

RECENT ENGLISH PATENTS.

Some recent English inventions are here appended:—

Rotary Engines.—The cylinder of this improved rotary engine is made in two halves, each of which is turned inside to a template, so as to be exact counterparts of each other, and then the two halves are fixed together with accuracy. In the interior of the cylinder there is a central plate or disk acting as an arm, and forming a central boss, which is fitted conically into glands connected to both sides of the cylinder. The arm extends to the piston part of the cylinder, and works between two rings provided with springs. The piston is fixed to the arm, and works in a circular space or bore at the outer circumference of the cylinder. The box of the arm has an oblong hole, into which is loosely fitted the main shaft of the engine, so that there shall be no friction on the arm and glands. The side is enclosed in a box or case having a stuffing-box, and to the outer end of the slide-rod is connected a roller, which is placed in an elliptic or cam groove, cut or formed in a drum fixed to the main shaft, so that as the drum revolves the slide shall move out to allow the traverse of the piston, and then close up quickly. When there is a double engine having two cylinders, the grooved drum is placed between, and the grooves arranged accordingly. For regulating the supply and exhaust of the cylinder there is a slide valve worked by a loose eccentric on the main shaft, there being stops for working the engine forwards or backwards; and air-pumps, feed-pumps, and other apparatus can be worked by eccentrics on the main shaft or otherwise.

Steam Boilers, etc.—These improvements consist, first, in dispensing entirely with the use of straight or flat plates or bars, in the preparation of hoops or rings, or other continuous forms, thereby avoiding the necessity of any seams or joinings in such hoops or rings or other forms, by which they are very considerably strengthened; and instead of such straight or flat plates or bars the patentee uses ingots or blooms of iron or other materials, from which the hoops, or rings, or other continuous forms are to be made, such ingots or blooms being of comparatively small diameter or sizes, and of considerable thickness, but sufficient in quantities of material to form the hoops or rings; or other forms, of the sizes desired; and, subsequently, by the operations of pressing, hammering, and rolling, or either or any of such operations, from such ingots or blooms into hoops or rings, or other forms as desired, and without any joinings or seams whatever.

RECENT AMERICAN PATENTS.

Pumps for Compressing Air, Etc.—The object of this invention is to compress atmospheric air, vapor or gases and store them in a proper reservoir, which must be of great strength and thickness, for use in oil and other wells, including those called artesian, for the purpose of obtaining a flow of liquid from such wells upon the principle of the oil ejectors. It consists in placing oil, water or saline solutions in the chambers and passages of an air pump, or in other words, immersing the piston of an air pump in a liquid comparatively incompressible in lieu of air, whereby the efficiency of the pump is greatly increased. George M. Mowbray, of Titusville, Pa., is the inventor.

Machine for Cutting Out Gloves.—This invention relates to a new and improved device or machine for cutting out gloves preparatory to sewing the same for market or for use. The invention consists in a peculiar construction and arrangement of the cutters and their attachment to a bed-plate, and also in the manner of connecting the latter to the cross-head of a press, whereby several advantages are obtained over the machines hitherto used for the purpose. Henry J. Dickerson, Groversville, N. Y., is the inventor.

Traction Engine.—The object of this invention is to render the driving mechanism of a traction engine entirely independent of the truck, so that said driving mechanism is free to follow the sinuosities of the ground. The invention consists in the employment or use, in combination with the truck, of a hinged frame, which carries the steam boiler and cylinder and the driving gear, and which forms the bearing for the axle of the driving wheel in such a

manner that said driving wheel is free to follow the sinuosities of the ground, and to act with its full power, assisted by the weight of the boiler and driving gear, and independent of the position of the wheels supporting the truck frame. G. W. Barrett, of Urbana, Ohio, is the inventor.

An American Steamer Building for an English Company.

Daniel Westervelt, of this city, is building for the Pacific Steam Navigation Company, of Liverpool, England, a beautiful side-wheel steamer, to be called the *Favorita*, and from present appearances she will probably be the fastest steamer of her length in the world; she is intended to be so at least. The *Favorita* is intended for the route of this company on the west coast of South America, extending to the isthmus down to the lower parts of Chili. As the route is cut up into divisions, it is not known at present what division she will be attached to. Capt. James Hall, one of the company's officers, is here superintending the construction of the vessel.

The *Favorita* is 200 feet in length, 300 feet beam, and 19 feet depth of hold; she is building of the best materials, and will be in every respect a first class passenger and light freight boat. The Atlantic Works are building the engine, which has a 56-inch cylinder and 11 feet stroke, and the power that can be developed will certainly tend, with her fine model, to make her a very fast vessel. No pains or expense will be spared to make her the most attractive, comfortable and staunch vessel on the Pacific coast. All the new improved labor-saving machines will be placed on board, among them will be the Ericsson windlass; this is deemed the best for a vessel which is constantly using her anchors and desires to weigh them quick and with a small crew, as is the case in the Pacific trade, and these vessels are only a few hours at sea when they run in, anchor, land their passengers and freight, up anchor and are off for another port.

The *Favorita* will be superior in many respects to the *Peruvian*, which was built here by Mr. Westervelt in 1860-1. It is gratifying to us as a nation, and creditable to our ship builders that England must come to us to have passenger steamers for the use of her navigation companies in foreign waters. Nothing but American built ships seem to please and satisfy the people of Peru and Chili, who support the Pacific Steam Navigation Company's line. Capt. Hall went to England to have a vessel built there, but none of the builders could guarantee to build such a vessel as would make the speed, possess the accommodations, and come up to the requirements of the superintendent as well as the demand of the patrons of the line. The rapidity with which the work on the *Favorita* progresses gives promise that it will not be many weeks before she will be launched.

Diamonds for Boring Artesian Wells.

Mr. Lorenzo Dow, No. 170 Broadway, N. Y., recently brought to this office a core of compact sandstone, about two feet in length and 3 1/2 inches in diameter, which was taken out on the Funk farm, Pennsylvania, by his peculiar cutter. This instrument was originally patented in France, by M. Rudolph Leschand, and subsequently in the United States, through the Scientific American Patent Agency. The most novel feature in the tool is the employment of diamonds for cutters in the place of steel. These diamonds are set in the end of a tube driven by machinery, the same as an ordinary drill, and work with astonishing rapidity. Five feet per hour is a fair rate of its progress through hard sandstone. The drill leaves a core standing which is broken off and drawn upon convenient lengths. In the cutter under notice, 15 diamonds are used, and the cost of them is about \$500, but they last a long time, and are practically durable. Miners and well-borers who have seen it speak highly of its efficiency.

TRUNK hardware is almost entirely an American product, and a distinct branch of the hardware business. It consists of locks, rivets, nails, rollers, silvered, gilt and japanned ornaments of various kinds, bag frames, steel and brass bands, buckles and hinges. One Connecticut establishment furnishes nearly all the locks used in the trade.



ISSUED FROM THE UNITED STATES PATENT-OFFICE

FOR THIS WEEK ENDING NOVEMBER 22, 1864.

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.

45,128.—Combined Time and Concussion Fuze for Shells.—Clifford Arick, St. Clairsville, Ohio:

I claim, first, The construction of a soft metal fuze case having an annular chamber or groove for the reception of an annular time fuze, and a vertical or other independent chamber or tube, for the reception of a concussion or percussion fuze.

Second, The union in a single magazine to an annular fuze, of the two ends of the fuze, by independent vents, one operated in the usual way on time, and the other by concussion.

45,129.—Knob Latch.—John H. Barnes, Brooklyn, N. Y.:

I claim the construction of the latch-head, D, having three beveled surfaces, substantially as and for the purposes set forth.

I also claim the beveling of the outside ends, g, g, of the keeper or striker, E, substantially as and for the purposes set forth.

I also claim the arrangement of the inner inclines, k k, of the keeper or striker, E, substantially as and for the purposes set forth.

I also claim the combination of the beveled latch head, D, and keeper or striker, E, for the purposes set forth.

45,130.—Steam Carriage.—G. W. Barnett, Urbana, Ohio:

I claim the driving wheel, F, steam boiler, H, and cylinders, G, mounted upon the hinged frame, D, in combination with the truck frame, A, all constructed and operating substantially as and for the purposes set forth.

45,131.—Device for Measuring Cloth in the Piece or Roll.—Wm. Beaton, Grinnell, Iowa:

I claim, first, A cloth measure for measuring cloth and other materials, in the roll or folds, substantially as described.

Second, I also claim the hollow bill for inserting the tape in the folds of the goods to be measured in the roll, in combination with the reel of the tape, substantially as described.

[This invention consists in the construction of an implement by means of which cloth and other materials put up in rolls, can be measured in the roll, thereby saving the necessity of opening or unrolling a package or roll in order to measure its contents.]

45,132.—Gate.—Asa Blood, Sr., Janesville, Wis.:

I claim a gate and door when constructed and supported substantially as and for the purpose described.

45,133.—Screw.—Wm. G. A. Bonwill, Dover, Del.:

I claim as a new article of manufacture, a wood screw, constructed as herein specified.

[In these screws longitudinal grooves intersect the threads and extend through the plain part near the head and also into the beveled side of the head. A screw thus constructed may be inserted into a piece of wood without the necessity of previously boring, cuts clean and does not splinter the wood, takes a firmer hold and may be inserted into the most delicate article without splitting it. It is also adapted to countersink itself.]

45,134.—Soldering Furnace.—Lewis Boore, Buffalo, N. Y.:

I claim the relative arrangement and combination of the coal chamber, A, draft opening, F, hearth, E, for the soldering irons and smoke flue, H, so that the air for combustion will enter above and draw down on to the soldering irons, for the purpose and substantially as described.

45,135.—Water Closet Valve.—John Brower, Newark, N. J.:

I claim a water closet valve held to its place by a bar secured by a hemispherical connection and rendered water-tight by means of a V-shaped joint, all substantially as shown and described.

45,136.—Mode of Lubricating Packing of Pistons, etc.—Daniel J. Browne & Cyrus W. Baldwin, Boston, Mass.:

We claim to coat over or infuse into raw hide, leather, paper, and canvas, or cloth, employed for the packing of caloric engines and pumps, as well as the parts of machines subjected to abrasion or wear, with a good adhesive varnish or paint and when said packing and part of machines are partially stiffened or dry, to dust and further coat them over with finely pulverized plumbago, stearite or talc immediately afterwards, rubbing or burnishing them to the desired degree of smoothness or firmness required, substantially as and for the purposes herein described.

Among the advantages claimed by this invention, are durability, protection from abrasion, moisture, and a considerable degree of heat, when applicable to the packing of caloric engines and pumps, as well as to various parts of machines.

45,137.—Cork Screw.—Joseph Linus Clark, Chester, Conn.:

I claim the increased pitch of the thread when used for the purpose herein described, and operating in combination with the pin, P, and catch, K, or their equivalent.

45,138.—Boots, etc.—Frederick Closs, New Haven, Conn.:

I claim sewing (by machinery) the soles to the uppers of boots and shoes, substantially as herein described.

45,139.—Seed Planter.—Aaron Crisman & Michael Whitmer, Sugar Creek, Iowa:

We claim the combination of a hinged lever, G, cross bar, K, rocker shaft, H, short arms, I, and feed blocks, K K, or their equivalents with the running gear and seed box of a seeding machine for the purpose of effecting and controlling the discharge of seed therefrom, when a regular vibratory movement is imparted to the lever, G, and its attachments by means of an annular plate, a, and pins, b b, operating upon a cam, g, substantially in the manner herein set forth.

45,140.—Safety Fuze.—J. E. Chase & Joseph Toy, Simsbury, Conn.:

I claim enclosing the body of the fuze within a covering of loose fibers in the condition of shiver or its equivalent, substantially as and for the purpose above described.

[This invention consists in covering the body of fuze, in making waterproof safety fuze, with a covering made of fiber when it is in the condition known as "shiver."]

45,141.—Soap Composition.—Edwin De Mortimer, Cincinnati, Ohio:

I claim the compound of materials in the proportions and manner and for the purpose set forth

45,142.—Bolts in Grinding Mills.—Roswell Denison, Grand Rapids, Mich.:

I claim the employment or use of a series of tubes, containing balls or other shaped weights and applied to the bolt, to operate in the manner substantially as and for the purpose herein set forth.

[This invention relates to a new and improved means for knocking or jarring flour bolts during the operation of bolting, in order to favor the passage of the flour through the bolting cloth and prevent the latter from choking or clogging.]

45,143.—Soldering Metal Vessels.—Henry P. Dennis, Peoria, Ill.:

I claim the machine composed of the two-armed standard, A, with the sliding box, C, vibrating box with lever or arm, D, in combination with the shaft, B, the adjustable cylinder or mold and finger lever, E, all constructed and operating substantially as described.

I also claim the cylinder or mold constructed with the head, I, the stave plate, L, with adjustable set screws, n and K, and springs, P, and stave, q, in combination with the expansion plate, G, and shaft, B, all arranged to operate in the manner and for the purposes set forth.

45,144.—Machine for Amalgamating Gold and Silver.—Julius C. Dickey, Saratoga Springs, N. Y. Antedated Nov. 19, 1864:

I claim the employment of one or more of the conductors, G, in combination with one or more channels, F, for the purpose set forth.

45,145.—Machine for Cutting out Gloves.—Henry J. Dickerson, Gloversville, N. Y.:

I claim, first, The method of attaching cutters, h, j, to the bed-plate, B, as herein shown and described; to wit, by having the cutter, h, secured to ledges, g, and the cutters, j, secured in position by pendant pins or projections, i, and the notched cross-bar, k, and the wedges or keys, l, substantially as herein set forth.

Second, The employment or use in combination with the cutters, h, j, of the quick cutters, m, n, arranged substantially as and for the purpose specified.

Third, In combination with the aforesaid bed-plate, B, and cross-head, f, of a glove-cutting machine, I further claim the dove-tail, S, and slot, t, for securing the bed-plate to the press, substantially as set forth.

45,146.—Folding Chair.—Augustus Eliars, Boston, Mass.:

I claim, first, The arrangement of the pivoted seat supported by suitable braces held by a locking device in such a manner that the chair can be set at any desired inclination, as described.

Second, The arrangement of the locking device and pivoted or hinged legs, operating together as described.

Third, The use of a rigid pivoted ring or bar, to shape the flexible back and also enable it to be folded into a small compass, arranged substantially as described.

45,147.—Rock Drill.—David Evans, Philadelphia, Pa.:

I claim providing a rock drill with permanent cheeks or cutters a short distance from the point of the drill, to cut or ream the hole drilled of a uniform size, as the point of the drill wears away in drilling.

45,148.—Skate.—Elisha Foote, Saratoga Springs, N. Y.:

I claim, first, The form of the runner as above set forth consisting of a thin upright rib and one or two flanges, as described.

Second, The combination of such a runner with standards to prevent it from turning over sideways, as described.

Third, The use of two screws at the heel, constructed and arranged as described.

Fourth, The improved mode of attaching the clamps and screws, to operate them as set forth.

45,149.—Paper-making Machine.—Eunice N. Foote, Saratoga Springs, N. Y.:

I claim, first, Giving to the pulp on its approach to the cylinder of a paper machine the motion of the cylinder by means of the band of slats described, or other equivalent means for the uses and purposes above set forth.

Second, I claim the combination with the cylinder of an endless band of slats or its equivalent, constructed and operating as and for the purpose described.

Third, I also claim the use of the rolls, b and c, and band, d, or their equivalents to effect the objects specified.

45,150.—Carriage Wheel.—Walter K. Foster, Bangor, Maine:

I claim the combination of the holding screw (bolt, g, with the wheel and the tire contracting mechanism thereof.

I also claim the combination of the series of tennons, i, l, with the wheel and the tire-contracting mechanism thereof.

45,151.—Invalid Bedstead.—O. P. Furman, Addison, N. Y.:

I claim the pulley, F, provided with a lever, G, at the rear end of its shaft, which works over a semi-circular notched bar, H, in connection with the cords, E, E, attached to the pulley, F, as shown and connected to the pivoted part, C, of the bed bottom, all applied and arranged to operate substantially as and for the purpose specified.

[This invention consists in having the bed-bottom composed of two parts, one being fixed or stationary, and the other arranged so as to be capable of being raised and lowered in a more or less inclined position by means of a pulley and cords, and retained at any point within the scope of its movement by means of a fastening, whereby the patient may, with the greatest facility, be adjusted in a horizontal or a more or less inclined or elevated position, and without disturbing or annoying the patient in the least.]

45,152.—Breach-loading Fire-arm.—Alexander Grillet, Philadelphia, Pa.:

I claim, first, The breach-piece, E, and hammer, H, hung to the pivot, F, as combined with the devices herein described or its equivalents to the same, whereby said breach-piece and hammer may be made to operate together or independently of each other, as set forth.

Second, The spring bolt, G, with its spring catch, g', combined with the breach-piece, substantially in the manner set forth and for the purpose specified.

Third, The breach-piece, its spring bolt, G, the pin, e, attached to the same, and the curved slot, j, in combination with the hammer, H, and its two pins, i and i'.

Fourth, The combination of the breach-piece, E, hammer, H, and the spring, u, or its equivalent, for maintaining the breach-piece in advance of the hammer.

Fifth, The arm, j, its projection, p, and curved projection, r, in combination with the pin, t, on the breach-piece, the whole being constructed and arranged substantially as and for the purpose herein set forth.

45,153.—Oil Ejector for Oil Wells.—T. B. Gunnalg, New York City:

I claim, first, The employment or use of a gas tube or gas chamber arranged with the air-pump and oil-tube, substantially as shown, for the purpose of admitting of the gas which escapes from the elevated oil being made subservient in forcing up the oil, as described.

Second, The enlarged portion, F, at the upper part of the oil-tube, B, provided with a flap or door, G, and a valve, I, and having the gas tube, H, communicating with it, and all arranged substantially as and for the purpose specified.

[This invention relates to a new and useful means for ejecting or forcing oil from oil wells, and is an improvement on the atmospheric pump recently employed for that purpose.]

45,154.—Flax and Hemp Brake.—A. W. Hall, New York City:

I claim the employment or use of a series of beaters provided with opening, c, and operated by pins placed in one or more spiral rows on a cylinder, A, in connection with the slotted bed, B, and a suitable spring or springs, all arranged so that the beaters will work consecutively in pairs and perform the operations of beating or breaking, scutching and feeding simultaneously or at one operation, as set forth.

I also claim the bar, F, when applied to the bed, B, and underneath the beaters, C, substantially as and for the purpose specified.

I further claim the knives or cutters, d, and saws, e, when applied to or used in combination with the beater, C, substantially as and for the purpose herein set forth.

I also claim the openings, c, in the beaters, C, made or arranged as shown with a bottom piece or bar so as to raise the flax or hemp

from between the bars, e, and admit of its being fed along by the descent or down stroke of the beaters, as set forth.

[This invention relates to a new and improved machine for operating upon fax or hemp, for the purpose of separating the fiber from the woody portion thereof.]

45,155.—Churn.—Samuel Z. Hall, Camden, N. J.:

I claim the employment in a churn of one or more revolving twisted dashers, arranged at a distance from the axis of revolution, substantially as herein specified.

45,156.—Grape Mill.—Amandus Hemminger, Sandusky, Ohio:

I claim, first, The oscillating separator, J, J, employed in connection with the grated concave, A, a, a', for removing the stems and skin from the pulp previously to the latter being submitted to the action of a press, substantially as and for the purpose set forth.

Second, I claim the combined arrangement of the ribbed and grooved rolls, C, C', and separator, J, J, when employed in connection with the grated concave, A, a, a', substantially in the manner described.

45,157.—Odometers.—Austin D. Hoffman, Wayne, Mich.:

I claim, first, The spring or brake, H, employed in the described combination with the worm shaft, E, of an odometer, to regulate its rotation.

Second, I claim the double dial, d, d', and gearing, K, L, M, N, arranged as specified in the described combination with the worm shaft, E, and sprocket wheel, F, of an odometer.

45,158.—Mowing Machine.—M. G. Hubbard, Syracuse, N. Y.:

I claim the combination of a curved track-clearer hinged as and at the point described, and extending forward as and for the purposes set forth, in combination with a curved adjustable grassing attached in the manner described to the upper edge of the clearer board, substantially as and for the purpose specified.

45,159.—Oscillating Engine.—M. C. Kilgore and Wm. Eberhard, Washington, Iowa:

We claim the combination of the arm, H, b, attached to the cylinder, the guide, I, attached to the head, G, of the piston rod, the arc-formed valve seat attached to the underside of the cylinder and the adjustable arc-formed stationary valve, K, K, all constructed, arranged and operating in the manner and for the purposes herein specified.

45,160.—Composition for Candles.—John Lawrence Klein, New York City:

I claim a new and improved process for making composition candles as herein described, using for that purpose the aforesaid ingredients or composition of matter or any other substantially the same, and which will produce the intended effect.

45,161.—Manufacture of Paraffine Candles.—John Lawrence Klein, New York City:

I claim a new and improved process for making paraffine candles, as herein described, using for that purpose the aforesaid ingredients or compositions of matter or any other substantially the same, and which will produce the intended effect.

45,162.—Gate Fastening.—Henry Last, West Lebanon, Ind.:

I claim the latch, E, provided with a lever, F, applied to the gate, A, substantially as shown, in combination with a drop catch, G, arranged with a spring or springs, in such a manner that said catch may, to a certain extent, yield or give to the latch as the latter impinges against the drops as the gate closes, substantially as and for the purpose set forth.

[This invention relates to a new and improved fastening for gates, and has for its object the ready opening of the gate by an equestrian, without the necessity of dismounting, and at the same time admit of the gate closing and fastening itself, without the liability of the fastening being injured by jars or concussions, however violently the gate may close.]

45,163.—Sap Spout.—John McCombs, Edinburg, Ohio:

I claim a sap spout consisting of the cylinder, A, cone, B, and bore, C, D, the whole being constructed and for the purpose herein specified.

45,164.—Apparatus for Marbling Soap.—F. Moreau and F. Roberts, New York City:

I claim the use of two pans, A, B, with holes, a, b, in their bottoms, and connected by pipes, c, in combination with plates, C, E, constructed and operating substantially as and for the purpose set forth.

45,165.—Locking Door for Railroad Cars.—E. W. Morse, Chicago, Ill.:

I claim, first, A locking device in a car or other structure with sliding doors, constructed and operated substantially as above described.

Second, I also claim protecting the bolt of the lock by means of the guides which hold the door to the rail on which it slides, substantially as and for the purpose set forth.

[This invention consists of a device for locking the sliding doors of freight cars, by which the bolt is concealed within the guides which hold the door to the rail on which it moves.]

45,166.—Manufacture of Soap.—F. Moreau and F. Robert, New York City:

We claim the within-described process of manufacturing soap by mixing lye with fat or oil oxidized either previous or during the saponification, substantially in the manner herein set forth.

Also the use in the manufacture of soap of an apparatus, substantially as herein described, consisting of a flat pan, A, supported by a frame, C, in a steam jacket, B, as set forth.

45,167.—Washing Machine.—S. A. Mort, Dayton, Ohio:

I claim, first, The fitting of the journals of the rollers, F, of the concave in segments, G, connected at their lower parts by a hinge or joints, d, provided with springs, H, and attached to slides, I, which have springs, e, attached to them, in combination with the fluted cylinder, C, placed in an adjustable frame, B, all being arranged to operate in the manner substantially as and for the purpose herein set forth.

Second, In combination with the above I further claim the partitions, J, J, placed within the suds-box and arranged relatively with the concave, E, substantially as and for the purpose herein set forth.

[This invention relates to a new and improved clothes washing-machine, of that class in which a concave of rollers is used in connection with a fluted cylinder.]

45,168.—Air Pump.—G. M. Mowbray, Titusville, Pa.:

I claim, first, Compressing and forcing air in and through a pump by means of water or other comparatively incompressible liquid, so that the air is acted on directly by the water and does not come in contact with the piston under a mode of operation and by a combination and arrangement of chambers, D, D', and cylinder, A, substantially as above set forth.

Second, I also claim arranging the inlet or check valves so that while air is supplied through their seats to the chambers, D, D', a small portion of water or other liquid may also be passed into the chambers to compensate for the waste of the supply in the pump, substantially as described.

Third, I also claim the combination of the air-reservoir, J, with the water-gauge, L, and water discharge cock, M, substantially as described.

Fourth, I also claim balancing or partially balancing the inlet or check valves by means of the compensating water supply under a mode of construction and operation, substantially as described.

45,169.—Artificial Leg.—F. W. Newbert, Pittsburgh, Pa.:

I claim the arrangement of the stop, f, and cushioned shoulder, g, in front of the knee joint in combination with the elastic cord, e, e', and cord, d, d', arranged and operating substantially as herein described and for the purpose set forth.

45,170.—Portable Refreshment Fountain.—Augustus J. Ohmer, Hamilton, Ohio:

I claim, first, The portable refreshment fountain hereinbefore described, consisting of the reservoir, A, ears, C, C, injecting and discharging tube, D, throttle, E, and nozzle, G, or their equivalents, constructed, arranged and employed substantially as and for the purpose specified.

Second, In combination with a portable refreshment fountain I further claim the flexible tube, H, and mouth piece, I, J, K, constructed and employed in the manner and for the purposes described.

45,171.—Vegetable Cutter.—Samuel W. Packard and Charles A. Meekins, Rockland, Mass.:

We claim the arrangement of the rotary conical cutter-head, A, with a series of knives, D, in combination with the hopper, E, constructed and operating as and for the purpose set forth.

45,172.—Washing Machine.—Albert L. Philipp, Appleton, Wis.:

I claim the endless apron, E, in connection with the fluted cylinder, G, rollers, H, H, yielding bed, D, and the yielding rollers, C, C, all arranged in a suds-box, A, to operate in the manner substantially as and for the purpose specified.

[This invention consists in the employment or use of a fluted cylinder, pressure rollers, an endless apron and yielding bed, all being so arranged and combined that clothes may be washed with great facility and in a perfect and thorough manner.]

45,173.—Carriage Spring.—Charles P. Phillips, Syracuse, N. Y.:

I claim the outside guide lugs, a and b, so arranged as to operate in conjunction with the center bolts of leaf springs, for the purposes and in the manner specified.

45,174.—Device for marking Ground for Planting.—W. W. Potts, Nashville, Ill.:

I claim the long axle, A, A, in combination with the wheels, F, provided with beveled rims, b, all arranged substantially as and for the purpose described.

I further claim the connecting of the axles, A, A, by means of the two parallel reaches, B, B, extending beyond the front axle, A, to form bounds to receive the draught pole, C, in connection with the brace rods, D, D, all arranged as shown to form a simple, economical and durable framing for a device, for the purpose set forth.

[This invention relates to a new and improved machine for furrowing ground for planting corn, and it consists in the employment or use of wheels provided with beveled rims and attached to axles all being so arranged that ground may be furrowed in a rapid manner and with great accuracy, so as to ensure the corn being planted in check rows.]

45,175.—Grinding Plate.—P. M. Randall, San Francisco, Cal.:

I claim a grinding plate, B, the grinding surface of which is composed of two or more materials of different hardness, the softest material being placed nearest to the center or axis of rotation, and the hardest nearest to the periphery or furthest from the axis of rotation, substantially as and for the purpose herein shown and described.

[This invention consists in the manufacture of grinding plates of two or more materials of different hardness arranged so that the softest material is nearest to the center, and that said plate becomes harder and harder towards its periphery, and consequently the hardness of the material increases with the destructive effect, and the grinding surface is prevented from wearing uneven or coarse.]

45,176.—Cartridge Extractor for Fire-arms.—Henry Reynolds, Springfield, Mass.:

I claim the ejector consisting of a lever, C, and attached wedge, b, applied to the exterior of the frame of a fire-arm and in combination with its chamber or chambers, and operating substantially as herein specified.

45,177.—Cultivators.—J. J. Rider, Wilton Junction, Iowa:

I claim the treadle levers, M, M, the adjustable roller, K, and the chains or cords, L, L, when so combined with each other, and with the frame of a cultivator plow, as to sustain the weight of the plow and plow beams, and enable them to be quickly and readily elevated from the ground by the driver, substantially in the manner and for the purposes herein set forth.

I also claim the cord, p, pulleys, o, o, o, angular lever, W, spring bolt, l, arc-shaped cross beam, S, and sockets, m, m, when combined with each other, and with the frame of a cultivator plow, for the purpose of enabling m, to adjust the direction of the draft, substantially in the manner herein set forth.

45,178.—Mold for taking Impressions of Feet.—Jean Eustache Augustine Riilot, San Jose, Cal.:

I claim, first, The separating gauges, B, in combination with the mold, A, constructed and operating in the manner and for the purpose herein shown and described.

Second, The adjustable toe gauge, D, applied in combination with the mold, A, substantially as and for the purpose set forth.

Third, The extension, E, in combination with the mold, A, and separating gauges, B, constructed and operating in the manner and for the purpose substantially as specified.

[This invention consists in the application of separating gauges, one to each of the halves of the mold, in such a manner that the impression taken from the foot can be readily separated in two halves, in order to release the foot, and also the last formed by casting thereon lead or other suitable material. The invention consists, also, in the application to the foot from which an impression is to be taken of an adjustable toe gauge, whereby the proper length and width of the last is insured, and the impression taken from the foot, and the last cast in this impression, can be readily made larger or smaller, according to the convenience or desire of the person for whom the last is to be made, or according to the variations of fashion.]

45,179.—Soldering Fire Pot.—Wm. F. Rossmann, Hudson N. Y.:

I claim a double cylinder soldering fire pot, or its equivalent having a draft space, D, or flues between the outer and inner cylinder, in combination with the draft holes or perforations, F, F, etc., through the inner one level or nearly level with the top of the mouth, E, connecting the fire chamber, C, with the space, D, substantially in the manner and for the purpose herein set forth.

45,180.—Concentrated Food.—John H. Schenck, St. Louis, Mo. Antedated July 15, 1863:

I claim the mode of preparing concentrated food, for man and beast, in the manner herein fully set forth and described.

45,181.—Summer Stoves.—Joseph Schmedinghoff, Cincinnati, Ohio:

I claim the combination of the annular plate or ring, C, the shaking handle, G, and the removable basket-grate, E, formed with crated rim, D, permitting the passage of air around the margin of the grate, while supporting it within the shell, A.

45,182.—Churns.—Obadiah Seely, Syracuse, N. Y.:

I claim the combination of the vertical adjustable partitions with the lower revolving dashers, f, and the upper revolving dashers g, substantially as and for the purpose above described.

I also claim the vertical adjustable partition, b, suspended within a churn through its cover, and held against the sides of the churn, substantially as described.

[This invention consists in a novel arrangement of an upper and lower series of revolving dashers, with a series of vertical partitions set radially in the churn, by means of which the rotation of the dashers causes the milk to flow in a circuitous course around the sides of the churn, until it comes in contact with the partitions.]

45,183.—Apparatus for Transferring Liquids from Casks.—Daniel Sexton, San Gabriel, Cal.:

First, I claim the faucet, B, B', employed in connection with the rod, D, spigot, G, and pipe, H, substantially in the manner and for the purpose herein set forth.

Second, I claim the nut, I, in combination with the rod, D, when employed in removing a bung, substantially as described.

Third, I claim the employment of the rod, E, E', operating in combination with the nut, I, substantially as described.

Fourth, I claim the use, in connection with the faucet, B, of the boring device, F, when operated as set forth.

Fifth, I claim the annular socket, C, when used to admit of the application of the faucet to the cask, A, and its detachment therefrom, as described.

45,184.—Field Fence.—F. L. Sexton, Wellington, Ohio: I claim the special arrangement of rectangular bars, a, stiles, b, posts, b, in combination with the braces, g, g, and m, and pins, p and h, when constructed as and for the purpose set forth.

45,185.—Raking Attachments to Harvesters.—Wm. T. Shaw and John Manz, Wilmington, Del.: First, I claim the extensive tumbling shaft, I I, attached directly to the main driving shaft, a, in combination with the gearing, G H, and independently hinged rakes, K K, arranged and operating as and for the purposes herein specified.

Second, I claim the revolving head, H H', made in two disconnected parts, adapted to be coupled and uncoupled by means of the key, h', and recess, h2, so as to cause the rakes to operate when the machine is moving forward, and to remain at rest during the backward movement thereof.

Third, I claim the frame or casing, F, formed with the guide, f f', for controlling the movement of the rakes and reels, as described.

Fourth, in combination with the aforesaid guide, f f', I claim the roller, L, arranged and operating substantially as described, to initiate and assist in the elevation of the rake and reel arms, as and for the object specified.

45,186.—Harvesting Machines.—Jonathan B. Smith, Windfield, N. Y.: First, I claim the cam lever, a, when constructed and arranged to operate in combination with the rods, C, and finger bar, B, in the manner and for the purpose set forth.

Second, I claim the stop, i, applied to the cam lever a, substantially as and for the purpose set forth.

45,187.—Forge Hammer.—Edward Spaulding, Worcester, Mass.: I claim the blocks I I, with their inclined adjacent faces, when arranged in respect to each other to the anvil, H, and to the hammer, E, to which a reciprocating movement, unvarying in extent, is imparted, and when operated substantially as and for the purpose specified.

45,188.—Mode of Extracting Gold and Silver from Ores, by means of the Vapor of Mercury.—Robert Spencer, New York City: I claim, first, Subjecting ores, while under pressure and in a disintegrated state, to the action of the fumes or vapors of mercury, substantially as and for the purpose herein described.

Second, Desulphurating also exposing ores to the action of the fumes of mercury, in a single chamber, substantially as described.

45,189.—Weather Strip.—Stephen G. Spicer, Philadelphia, Pa.: I claim the combination of the three strips, g h i, hinges j, and flat spring, s, the latter applied to the outer end of the weather strip, g, and all arranged in the manner herein shown and described, to operate in combination with a recess T, in the rabbet of the door frame.

45,190.—Feed Manger.—C. E. Steller, McGregor, Iowa: I claim, in combination with the hopper or feed receptacle, B, and manger, A, a valve, C, or its equivalent, for the purpose of regulating a supply of food to the manger, as set forth.

[This invention consists in providing a feed manger with a hopper or feed receptacle, which communicates with the manger, and is provided with a valve arranged in such a manner that the manger will be supplied with feed as rapidly only as the animal can eat it, thereby preventing the waste of feed which now occurs with the ordinary mangers, in consequence of the animal throwing it out of the manger by the movement of his head, and also preventing the feed being damaged and rendered useless by slobber, etc., etc.]

45,191.—Water Wheels.—Amos Stewart, Mt. Lebanon, N. Y.: I claim the serpentine buckets, b, having a concave surface, e, at their outer ends, and a convex portion, e', from the concave surface, e, to the hub of the wheel; in combination with the two water discharge passages, E E, placed at opposite sides of the box, A, and the gate, F, connected by the bar, I, which is to be controlled by the governor.

[This invention relates to the peculiar form or shape of the buckets, and to a particular manner of applying the water to the wheel, whereby the journals of the wheel shaft are not subjected to any lateral pressure, and much friction thereby avoided, and the admission of the water to the wheel alluded to be regulated by a governor, so as to enable the wheel to operate evenly or uniformly, with a greater or less power, as may be desired.]

45,192.—Corn Planter.—Volcott D. Stoddard, Muscatine, Iowa: I claim the armed wheel, C, in combination with the runners, B, elbow lever, D, lever, F, movable pin, e, and seed slide, F, all constructed and operating in the manner and for the purpose herein shown and described.

45,193.—Abdominal Supporters.—Harriet H. Thompson, Washington, D. C.: I claim the back brace, A, abdominal supporter, H, cushion, K, with their adjustable and yielding straps, C E, and J, when constructed, arranged and combined as herein described, and for the purposes set forth.

45,194.—Churn Dashers.—Howard Tilden, Philadelphia, Pa.: I claim the combination and arrangement of the perforated disk, B, with the perforated dash bottom, A, substantially as described, and for the purposes set forth.

Also the arrangement of the wings, C C, in the manner and to act as set forth.

45,195.—Paper-Rulling Machines.—Chauncey Walton, Washington, D. C.: First, I claim the springs or bar, L, operating, as herein set forth, to gradually elevate the fountain as the same is depleted, so as to maintain an unvarying level of the ink.

Second, I claim the adjustable weight, D2, or its equivalent, employed in combination with the shaft, D D D', operating to balance the fountain and equalize the power applied to hold the pens in working position, substantially as described.

Third, I claim the combination of the arm, K, and adjustable support, k, fitted to turn on a vertical pivot, to serve as a pen rest, or retain the clamp, C, in any desired position.

Fourth, I claim the siphon cloths, I I, tapering or converging from their central portion toward their respective ends, in the manner and for the purpose herein shown and described.

Fifth, I claim the pen, N N N, constructed substantially in the manner and for the purpose herein set forth.

Sixth, in combination with the pens, N N N, I claim the rods or wires, m m m2, arranged and operating substantially as described.

Seventh, I claim a ruling pen constructed with two, three, or more points, set at any distance asunder by a screw, n3.

Eighth, I claim the treble pen, substantially as represented, with a right and left screw for adjusting the outer points simultaneously and equally.

Ninth, I claim the bar, m', applied and operating as described, as an additional support for the pens.

Tenth, I claim the bit, M, employed to depress or raise any desired number of the pens at will, as explained.

Eleventh, I claim a ruling pen, constructed with an extensible point, substantially as described.

Twelfth, I claim the sponge S, employed in the manner described, as an ink holder and filter.

45,196.—Pruning Shears.—George F. Walters, Waterville, Maine: I claim a pair of pruning shears composed of a fixed chisel-shaped cutter, C, and a curved knife, D, applied to the plate of the cutter, C, constructed substantially as shown, so as to operate with a curved, drawing cut, as described.

45,197.—Grain Shovel.—George V. Watson, George Milsom, and Henry Spindelov, Buffalo, N. Y.: I claim, first, making a scraper or shovel having a pointed or hooked entering piece, for the purpose and substantially as described.

Second, Placing and operating two, three, or more scrapers on one chain or line, and imparting to said scraper a short vibrating motion, so that one scraper will deliver its load to the one next

in advance of it, and so on, until the end scraper delivers to the elevating leg, substantially as described.

Third, Arranging two or more scrapers in line, so as to have a clear space between them, so as to allow the grain to flow in between them and into their track, as set forth.

Fourth, Connecting these scrapers, thus arranged, by stiff bars, D, on each side, jointed and hinged to the scrapers, so as to allow of a free movement upon the joints, and yet keep the scrapers an equal distance apart, and so that power is applied to the forward scrapers only, it will be communicated through these stiff bars to each scraper in the line.

Fifth, Arranging and operating the scrapers in the four quarters of the vessel simultaneously, for the purpose and substantially as described.

Sixth, Imparting to the scrapers a vibratory motion, whereby the scrapers shall be caused to scrape the grain to the elevating leg, for the purposes and substantially as herein described.

45,198.—Sheep Shears.—Herman Wendt and Henry Seymour, of Elizabeth, N. J.: We claim as a new article of manufacture the sheep shears hereinbefore described, consisting of the backs, A, and blanks, B B, secured in a plate, the iron blade plates, C C, strap, and steel blade plate, D D, all constructed and combined in the manner and for the purposes specified.

[This is an ingenious improvement in the mode of constructing the shear, by which an important economy is secured which enables the manufacturers to furnish an article equally as good as the best heretofore known, at a less cost. Agriculturists will be benefited by this invention.]

45,199.—Steam Engines.—S. Lloyd Wiegand, of Philadelphia, Pa. Ante-dated Nov. 9, 1864: I claim, first, closing the induction valves by a positive movement of a cam, which, while it is adjusted and controlled in position by a centrifugal regulator, is locked or secured during the closing movement of the valve, so as to prevent the resistance of the valve gear from reacting upon the governor, substantially in the manner set forth and described.

Second, Combining a centrifugal regulator whose plan of motion is coincident with or parallel to the plane of motion of the adjustable cam, which is locked or secured during the induction valves, substantially in the manner set forth and described.

Third, The arrangement of rock shaft in combination with the mechanism for imparting motion thereto, substantially as hereinbefore set forth and described for operating the valves of steam or pneumatic engines.

Fourth, Suspending the oscillating cylinder upon a universal joint, substantially as set forth and described.

Fifth, Combining the centrifugal regulator with the fly wheel in the manner set forth and described.

45,200.—Ambulance Carriages.—Thomas Wilkins, of Greenville, Ill.: I claim, first, an ambulance carriage having its front and rear axles, A B, connected by an elastic bottom board, C, with a frame E, resting on a crossbar, D, attached to C, with springs, F, of steel or wood, interposed between them, the front part of the bottom board being hollowed out to admit of the cramping of the front wheels, and all arranged substantially as herein set forth.

Second, The litters, L, composed of frames, M, with cloth, k, attached, substantially as and for the purpose herein set forth.

[This invention relates to a new and improved ambulance carriage for carrying the wounded from the field of battle to the hospital or place designated for their subsequent treatment.]

45,201.—Pipe for Gas, Water, &c.—Arcalous Wyckoff, of Elmira, N. Y.: I claim the combination of a composition of hard boiled tar and sawdust with wooden pipes applied in the manner and for the purpose set forth.

[This invention consists in the application for use of a composition of sand or sawdust and hard-boiled tar, in combination with wooden pipes, in such a manner that by coating said pipes on the inside and outside with the composition the wood is rendered perfectly impervious to water or gas, and preserved against the injurious influence of moisture from the inside or outside.]

45,202.—Breech-loading Firearms.—Alexander J. Bergen and David Williamson (assignors to the Moore's Patent Firearms Company), of Brooklyn, N. Y.: We claim, first, the spring catches, 7, in combination with the sliding breech block, d, and grooved housing, b, substantially as specified, whereby the said springs both guide the breech block and draw out the cartridge case as set forth.

Second, We claim the shoulders, 4 4, within the housing, b, extending from the breech block, d, from the rear end of the barrel to the forward end of the vertically sliding block, e, for the purposes, and as set forth.

Third, We claim forming the tumbler of the hammer with a notch taking against the stop pin, 9, at the extreme movement of the hammer in both directions as set forth, in combination with the removable block, g, whereby opportunity is afforded for the introduction of both the tumbler and stop pin as set forth.

45,203.—Water Alarm Gauges.—John D. Hall (assignor to himself and Osborn Conrad), of Philadelphia, Pa.: I claim the arrangement of the float, G, the lever, D, the valve, C, and steam whistle, A, substantially in the manner and for the purpose specified.

45,204.—Locomotive Smoke Stacks.—Seth Ham, of Philadelphia, Pa., assignor to himself and Wm. H. McCafferty, of Alexandria, Va.: I claim, first, the curved deflecting plate, E, and inner journal shaped casing, D, arranged in respect to the inside pipe, A, and outer casing, B, substantially as and for the purpose specified.

Second, The plate, E, inner casing, D, and plate, C, with its flange, a, arranged in respect to each other and the inner pipe and outer casing substantially as set forth for the purposes described.

45,205.—Automatic Air-Holder for Gas Apparatus.—Hugh L. McAvoy (assignor to himself and Elias S. Hutchinson), of Baltimore, Md.: First, I claim an air-holder automatically charged and discharged by an automatic syphon and an induction pipe, operated substantially as herein described.

Second, I claim the syphon, E, having a valve, E1, which is operated by the arm, E2, and projections, b1 b2, for the purpose of opening and closing the syphon, substantially in the manner and for the purpose herein set forth.

Third, I claim the pipe or tube, F, adapted to be opened to the external air by the withdrawal of the water by the syphon, E, and to supply air to the holder, B, as explained.

Fourth, I claim the induction pipe, G, and valve, G1, the latter being provided with an arm, G2, which is moved by the float, G3, so as to open and close the valve, G1, substantially as and for the purpose specified.

45,206.—Apparatus for Carbureting Air.—Hugh L. McAvoy (assignor to himself and Elias S. Hutchinson), of Baltimore, Md.: I claim the combination of the inverted bowl or open-mouthed chamber, E, with the air discharging pipe, B, beneath it, substantially as and for the purpose described.

45,207.—Low-Water Detector for Steam Boilers.—Bernard Schaer, of Buckau, Magdeburg, Prussia, assignor to himself and Christian Budenberg, of New York City: I claim, first, the employment or use of the ball-shaped valve, C, in combination with the adjustable float, D, and whistle, A, as described, leaving the valve free to accommodate itself to the motions of the float, and preventing the valve from sticking by the motions of the float.

Second, The arrangement of the tube R, and stem screws, s s, in combination with the float, D, and valve stem, C', as specified, whereby the float can be adjusted to the desired position, and a free communication between the interior of the float and the steam space of the boiler is effected.

45,208.—Looms for Weaving Hats, etc.—Phineas L. Slayton (assignor to Almet Reed), of New York, N. Y.: I claim giving the web pressing devices of a circular or rotary

loom a movement toward and from the center of the loom during each of the revolutions of the loom, substantially as and for the purpose herein specified.

And I further claim the attachment of the plate, R, to the sleeve or its equivalent, by means of a ball and socket, or other flexible joint of similar character, substantially as and for the purpose here in specified.

45,209.—Horse-Hair Woven Garments.—Phineas L. Slayton (assignor to Almet Reed), of New York, City: I claim as an art-improved article of manufacture a garment composed wholly or in part of horse hair, woven in one piece, substantially as herein set forth and described.

45,210.—Priming Metallic Cartridges.—Charles E. Snelder (assignor to himself and Thos. Poultney), of Baltimore, Md.: First, I claim a cartridge consisting of a casing, A, a transverse pin, B, fixed in the said casing, and an aperture, a2, in the casing opposite the end of the pin B, for the application of a percussion cap, C, to the end of the pin through the side of the casing, as here in explained.

Second, I claim the movable cap or cover, D, employed in combination with the aforesaid casing, A, to close the aperture, a2, and check the escape of gas.

45,211.—Cancelled.

45,212.—Composition for Coating Ships' Bottoms.—Frederick Newton Gisborne, of London, England. Patented in England Oct. 30, 1863. I claim as my invention the composition substantially as hereinbefore described.

45,213.—Centrifugal Crushing Mills.—C. H. Griffin, of Chelsea, Mass. I claim combining with the projectors or impelling arms of a centrifugal crushing or pulverizing machine a series of rotating teeth or percussion surfaces, rotating in the opposite direction, substantially as set forth.

I also claim the employment of the pipe, Z, in combination with the receiver and pulverizer, substantially as described.

RE-ISSUES. 1,823.—Stoves.—Dennis G. Littlefield, of Albany, N. Y.—Patented Jan. 24, 1854; re-issued Nov. 19, 1861; again re-issued Aug. 26, 1862; again re-issued May 19, 1863.

I claim the arrangement, adaptation and combination with a fuel-supplying stove of a cover so hinged to the top plate of the stove that it may be swung open on a horizontal plane, substantially in the manner and for the purposes specified.

1,824.—Harvesters.—David S. McNamara, of Troy, N. Y.—Patented June 30, 1857.

I claim, first, the combination of a pointed or hinged lever and castor wheel, with the drooping end of the main frame and finger beam of a harvester when arranged in relation to said main frame and finger beam, substantially as and for the purpose set forth.

Second, The combination of lever, I, frame, A, and castor wheel and leading wheel, substantially as and for the purposes set forth.

Third, An adjustable leading and supporting wheel in combination with the shoe part of the main frame which supports the heel of the finger beam in a mowing machine, when arranged so as to run directly in advance of the heel end of the finger beam and cut bar and the bearing part of the shoe, and when the axis of said wheel is rigidly connected with the main frame, substantially in the manner and for the purposes herein set forth.

Fourth, The combination and relative arrangement of frame, A, finger beam, G, lever, I, castor wheel, J, and leading wheel, M, substantially as shown and described.

Fifth, The combination and arrangement of the main frame, finger beam, shoe, part F of the main frame and crank shaft, substantially as and for the purposes set forth.

Sixth, Connecting the shaft, t, by means of the arm and link with the rod placed at the underside of the draft pole, and connected with the yoke ring, substantially as described for the purposes set forth.

1,825.—Machine for Cutting Paper for Paper Twine, &c.—John B. Wortendyke, of Godwinville, N. J.—Patented Sept. 13, 1864.

I claim, first, the two rollers, C C, in combination with the cylinders, B B, arranged relatively with each other to operate in the manner substantially as and for the purposes herein set forth.

Second, The employment in combination with cutting devices for cutting paper into strips, of separate sets of receiving or take-up rollers, for receiving or taking away the cut strips from the said cutting devices, whereby the strips are separated from and prevented from interfering with each other, in a manner substantially as herein described.

Third, In combination with the cutting devices for cutting the paper into strips I claim the securing of the receiving or take-up rollers, which take the strips of paper from the cutters to their respective shafts by means of friction devices, for the purpose of allowing the several rollers to have separate or independent movements, substantially as set forth.

PATENTS
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In connection with the publication of the SCIENTIFIC AMERICAN, have acted as Solicitors and Attorneys for procuring "Letters Patent" for new inventions in the United States and in all foreign countries during the past seventeen years. Statistics show that nearly ONE-THIRD of all the applications made for patents in the United States are solicited through this office; while nearly THREE-FOURTHS of all the patents taken in foreign countries are procured through the same source. It is almost needless to add that, after seventeen years' experience in preparing specifications and drawings for the United States Patent Office, the proprietors of the SCIENTIFIC AMERICAN are perfectly conversant with the preparation of applications in the best manner, and the transaction of all business before the Patent Office; but they take pleasure in presenting the annexed testimonials from the three last ex-Commissioners of Patents.

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

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

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