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41,824.—Hydrostatic Scales for Indicating Tonnage of Boats.—Amory Amsden, Springfield, Ohio :

I claim, first, The process hereinbefore described for arranging or locating a hydrostatic scale accurately at the dead point or center of motion of a boat or vessel, for the objects specified.

Second, The slide, H', employed in the described combination with a hydrostatic scale, to adapt the entire apparatus to be placed below the deck when not in use.

41,825.—Retting Flax and Hemp.—George W. Billings, New York City :

I claim the retting of flax or hemp, straw or stalk, or other analogous fibres by sections at intervals so as to produce a uniform even and uninjured fibre, substantially as described and set forth.

41,826.—Cleaning and separating the Fibers of Flax and Hemp.—George W. Billings, New York City. Antedated Feb. 21, 1864 :

I claim the loosening and dissolving of all resinous matters, silex and other foreign and deleterious substances from flax, hemp and other fibrous substances of like or analogous character by fermentation and removing the same by washing, and the moisture by drying, substantially as described and set forth.

41,827.—Lock.—Edward W. Brettell, Newark, N. J. :

I claim, first, In locks the employment of tumblers, M, N, &c., mounted in the turning part, E, adapted to be adjusted by the turning motion of the key, and to present their ends simultaneously against the bridge, G, substantially in the manner and for the purpose herein set forth.

Second, I claim, in connection with the above, bracing the bent tumblers, M, N, &c., by an arm, E', extending from the cylinder, and arranged substantially as herein set forth.

41,828.—Envelope.—Howard C. Bristol, St. Clair, Mich. :

I claim, first, So forming a letter envelope substantially as shown and described, that when the same is sealed it shall present two fronts, having a smooth unbroken surface, upon one of which the superscription may be written and upon the other an advertising card printed.

Second, I claim a letter envelope constructed with a single flap, d, coincident with the length of the body of the envelope, and with reduced end flaps coincident with the width of the body of the envelope, substantially as and for the purpose set forth.

41,829.—Fast and Loose Pulley.—Charles H. Brown, Fitchburg, Mass. :

I claim the fast and loose pulley, A, sliding brakes, D, D, springs, e, e, wedges, g, g, and brake supporter, C, combined and arranged as described and for the purposes specified.

41,830.—Egg-hatching Apparatus.—Thomas Carter, Covington, Ky. :

I claim, first, The provision in an apartment, A, warmed and insulated in the manner described, of the egg receptacle, F, the same being capable of elevation and depression within the apartment, substantially as and for the purpose set forth.

Second, The combination of the apartment, A, heater, B, and vaporizing vessel, E, all constructed, arranged and operated as described.

Third, In the described combination with a vertically adjustable receptacle, F, I claim the automatic egg-turner, K, operated by mechanism substantially as specified.

41,831.—Harvester-cutter Sharpener.—Isaac H. Collier, Poughkeepsie, N. Y. :

I claim bevelling and sharpening the two contiguous edges of a mowing or harvesting cutter-bar, at one operation, by straddling a conic or A-shaped wheel with the two contiguous edges of adjoining blades of such bar, substantially as described.

41,832.—Preparing Artificial Fuel.—Dominic E. Conart, New York City :

I claim the use of compounds known in chemistry under the name of insoluble soaps, in order to effect the agglomeration of small common fragments of anthracite, and obtain the infusible fuel prepared as described.

41,833.—Curd-cutter.—Josiah Crosby, Rome, N. Y. :

I claim as a new article of manufacture a curd-cutter and worker, consisting of a series of knives, A, handles, D, E, and rod, C, all constructed and arranged as herein shown and described.

41,834.—Yarn-delivering Mechanism for Looms.—George Draper, Milford, Mass. :

I claim my said yarn delivery mechanism, or combination substantially as described, the same consisting of the ratchet, I, the pawl, l, the arm, m, the gravitating catch, p, the weight, r, or their mechanical equivalents combined with the guide, F, and the yarn beam, substantially in manner and so as to operate as hereinbefore specified.

I also claim the combination therewith and with the lay, in the manner substantially as described of the stopping mechanism, to operate as and for the object hereinbefore explained.

And I claim the gravitating catch and its arm or carrier to operate together and with the ratchet, substantially as specified.

41,835.—Mode of converting Motion.—John W. Drummond, New York City :

I claim the combination of a belt and crank-pin with a pair of pulleys or wheels, and a cross slot for producing a reciprocating movement as specified.

41,836.—Apparatus for straightening and polishing Cylindrical Bars or Tubes.—George Walter Dyson, Tinsley, England :

I claim rolling and polishing pieces of solid metal or tubing of cylindrical shape by passing them between rolls in a direction in a bisecting the angle of inclination of the axes of the rolls to each other, that is in a direction nearly parallel with the axes of the rolls, instead of a parallel direction or one at right angles thereto.

Also the use of rolls the axes of which are inclined to each other and which are made to rotate in the same direction, through and between which metal rods, bars and shafts or tubing are made to pass by the rotation of the rolls aided by guides, for the purpose of giving a cylindrical shape to such bars, shafts or tubing, and at the same time, if desired, polishing the same.

41,837.—Car Coupling.—Carlton Foster, Oshkosh, Wis. :

I claim, first, The construction and use of the eyes, k, connected to levers, g, for the purpose of receiving and holding in position the coupling pins, e, and operating them in their respective bunters, as herein described and set forth.

Second, In combination with the foregoing I claim the mode of securing the connecting links as at d, for the purpose described.

Third, The combination of said eyes, levers, links and hooks, m,

and bunters, a a' a', in the manner and for the purpose herein set forth.

41,838.—Clothes-fastener.—Pinckney Frost, Springfield, Vt. :

I claim a clothes-fastener constructed and operating substantially in the manner and for the purpose set forth.

41,839.—Rendering Compasses Inseparable to Local Attraction.—John S. Gisborne, Birkenhead, England, and Wm. Simpson, Liverpool, England. Patented in England Feb. 14, 1863 :

We claim by means of electricity, however obtained, rendering compasses, or the magnetic needles in compasses for ships and other purposes, inseparable to local attraction, convenient practical constructions and arrangements being illustrated on the accompanying sheet of drawings and herein delineated.

41,840.—Lubricating Compound.—George W. Gladden, Cincinnati, Ohio :

I claim lubricant composed of residuum from the distillation of petroleum, pine tar, and plumbago compounded, substantially in proportions and manner specified.

41,841.—Printing Press.—George P. Gordon, Brooklyn, N. Y. :

I claim, first, Taking the unprinted sheet from the feed table, presenting it to the type for the reception of the impression, relieving it from such impression and carrying it to and depositing it upon the pile table, by the use of one and the same set of reciprocating automatic nippers, whether constructed and operated in the precise manner shown or in some equivalent way to produce a like result.

Second, The combination of said reciprocating automatic nippers with a cylinder or segment of a cylinder which shall have a part rotary with a return movement.

Third, I claim the nipper trip, V, and the nipper guide, z, in combination with the reciprocating bed and the reciprocating nippers; and these in combination with the cylinder or segment of a cylinder, which shall have a part rotary with a return movement.

Fourth, The combination of the tympan sheet holders with the cylinder or segment of a cylinder, for the purpose shown.

Fifth, I claim rotating reciprocating nippers to file the sheet (heretofore patented by me), when combined with a cylinder or segment of a cylinder, operating substantially as shown.

Sixth, The filing the printed sheets by the use of one and the same set of reciprocating automatic nippers, directly before or in front of and under the eye of the operator, so that he may at once detect any imperfection in the impression (as heretofore patented by me), when combined with a cylinder or segment of a cylinder, substantially as described.

41,842.—Harvester.—Samuel B. Haines, Lewistown, Pa. :

I claim, first, The combination of the enclosing and rotary drum, B, and pivoted gear frame, F, arranged and operating substantially as described.

Second, The combination with the frame or arm, F, constructed and arranged as described, of the slotted head, C', adapted to permit the vertical motion of the said frame and trace it horizontally as explained.

Third, In combination with the drum, B, I claim the gear frame or arm, F, provided with the concavity in its upper surface as represented, to receive the pitman and combine lightness, strength and rigidity.

Fourth, The main frame, C, C', constructed substantially as described and attached to the wheels, A, A, or drum, B, in any suitable manner.

Fifth, The combination of the segments or pinions, d', cogged rims, E, and lips, e, with the pawls, b, b, and wheels, A, A, for throwing the parts in and out of gear, substantially in the manner explained.

The pawl, F, constructed with an elastic shank, p, and operating in the manner and for the purposes specified.

[In this machine the gearing is enclosed within a drum which is rotated by driving wheels, or by direct contact with the ground and through the medium of which motion is communicated to the working parts; the advantages of the invention being lightness, durability, efficiency of operation, and cheapness of construction.]

41,843.—Mode of ringing Bells.—James Harrison, New York City :

I claim the combination of the gear wheel, C, with the hub, D, and shank, E, fitted to a corresponding hole in yoke, A, making a perfect right angle joint at the point, D, and the bolt holes, 1, 2, 3, 4, 5, for the purpose of fastening the wheel to the bell as specified.

I also claim the combination of levers, M, with the working pawl, N, the check dog, L, ratchet wheel, J, and screw or worm, K, and cam, P, with friction roller, O, for the purpose specified.

I also claim the combination of cap, G, with hole in center to fit nut, F, that bears the weight of the bell and slots, g, g, g, to fit lugs, v, v, on yoke, A, substantially as described.

I also claim the working of lever, M, through the arm of yoke, A, and the ears, A', on yoke, A, substantially as described.

41,844.—Explosive Shell.—Thompson D. Hart, Philadelphia, Pa. :

I claim securing the bars, C, around the body of the shell, A, in the manner described as and for the purpose specified.

41,845.—Bridle and Bit Connection.—Charles B. Hogg, Boston, Mass. :

I claim the improved bridle bit, having each of its rings made with the prongs, b, b, and passage, c, arranged substantially as described.

And in combination with a ring, a, made with prongs, b, b, and a passage, c, arranged as described, I claim the rein or strap, R, as made with the holding loop, A, and arranged within such loop and so as to be applied to the ring, substantially as described.

41,846.—Lamp Burner.—Henry C. Hutchinson, Cayuga, N. Y. :

I claim a deflected wick tube with lateral opening for the flame, substantially as described, when by a wide flame may be obtained from a small wick tube and a free access of air to the base of the flame, in whatever direction it may burn from the tube.

41,847.—Washing Machine.—Samuel S. Johnson, Virden, Ill. :

I claim, first, The combination of the tub, A, convex plate, E, bar, F, cleats, E', E', roller, G, and levers, H, H, constructed and operating in the manner described.

Second, In combination with a machine of the construction above specified I claim the furnace, C, arranged and operating in the manner and for the purpose set forth.

[This invention consists in the employment in connection with a washing apparatus of a fire-box or furnace, located beneath a metallic bottomed tub, whereby the clothes may be boiled and at the same time subjected to the action of the rubbing apparatus, and thus means for most thoroughly cleaning the same.]

41,848.—Revolving Fire-arm.—Ben Kittredge, Cincinnati, Ohio :

I claim a metal shield constructed substantially as described, and placed between the cork and nipple to throw the fire laterally from the nipple.

41,849.—Washing Machine.—Joel Lee, Galesburg, Ill. :

I claim the pedestal, A, the shaft, D, the segment, H, the pinion, E, the yoke, K, the cross bars, C, and the rods, m, the whole constructed and arranged substantially as and for the purpose herein set forth.

41,850.—Filtering Cisterns.—Philemon Markley, Canton, Ill. :

I claim a filtering cistern in the form of a hollow globe, with the chamber for unfiltered water directly above the cistern, thereby giving a filtering surface equal to the circumference of the water chamber, with the water chamber and cistern having a common base, to wit the lower half of an S-shaped globe wall.

41,851.—Rolls.—Benjamin Merritt, Jr., Newton, Mass. :

I claim a pressure roll consisting of an exterior metallic shell, A, supported on a metal shaft, B, having inside or bearings at b, a, placed at or about one-fourth the length of the roll from its ends, and the shaft reduced in diameter each side of said bearings, in the manner and for the purpose substantially as set forth.

41,852.—Cinder-washer.—James M. Meschutt, New York City. Antedated Feb. 20, 1864 :

I claim the rotary or oscillating bucket or ash receptacle, c, sus-

tained by and moved on the center pin, b, in a pall or water receptacle for washing cinders, as set forth.

41,853.—Butter-worker.—Solon E. Morse, Montgomery, Vt. :

I claim the improved butter-worker as made with the grooved inclined plane, E, the perforated table, A, and the layer of cloth, B, the whole being arranged and constructed substantially in manner and so as to operate as specified.

41,854.—Corn Planter.—J. Y. D. Murphy, Half Moo, Pa. :

I claim, first, In combination with the side plates, B, unobstructed at their forward ends, a sliding seeding mechanism composed of a grain duct or passage, n, and the bell-crank levers or arms, o, for opening and closing the same, substantially in the manner and for purpose described.

I also claim in combination with the sliding plates and their grain ducts or passages, the hoppers, P, attached thereto, and operating in connection with the seed hoppers, D, substantially as described.

I also claim the combination of the three springs, e, k, k, with the cam, and with the plates, m, m, for the purpose of more readily raising up the plates without requiring so much resistance as one spring would require to raise the wheels to compress it, as herein above described and represented.

41,855.—Sugar-cutting Machine.—James H. Murrill, Baltimore, Md. :

I claim the employment of the vibrating knives, h, h, in combination with the armed rollers, G, G, in the manner and for the purposes substantially as set forth.

I claim the arrangement of a slabbing saw, B, and reciprocating frame, e, e, e, and hopper, C, in combination with rollers, G, G, and knives, h, h, in the manner substantially, and for the purpose of cutting sugar into lumps.

41,856.—Stencil Plate.—John C. Nyc, Cincinnati, Ohio :

I claim the combination of the holding frame, A, having grooved or hollow ways, a, a, therein, with the wire, o, or otherwise enlarged and stiffened guide edges, b, b, of the letter plates, B, B, in the manner and for the purpose herein specified.

I also claim the combination of the enlarged abutting edge of the letter plates with the intermediate overlapping edges, h, h, thereof, for the purpose herein set forth.

41,857.—Revolving Fire-arms.—William Palmer, New York City :

I claim, first, The employment of a grooved carrier, k, intermittently revolved by automatic mechanism, for presenting a chamber containing the charge to be fired, to the rear end of the barrel and holding the same in place while being fired, as set forth.

Second, I claim a hopper slide or opening, e, combined with said revolving carrier, when such hopper slide or opening is so located that the chambers placed therein descend into the said carrier by gravity, as set forth.

Third, I claim a shield, l, in combination with said rotary carrier, k, and hopper slide or opening, l, when said shield extends from the base of the hopper slide or opening, l, to the point at which the chamber, i, is brought into line with the barrel for firing, as specified.

Fourth, I claim a revolving cam, n, in combination with the rotary carrier, k, for giving progressive motion to said carrier and allowing the chambers to be fired, as set forth.

Fifth, I claim the employment of automatic mechanism to press the chambers to the rear of the barrel and then withdraw the same, in combination with the rotary carrier, also moved by automatic mechanism, so that the motions are in unison, as set forth.

Sixth, I claim the metallic case cartridge, r, formed and acting as specified in combination with the detached chamber, i, receiving the same as specified.

Seventh, I claim the combination of the rotary carrier, k, cams, n and p, and hammer, o, in the manner specified, the parts being so formed and timed that the motions are harmonious, for the purposes and as set forth.

Eighth, I claim the bridge piece, q, in combination with the cam, n, and rotary carrier, k, for drawing back the chambers, i, and rotary carrier, as specified.

Ninth, I claim the ring, g, or its equivalent, in combination with the rotary carrier for withdrawing the chambers, i, as the carrier is moved, as set forth.

Tenth, I claim the disk, m, and its pins, 3, 3, in combination with the cam, n, and its grooves, 4 and 5, for the purposes and as specified.

41,858.—Apparatus for distilling Rock Oil and other Hydro-carbons.—Elijah Freeman Prentiss, Philadelphia, Pa., & Robert Adam Robertson, Liverpool, England. Patented in England July 31, 1862 :

We claim, first, The combination of the still, A, the injecting worm, B, and the central tube, G, G, as set forth.

Second, Roughening the surface of the injecting worm or tube, as at a, to render the ebullition regular and quiet.

Third, The combination of the still, A, with the series of columns, three or more, each column being set and maintained at the temperature necessary to separate the product condensable at such temperature, whereby at one continuous operation the crude oil is separated with the various products due to condensation at the different temperatures fixed upon.

Fourth, The arrangement of the vapor tubes and oil spaces in columns, B, B' or C, C', whereby the crude oil on its way to supply the still, A, is made to act as a condensing bath to the vapors in these columns, coming from the still, A.

Fifth, The arrangement of the columns, B, B' and C, C', in combination with the still, A, and the movable inlet tube, g'', whereby the operation of the still is rendered continuous.

Sixth, The air regulator, or its equivalent, for regulating the temperature of the respective columns or either of them in combination with the pipes of supply of the heating and cooling media.

Seventh, The water legs, X, and the floats, Z, for regulating the escape of water from the columns.

Eighth, The auxiliary heads, V, V', for enabling the oil-bath in each column to act as a still.

Ninth, The warming of the bottoms of the chambers which are at the bases of the columns by means of steam chambers arranged and operating as shown above.

Tenth, The warming of the bottom of the column on which the still, A, is supported, substantially as above described.

41,859.—Hay-shocking Machine.—Nathaniel W. Plymate, Freeland, Iowa :

I claim the shock-frame constructed of the frame or shaft, Y, Y, and teeth or bars, A, A, when combined with the rotating rake, and used in the manner and for the purpose herein set forth.

41,860.—Wire Harness.—Adam R. Reese, Phillipsburgh, N. J. :

I claim, first, The use of wire rope or cord in bridles or harness, substantially in the manner and for the purposes set forth.

Second, The use of solid loops in wire harness, substantially in the manner and for the purposes set forth.

41,861.—Apparatus for punching and shearing.—Sylvester Renrew, Marseilles, Ill. :

I claim the cutter-plate, G, secured to the shank of the metal punch, in combination with the stationary cutter-plate, d, secured to the frame of the punch to form a combined metal cutter and punch, substantially in the manner and for the purposes herein described.

I also claim in combination with the combined metal-cutter and punch the toggle links, I, K, link, L, and hand lever, M, substantially in the manner and for the purposes described.

41,862.—Lithographic Printing Press.—Edwin Reynolds, Mansfield, Conn. :

I claim imparting the upward motion to the movable tooth, g, by means of the rod, h, arm, l, rocker shaft, k, arm, r, and cam, q, operating together in the manner substantially as described.

I also claim the combination of the rod, h, lever, v, catch, a, z, and arm, l, for entirely arresting the descent of the tooth, and the operation of the tympan, as set forth.

I also claim the combination of the pins, k, and projection, h, operating together substantially as described to lock the tympan in position, when the movable tooth is out of gear with the rack.

I also claim the combined operation of the cams, q and r, for controlling the arrest of movement of the tympan, substantially as specified.

I also claim operating the nipper jaws, n, m, to close them and to cause them to remove the sheet from the tympan frame, by the combined action of the pin, e, lever, s, z, and projection, f, z.

I also claim constructing the stationary damper with folds, in the manner and for the purpose substantially as described.

41,863.—Hand Loom.—Conrad Roder, Ceralvo, Ky. :

I claim, first, Communicating motion to the tension beam, B, from the batten, d, by means of the arm, l, lever, m, pawl, n, ratchet, o, and intermediate gearing, substantially as specified.

Second, I claim in combination with the tension beam, B, the use of the removable ratchet, o, or a series of similar ratchets spaced or

adapted to the thread or yarn used as filling in the web, as herein set forth.

Third, In combination with the batten, d, the use of the springs, r, r', substantially as and for the purpose specified.

41,864.—Padlock.—Louis C. Rodier, Springfield, Mass.: I claim, first, the employment in padlocks of a locking spring moving when actuated by turning a key either to the right or to the left, transversely to and out of the path of the bolt, substantially as herein shown and described.

Second, In combination with a locking spring vibrating under the action of a key turning on a fixed pin within the lock case either to the right or to the left, transversely to the path of the bolt, I claim the cam-shaped hook on the end of the said bolt for operation as set forth.

Third, I claim the arrangement in combination with a side locking spring and bladed bolt, operating as described, of wards cast to the front plate of the lock case, as shown and set forth.

Fourth, In combination with a bolt-locking side-spring, I claim a yoke, or the equivalent thereof, actuated by a spring as described to securely hold the side-spring when locking the bolt and when arranged in relation to the key so that when turned either to right or left it shall cause the release of the spring, substantially as herein set forth.

Fifth, I claim in combination with the bolt-locking spring and spring-locking yoke, a spring connected with or disconnected from the yoke spring arranged within the casing of the lock relatively to the bolt and the yoke so as to constantly bear on the yoke and to throw out the bolt when a key is applied from without to actuate the yoke and side-spring, as shown and described.

41,865.—Stump Extractor.—Charles Rundquist, Knoxville, Ill.: I claim, first, a vertical screw, G, grooves, ff, n uprights, B, B', and radial conical rollers, c, c, c, c, c, as herein arranged and combined operating, substantially in the manner and for the purpose specified.

41,866.—Safety Cleat for releasing Sails of Vessels.—John W. Sharret, Portsmouth, Va.: I claim, first, a cleat, constructed with a pivoted tongue, a', substantially as for the purposes described.

Second, The extended latch, d, formed on the pivoted tongue, a', of a cleat in combination with a pendulum, D, or its equivalent, substantially as described.

Third, Releasing the sails of vessels by means of an automatic device constructed and operating substantially as described.

41,867.—Joiners' Gauge.—Christian Sholl, Mount Joy, Pa.: I claim a gauge, the stem of which is comprised of three or four separate stems, each independently adjustable and held by a single thumb-screw, substantially in the manner shown and for the purpose specified.

41,868.—Spring Tension Regulator.—Thomas Silver, New York City: I claim the combination of a spring with an eccentric, substantially as described for the purpose specified.

41,869.—Damper.—Charles C. F. Stender, Chicago, Ill.: I claim, first, The combination of one or more deflectors, G, G', with the sliding damper or register, D, and valve plate, A, substantially as and for the purpose described.

Second, The combination of one or more deflectors, G, G', with an oscillating valve, A, substantially as and for the purpose described.

41,870.—Knapsack Hammock.—A. Wm. Sus, New York City: I claim, as a new article of manufacture, the army knapsack hammock hereinbefore described, consisting of the webbing, A, pouch, D, shoulder straps, B, B, slinging cords, C, C, C, C, and ties, E, E, all constructed, combined, and arranged, in the manner and for the purposes specified.

41,871.—Distilling Rock Oil.—Alexis Thirault, New York City: I claim, first, Subjecting petroleum or rock oil to repeated evaporations by condensing the vaporous products in one and returning the condensed liquid to the still through another pipe, substantially as and for the purpose specified.

Second, The arrangement of the condensing pipe, D, funnel-shaped conductor, E, and return pipe, F, in combination with the still, A, constructed and operating substantially as and for the purpose described.

Third, The arrangement of the recondenser, H, in the interior of the still, A, in combination with the condensing pipe, D, funnel-shaped conductor, E, return pipe, F, and condensing pipe, I, all constructed and operating, substantially in the manner and for the purpose herein specified.

41,872.—Grain Winnowers.—Henry B. Thomas, Cascade, Iowa: I claim the mode of suspending the upper and second shoe by means of the notched spring plates, H, attached to the sides of the mill and to the shoe as seen in the drawings of Figs. 4 and 2.

I also claim the second shoe having a perforated plate and three overlapping blinged plates for discharging small seeds at the sides of the machine through the discharge channels as arranged in relation to the pair of reciprocating rock-shaft screens in combination with the lever arm, L, and connecting rod, M, substantially in the manner and for the purpose herein set forth.

41,873.—Medicine for Wounds, Inflammation, &c.—Otto Troemel, Manitowoc, Wis.: I claim the production of the above described solid and stone-like mass by the drying and melting of the above-named ingredients, substantially as and for the purpose set forth.

41,874.—Telescopic Sight for Fire-arms.—Joseph M. Trowbridge, United States Army: I claim, first, A cross-line diaphragm mounted adjustably within a telescope attached rigidly to a fire-arm, whereby the instrument is rendered secure from derangement by ordinary military and sporting usage.

Second, Securing the diaphragm, D, adjustably within the telescope, A, by springs, E, E', reacting against set screws, F, F', substantially as and for the purposes set forth.

41,875.—Apparatus for raising Sunken Vessels.—Edward Turner, Baltimore, Md.: I claim the combination of the lifting screws, gearing, and chains, constructed and arranged as herein described, with two or more trussed beams, which beams rest on two or more floats or vessels, for the purpose of raising the sunken vessel, in the manner herein described.

41,876.—Foot-stove.—Abner T. Upham, Canton, Mass.: I claim the improved foot-stove as made not only with the foraminous top, but with the chambered guard arranged with respect to such top and the lamp, substantially in manner and so as to operate as described.

41,877.—Saw-mill.—Lorenzo Vance, Philadelphia, Pa.: I claim, first, The combination and arrangement of the rotating disk, C, sliding frame, E, frame, I, carrying the saw, A, and the means of adjusting them severally or singly when constructed and operating, substantially as described.

Second, The arrangement of the sliding frame, E, the saw frame, I, and saw, A, when constructed and used, substantially as and for the purpose specified.

Third, The adjustable pulley-frame, Q, and pulleys, P, P, in combination with the saw frame, I, and sliding frame, E, and its adjusting devices when arranged, to operate as described.

Fourth, The rotating frame, F, having adjustable feed rollers, c, c, with their adjusting and operating devices in combination with a driving shaft, T, having two universal joints, substantially as described.

41,878.—Producing Mixed-colored Woolens, &c.—Stanislas Vigoureux, Rheims, France: I claim the manufacture of mixed-colored woolen and other threads from filaments dyed, printed, or colored in sections, in the manner hereinbefore described.

41,879.—Rubber Boots and Shoes.—Benjamin H. Webb, North Cambridge, N. Y.: I claim the combination of a tube, or what is equivalent, with boots and shoes that are made of india-rubber or other material requiring ventilation, substantially as and for the purpose set forth.

41,880.—Tools for drawing Spikes.—Charles T. Webber & Paul Iverson, Janesville, Wis.: I claim the combination of the adjustable steel point, b, with the main bar, a.

Also the combination of the flexible fulcrum, c, with the said bar, substantially as described.

41,881.—Blank for Horse-shoe Nails.—Milton D. Whipple, Cambridge, Mass.: I claim, as a new article of manufacture, a blank for horse-shoe nails, substantially of the form herein shown and described.

41,882.—Canister Shell.—William S. Williams, Canton, Ohio: I claim, first, The peculiarly-formed hemispherical chamber, C, in the described combination with the shoulder, h, and final explosive chamber, D, for the purposes specified.

Second, The combination of the perforated plate, H, resting upon a shoulder, h, the tapering tube, I, permanently attached by its smaller ends to the plate, H, around the aperture, l, and the cap, F, with a tapering neck, f, fitting within the large end of the tube, I, all as herein shown and described and for the purposes specified.

Third, The fusible guard, e, applied to the orifice of the fuse, E, in the manner and for the purposes explained.

[This invention relates to shell carrying a charge of explosive shot which may be projected from it at any desired period during or at the termination of its flight, at any desired interval after which the entire shell explodes.]

41,883.—Automatic Railroad Switch.—J. P. Woodbury and N. Ames, Boston, Mass.: We claim, first, Attaching a pendent or depressible arm permanently to the longitudinal center of the axle, substantially as set forth and for the purpose described.

Second, Combining with the arm, d, permanently attached to the longitudinal center of the axle, either a horizontal or vertical roller, F and G, substantially as and for the purpose described.

Third, Holding the arm, d, in a perpendicular position by means of the start, e, or its equivalent, in combination with links or a cleat attached to the bottom of the car by bolts so small as to break when required, substantially as described.

Fourth, Connecting and raising the two arms, d and d, by means of a single spring, substantially as described.

Fifth, The combination of the windlass, J, chain, I, and box, D, substantially as and for the purpose set forth.

41,884.—Pegging Machine.—C. H. Binger and W. E. Fischer, Boston, Mass., assignors by mesne-assignments to Alfred B. Ely, Newton, Mass.: We claim a mechanism, substantially as herein described, for alternately operating by percussion to give long and short strokes to the instrument, a.

41,885.—Rotary Hair Brush.—E. G. Camp, Bristol, England. Patented in England, March 11, 1862: I claim the construction and employment of circular brushes or apparatus, whether magnetized or not, for brushing the human hair and skin, made to act substantially in the manner hereinbefore described.

41,886.—Washing and Wringing Machine.—John Cram (assignor to himself and John S. Cram), Boston, Mass.: I claim the improved mode of making the elastic covering of each of the elastic washing rollers, viz. of a solid tube of vulcanized rubber, or other equivalent material, grooved helically from end to end, as described.

I also claim the combination of the single yoke lever and the holding devices thereof with rollers operating together, substantially as described.

41,887.—Printers' Inking Roller.—Lewis Francis (assignor to himself and Cyrus H. Loutrel), New York City: I claim the use or employment of the ingredients specified, when combined to form a composition for the manufacture of printers' inking rollers.

41,888.—Pegging Machine.—Luther Hall, Boston, Mass. (assignor through mesne-assignments to Alfred B. Ely, Newton, Mass.): I claim, first, The combination of the awl and employing it as a driver upon each alternate stroke, for the purpose described.

I also claim interrupting the upward motion of the driver every other time it ascends, to prevent the feeding of the peg strip until after the peg is cut off and the hole is made to receive it.

I also claim the combination of the boss, I, the block, G, the switch, d, and the pin, c, or their equivalents, operating as set forth for the purpose specified.

41,889.—Tool-rest for Turning Lathe.—Addison Hathaway (assignor to Ames Manufacturing Co.), Chicopee, Mass.: I claim, first, The combination of a ball-and-socket joint with a stationary post to form an adjustable tool-rest for engine lathes, substantially as described.

Second, The combination in a tool-rest for lathes of a stationary post, a rocking and a rotating rest, and a set screw, arranged and operating as set forth for the purposes specified.

Third, The combination of a stationary post with the ball of a ball-and-socket joint, having an elongated slot to vary the vertical position of the tool while the post remains stationary, as and for the purposes set forth.

41,890.—Automatic Railroad Car Brake.—P. R. Higley (assignor to W. P. Sproule), Oshawa, Canada: I claim a brake for wheel vehicles, held in contact with the wheel by a weight or spring and retracted therefrom by the power applied to draw the vehicle, substantially as described.

Second, I claim the combination of the draw bar, C, connecting rods, E, F, J, links, f, levers, F, K, G, G, and pin, k, all operating in the manner described to retract the brakes by either the forward or backward movement of the cars.

[In this invention the power applied to move the cars forward or backward is caused to act upon the brakes and throw the same out of contact with the wheels automatically, and when the cars stop or the speed thereof is slackened, the brakes are thrown on by means of suitable springs or weights.]

41,891.—Razor.—John Kinloch (assignor to himself, Archibald Catanach and Adam Catanach), Philadelphia, Pa.: I claim the toothed guard arranged in respect to the blade of a razor and rendered reversible on and detachable from the same, substantially as and for the purpose herein set forth.

41,892.—Stove.—Francis Magre (assignor to himself and T. H. Conroy), Boston, Mass.: I claim the combination and arrangement of the supplying and heating chamber, B, with the fire chamber, A, and the surrounding smoke space or chamber, D.

I also claim the combination and arrangement of the air supply and heating chamber, B, the fire chamber, A, the surrounding smoke space, D, and the auxiliary chamber, G.

I also claim the peculiar fire-chamber dome as made in two parts, g, h, and with one of them extended above the other so as to form therewith the crescent or equivalently-shaped duct, l, the smaller being provided with a discharging opening arranged in it, as described.

I also claim the arrangement of air-holes in the sides of the throat of the fire-place and out of the air-heating chamber, so as to discharge air across the throat, in manner and for the purpose specified.

41,893.—Hay and Cotton Press.—Wm. Bidenour and M. K. Biser, Spring field, Ohio, assignors to themselves and George Fry: I claim, first, A horizontal baling press of the construction specified, we claim the hinged and graded discharge door, L, I, applied and operating in combination with grooves, J, J, in the manner and for the purposes set forth.

Second, In combination with the above we claim the slanting blocks, K, K, at the ends of the floor channels, J, for the object specified.

41,894.—Countersink.—H. S. Shepardson (assignor to himself and F. R. Pratt and W. H. Maynard), Shelburne Falls, Mass.: I claim a countersink to be used with a boring tool, the making of the countersink to only partially surround the shank of the bit and the cutting lip to work concentrically with the bit, and the throat of the countersink to conform to the clearance of the bit, all as herein described and represented.

41,895.—Hat and Velvet Polish.—J. A. Thompson, Auburn, N. Y.: I claim a hat and velvet polish, with an interior metallic case into which may be introduced heated fluids or sand.

41,896.—Gear Wheel and Pulley.—George I. Washburn, Worcester, Mass.: I claim a compound wheel constructed of metal, substantially as herein shown and described, so that each member, while forming part of the body of the wheel, will also constitute a clamp to hold the parts together.

[This invention consists in a metallic gear wheel or pulley, formed in two or more parts, adapted by their peculiar construction to be passed around a shaft and firmly secured thereto, without being slipped over the ends thereof. An illustrated description of this invention will shortly appear in our columns.]

41,897.—Stove.—Wm. E. Hagan, Troy, N. Y., assignor to John B. Gale: I claim, in the management of combustion in fire chambers, the application, substantially as herein described, of superheated steam, in jets, so as to impinge, without admixture with atmospheric air, directly against the incandescent coals, in addition to or in combination with the supply, separately, of atmospheric air, either by draught or blast, in the usual manner, as set forth and for the purpose specified.

I also claim, in the construction of fire chambers for the combustion of fuel and provide with apertures at or near the bottom for the admission of atmospheric air, combining therewith a steam chamber or chambers for superheated steam, the inner wall of the steam chamber or chambers, having numerous small apertures next to the fuel for the escape of the superheated steam to impinge, without admixture of atmospheric air, against the incandescent coals, substantially as set forth for the purpose specified.

And I also claim, in the construction of fire chambers, combined, substantially as herein described, with a chamber or chambers for superheated steam, and with numerous apertures for the escape of jets of superheated steam to impinge against the incandescent coals, making the perforated wall of the fire chamber grooved, or the equivalent thereof, to reduce the thickness of the wall at the perforations, substantially as and for the purpose specified.

RE-ISSUES.

1,627.—Machine Belting.—Thomas J. Mayall, Roxbury, Mass. Patented Nov. 24, 1863: I claim the combination of fibers of leather with sulphur, india-rubber or gutta-percha, separately or combined with litharge or other metallic oxides, with or without the use of any of the other ingredients mentioned in the specification, when the compound is subjected to a tificial heat to produce the product as herein described.

1,628.—Cotton Gin.—Enoch Osgood, New York City. Patented Dec. 23, 1863: I claim, first, The combination of the elastic roller, A, with the concave bar, B, connected and operating together substantially as described.

Second, The combination of the elastic roller, A, the concave bar, B, and the endless apron, C, arranged and operating together, substantially as described.

Third, The combination and arrangement of the elastic roller, A, the concave bar, B, and the cleaning plate, E, constructed and operating together, substantially as described.

Fourth, The cleaning plate, E, constructed with grooves in its inner side, and operating in combination with devices for drawing the fiber through said grooves, substantially as described.

Fifth, The cleaning plate, E, constructed with teeth formed by grooving its inner side and beveling its lower edge, and operating in connection with devices for drawing the fiber between said teeth, substantially as described.

1,629.—Inkstand.—Joseph W. Ross, Boston, Mass. Patented April 30, 1861: I claim, first, The use of the float, k, traveling in a suitable guiding tube and operating substantially as hereinbefore described.

Second, The arrangement and constructing an ink-well or fountain that its cover or top surface can be brought flush or nearly so with the top of the desk and so that the cover or ink-well cannot be locked in or removed from the same without the use of a key or other instrument, substantially as set forth.

1,630.—Hat-stand and other Clothes-hanging Apparatus.—John B. Wickersham, New York City. Patented June 2, 1857: I claim attaching the hooks of hat-stands and other clothes-hanging apparatus, so that said hooks can be turned around horizontally, substantially as and for the purposes specified.

1,631.—Construction of Steam and Sailing Vessels for Naval and Merchant Service.—Augustus Walker, Buffalo, N. Y. Re-issued May 23, 1863. Patented Aug. 25, 1863. Re-issued Jan. 19, 1864: I claim, first, Constructing a vessel with one or more longitudinal arches or truss frames applied in vertical position to the central part of the hull for the purpose of strengthening it, substantially as set forth.

Second, I claim a vessel bottom constructed with a central keel, C, two concavities, b, and two straight and horizontal or nearly horizontal surfaces, h, extending longitudinally throughout the length of the vessel, substantially as shown and described.

Third, I claim the combination of a central longitudinal truss framing or arch with a double concave bottom, constructed substantially as herein described.

Fourth, I claim the doubly-arched prow or ram, D3, constructed and supported as described.

Fifth, I claim the dome or turret, G, formed and supported substantially as shown and described, and adapted to be revolved either independently of or in connection with the gun carriage.

Sixth, I claim the inner turret or gun carriage, G', constructed separately from the dome or turret, G, so as to be revolved either independently of or in connection therewith.

Seventh, I claim the method of ventilating by the construction and method of insertion of tubes or flues, substantially as set forth and described herein.

Eighth, I claim closing the ventilating tubes, II, by the stay-ions, J, J, substantially as described.

Ninth, The casing, H, constructed with a circular arch, h, for sustaining the turret, G, or G', substantially as specified.

Tenth, In connection with a vessel of the above construction, I claim the sliding pilot-houses, K, K, elevated and sustained in any way substantially as described, either by windlass or stationary screw.

Eleventh, The described position and means of working the anchors.

1,632.—Rake for Grain Harvesters.—Water Wright, Chicago, Ill., assignee by mesne-assignments of Jea um Atkins. Patented Dec. 21, 1852: I claim an automatic rake for harvesters which is supported, guided and impelled by a vertical shaft an by contrivances sustained by or placed around the same, the said shaft and other contrivances being all placed upon the inner side of the machine or of its platform, when such rake acting alone shall rake and deposit the gavel upon the inner side of the newly-cut swath, and shall then return to its proper position for raking the next gavel, in such a way as to swing clear of the standing grain as well as of the unraked grain, which is then lying upon the platform, all by means of a motion of this shaft upon its axle, with its necessary appurtenances, substantially as above described.

1,633.—Rake in Grain Harvesters.—Water Wright, Chicago, Ill., assignee by mesne-assignments of Jea um Atkins. Patented Dec. 21, 1852: I claim, first, An automatic rake for harvesters which shall singly and alone rake and deposit the gavel with the straw nearly at right angles to the line of draft, when such rake is controlled in its movements by contrivances no part of which shall be placed upon the outer side of the machine, substantially as described.

Second, An automatic rake for harvesters which shall singly and alone rake and deposit the gavel with the straw nearly at right angles to the line of draft when such rake is sustained, guided and impelled by contrivances so placed on the inner side of the machine as not to be liable to become entangled either with the cut or with the uncut grain, substantially as described.

Third, An automatic rake for harvesters which singly and alone shall rake and deposit the gavel so as to fall on the inner side of the newly cut swath as to be out of the way of the horses on the next round, and then swing back to its proper position for raking a new gavel in lines which shall both in plan and elevation be substantially different from those described by its various parts in making its forward movement, thus keeping clear of the standing grain as well as that which

lies upon the platform, when the movements of said rake are accurately directed in without the use of an exterior guide or other fixture for that purpose, substantially as described.

Fourth, In an automatic rake for harvesters I claim the employment of a palm, or its equivalent, by which, in connection with the said rake the gavel may be firmly grasped, when said arrangement is so contrived as to provide for a yielding pressure between the rake and the palm so as to be accommodated to the size of the gavel, substantially as described.

Fifth, In a harvester I claim the use of an automatic rake which shall rake the gavel to the inner side of the machine when in combination with a palm, or its equivalent, it shall grasp and turn and deposit it so that the straw shall lie perpendicularly to the line of draft, or nearly so, substantially as described.

Sixth, In a harvester I claim the use of an automatic rake which, by a rapid movement in a direction nearly parallel with the cutter bar shall rake the gavel and then by a slower movement shall return outward and back to its proper position for commencing a new gavel so as not to interfere with the cut or with the uncut grain, when all the contrivances for giving such motion shall stand upon the inner side of the machine, substantially as described.

Seventh, In a harvesting machine I claim a turning shaft or crank post, the action of which constantly preserves the same angle with the platform, in combination with a rake which has an undulating or swinging motion communicated to it through its arm or handle to bring it back after raking one gavel to its proper position for commencing another by means of an oscillating or rotary motion of said turning shaft upon its axis, substantially as described.

DESIGNS.

1,909 to 1,919.—Carpet Patterns.—Henry G. Thompson, New York City, assignor to the Hartford Carpet Co., Hartford, Conn.



PATENTS

GRANTED

FOR SEVENTEEN YEARS!

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CHAR. MASON.

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 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. Very respectfully, your obedient servant,

J. HOLT.

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. Very respectfully, your obedient servant,

WM. D. BISHOP.

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 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.

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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.

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On application for Re-issue.....	\$50
On application for extension of Patent.....	\$50
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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, 1861, are 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 allowing 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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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 is \$10. A pamphlet of advice regarding applications for patents and caveats is furnished gratis, on application by mail. Address MUNN & CO., No. 37 Park Row New York.

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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.

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Inventors will do well to bear in mind that the English law does not limit the issue of patents to inventors. Anyone can take out a patent there.

Circulars of information concerning the proper course to be pursued in obtaining patents in foreign countries through MUNN & CO'S Agency, the requirements of different Government Patent Offices, &c., may be had, gratis, upon application at the principal office, No. 37 Park Row, New York, or any of the branch offices.

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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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Persons who are about purchasing patent property, or patentees who are about erecting extensive works for manufacturing under their patents, should have their claims examined carefully by competent attorneys, to see if they are not likely to infringe some existing patent, before making large investments. Written opinions on the validity of patents, after careful examination into the facts, can be had for a reasonable remuneration. The price for such services is always settled upon in advance, after knowing the nature of the in-

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J. H. O., of C. W.—We thank you very much for the long list of subscribers you have sent us and we appreciate your efforts to increase our circulation. We have no means of obtaining the information you desire, but should we ascertain the number of vessels of all classes in Great Britain and the same in this country, we shall publish it.

A. N., of N. Y.—Soda water is simply pure water saturated with carbonic acid, and is beneficial to most constitutions. The carbonic acid is usually obtained by pouring sulphuric acid upon marble dust. As the sulphuric acid is an active poison, effective measures must be taken to prevent any of it from getting into the beverage. All properly constructed apparatus is so arranged as to accomplish this perfectly.

C. W. H., of —You are right about the drill being left-handed. When it was drawn on the block it was right, but of course when printed it became left-handed. Cross the belt on the machine and it will run just as well. No offense taken.

J. S., of Mass.—Write to H. C. Baird, 406 Walnut street, Philadelphia, for a book on locomotive engineering practice. There is nothing more modern than Holley's Railway Practice, which is a large and costly work.

C. C. W., of N. Y.—A good index plate is a difficult thing to obtain. The Novelty Iron Works are said to have an excellent standard from which they will doubtless make you one.

W. M., of Conn.—Shellac varnish is what you require; dissolve shellac to be obtained at the druggists, in naphtha or alcohol till of the required consistency.