RECENT AMERICAN PATENTS

The following are some of the most important improvements for which Letters Patent were issued from the United States Patent Office last week. The claims may be found in the official list.

Call for Telegraphs.—The custom now generally adopted in this country, in electric telegraphy, of reading intelligence by the sounds emitted by the instruments in their operation, has rendered it difficult, if not impracticable with the instruments at present in common use, to transmit intelligence with any degree of secrecy, because the instruments in all other offices or stations on a line of telegraph, besides that to which the intelligence is to be transmitted, operating in unison with the instruments at that station, produce the same sounds, and may be heard by other persons than the confidential operator, who may be familiar with the telegraphic alphabet. This difficulty has been, in a great measure obviated by means of the receiving instrument, which constitutes the subject matter of Letters Patent, No. 1,850, dated July 23, 1861; but it is essentially necessary that the several offices or stations on a line should have means of communicating with each other by sounds audible at some considerable distance from the instruments, so that the operator at one office or station may thereby draw the attention of another operator at any other office with which it may be desirable to communicate; to this end this invention consists in an instrument which may be termed the "silent message call," from which, though it is capable of calling the attention of the operator, messages cannot be read, because the electric pulsations produced in their transmission are too frequent for its action, but which, when the pulsations are less frequent, will act in accordance with them and thereby produce sounds sufficiently loud to be heard at a distance greater or less according to the strength of the electric currents, and which sounds will then be intelligible, and are intended to be used to call from one office or station to another. Alexander Bain, of New York city, is the inventor of this improvement.

Key for Electric Telegraphs.—Most persons practically familiar with the operation of the Morse telegraph instruments can read the intelligence by the sounds, not only from those instruments used for receiving the intelligence but from the key commonly used for its transmission, and hence it has been very difficult to preserve secrecy, not only at the offices or stations where the intelligence has been intended to be received, and through which it has passed, but at that from which it has been sent. The object of this invention is to render the operation of the key inaudible, or so nearly so as not to be heard by any one not in very close proximity to it; and to this end it consists in a certain construction of the key, whereby the surfaces of contact, by which the circuit is opened and closed, are caused to come together with a sliding instead of with a percussive action. The inventor of this improvement is Alexander Bain, of New York city.

Dresser Brush.—This invention is an improvement upon a dresser brush which has been in universal use for the last fifteen or twenty years, and by it a decidedly more valuable brush is produced at a less cost. By the original patent a considerable portion of the best part of the bristle was necessarily used in setting; by the present improvement a large portion of this part of the bristle is saved and consequently the quality of the bristle which comes in use for dressing purposes, is superior to that which is found in the brush made by the old method. The present invention relates to a simple device for holding the bristles for the purpose of dipping their butt ends in the pitch or cement used to secure the same to the blocks, and also to a peculiar manner of fastening the strips of wood between which the butt ends of the bristles are secured. Samuel Taylor, of East Cambridge, Mass., is the inventor and manufacturer of this brush.

Manufacture of Metallic Zinc.—This invention consists in submitting the oxide or other compound of zinc, either alone or mixed with coal or other carbonaceous matter used as fuel in charging the mufflers or retorts in which the reduction to the metallic condition is effected, to pressure or pressure and friction combined, whereby the material is brought to a condition in which it is better adapted for the charging of the muffles or retorts, that is to say it has imparted to it increased compactness and gravity, which enables the muffles or retorts to be charged with a much greater quantity than when the material has not been so treated, thereby not only saving time in the process but wear and tear, and the breakages of the muffles or retorts, which often occurs by cooling when charging, such breakage being a serious loss, as the muffles or retorts are expensive. G. T. Lewis, of Philadelphia, Pa., is the inventor of this improvement.

Apparatus for working Ships' Pumps.—The principal object of this invention is to provide for the pumping of the bilge water from all parts of a vessel, whether on an even keel or careening over to one side or the other; and to this end the invention consists, first, in leading pipes from various parts of a vessel to one common air-tight chamber with which the pump is connected, thereby enabling the water to be drawn directly from all parts of the vessel by one or a set of pumps. Second, in the employment within such a chamber of a valve or valves, so applied under the control of a hanging weight as to cut off from communication with the said chamber such of the pipes leading from different parts of the vessel as may have their mouths left uncovered with water by the change of position of the vessel and to open to communication with the said chamber such of the said pipes as may have their mouths covered with water, thereby insuring the pumps drawing water while any remains in the vessel, and preventing them from drawing air while any water remains. F. R. Boettner, of Chicaco, Ill., is the inventor of this pumping apparatus.

An Ingenious Counterfeit.

Before the war a certain kind of fine sheeting, made in New England by the Lonsdale (R. I.) works, was very popular, and extensively patronized by the Southern merchants. Since the war broke out they have been unable to get them. Among the merchandise captured on board of the British prize steamers off Charleston, trying to run the blockade, and brought to Philadelphia to be sold, was found a lot of goods made by the English manufacturers in exact imitation of the Lonsdale article, bearing a label which is a perfect counterfeit of the New England label, except that for Lonsdale is substituted the word "Lonsdale." No such works exist in England, and the goods are palmed off as the American make, upon Southerners who have been for two years swearing that they would never wear Yankee goods if they could get any other. It seems that even their English friends are obliged to counterfeit the Yankee labels before they can get them to buy English sheetings.

HONORABLE EMPLOYMENT.—Let young men remember there is nothing derogatory in any employment which ministers to the well-being of the race. It is the spirit that is carried into any employment that elevates it or degrades it. The plowman that turns the clod may be a Cincinnatus or a Washington or he may be a brother to the clod he turns.

Magazines and other Publications received.

PRACTICAL NOTES ON THE STEAM ENGINE, PROPELLERS, &c. By W. H. King. Published by D. Van Nostrand, 192 Broadway, New York.

This volume is, as its title purports, a treatise on the steam engine and its details and management in general. The work is invaluable to engineers who desire to perfect themselves in their profession, and to all others who wish to become acquainted with the mysteries of the mechanical action of steam. Expansion valves and cut-offs, the study of the indicator, boilers, materials and the elements of machinery, are all treated on in separate chapters, and we can confidently recommend the book to persons of every grade of mental ability for the simple and unaffected style in which it is written. The publisher, Mr. Van Nostrand, has issued the work in very handsome binding and printed it with clear type on fine paper, so that it is a decided acquisition to any library, and a valuable addition to the scanty stock of standard mechanical works. The present is the fourth edition, and has been revised by J. W. King, C. E., U. S. N.

LEAVES FROM THE DIARY OF AN ARMY SURGEON. By Thomas T. Ellis, M. D. Published by John Bradburn, New York.

This book contains incidents of field, camp and hospital life—the author's experience beginning at Camp Washington, on Staten Island, in October, 1861, and ending with the removal of General McClellan after the sanguinary battle of Antietam. The book is very cleverly written and forms a very readable narrative, but it is marred by the discussion of matter upon which the people are divided in opinion and in regard to which the author might just as well have kept silence. The otherwise valuable character of the book is almost spoiled by this unfortunate admixture of matter. Price $1.

ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING MAY 12, 1863.

Reported Officially for the Scientific American.

*** Pamphlets containing the Patent Laws and full particulars of the mode of applying for Letters Patent, 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.

38,455.—Breech-loading Fire-arm.—Wales Aldrich, Cleveland, Ohio:

I claim, first, the wedge-shaped body, D, rack, E, and pinion, F, in combination with the rigid spur, K, and slider, L, when these parts are constructed, arranged and operated substantially as and for the purpose specified.

Second, I claim the herein-described device for bringing the piece to a half-cock by the movement of the body, D, as set forth.

38,456.—Register for Horse Cars.—C. B. Angell, Coventry, R. I.:

I claim, first, the step, B, attached to the shaft, K, in combination with the lever, g g g, arranged and applied substantially in the mode described, for the purposes set forth.

Second, The combination of the gates, C, with the wheels, b, the racks, c, or their equivalents, with the beam, d, and the spring, l, arranged substantially as described for the purposes set forth.

Third, The mode of unlocking the beam, d, by the rod, h'', combined with the lever, k, and arm, k', acting on the spring, l, or their equivalents, arranged substantially as described for the purposes set forth.

Fourth, I claim the lever, h, with its weight or spring, in combination with the lever, g, shaft, K, and levers, P and N', arranged substantially as described for the purposes set forth.

Fifth, The shaft, No. 7, in combination with its arms or cranks connecting it with the racks and wheels, arranged substantially as described for the purposes set forth.

Sixth, The arrangement of the levers and rods, 12, 5, 4 and 3, in combination with the spring, 2, constructed substantially as described for the purposes set forth.

Seventh, The shaft, R and P', their cams, S and S''', their connections with the beam, d, or shaft, 7, arranged and applied substantially as described for the purposes set forth.

Eighth, The drums, Z and Y, constructed and placed as described for the purposes specified.

Ninth, The mode of throwing the drum out of gear by the action of the shafts, U' and V', and the levers, n n', and the parts connected therewith, arranged substantially as described for the purposes specified.

Tenth, The guides, m m', for the purposes set forth.

Eleventh, The combination of the levers, R and N', with the rods, S' and T, and their intermediate and appurtenant parts, arranged substantially as described for the purposes set forth.

Twelfth, The combination of the lever, P, with the springs, rod, wheel and hammer connected therewith, arranged substantially as described for the purposes set forth.

Thirteenth, The combination of the movable step, B, with the drums, Z Y, in connection with the gates, C, through the mechanical contrivances described, or their equivalents, constructed and arranged substantially as set forth for the purposes specified.

38,457.—Lantern.—J. S. and T. B. Atterbury, Pittsburgh, Pa.:

I claim, first, applying a metallic reflector to a lantern surrounded with glass, substantially as herein described.

Second, Making the glass surrounding the lantern, or the lantern glass, the support for the reflector, substantially as herein described.

38,458.—Animal Trap.—G. T. Barker, Pittsfield, Mass.:

I claim the combination of the swing door, B, the buttresses or jambs, c c, and the shelf with the entrance port, d, the whole being arranged and applied together substantially in the manner and so as to operate as specified, the bait being applied to the door.

And I also claim the improved swinging door, as provided, with the bait recess or chamber open in front, as described, or so made and provided with a lateral passage, as specified.

38,459.—Lubricating Composition.—August Bauer, Philadelphia, Pa.:

I claim the lubricating compound or grease produced as hereinbefore stated.

38,460.—Apparatus for working Ships' Pumps.—F. R. Boettner, Chicago, Ill.:

I claim, first, Leading pipes from different parts of a ship or other vessel to one common chamber, C, with which the pump or pumps or suction pipe of the pump or pumps is connected substantially as and for the purpose herein specified.

Second, The employment within such chamber, C, of a valve or valves, so applied in relation to suitably arranged ports in combination with the pipes leading from different parts of the vessel, and so controlled by an oscillatory movable weight as to open communication between such chamber and the pipe or pipes whose mouths are covered with the bilge water and to close communication between such chamber and the pipe or pipes, which, owing to the position of the vessel, have their mouths uncovered by the said water, substantially as herein specified.

38,461.—Machine for planing Oval Moldings.—Francis Brandon, Albany, N. Y. Ante-dated November 2, 1861:

I claim the arrangement with each other and with the pattern, K, and eccentrically rotating face-plate, e, of the self-adjusting cutter, j, and the adjustable cutter, J, the said cutters acting upon the work at right angles to each other, all in the manner and for the purposes herein shown and described.

[The object of this invention is to obtain a machine by which heads and concaves or hollows may be turned or cut on the face of oval frames at one operation, the work being done expeditiously and in a perfect manner; the invention also admits of different-sized ovals being turned or cut with one and the same pattern.]

38,462.—Window-sash Fastening.—E. K. Breckenridge, West Meriden, Conn.:

I claim a spring window-fastener which has its pintle, C, provided with a projection or pin, h, and its case or tube, B, made in two parts and provided with a slot, d, and shoulder or recess, e, as herein shown and described, so that the pressure of the sides of the orifice into which the tube is driven, will suffice to keep the parts together in working order without riveting or fitting, and so that the pintle, on being withdrawn and partially rotated, will remain withdrawn until it is rotated in a contrary direction, all as set forth.

[This invention relates to an improvement in that class of window-sash fastenings or stops which are composed of a pintle and spiral spring fitted in one or both stiles of the sash, and so arranged that the spring will force the pintle into holes made in the sides of the window frame, the holes being made in the latter at different points, so that the sash may be retained at a greater or less hight, as desired.]

38,463.—Shoe-pegging Machine.—W. C. Budlong, Providence, R. I. Ante-dated June 30, 1862 :

I claim, first, The arrangement of the peg-driver and the awl within the slides, b c, so that while they are capable of moving vertically, independently of each other, they shall have a lateral motion in unison, in the manner substantially as described.

Second, I claim the employment, in combination with the peg-driver, of the retarder to control the force of the descent of said driver, substantially as described.

Third, I claim the arrangement of the vertically and laterally moving slide plates, in combination with the cams, so placed as to operate upon said plates from within or between said plates, substantially in the manner described herein.

38,464.—Traction Wheel.—J. R. Cameron, Pittsburgh, Pa. :

I claim the use of vibrating feet, N N N, upon the periphery of a wheel, when constructed in the manner and for the purposes as herein set forth.

I also claim turning up the edges of the plates so as to form a heel and toe, substantially in the manner as hereinbefore stated.

I also claim the use of a double wheel in combination with the vibrating feet turned up at their edges, in the manner and for the purposes as herein previously stated.

38,465.—Trunk.—Lazare Cantel, New York City :

I claim, first, The screw, i, and nut, g, in combination with the hasps or lock attached to the trunk, and acting as specified, to keep the joint together and form a water-proof trunk, as specified.

Second, I claim the spring catch, 7, in combination with the said hasp, l, block, m, screw, i, and nut, g, for the purposes specified.

38,466.—Medicine for Piles.—William Carr, Bath, Maine :

I claim the above described composition, as made of the ingredients, and compounded in the manner set forth.

38,467.—Ore-washing Machine.—John Collom, Houghton, Mich. :

I claim, first, The employment or use of a cistern, B, divided into two compartments, b b, in connection with the screens, D D, and plungers, E E, and arranged to operate as and for the purpose specified.

Second, Operating the plungers, E E, through the medium of the rockbar, J, and adjustable connecting rod, K, as set forth.

Third, In combination with the rockbar, J, the plunger rods, F F, springs, H, and adjustable thimbles, I, for the purpose set forth.

Fourth, The buttons, o, on the inclined spouts, N N, when the same are used in connection with the screens, D D, as and for the purpose specified.

Fifth, The bars, O O P P Q Q, applied to the screens, D D, so operate as and for the purpose herein specified.

38,468.—Photographic Printing Frame.—G. W. Cook, St. Paul, Minn. :

I claim the construction and arrangement of the four bolts, C C C C, in combination with the springs, G G, and the frame, A, and the lids, B B, substantially as shown and described.

38,469.—Fulling Machine.—Guiseppe M. Coppo, Paris, France, assignor to E. Dams, late of Buffalo, N. Y. :

I claim constructing the trough of a fulling machine in layers or strata of the materials specified and arranged relatively to each other, substantially as described.

I claim the hollow formation of the beaters or mallets by which elongation and extent of acting surface thereof is secured without sacrifice of lightness, substantially as specified.

I claim the manner of employing heat by the introduction of a heated medium between the strata forming the trough, substantially as specified.

38,470.—Camp Table or Stool.—John Cram, Boston, Mass. :

I claim the improved camp table or stool, as made, with the latching apparatus or its equivalent, and the recessed guide grooves arranged and combined as described, with the table top and the two folding sets of legs, applied together, substantially in manner and so as to operate as specified.

38,471.—Scroll Saw-mill.—W. H. Doane, Cincinnati, Ohio :

I claim, first, The metal guide rod, E, in combination with the lower support, f', and the upper support, f, or the equivalents thereof, substantially in the manner described.

Second, Supporting and guiding the upper end of the saw, d, in the metal rod, E, the latter being fixed within an adjustable tube, F, substantially as described.

Third, The combination, with the adjustable tube, F, of the flaring bell-mouthed holder, H, as herein described.

Fourth, The elastic clamping collar, J, in combination with the adjustable tube, F, and metal guide rod, E, as and for the purpose described.

Fifth, The combination of the tube, F, elastic collar, J', adjustable slotted plate, J, and pivot connection, k, substantially as and in the manner described.

Sixth, Making the upright yoke rod, the driving rod for the saw, and guiding this rod in its motions by means of two or more guide boxes arranged above and below the yoke, C', the whole being combined with the eccentric, C, and saw, d, for giving a positive rectilinear motion to the guide rod, and dispensing with the pitman driver, substantially as herein described.

38,472.—Machine for leveling the Faces of Millstones.—Daniel Drawbaugh, Ebersly's Mills, Pa. :

I claim, first, The shape and construction of the arm, E, with its forked end, G, and adjustable screws, J, so that the rod staff, H, may be regulated and adjusted on either side or at either end.

Second, I claim the shape and construction of the adjustable key, T, as arranged and fastened to the rim, U, of the upper stone or runner.

Third, I also claim the upright tramming frame, A, as herein described, in combination with the movable-pointed dies, N, and circular bedplates, for the purpose of regulating the tramming and to be held firmly to the cock-head, M.

38,473.—Wardrobe.—Ezra Durand, Chelsea, Mich. :

I claim a wardrobe provided with an attached clothes-drying device made and operating as herein shown and described.

[The object of this invention is to combine with a wardrobe, bureau or other similar piece of furniture, a clothes-dryer or device for airing the clothes contained in said wardrobe or bureau.]

38,474.—Engine Piston.—T. S. Dwelley, Charlestown, Mass. :

I claim the improved piston, made not only with an annular space or groove encompassing and being within the periphery of the piston head, but having an annular or centralizer, cast or placed within such groove, and a packing, arranged substantially in the manner and for the purpose as described.

I also claim the combination of the auxiliary groove, f, and the retaining projections or arms, l l, with the packing ring groove and with the joint lap or breaker of the packing ring, the whole being arranged and so as to operate together, as specified.

38,475.—Beehive.—R. G. Emerson, Fair Haven, Ill. :

I claim the application to beehives of a concave block or strip of wood or other materials, constructed with an internal groove and sliding bar, substantially as delineated, and for the purpose specified.

38,476.—Lock and Key.—F. A. H. Gaebel, New York City :

I claim a key having two bits, when said bits are curved or stand under an oblique angle with the geometrical axis of the key, substantially in the manner and for the purposes herein described.

I also claim, in combination with a double key-bit, substantially as herein described, the annular concave, g, and convex, d, within the lock and in the line of the key-hole, substantially in the manner herein described.

38,477.—Saw-mill.—D. C. Gibbs, Fleetville, Pa. :

I claim, first, The arranging of the sill pieces, B B', with the keys, c, and wedges, d, substantially as shown, to admit of the adjusting of the driving shaft, C, whenever required to maintain the horizontality of the same.

Second, The cross-head, G, formed with a turned cylindrical bar, i, and flattened ends or broad plates, j j, in connection with the plate, l, and wooden, leather or other suitable bearings, k, and the guides, H H, all arranged substantially as herein shown and described.

Third, The plates, s s, formed or constructed as shown, and attached to the upper end of the saw, K, in connection with the plate, v, guides, L L, and the pendent bar, M, having a longitudinal or vertical slot, u, in it to receive the plates, s s, substantially as set forth.

Fourth, The bracket, N, attached to the fender sill, g, provided with a slot, a', and woodenbars, d' d', attached to it, as shown and described, to form adjustable saw-guides, as set forth.

Fifth, The movable or adjustable frame, P, with saw-guides, O O, attached in combination with the bracket, N, and guides, d' d', arranged as herein set forth.

Sixth, The band and toothed wheel, U, in combination with the wheel, B', friction pulley, A', provided with the leather or other suitable material, g', in its periphery, the pulley, A', being placed on an adjustable shaft, W, which has a pinion, k', placed on it, and the wheels, U and B, having a belt, F', passing around them, which is rendered operative or inoperative by an idle pulley, G', all arranged as shown, for communicating a feed movement to the carriage, and gigging back the same, as set forth.

Seventh, Arranging the friction pulley, A', so that it may slide on the shaft, W, and moving said pulley on its shaft by the means herein set forth, when said pulley thus arranged and operated is used in connection with the wheel, B', for the purpose specified.

[This invention relates to an improvement in that class of saw-mills or sawing machines in which a reciprocating saw is used without a saw-sash or gate, and which are commonly termed muley saws. The invention consists in a novel and improved construction and arrangement of parts pertaining to the hanging and the running of the saw, and also to the adjustment of the driving shaft by which the saw is operated. The invention further consists in a novel and improved arrangement of means for operating the carriage on which the log to be sawed is placed.]

38,478.—Plow.—Jacob Haege, Shiloh, Ill. :

I claim, first, Raising and lowering or adjusting the handles, B B, by means of the screw-rod, D, attached to the beam, A, and provided with a nut, F, fitted within a cap or socket, d, which is secured to a bar, E, attached to the handles, all being arranged as and for the purpose herein shown and described.

Second, Adjusting the beam, A, for the purpose of regulating the penetration of the plow, by means of the screw-rod, K, fitted in the plate, J, and nut, L, which are hung on pivots or trunnions, as herein set forth.

[This invention consists in applying or attaching the handles of the plows to the beam in such a manner that they may be raised and lowered to suit the hight of the plowman. The invention also consists in an improvement in the moldboard and share, whereby the latter is rendered capable of being adjusted as it wears by use, and when worn out, admits of being readily detached and replaced by a new one. The invention also consists in an improvement in the cleris whereby the same is made to stiffen the beam of the plow, the latter being slotted longitudinally or made in two parts, in order to avoid springing or warping. The invention further consists in an improvement in the parts employed for adjusting the beam of the plow in order that the latter may be made to penetrate a quarter or less depth into the earth, as may be desired.]

38,479.—Excavating Machine.—William Hamilton, South Paris, Maine :

I claim my improved land excavator, constructed not only with its front axle so made and applied to the body of the carriage or frame, A, as to enable the latter to be tilted laterally on it, but having one or both of its rear wheels applied to the carriage frame or body by means of a lever, or its equivalent, to operate substantially in the manner and for the purpose, as specified.

38,480.—Water-proof Cement for Leather, &c.—Robert Hinshelwood and Charles A. A. During, New York City :

We claim a water-proof cement consisting of the ingredients herein described and mixed together in about the proportion and substantially in the manner specified.

[This invention is intended for the purpose of producing a cement which is of peculiar advantage for joining or patching leather or other similar materials, without sewing, more neatly, quickly and permanently than by any of modes now in use.]

38,481.—Mining Pick.—George Hofman, Scott Bar, Cal. :

I claim, in combination with a removable eyeless pick or point, a metallic head composed of one piece and having wrought upon it a strap or mortise to receive the pick or point, and a tight socket to receive the handle, the several parts being secured to said head, substantially in the manner herein described and represented.

38,482.—Buckle.—O. L. Hopson and H. P. Brooks, Waterbury, Conn. :

We claim a buckle, the prongs of which are made of one piece of wire, and being passed through holes in the center bar of the buckle frame, so bent that the bar connecting the said prongs shall form with them a joint upon said central bar of the frame, all substantially as herein shown and described.

[This invention relates to an improvement in the construction of that class of buckles which are used on garments and articles pertaining thereto, and consists in forming the frame of the buckle of three longitudinal bars connected by bars at their ends, constructed of wire or formed by striking them out of a metal plate by a single operation of a die. The prongs or tongues of the buckle are composed of wire bent in such a manner as to be firmly secured to the central bar of the frame.]

38,483.—Hook-eyes for Wearing Apparel and other Purposes.—Joseph C. Howells, Washington, D. C. :

I claim an eye provided with an embossed surface constituting a shield or guard for the security and protection of the hook, substantially as set forth.

38,484.—Bran-duster.—William W. Huntley and Alpheus Babcock, Silver Creek, N. Y. :

We claim, first, The disk flour-discharger, made fast on the brush shaft, arranged below the dusting cylinder and above the annular plate, D, of the casing, substantially as and for the purpose set forth.

Second, The combination of disk flour-discharger, annular plate, D, and scrapers, n n, substantially as and for the purpose set forth.

Third, The arrangement of the disk flour-discharger, adjustable levers or arms, g g, sliding collar, H, dusting cylinder, E, and casing, A, all united substantially as described.

38,485.—Grain Drill.—A. Ingalls, Independence, Iowa :

I claim the revolving axles, C, rod, M, and plates, m, the lifting plate, J, and gage wheels, K, when all these parts are constructed, arranged and operated as and for the purpose herein set forth.

38,486.—Clutch.—Simon Ingersoll, Stamford, Conn. :

I claim the combination of the following parts, to wit: the inclined planes, f f, disk, d, stationary disk, e, and nut, h, or its equivalent, all arranged and operating together as a friction clutch, in the manner specified.

38,487.—Apparatus for the Manufacture of Cube Sugar.—Gustavus A. Jasper, Boston, Mass. :

I claim my improved machine as not only constructed with the stationary journals, I I, arranged eccentrically to its shaft, L, but as having the molds, i i, &c., plungers, f f, &c., and curved plate, S, arranged and constructed substantially in the manner and so as to operate as specified.

38,488.—Cutter-head for the Wood of Lead Pencils.—Frederick G. Jenkins, New York City :

I claim the arrangement of the plate, B, with the cap, G, for the purpose of forming the mortise to receive the knives or cutters, D, as herein shown and described.

I also claim as new the use of segments saws set stationary in a revolving head for the purpose of grooving and separating the wood, as herein described.

I also claim as new the combination of the several parts in one head for the purpose of planing, grooving and separating at one and the same operation the woods for lead pencil cases.

38,489.—Loom.—Barton H. Jenks, Bridesburgh, Pa. Ante-dated Dec. 14, 1861 :

I claim, first, The tumbler, f, in combination with the oscillating cam, C, or an equivalent arrangement of the same, for the above-described purpose.

Second, I claim pins of an equal length, having one side beveled, in the manner shown, for the purpose of controlling the movements of shuttle boxes in power looms.

38,490.—Hook for Ox-chains.—Frank G. Johnson, Brooklyn, N. Y. Ante-dated Nov. 7, 1861 :

I claim the combination together of the hook, A, and the slotted and weighted tumblers, B B', two or more, substantially in the manner and for the purposes herein set forth.

38,491.—Explosive Projectile.—Job Johnson, Brooklyn, N. Y. :

I claim, first, The cross-bar, g, screw-spindle, k, and internal flange, u, in combination with the cap, f, nut, l, and soft metal ring, o, fitted and acting in the manner and for the purposes set forth.

Second, I claim the spring tube, r, to hold on the detonating cap, s, in combination with the rod, q, and screw, t, that is driven in by the concussion, as set forth.

38,492.—Lamp Chimney.—Wesley L. Jukes, Covington, Ky. :

I claim, as a new article of manufacture, the glass lamp chimney formed with longitudinal corrugations, A, substantially as and for the purpose set forth.

38,493.—Manufacture of Zinc.—George T. Lewis, Philadelphia, Pa. :

I claim subjecting the oxide or other compound of zinc, either alone or mixed with the coal or other fuel, to pressure, or pressure and friction, before charging it into the muffles or retorts, substantially as and for the purpose herein specified.

38,494.—Refrigerator for Steam Engines.—William A. Lighthall, New York City :

I claim, first, Forming apertures in the diaphragm plate, G, as shown, for the purpose of alternately passing the water to be cooled from one side of the apparatus to the other, as described.

Second, The arrangement and construction of the division plates, d d', as shown, whereby the water to be cooled is forced to pass through the different sections of the apparatus and through the apertures in the diaphragm plate, as described.

38,495.—Combined Harrow, Drill, Grass-seeder and Roller.—James P. Long, Osage, Iowa :

I claim the combined machine, supported in front on wheels, Q and at back on the roller, R, and provided with the adjustable suspended harrow, B, adjustable drill frame, J K, and seeding apparatus F G H I, all arranged and operating as and for the purposes herein set forth.

[An engraving of this machine will shortly appear in our columns.]

38,496.—Machinery for cutting Soles of Boots and Shoes.—James W. Maloy, Charlestown, Mass. :

I claim the combination of the reciprocating bed, L, and platen, B, with the stop-bars, s s', the whole operating together and upon the leather to be cut, as above described.

I also claim the yielding plate, P, when used with a horizontal knife-bed, L, and for the purpose of keeping the leather from contact with the edges of one knife, d, as it is fed into the machine over to the other knife, d'.

I also claim the stationary clearer, p, when operating in conjunction with the reciprocating horizontal movements of the knife-bed, as described.

I also claim giving to the knife-bed its reciprocating and intermittent motions by means of the cam, c, pin, b, and crank, k.

38,497.—Hoisting Machine.—William Miller, Cincinnati, Ohio :

I claim, in combination with the described (or equivalent) actuating mechanism, H I, and platform, B, the arrangement of the worm racks, D D', and worm wheels, J J', the whole being combined and operating substantially as set forth.

38,498.—Attachment of Lantern and Reflector.—William C. Owen, Brooklyn, N. Y. :

I claim the combination of a lantern and reflector, when the latter is applied or arranged at the] outer side of the former, substantially as herein set forth.

[This invention consists in applying a reflector to the outer side of a lantern in such a manner that the reflector may be readily attached to the lantern and detached therefrom, as required, and a reflector of large diameter rendered capable of being used.]

38,499.—Apparatus for mixing Gases.—William D. Parrish, Philadelphia, Pa. :

I claim the described mode of mixing gases in variable proportions, consisting in the employment of two meters of any ordinary construction for measuring gases: the said meters being so connected by the described mechanism or any equivalent thereto, that the motion thereby transmitted and the relative quantities measured by the meters can be adjusted substantially in the manner and for the purpose herein set forth.

38,500.—Combination of a Chamber Lamp and Lantern.—Charles H. Peters, Cincinnati, Ohio :

I claim, first, The chamber or handled house-lamp, A B., provided with studs, C C' C'', projecting from the upper portion of the reservoir, and adapted to interlock within the gated-bottom of a lantern case, F, the whole being constructed and adapted for the separate uses of a lantern and a house-lamp, as set forth.

Second, I claim the described arrrugement of the guards, H, and apertures, I, for the double purpose of retaining the panes and of deflecting the indraft, substantially as set forth.

38,501.—Clamp for raising Buildings.—Nathaniel Pickard, Rowley, Mass. :

I claim my device or clamp, having its parts, A B C, constructed and arranged with respect to each other as described, and so as to operate in connection with a jack screw, in manner and for the purpose set forth.

38,502.—Stop Watch.—George P. Reed, Roxbury, Mass. :

I claim the combination of the friction spring, k, the brake collar or wheel, i, and the brake or stopper, l, or their mechanical equivalent or equivalents, with the second's pinion, e, and its arbor, g, so applied that the pinion may rotate on the arbor, and relatively thereto, as described.

I also claim the arrangement of the friction spring, k, the brake stopper, l, and collar or wheel, i, with respect to each other and in or relatively to the main or regular train of a watch, as described.

38,503.—Apparatus for wetting Stamps, &c.—R. W. Sackett, Worcester, Mass. :

I claim a device for wetting stamps, envelopes, &c., consisting of a block, A, or its equivalent, revolving in a case, B, containing water, substantially in the manner shown and described.

[The object of this invention is to secure the exact surface of water for wetting stamps, envelopes, &c., without defacing them, by artificial means, instead of licking the same with the tongue.]

38,504.—Manufacture of Steel.—J. C. Schemmann, Hamburg, Germany :

I claim, first, Manufacturing steel in a granular and spongy state by withdrawing it from the puddling furnace at the stages herein before described, and plunging it in cold water.

Second, Manufacturing refined steel by enclosing the granular steel obtained, as hereinbefore described, in iron or steel cases, submitting the same to welding heat, and subjecting the cases and their contents to hammering as hereinbefore described.

38,505.—Apparatus for teaching the Art of Swimming.—Socrates Scholfield, Norwich, Conn. :

I claim the use of either floats or breathing pipes, when constructed and arranged in such a manner that they may be raised out of the water and rendered useless by the proper motions of the wearer in the act of swimming.

38,506.—Water Elevator.—H. R. Scott, Plainwell, Mich. :

I claim the combination and arrangement of the bevel wheels, b b c c, oscillating shaft, a a, lever, k, crank, o, and drums, h h, substantially as described.

38,507.—Constructing Cars.—Samuel J. Seely, Brooklyn, N. Y. :

I claim, first, Constructing the ends of metal cars of ridged sheet metal, d c c, and of elliptical or curved form and without joints at the corners, substantially as set forth.

Second, The arrangement of the angular guard, J, or its equivalent, in combination with the car body, substantially as and for the purpose set forth.

Third, Arranging the seat of a car substantially in the manner and for the purpose described.

Fourth, The construction of a car or other wheeled vehicle with round or elliptic ends and ridges of sheet metal, d c c, angle iron and wood, combined in the manner and for the purpose herein described.

Fifth, The manner herein described of arranging the doors in combination with the shield or guard, for the purpose set forth.

98,508.—Tram and Level for Mills.—J. M. Seldomridge, Spring Valley, Ohio :

I claim the combination of the center screw, e, and radial slides, g g and c, for adjusting the instrument appropriately to the spindle, and the projecting arm, i, for the purpose described.

38,509.—Machine for punching Railroad Rails.—Alfred Sower and Martin Payne, Troy, N. Y. :

We claim the rollers, G, in the bed or bar, A, in connection with the two blocks, E E, having the punches, f, attached, all arranged for joint operation as and for the purpose herein set forth.

[This invention relates to a new and improved machine for punching railroad rails directly after being rolled and while in a heated state. The invention consists in the employment of rising and falling blocks provided with suitable punches, and operated through the medium of eccentrics and rollers, the blocks being provided with two punches each, so as to punch both sides of the rails at one operation, and the rails being placed on rollers which are operated simultaneously by means of belts, or their equivalents, all being arranged in such a manner that the rails may be punched expeditiously at both ends, and with less labor than the work can now be performed.]

38,510.—Corn Planter.—James H. Sorey, Xenia, Ill. Antedated Dec. 28, 1861.

I claim the combination and arrangement of the cams, H, grooves, Q, slide, I, spring, K, lever, L, slide, M, and points, N, constructed and operating together in the manner specified.

38,511.—Apparatus for Measuring and Weighing.—Nicholas Smith, Lansing, Iowa :

I claim a measure of capacity, B, fitted within a case, A, and having springs, D, one or more, applied to it, and also an index or indexes to travel over graduated plates, G, on the outer size of the case, all arranged substantially as and for the purpose herein set forth.

[This invention consists in the application of a weighing attachment to a measure of capacity (a half bushel, for instance), the parts being arranged in such a manner that grain or other articles may be measured and weighed simultaneously or separately, as desired.]

38,512.—Expanding Screw Tap.—William J. Stevens, Jersey City, N. J. :

I claim, as an improved article of manufacture, an expanding screw tap, made with a hollow body, A, mortises, h, nut-cutters, E, conical screw spindle, D, the nut, e, and screw-head, C, all as herein shown and described.

[The object of this invention is to provide, in a simpler manner than in the expanding taps heretofore constructed, for the setting-out and adjustment of the cutters; to this end it consists in a novel mode of combining a cone and adjusting screw with each other and with the body and head of the tap and the cutters.]

38,513.—Melting and Smelting Furnace.—James F. Stileman and Zabina Ellis, Philadelphia, Pa. :

We claim a box, I, of any convenient form with its opening, m, through which the slag is forced by the aid of the blast and tapping hole, h, the whole being applied to a foundry cupola or other furnace substantially as and for the purpose herein set forth.

38,514.—Harvester.—Daniel M. Swartz and Jonathan Kreamer, Millheim, Pa.:

We claim in combination with a horizontally revolving rake or reel that has also a rising and falling motion to accommodate itself to the platform and main frame, the frame, h, with its guides, i, for supporting and guiding the rear ends of the rake or reel stales or levers, substantially as and for the purpose described.

38,515.—Rake for Harvesting.—Philo Sylla, Elgin, Ill.:

I claim, first, Operating a rake for a harvesting machine, by means of two rotating cranks of unequal lengths, and both driven by a positive motion, substantially as and for the purpose set forth.

Second, I also claim the so combining with a rake shaft or handle, of two rotating cranks of unequal lengths, as that the said handle shall be united so as to move with the wrist pin of the short crank, whilst the wrist pin of the long crank traverses a slot or guide in or on said handle, thus causing one end of said handle to move in a true circle whilst the other end describes an irregular ellipse substantially as set forth.

Third, I also claim in combination with a rake driven by two rotating cranks, of unequal lengths having each a positive motion given to it, the setting of the crank shafts in a line oblique to the line of the finger bar, or cutting line of the machine substantially as and for the purpose set forth.

38,516.—Warp Brush.—Samuel Taylor, East Cambridge, Mass.:

I claim the employment or use in the manufactures of brushes of a concave plate, E, in combination with a flat plate or strip, F, for the purpose of holding the bristles while dipping them in pitch or other suitable cement, substantially as herein shown and described.

38,517.—Sink Trap.—Theodore B. Voorhees, New York City :

I claim in combination with the water-box of a sink, the valve bottom, F, attached to a shaft, G, or its equivalent, arranged substantially as shown, so that the valve bottom, F, will descend or tilt under a given weight of water in the box, and return to its original closed position when all over a given weight of water has escaped from the box.

I also claim the employment or use of the packing, J K, applied to the valve or bottom, F, of the box, E, and to the bottom edge of said box, for the purpose specified.

I further claim the lubricating arrangement, composed of the oil chamber, g, grooves, i i, in the shaft, G, and the tube, h, or its equivalent when combined and arranged with a sink to operate substantially as and for the purpose herein set forth.

[An illustration and description of this invention was published on page 305, current volume of the SCIENTIFIC AMERICAN.]

38,518.—Machine for making Bolts.—William E. Ward, Port Chester, N. Y.:

I claim in machinery for forming carriage and other like bolts from square rods of iron, forming the first set of grooves of the rolling dies, for a portion of their depth, with the sides square, that is, at right angles with the axis of the rollers, or nearly so, and having a mode of operation, such as herein described, in combination with other grooves of a semi-circular or other equivalent form for the after rollings, substantially as described.

I also claim the rolling dies with two or more sets of grooves substantially as described, in combination with a sliding and rotating madrel with jaws, substantially as described, the two or more sets of grooves in the rolling dies acting in succession on each blank, the mandrel being turned for each successive rolling, as described.

I also claim in combination with the griping jaws on the mandrel the sliding stop, operated substantially as herein described, for forcing and holding the inner face of the head of the blank against the inner face of the griping jaws as described, and for the purpose specified.

I also claim the sliding shield plate, substantially as described, in combination with the rolling dies and the jaws on the mandrel, substantially as and for the purpose specified.

38,519.—Table Waiter or Tray.—Nathaniel Waterman, Boston, Mass.:

I claim the improved tray made substantially as described.

38,520.—Tool for cutting and beveling Barrel Heads.—William Watkins, Crete, Ill. Ante-dated Oct. 11, 1862 :

I claim the curved block, D, provided with the handle, B, and fitted with tooth, E, and knife, H, when used in combination with the slotted arm, C, and adjusting screw pivot, K, and operated in the manner and for the purpose set forth.

38,521.—Utilizing the Waste Heat of Puddling Furnaces &c., in generating Steam.—James Watt, Buffalo, N. Y.:

I claim the location of the boiler at the end of the furnace and on a horizontal plane therewith so that the surplus heat and slag from the furnace may be directed into a fire chamber, B', within the boiler, for the purpose and substantially as described.

38,522.—Apparatus for the Water Propulsion of Vessels.—James Watt, Buffalo, N. Y.:

I claim the application of the curb, B, and water-ways, C, to the stern of a boat or vessel in combination with a screw propellor for the purposes substantially as described.

38,523.—Incombustible Paper Shades for Lamps.—Gustav Wedekind, Philadelphia, Pa.:

I claim a paper shade, the whole interior surface of which is backed by mica, and the two layers of paper and mica are caught and held at the top and bottom thereof by a thin metallic strip or its equivalent, substantially as herein described and represented, and for the purpose described.

38,524.—Fastening Tire on Wheels.—Wm. C. Whiting & Henry F. Edwards, Worcester, Mass.:

We claim a metallic plate with any number of prongs on either or both ends introduced between the tire and felloe in the manner and for the purposes set forth.

38,525.—Process of finishing Leather.—Henry C. Williams, Lancaster, Pa.:

I claim the process of treating leather (after the same has been subjected to the operation of tanning) substantially in the manner and for the purpose set forth.

38,526.—Lubricator.—William W. W. Wood, Philadelphia, Pa. Ante-dated May 3, 1863 :

I claim the use, substantially in the manner described of the detachable siphon, E, in connection with an oil cup for the purpose set forth.

38,527.—Marine Camel.—Samuel Woolston, Vincentown, N. J.:

I claim, first, The above-described marine camel, having a spacious chamber elevated above the main deck, substantially as set forth.

Second, In combination with the above I also claim the valves in the keel of the camel and the elevated pumps, the former for filling and the latter for emptying the chambers, substantially as described.

38,528.—Seeding Machine.—Nelson E. Allen (assignor to himself and Chas. B. Warren), Fox Lake, Wis.:

I claim, first, The spirally formed cups or pockets in the cylinders, E, in combination with oblique openings in the stationary caps, g, arranged to operate in the manner and for the purpose specified.

Second, The fluted cone or scatterer, J, attached to the tube, I 2, by an arm, h, and screw, i, so that it can be adjusted within the lower end of the tube, as and for the purposes specified.

Third, Suspending the bars, K, to which the cultivator teeth, j, are attached, from shaft, l, so as to have them project a sufficient distance in front of the shaft to form pedals by which either one of the cultivator teeth may be raised independently of the other, in the manner specified.

38,529.—Call for Telegraphs.—Alexander Bain (assignor to Wm. H. Allen), New York City. Ante-dated Dec. 11, 1862:

I claim the call composed of the reels of wire, B B, the permanent magnet, E, and the glass disk, G, or its equivalent; the whole combined, applied and arranged to operate substantially as and for the purpose herein specified.

38,530.—Key for Electric Telegraphs.—Alexander Bain (assignor to Wm. H. Allen), New York City. Ante-dated Dec. 11, 1862:

I claim, first, Providing the lever of a telegraph key with a plug, p, of ivory or other surface of non-conducting material, operating with a sliding movement in combination with an elastic arm, l, or its equivalent, substantially as and for the purpose herein specified.

Second, In combination with the surface of insulating material, p, provided on the key and the arm, l, or its equivalent, I claim the cushions of soft material, f g, applied under the regulating screw and hammer or other stops of the key substantially as and for the purpose herein specified.

38,531.—Water Engine.—Abraham Coates & Martin V. Osborn (assignor to themselves and H. H. Babcock), Watertown, N. Y.:

I claim, first, The combination with the induction pipe of a water engine with the shifting valve, b, and with the air chamber of the auxiliary pipe, L, and valve, K, by which the concussion of the water upon the valve and piston is made to supply a portion of water to the air-chamber, substantially as and for the purpose set forth.

Second, The construction of the valve, b, of a single flat plate in combination with the conical or cylindrical heads or flanges, n n, substantially as set forth.

Third, The combination of the flat valve, b, with a water engine, substantially as set forth.

38,532.—Chain Hook.—George H. Draper (assignor to himself and Oscar M. Draper), North Attleboro, Mass.:

I claim the improved chain hook or connection as made with its shank and movable tongue scarfed together in manner, and secured by a rivet or pin, arranged with respect to the scarfing, substantially as described.

38,533.—Harvester.—Robert Glover, Grayville, Ill., assignor to himself and David Negley, White County, Ill.:

I claim the arrangement of main frame, A, supported on the single ground wheel, B, and double wheeled caster, C, the tongue, D, being hinged in line with the axis of the ground wheel, in the described connection with the finger bar, F, having a rolling drag bar, G, supported by arm, I, and brackets, H J, the whole being combined and adapted to operate, in the manner set forth.

38,534.—Power Loom.—Barton H. Jenks & John Shinn (assignor to Barton H. Jenks), Bridesburgh, Pa. Ante-dated Nov. 24, 1861 :

We claim, first, Making the lever, B, jointed as above described and for the purpose specified.

Second, We claim the raising cam, C, in combination with the moving pin, r, or its equivalent, for the above described purpose.

38,535.—Hand Stamp.—George J. Hill (assignor to Sanford, Harrun & Co.) Buffalo, N. Y.:

I claim the combination of a belt or strip of ink-prepared ribbon, with a bed for holding the "form" of types or plates and a stamping platen, the parts being so arranged that the ribbon may be run from spool to spool over the face of the type, and a succession of impressions printed without an inking apparatus, for the purposes and substantially as described.

38,536.—Closing Fruit Jars.—Carlton Newman (assignor to himself and Ephraim Wormser), Pittsburgh, Pa.:

I claim so constructing or shaping the upper part around the neck of self-sealing jars or cans, as that the shoulder of the jar shall incline gradually downwards from the circumference towards the neck in combination with the use of a cap or cover screwed or otherwise fastened over the neck of the jar, with an elastic gasket interposed between the base of the cap, and the shoulder of the jar, for the purpose of increasing the pressure on the gasket, between the shoulder of the jar, and the base of the cap or cover, as the jar contracts in cooling, substantially as hereinbefore described.

38,537.—Burner for Kerosene Lamps.—Timothy Raymond, Brooklyn, N. Y., assignor to himself and Samuel Dietz, New York City :

I claim the combination of the lever 2, and the spiral spring, 3, in the manner described, the parts being constructed, combined, and operating substantially as set forth.

38,538.—Machine for thrashing and cleaning Clover and Grass Seed.—Darwin Shattuck, Branchport, N. Y., assignor to himself and Alexander F. Whitaker, Penn Yan, N. Y.:

I claim, first, The conveyer, I, when made and used as specified.

Second, I claim the supports, M, for the concave, when made with the projections, and held by the bolts as specified and used for the purpose set forth.

Third, I claim the valve, N, when used in combination with the cylinder, K, and concave, L, to change the machine from thrashing and hulling to thrashing only without changing or stopping any other part of the machine.

38,539.—Adjustable Hanger.—Richard A. Stratton (assignor to himself and Charles H. Miller), Philadelphia, Pa.:

I claim the hanger with its cylindrical or semi-tubular stem, d, and its set-screws, B and G, in combination with the two portions, D and D', of the box, the latter portion having a plate, i, adapted to and rendered adjustable on the stem of the hanger, and the whole being constructed and arranged substantially as and for the purpose herein set forth.

38,540.—Purifying and bleaching Wax.—William Van Wyck (assignor to Elias W. Van Voorhis), New York City :

I claim the process herein described of purifying and bleaching wax, that is to say, first liquefying the wax, and while in that condition, submitting it in a filter to the action of bone-black or other suitable decoloring material.

38,541.—Anatomical Bit for Horses.—Henry T. Bomertre, Philadelphia, Pa.:

I claim first, The construction of the two check-pieces, conformable, or nearly so to the horses cheek-bones, nearly on line with the upper lips of the nostrils, so that by stress upon the reins connected with the bars, d d, pressure may be applied first to the cheek-bones for the ordinary control of the animal; or, in case of restive horses, a further pressure may be made upon the nostrils, all in the manner and for the purpose described.

Second, The straps, F and G, constructed and arranged as described in combination with the elastic cheek-pieces made to extend over the nostrils of the horse for the purpose of controlling by pressure the respiratory organs of the animal.

Third, The elastic cheek-pieces provided with the oblique or semi-circular slots, in combination with the lever bars, d d, constructed and arranged as described, and the bar, C, made rigid or elastic, whereby I am enabled to control the animal by pressure upon the cheek-bones, and eventually against the nostrils.

RE-ISSUES.

1,472.—Rake for Harvesters.—Walter A. Wood, Hoosick Falls, N. Y., assignee of John Richardson. Patented June 19, 1855 :

I claim in combination with a self-acting rake for harvesting machines, the crank-motion, the turning or rocking guide, and the long rake stale passing through said guide substantially as and for the purpose described.

DESIGNS.

1,759.—Metallic Plate for Burial Cases, &c.—Lucian Fay, Cincinnati, Ohio.

1,760.—Skate.—Eben T. Starr, New York City.

cation for a patent is *reduced* from $30 down to $15. Otherchanges 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 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 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 (but in cases of designs) on the above terms. Foreigners cannot secure their inventions by filing a caveat; to citizens only is this privilege accorded.

During the last seventeen 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 at least 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 inventorsfor 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.

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 story of the case, inclosing the official letters, &c.

Notes and Queries

T. M. McG., of N. Y.—You had better send for a boiler-maker and have him examine your furnace. He can tell betterthan we can, at this distance, what you require.

P. S., of Maine.—You should be very careful and have all the joints of your condenser air-tight. Take a lighted lamp and hold it up to suspected parts, and if the flame is forced in by the atmospheric pressure you may be sure that your vacuum will be impaired.

H. W., of Conn.—Albata is a name given to an alloy of nickel, and it is employed for making inferior tea-spoons, to imitate silver It is composed of copper, 15 parts; nickel, 5 parts; zinc, 5 parts.

H. W., of N. Y.—The amount of grate surface required in a boiler depends entirely upon the draft. In a locomotive, for six inches square of grate surface the evaporation is one cubic foot of water per hour—one horse-power. In stationary and marine engines one square foot of grate surface is allowed for each horse-power.

J. W., of N. Y.—All soaps are not suitable for washing. Lime water and olive oil form an insoluble soap totally unfit for washing purposes. A caustic alkali is necessary for the manufacture of washing soap; soda makes a hard and potash a soft soap with grease or oil.

G. A. F., of Ohio.—We have never heard that any European Government has offered a reward for the invehtion of an auger to bore a square hole.

Y. and A., of Cal.—Bound volumes of the SCIENTIFIC AMERICAN, if sent to you by mail, will cost three dollars per volume.

E. C. E., of Ohio.—We have carefully examined the sketch of your alleged improvement in projectiles, and it is a singular fact, that within the past three weeks we have received, from an American citizen in China, the same thing. We think well of the plan and should like to see it thoroughly tried.

S. L. M., of Conn.—We cannot tell you when wooden screws were first made in this country. They are extensively manufactured in Providence, R. I.

D. D. & Co., of Pa.—We do not sell the blind slat tenoning machine to which you refer. You had better write to S. C. Hill, No. 12 Platt street, this city, in regard to it. We do not deal in any kind of machinery.

J. B., of Pa.—Take your piston out and scrape the rings steam tight; that is better than to grind them in with emery. The latter substance gets in the pores of the iron and frequently ruins the cylinder.

F. D. D., of Ohio.—The old papers to which you refer will be of no value to us. In reference to marbleizing the front of the building to which you refer, we can furnish you with no receipt for preparing a stucco which shall imitate marble. The imitation is produced on the face of the stucco by the skillful use of paint. It needs a practiced hand to do it properly.

S. K. S., of Pa.—The Canadian Patent Bill to which we referred does not contemplate the granting of patents to those who have already secured them in this country. We fear the bill will not pass this season as Parliament is prorogued in consequence of the defeat of the ministry.

J. W., of Pa.—Picric acid is obtained by treating phenole with strong nitric acid. It is employed for dyeing yellow on silk, by first impregnating the silk with alum, then immersing it for a short period in a solution of the picric acid. An admixture of picric acid and indigo forms a beautiful green color on silk.

R. McC., of C. W.—Gutta-percha or india-rubber cement is well adapted for stopping leaks in the floors of piazzas, roofs, &c., but if you cover it with a coat of oil paint it will become soft and mix with the paint, as the oil dissolves the gutta-percha.

J. R. K., of Ohio.—We do not know what is the best known mode of swinging horses, but perhaps some of our readers may be able to inform you. We think such horses ought to be hung up by the neck. The cost of binding the SCIENTIFIC AMERICAN is 75 cents per volume.

T. H., of Pa.—Innumerable plans of aerial ships have been sent to us, which, like yours, we have not thought proper to notice. It will afford us pleasure to record the voyage of the first successful one—hoping it may be yours.

J. B. S., of Mass.—We have never seen the photograph of a cannon ball taken while in motion, but we have seen a great many such balls in the pictures of battle scenes. Great allowance must be made for the remarkable visionary powers of the artists who design such pictures.

S. V., of Mass.—The Bramah press is called the hydrostatic (not hydraulic) press, because it operates by the pressure of water.

C. H. C., of Conn.—Some Jonval turbine wheels have given out more power with the same quantity of water than overshot wheels. You will find full information respecting trials to test the power of turbine wheels on page 164, current volume of the SCIENTIFIC AMERICAN.

J. H. W., of Ohio.—Common hydraulic cement will stop the leaks in your aquarium; so will a cement of molten pitch.

A. H. N., of Ind.—If your patent does not cover all that you desire and have a right now to claim, you can surrender the original patent and obtain a re-issue. You cannot claim under an application for a re-issue what is not already contained in your model in the Patent Office. Our pamphlet, a copy of which we will send you, explains the subject of re-issue.

R. M., of Ohio.—If you use Giffard's injector you will not require any feed-pump.

R. H. J., of Iowa.—If you have invented a convenient power which can be economically used for driving sewing machines, churn machines, washing machines, &c., we think it would find a ready sale, as such an apparatus is much wanted. In the absence of a suitable description of it, we can express no opinion respecting its merits.

M. P. & Co., of Conn.—The specimen of your mode of addressing newspapers seems to be an improvement over the method now in use for that purpose, and if the apparatus is simple it will meet approval. We shall be glad to see the machine in operation. The demand for labor-saving machinery of all kinds must be increased in proportion as men are drawn from industrial pursuits into the military service.

Money Received

At the Scientific American Office, on account of Patent Office business, from Wednesday, May 13, to Wednesday, May 20, 1863:—

L. B., of N. J., $25; V. D., of Pa., $50; J. A. & L. Van R., of N.Y., $36; T. O., of Mass., $100; G. R. J., of N. Y., $49; R. K., of Mass., $20; H. Van DeW.. of Mass., $20; D. D., of N. Y., $20; J. A. W., of Wis., $20; A. & W., of N. Y., $16; G. W. L., of N. J., $47; S. M. B. of N. Y., $16; A. J. G., of Mass., $39; M. H. S., of N. Y., $20; G. P. H., of N. Y., $20; J. B., of Ill., $16; J. H. A., of Mich., $15; S. D. G., of N. Y., $25; R. P. P., of N. J., $25; A. W., of N. Y., $100; G. H. F. of N. Y., $10, A. S., of Ill., $16; L. M., of N.Y., $20; M. & K., of Ill., $10; A. C., of Pa., $35; W. F., of Mo., $25; G. H. D., of N. Y., $15; L & W., of N. Y., $250; C. W. S., of N. Y., $250; O. P., of Vt., $25; E. H. J., of Ohio, $25; L. J., of France, $25; J. B., of N. Y., $29; J. J. D., of N. Y., $30; L. C , of N.Y., $28; H. U., of Conn., $20; T. H., of N. Y., $20; E. H., or Mass., $20; H. T., of N. J., $45; S. J. S., of N. Y., $20; R. Q., of N. Y., $41; A. H. P., of Iowa, $20; G. H. R., of N. Y., $16; R. & W. K., of Mass., $44; H. W. B., of Ohio, $63; M. A. D., of Mich., $20; A. & S., of N. Y., $10; A. B., of Vt., $16; M. M. & Co., of Ind., $30; G.M., of N.H., $25; J. McC., of N.Y., $28; J.W. K., of Mass., $16; T. W., of Mass., $30; F. W. H., of Canada, $250; E, G. H., of Mass., $16; W. N., of N. Y., $29; J. G., of R. I., $25; E. C. B., of Cal., $50; M. A. J., of Mass., $16; J. B. R., of N. Y., $300; G. & T., of N. Y., $373; W. B. R., of Mich., $16; H. W., of N. Y., $25; E. A., of N. J., $35; L. B., of N. Y., $25; A. F. T., of N. Y , $45; W. M., of N. Y., $16; G. L. T., of Mass., $10; A. C., of Cal., $16; G. G., of Ill., $20; D. L. D., of N. Y., $16; W. K. L., of Mass., $20; H. & S., of Pa., $20; T. R. T., of N. Y., $16; W. P., of N. Y., $16; V. & W., of Wis., $20; G. T., of N. Y., $16; A. W., of Iowa, $16; G. H. M., of Ind., $15; S. F. L., of Wis., $20; S. M. & Bros., of Pa., $20; A. S. L., of N. Y., $372; C. R., of Mich., $15; G. L., of N. J., $25; D. R., of N. Y., $25; J. & J., of Mich., $16; A. C. T., of N. Y., $25; A. J. A., of Ill., $16; J. V. D., & Co., of Va., $25; Z. S., of Wis., $30; G. R. B., of R. I., $16; E. P. H., of Mass., $16; B. L., of Vt., $35.

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Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office from Wednesday, May 13, to Wednesday, May 20, 1863:—

L. B., of N. J.; J. B., of N. Y.; E. A., of N. Y.; V. D., of Pa. (2 cases); J. J. D., of N. Y.; L. B., of N. Y.; J. A. & L. Van R., of N. Y.; L. C., of N. Y.; B. and B., of N. Y.; R. Q., of N. Y.; R. and W. K., of Mass.; A. J. G., of Mass.; O. P., of Vt.; H. and R., of Ohio; J. G., of R. I.; T. and S., of N. Y.; W. F., of Mo.; O. N., of N. Y.; G. H., of N. Y.; E. H. J., of Ill.; J. and S., of Wis.; A. C., of Pa.; J. C., of Ohio; J. D. P., of N. J.; G. M., of N. H.; S. F. L., of Wis.; S. G., of N. Y.; J. McC., of N. Y.; D. M., of Ind.; H. W., of N. Y.; G. L., of N. J.; L. J., of France; B. L., of Vt.; M. and K., of Ill.; T W., of Mass.; D. R., of N. Y.