatus for Engine Furnaces :

I claim the combination of the steam passages, e, with air passages, f, and water passages, g, combined, arranged and operating in the manner and for the purposes set forth.

[This invention consists in a simple apparatus for heating air for supplying the fires of a steam boiler and furnace, and also for heating air for warming buildings, whereby great economy is effected in the saving of fuel.]

2,798.—Henry Sidle, of Dillsburg, Pa., for Improvementin Churns :

I claim the combination of the fillets or cleats, f, with the dashes, I and G, when the whole are arranged and constructed to operate in the manner and for the purposes described.

2,799.—Joseph Stewart, of San Francisco, Cal., for Improvement in Maneuvering Heavy Guns :

I claim the combination of the shaft, S, and rope or chain, D, with the inclined chassis, A, and gun carriage, B, substantially as described, and for the purposes and uses as set forth.

2,800.—J. A. Strong, of Hyde Park, Vt., for Improved Self-Waiting Table :

I claim providing the self-waiting table, B G D, with a stationary central part, C, adapted to support dishes, lamps, or the like, and supported by a spindle or neck of less diameter serving to guide and retain the annular revolving part, D, substantially as and for the purpose set forth.

2,801.—Rollin White, of Davenport, Iowa, for Improvement in Cartridges :

I claim, first, The construction of the case of a cartridge of two or more pieces of metal movable longitudinally relatively to each other, substantially as and for the purpose specified.

Second, So constructing the cap or pellet, g, containing the percussion priming, and applying the same to the base of the cartridge that it will be caused to operate as a valve to close the vent thereof by the force of the explosion of the charge.

Third, Fitting the percussion cap or pellet, g, to a shoulder, i, formed around the vent in the base of the cartridge case, substantially as described, for the purpose of a firm bearing, to support the said cap or pellet against the blow of the hammer, and so insuring the explosion of the priming.

2,802.—J. W. Whittier, of Cambridge, Mass., for an Improvement in Fastening Window Blinds :

I claim the levers, B and D, the notched rest or support, A, and the plate or catch, A, constructed, combined and arranged as and for the purpose above set forth.

2,803.—A. J. Wiley, of South Attleborough, Mass., for an Improvement in Making Joint Wire or Stock for Jewelry :

I claim the making of joint wire or joint stock from one piece metal, as described, and

I claim making the said joint wire or joint stock, substantially in the manner shown and described.

2,804.—I. F. Williams, of New York City, for an Improved Machine for Applying Flocks to Felt Rubber Goods :

I claim, first, The arrangement of the gumming table so as to be an incline plane, as described, in combination with a self adjustable gum distributor, for the purposes set forth.

Second, I also claim the use of throat, F, and smut collector. G, or equivalent devices, in the sifter case, as a method of preventing masses of falling flock from smutting the cloth, substantially as described.

Third, I also claim the use of swinging arms or beaters, h3, in combination with the revolving beaters, H, substantially as described, and for the purposes set forth.

Fourth, I also claim the use of the cloth tension roller, I, in combination with the carrying roller, K, at the back end of the machine, arranged on a line below the revolving beaters, while the roller, I, is arranged on a line above the gumming table, so as to support the cloth on these two points, and thus prevent the blows of the beaters drawing or jerking the cloth over the surface of the gumming table.

Fifth, I also claim the combination of the finishing brush, J, with the revolving beaters, substantially as described.

2,805.—S. D. Woodbury, of Lynn, Mass., for an Improvement in Elastic Carriage Wheels :

I claim rendering a carriage wheel elastic, by making the felly in two concentric parts, F and f, and interposing a belt, or layer, of India rubber, or other elastic material, R, substantially as described, and for the objects specified.

2,806.—G. F. Blake, of Medford, Mass., assignor to Himself and Peter Hubbell, of Charlestown, Mass., for an Improvement in Machines for Pulverizing and Cleaning Clay :

I claim, first, In combination with a machine for cleaning and pulverizing clay, the reciprocating wipe or plunger, W, constructed and operating substantially as described.

Second, The revolving grate, constructed and operating as described.

Third, The stationary fingers, w, constructed, arranged and operating as set forth.

2,807.—S. E. Bolles, of Mattapoisett, Mass., assignor to Himself and Thomas Ellis, of Rochester, Mass., for an Improvement in Carriage-Pole Supporter :

I claim my improved carriage-pole supporter, having its several parts constructed and arranged in relation to each other, and so as to operate together, substantially as shown and described.

2,808.—R. G. Holmes, of Worcester, Mass., assignor to Himself and Jonathan Luther, of the same place, for an Improved Clothes Washer and Wringer :

I claim the arrangement of the guides, J, with the roller slides, H, rollers, G, springs, I, and bar, K, as shown and described.

[This invention relates to an improvement in that class of clothes wringers, in which elastic pressure rollers are employed for exhausting the moisture from the clothes.].

2,809.—William McCord, of Sing Sing, N. Y., and Edmund Maher, of New York City, assignor to William McCord aforesaid, for an Improvement in Repeating Ordnance, &c. :

We claim, first, Embracing and holding the cartridge chambers, O, opposite the gun barrel, B, by means of the oscillating and reciprocating jaws, C' D, constructed, combined, arranged and operating as described.

Second, We claim the employment of the bars, L, and segment of a cog wheel, M, on the oscillating jaw, C', and slide, N, with cogged rack on its lower surface, and a ridge on its upper one, for throwing off from said jaw, C', the exploded cartridge chambers, and admitting loaded ones singly from the hopper, as set forth.

Third, We claim the peculiar form of the opening or space, D3, in the reciprocating jaw piece, D, in connection with the crank, E', by which the necessary stoppage is given the said jaw piece at the end of every reciprocal throw of the same, as fully set forth.

Fourth, We claim covering the nipple ends of the cartridge chambers with a cap, P, having a headed or valve pin, P', working loosely in an opening immediately opposite the percussion cap on the nipple, substantially in the manner and for the purpose set forth.

2,810.—J. D. Owen, of Carlinville, Ill., assignor to Himself, E. L. Owen and G. W. Barnett, for an Improvement in Post-Hole Excavators :

I claim the combination of the cylinder, a, the follower, D, and the rod, c, when constructed and arranged substantially as described for the purpose of excavating holes for posts.

2,811.—R. H. Peck, of Wolcott, Vt., assignor to Himself and E. Gifford, of Cady's Falls, Vt., for an Improved Churn :

I claim the combination and arrangement of the frame, A, adapted to receive the tub, with its frame work, C, the crank shaft, H, and its gear wheel, G, mounted thereon, the tub, B, the upright revolving dasher, E e, with its gear wheel, F, the cross piece, a, and the hanged cap, I, the whole operating together in the manner and for the purpose described.

2,812.—Francis A. Pratt, of Hartford, Conn., assignor to G. S. Lincoln & Co., of the same place, for an Improvement in Stopping and Changing Motion :

I claim adapting the action of the levers, e e', to the rim of a pulley, D, in combination with the wedge collar, l, substantially in the manner as and for the purpose described.

2,813.—S. D. Tucker, of Troy, N. Y., assignor to C. S. Sill, of the same place, for an Improvement in Cording Guides for Sewing Machines :

I claim, first, The arrangement of the lower outside guide, F, with the bending shell, A, core, B, and two inside guides, C D, as and for the purpose specified and shown.

Second, The arrangement of the cord-guiding aperture, e, with the bending shell, A, core, B, inside guides, C D, and lower outside guide, F, as and for the purpose specified and shown.

Third, The arrangement of the upper outside guides, G, with the bending shell, A, core, B, and two inside guides, C D, as and for the purpose specified and shown.

Fourth, The arrangement of the core-guide, e, with the bending shell. A, core, B, inside guides, C D, and upper outside guide, G, as and for the purpose specified and shown.

Fifth, The arrangement of the two outside guides, F G, with the folding shell, A, core, B, and two inside guides, C D, as and for the purpose specified and shown.

Sixth, The arrangement of the cord-guiding opening, e, with the bending shell, A, core, B. two inside guides, C D, and two outside guides, F G, substantially as and for the purpose specified and shown.

Seventh, The arrangement of the cloth-passage, b, in the upper side of the folding shell, A, as and for the purpose specified and shown.

RE-ISSUE.

J. S. Smith, of New York City, for an Improvement in Epaulets. Patented April 12, 1859 :

I claim the construction, arrangement and combination of epaulets, substantially as described, the same consisting of the following three elements combined :—

First, A shell, or epaulet proper, with its usual appliance or appliances for its attachmeet to the coat.

Second, A bullion, or fringe, permanently attached or secured to a frame, plate or what is termed an adjuster, and

Third, A mechanical device for holding the said frame, plate or adjuster whithin the shell, substantially in the manner and for the purposes set forth.

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.

BACK NUMBERS AND VOLUMES OF THE SCIENTIFIC AMERICAN.—Volumes I., II. and III. (bound or unbound) may be had at this office and from all periodical dealers. Price, bound, $1.50 per volume. by mail, $2—which includes postage. Price in sheets, $1. Every mechanic, inventor or artisan in the United States should have a complete set of this publication for reference. Subscribers should not fail to preserve their numbers for binding.

Notes and Queries

A. J. B., of Nebraska.—There are no very good works published on the distillation of coal oils. Balliere Bros., of this city have published a work on coal oils, which is the best we know of

W. H. L., of N. Y.—The *American Railway Times* is published in Boston. The new steamer *Constitution* is now in the transport service of the government, and, we presume, will not go to California for some time.

T. R. B., of Mass.—"Nicholson's Cyclopedia" is a good work on mechanics and natural philosophy. Ure's Dictionary is a good work on the mechanic arts.

C. H. M., of N. Y.—In relation to joining the Cavendish Society, consult either personally or by letter Balliere Brothers, No 440 Broadway, N. Y.

C. P. W., of N. J.—The bore of a 6-pounder cannon is 3.668 inches. Dahlgren's shell guns are made of 8, 9, and 11 inch bore. Parrott makes his guns of various sizes.

D. B. D., of Ohio.—In reference to the study of mathematics we cannot give you any advice, but would refer you to some one of the many competent teachers in your city.

A. W. H., of C. W.—We do not know where machinery for making wooden bowls can be obtained. We presume that some one who sees this notice will advertise such machinery in this journal.

S. M., of Pa.—We are unable to give you any information in regard to the Saurpetoe blacking.

S. B., of Pa.—The suggestion you make in reference to the use of shells filled with noxious gases to operate against forts, is not a new one. This project has been frequently broached—but if you can accomplish anything practically valuable, your best plan will be to lay it before your member of Congress, and obtain his aid in getting you before the proper Department. We cannot afford you any assistance in this respect.

O. P. A., of N. H.—For information about brass belting address the Waterbury Brass Company of this city.

E. H., of ——.—Collodion is a solution of gun cotton in a mixture of alcohol and ether. It is composed of the four organic elements, oxygen, hydrogen, nitrogen and carbon, but as it is not a definite chemical compound, the proportions vary. The manipulations are so delicate, and the conditions so essential, that practical instruction is necessary to enable one to make it.

A. E. F., of Pa.—We do not approve of your plan for the general government to take charge of the subject of education. As a general rule the State governments are better adapted for the conduct of local affairs than the Federal government, and it would be impossible for the latter to compel the former to maintain common schools. The laws on this subject in the Northern States could not be enforced without the sanction of public opinion. You might as well pass a law prescribing to people what they should eat.

J. R. P., of Ohio.—We have received no information respecting experiments with rifled howitzers. Gun cotton has been used for exploding shells, and we believe it is very suitable for this purpose.

W. A. S., of Ohio.—There are many manufacturers of acetic acid from low wines in New York and its vicinity. You will find the process of making it described and illustrated on page 247, Vol. 4 (new series) SCIENTIFIC AMERICAN.

M. R. C., of Mass.—Sheet tin has never been manufactured in America. All that we use is imported from England. You will find the process described on page 116 of our present volume.

U. B., of Pa.—You have indeed made the improvement whereby gun carriages may be constructed to suit the tracks of railways and run upon them. It will be very difficult, however, to obtain a change in the construction of gun carriages, whereby their cost will be increased and their construction rendered more complex

C. I., of Mass.—We could not recommend rotten stone to be applied to the teeth daily to keep them clean ; once a week would be sufficient, as its frequent applicatian will tend to injure their enamel. The information desired about the National Hymn we cannot give.

R. G. B., of Pa.—A cannon constructed with successive charge chambers to give the shot successive impulses as it passes along the barrel, is not new. We do not know whether its range is much greater than that of common guns. Mr. Lyman of this city, is the inventor of such a gun.

W. A., of Wis.—Who told you that a ball shot from a rifle held horizontally ascended above the level of the rifle? The elevation of a ball in its flight is just in proportion to the angle of the rifle.

H. B. S., of N. B.—The bright surface resembling enamel on English cutlery, is produced by steel burnishing tools, not powder. We do not know the cost of the "Encyclopedia Britanica."

QUERY.—A correspondent makes the following inquiry, "I wish to know what it is that breaks a salt pan when strong brine is being concentrated in it, and why it is that the salt don't make on the bottom?"

COMPOSITION FOR LEATHER BELTS.—A correspondent says, "Take neat's foot oil and add to it about one-third of its bulk of common resin, and stir it over a moderately warm fire until the resin is dissolved. I have found this composition very superior for lubricating the belts of machines. Several good coats of it should be applied at first."

Money Received

At the Scientific American Office on account of Patent Office business, during one week preceding Wednesday, Dec. 4, 1861 :—

O. E. M., of Ill., $25 ; B. & C., of Mich., $25 ; G. M. N., of Ill., $15 ; E. S., of N. Y., $25 ; E. & R., of N. Y., $25 ; C. W. B., of Conn.

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