

Platinized Mirrors.

The diathermanous, properties possessed by various substances are precisely analogous to those of transparency and translucency with which they are endowed, except that the former refer to rays of heat and the latter to those of light.

It might be supposed that the substance which showed great power of translucency would also evince similar capabilities with respect to diathermanancy, but experience has proved this assumption to be perfectly erroneous.

As all rays of light and heat must be disposed of by reflection, absorption, and transmission in different proportions, it is manifest that when a transmission and absorption accompanies a reflection, there is a loss incurred when the end in view is to bring into play the reflective powers only of the body.

VARNISH FOR IRON WORK.—Dr. Lunge has published a method of making an excellent black varnish for iron work. He distills gas-tar until nearly all the volatile products are got rid of.

EFFECT OF FLANNEL ON THE SKIN.—Dr. Fox remarks that under the use of flannel, local heat is intensified and itching often increased and kept up.

OFFICIAL REPORT OF PATENTS AND CLAIMS

Issued by the United States Patent Office.

FOR THE WEEK ENDING SEPTEMBER 8, 1868.

Reported Officially for the Scientific American.

PATENTS ARE GRANTED FOR SEVENTEEN YEARS, the following being a schedule of fees:—

Table with 2 columns: Fee description and Amount. Includes On filing each caveat, On filing each application for a patent, etc.

In addition to which there are some small revenue-stamp taxes. Residents of Canada and Nova Scotia pay \$500 on application.

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.

81,861.—GRAIN MOISTENER.—L. J. Adams and J. H. Esale, Avon, Ill.

We claim the combination of the steam pipe or pipes, F, perforated shield, G, and the upper, B, with the lower, A, substantially as herein shown and described, and for the purposes set forth.

81,862.—SAFETY ATTACHMENT FOR POCKETS OF APPAREL.—Alfred Arsenault, Gattensberg, Iowa.

I claim a pocketbook protector, consisting of the wire clasp, A, and of the plate, B, spring, C, hook, D, and knob, F, all arranged and operating substantially as herein shown and described.

81,863.—STEAM SAFETY VALVE.—E. H. Ashcroft, Boston, Mass.

I claim the arrangement of the projecting jacket, d, with the cross head, C, with reference to the valve and spring, substantially as herein shown and described.

81,864.—PORTFOLIO.—G. Ashworth and E. Ashworth, Manchester, England. Patented in England, March 15, 1867.

We claim the spring clips or fasteners, G, constructed and applied to a portfolio substantially as described, in combination with a band or bands, C, of leather or other material, and with an actuating device, H, for staples or binders secured to sheets to be bound, substantially as specified.

81,865.—OPERATING SHUTTLE BOXES IN LOOMS.—John Ashworth (assignor to George L. Davis, John A. Wiley, and Joseph M. Stone), North Andover, Mass.

I claim, 1st, The combination of the lever, E, with the two cam wheels, H and I, arranged with and acting on said lever, at different points in its length substantially as and for the purpose set forth.

2d, The combination of the lever, E, the cam, H, and its hook rod or rods for operating the same, and the cam, I, and its hook rod or rods for operating the same, with the vibrating pawl or driver, N, and the levers, P, and the pattern chain, and their accessories, for controlling the movements of the shuttle boxes substantially as described.

81,866.—WATER WHEEL.—Vincent M. Baker, Preston, Minn.

I claim the chutes, K, in combination with the sliding gates, d, operated through the medium of the ring, H, and gear, K, I, all arranged substantially as and for the purpose set forth.

81,867.—STILL.—G. O. Baldwin, Hillsborough, Ohio.

I claim the slide, D, and condenser, E, constructed as described, when used in combination with the boiler, B, and steam pipe, C, substantially as and for the purposes herein set forth.

81,868.—APPARATUS FOR RECTIFYING SPIRITS.—W. G. Barter, Canton, Md.

I claim the combination, with the still, A, of the cylinder, B, provided with the receiving chambers, D and E, refrigerator, F, and pipes, H and I, substantially as and for the purpose described.

The arrangement of the supply pipe, G, discharge pipes, K and M, the air tube, L, and refrigerator, F, substantially as and for the purpose described.

The receiver, O, provided with a pipe, P, communicating with the still, for returning the light wines, substantially as and for the purpose described.

The combination, with the cylinder, B, of the stop cock, R, tubes, S and worm, T, substantially as and for the purpose set forth.

81,869.—COFFEE MILL.—W. H. Barnes, New London, Conn.

I claim the combination and arrangement of the coiled spring, a, with the arbor of the runner, C, shell, D, and nut, b, all operating substantially as shown and described and for the purpose set forth.

81,870.—REGISTER FOR KNITTING MACHINES.—B. B. Bollinger, Louisville, Ohio.

I claim, 1st, The knitting machine register composed of a pattern wheel, E, a spring hammer, F, and an alarm bell, substantially as and for the purpose described.

2d, In registers for knitting machines, the combination of the alarm bell, hammer, and mechanism for moving the pattern wheel, substantially as herein described.

81,871.—PRINTING TELEGRAPH INSTRUMENT.—R. K. Boyle (assignor to himself and Giuseppe Tagliabue), New York City.

I claim, 1st, Arranging a pair of electro magnets on each side of two horseshoe magnets, which are fastened to an oscillating shaft, substantially as herein shown and described, so that one pole of each horseshoe magnet shall be attracted by the other pole of the opposite magnet.

2d, The application of the adjustable springs, d, to the stationary part of the apparatus, said springs acting to repel the horseshoe magnet, and to adjust the same in the center of forces, substantially as herein shown and described.

3d, The insulated sleeve, f, attached to the horseshoe magnet, in combination with the contact pin, g, and with the local magnet, h, all made and operating substantially as and for the purpose herein shown and described.

4th, Connecting the local magnet, f, by means of an escapement lever, j, with the friction wheel, H, substantially as and for the purpose herein shown and described.

5th, The lever, I, when connected with the sleeve, m, in combination with the friction wheel, H, and spring, p, all made and operating substantially as herein shown and described.

6th, The device, herein shown and described, for locking the bar, n, into the toothed disk, L, by the action of the horseshoe, and subsequently of the local magnet, said device consisting of the sleeve, m, lever, i, spring, p, and friction wheel, H, the latter having upon its pins, l, and all made and operating substantially as and for the purpose herein shown and described.

7th, Connecting the friction wheel, H, with the escapement levers, j, and M, all made and operating substantially as and for the purpose herein shown and described.

8th, Connecting the sleeve, m, which is operated by the action of the local magnet, F, with the sleeve, t, which is moved by the action of the horseshoe magnets, E, substantially as and for the purpose herein shown and described.

9th, The device, herein shown and described, for winding up the hair spring, x, by which the sleeve, t, is turned, said device consisting of the cam, u, arm, w, forked bar, v, arm, c', ratchet wheel, y, and block or pin, b', all made and operating substantially as herein shown and described.

10th, Combining the horseshoe magnet and the local magnet in such a manner with the type-wheel shaft, that by the action of the horseshoe magnet, it receives the required motion, while, by the action of the local magnet, it is instantaneously stopped in the desired position, substantially as shown and described.

11th, The arm, n, when secured to and projecting from the shaft, j, in combination with the arm, n, which projects from the revolving and sliding sleeve, m, and which, by being locked into the stationary disk, L, also locks the shaft, j, substantially as and for the purpose herein shown and described.

12th, The type-wheel, O, when provided with a pin, b', in combination with the turning cam, P, sleeve, i', on shaft, R, pin, j', on sleeve, i', arm, T, and spring, m', all made as described, and operating in combination with each other, substantially in the manner set forth.

13th, The sliding sleeve, v', which is moved when the type-wheel shaft is stopped, and which is combined with the pin, S, having the arms, M, L, and U and operating the printing cushion, V, substantially as and for the purpose herein shown and described.

14th, The feed-rollers, p, n', when receiving motion from the friction wheel, H, and when combined with the support, U, and with the printing cushion, V, all made and operating substantially as and for the purpose herein shown and described.

15th, The printing cushion, V, when pivoted to an upright pin, and when operated by a spring, o', which is secured to one of the arms of the pin, S, substantially as herein shown and described, so that it will be forced with sufficient power against the edge of the type-wheel, and will still be yielding, as set forth.

81,872.—PIANO HAMMER.—C. W. Brewer, Racine, Wis.

I claim a piano hammer, constructed substantially as and for the purpose set forth.

81,873.—RAILROAD CAR HEATER.—Hiram M. Britton (assignor to himself and Joel F. Richardson), Cincinnati, Ohio. Antedated March 9, 1868.

I claim the relative arrangement within the car, A, of the hot-air chamber, G, having double metallic walls, C, G, and the furnace, D, d, the induction pipes, H, connecting pipes, I, J, M, N, and fan, J, substantially as and for the purpose set forth.

81,874.—SILK-WINDING MACHINERY.—Henry L. Brown, Mansfield Center, Vt.

I claim the arrangement of the spools, c, c', arms, d, and connecting rod, e, in a silk-winding machine, so as to produce an automatic vibratory change of motion of one spool, relatively to the other, substantially as described.

81,875.—GRAIN BINDER.—Joseph K. Bull, Buckingham, Iowa.

I claim, 1st, The movable platform, B, hinged or pivoted bars, C, and cord chain, D, in combination with the frame, A, substantially as herein shown and described and for the purposes set forth.

2d, The combination of the seat, E, box or trough, G, and pivoted box, I with each other, and with the movable platform, B, and frame, A, substantially as herein shown and described, and for the purpose set forth.

81,876.—MEDICAL COMPOUND.—J. H. Butts, Stroudsburg, Pa.

I claim the compound above described, composed and operating substantially as and for the purpose herein set forth.

81,877.—PRESSARY.—W. F. Chrisman, Trenton, Tenn.

I claim a pressary, of the form, construction, and method of operation, substantially as shown and described.

81,878.—STEAM SAFETY VALVE.—Gilbert H. Clemens and Everett Clemens, New York City. Antedated August 28, 1868.

We claim, 1st, The arrangement of the enclosed chamber, f, with reference to the valve within said chamber, the levers, h, h, and weight, k, below the same, substantially as set forth.

2d, The arrangement of the levers, h, h, radially, whereby their shorter ends act directly upon the valve stem, and their longer ends sustain the weight substantially as set forth.

81,879.—PLANE.—Alfred H. Comp. Mount Joy, Pa.

I claim the beveled sliding plate, A, and beveled groove plate, B, B, with their screw bearings, when constructed to operate in the manner and for the purpose specified.

81,870.—BED LOUNGE.—J. L. Cox, Manchester, N. H.

I claim the ratchet, b, and lock, x, in combination with the hinge, a, operating rack, A, arm, A', with ratchet, m, arm, C, with ratchet, h, and joint, D, the several devices operating relatively to each other, as described and for the purposes specified.

81,881.—HOT-BED SASH AND FRAME.—Matthew Cridge, Allegheny City, Pa.

I claim, 1st, In a hot bed sash, the sliding rails or bars, b, constructed and used substantially as and for the purposes hereinbefore set forth.

2d, A slotted following sash bar or rail, f, which forms one side of the sash frame and which holds the other sash bars and the glass securely in position substantially as above described.

81,882.—WAGON BRAKE.—H. Davidson, New Salem, Ill.

I claim the arrangement, herein shown and described, of the brake bar, S, slotted plate, P, U-shaped levers, O, H, connection, N, rod, K, formed with an eye at its rear end, bolt, G, arms, E, slotted plate, D, formed with a hook, slotted strap, F, rod, C, having a hook at each end, and sliding sleeve, A, all constructed as described, and arranged with relation to the reach, Q, king bolt, M, and pole, B, to operate as set forth.

81,883.—CONSTRUCTION OF WAGON AND CARRIAGE WHEELS.—Matt J. Dawkins, Brookston, Ind.

I claim, 1st, A method of adjusting the wheel, with the spokes inserted therein, by means of cams cast on to a thimble, said cams being located within the hub, and their faces bearing against the spokes, substantially as described and set forth.

2d, The hub, made of three parts, viz., the back part, with the main box cast in one piece, the front part, and the thimble, with cams cast thereon.

3d, The step-shaped form on the lower part of the spoke, which resists against the cams.

4th, In combination with the foregoing, the tapering sockets in the centrally divided hub, substantially as described.

81,884.—MANUFACTURE OF SOLID FATTY ACIDS.—Louis Adolphe De Milly, Paris, France.

I claim, 1st, Complete saponification, by means of sulphuric acid in the space of three minutes or less, substantially as and for the purpose set forth.

2d, Also, saponifying by means of sulphuric acid, without distillation, or the fatty acids, and without the usual deposit of carbonaceous, insoluble, tarry matter, which accompanies the existing mode of using sulphuric acid, as described in the specification.

3d, The use of water and white of egg for giving the brilliant whiteness to the candle stuff, substantially in the manner and for the purpose set forth.

4th, The use of the mixture of the palm and animal fat, substantially as described, for giving the crystalline structure found in this compound.

5th, While I do not claim the use of pressure to separate liquid and solid fats treated with sulphuric acid, I do claim treating this material by a succession of hot and cold pressure, substantially in the manner and for the purpose described.

81,885.—COFFIN.—Edward Ellinger, Mineral Point, Wis.

I claim the coffin, coated upon the inside with a composition impervious to moisture, as described, and rendered air-tight by the use of a rubber packing, b, let into the under surface of the lid, and held in place by the metallic strip, B, as herein set forth and shown.

81,886.—MACHINE FOR SIZING AND POLISHING BRAD.—John S. Fenner (assignor to the The Inman Manufacturing Company), Warren, N. Y.

I claim, 1st, The arrangement of driven guide and feed rollers with a rotary brush or brushes, with rollers presenting the end of the brush of brushes, substantially in the manner shown and described, and so that the brush or brushes passing through the machine shall be repeatedly subjected to the action of the brush or brushes, substantially as described.

2d, The arrangement of guide and tension rollers, j, c, d, d', d', g', g' and h', upon opposite sides of brush drums, C, D, substantially in the manner and for the purpose described.

3d, In combination with the foregoing, dressing and polishing machine mechanism, substantially as herein described, for communicating an intermittent movement to the brad, while it is being acted upon by brushes, substantially as specified.

4th, The arrangement of the weighted roller, F, and the roller, F, with a sizing trough and drying and dressing brushes, as described.

5th, The arrangement of the guide and tension rollers, c, d, g, with the brushes, C, D, substantially in the manner described.

6th, The combination of the reel, E, sizing trough, F, brushes, C, D, guide and tension rollers, j, c, d, g, and h, and reel, E, all arranged substantially as described.

81,887.—CULINARY APPARATUS.—Joseph S. Field, Brooklyn, N. Y.

I claim, 1st, The apparatus for cooking by steam, when made to be one complete and inseparable vessel, having distinct compartments, for the reception of pans and dishes, each compartment provided with a door, and so arranged that they are all supplied with steam from a common boiler, by means of a side flue, having one of its walls perforated, as herein shown and described.

2d, The vessel, A, when divided, by means of partitions, B, into compartments, which are connected by means of the door, F, with a boiler, C, each compartment provided with steam-tight doors, I, and the flue, K, and boiler admitting of the passage-pipe, G, arranged as described for the purpose specified.

81,888.—STARCH SEPARATOR.—Colgate Gilbert, Buffalo, assignor to J. J. Gilbert, Little Falls, N. Y.

I claim, 1st, The method of supporting and vibrating the bolting frame, A, of a starch separator, substantially as shown and described and for the purpose set forth.

2d, The method of supporting the bolting cloth, B, of a starch separator or longitudinal ribs, a, a, etc., arranged and combined substantially as shown and described and for the purpose set forth.

3d, The extensible and adjustable tube, composed of the parts, S, T, U, V, V, when forming part of a starch separator, and arranged and combined to operate substantially as shown and described and for the purpose set forth.

4th, The method of adjusting the incline of a starch separator by means of screws, g, when the same are arranged in combination with the receiver, C, frame, A, and bed, G, all substantially as shown and described and for the purpose set forth.

5th, An improved starch separator, when constructed and arranged to operate substantially as shown and described and for the several purposes set forth.

81,889.—SASH FASTENER.—L. D. Gould, Newark, N. J.

I claim the combination of the bolt, e, with the eccentric, a, when combined therewith, by sliding the eccentric in the manner and for the purpose shown.

81,890.—ANTI-SLIPPING PLATE.—W. B. Gould, Boston, and W. H. Harris, Taunton, Mass.

We claim a plate, provided with a device for securing it to a table, substantially as set forth.

81,891.—GRAIN BINDER.—J. B. Greenhut, Chicago, Ill.

I claim, 1st, The rake, C, constructed as described, in combination with chain, E, guide, rail, a, plate, D, hook, e, plate, D, pin, g', and guide, F, or their equivalent devices, the whole arranged and operating substantially as herein set forth and specified.

2d, The compressor, R, consisting of standard, W, provided with cam, y, hook, v', and plates, u and v, the compressing arms, Y, Y, plates, Y', Y', and adjustable spring lever, Z, each part constructed as described, and all arranged and operating substantially as herein set forth.

3d, The regulating device, consisting of segment, M, pawl, N, adjustable plate, S, bent rod, 2, and connecting plate, g, all arranged and operating substantially as and in the manner herein described and specified.

4th, In combination with the compressor, R, the cam, H, provided with open ing, l, and flange, l', with its pawl, 2', substantially as and for the purposes set forth.

5th, The combination of the knife, 3, fork, 4, and device, IV, and cam flanges, U, all arranged and operating substantially as set forth.

6th, The binding device, consisting of case, A', shaft, B', rod, H', pin, G', spring, h', fingers, K', K', pulion, C', h, a, c', flags, d', yoke, e', and fork, a, standard, 1', or their equivalents, each and all constructed, arranged, and operating substantially as and in the manner herein described and specified.

7th, The bent lever, L', brace, m', case, A', and arm, 7, of the device, IV, in combination with the fingers, K', K', and the mechanism for operating the same, the whole constructed and arranged substantially as herein described and for the purpose set forth.

81,892.—GAS HEATER.—J. T. Greenwood, Beloit, Wis.

I claim a kerosene stove, herein described, or its equivalent, when made of wood, in combination with cold-air drafts, a, a tin lining, E, cold-air chambers, e, e, a, heat deflector, d, cones, L, L, tank, M, cover, M', and cooler, I, when the whole is constructed and arranged substantially as and for the purpose herein set forth.

81,893.—GLOBE VALVE.—G. D. Hadley (assignor to himself and Gardner Waters), Cincinnati, Ohio.

I claim a globe valve when constructed with a blank surface, A, above the screw, a, in the body or shell of the valve, and the corresponding blank surface, B, above the screw, b, on the stem, D, so that when the screw, b, is revolved from the screw, a, and the valve, k, is bearing upon its seat, the blank surfaces, A and B, shall form a perfect guide for the purpose of grinding the valve to its seat without being obliged to remove the handle or the packing from its stuffing box or the body of the valve from its connections.

81,894.—EXPLOSIVE COMPOUND.—Joseph Hafenegger, San Francisco, Cal.

I claim the within described explosive compounds consisting of Nos. 1, 2, 3, 4, 5, made of the ingredients enumerated, mixed or compounded in about the proportions specified.

Also, the self-igniting match, compounded of the liquids or fluids enumerated, whether applied separately or mixed, to the explosive compounds or match, altogether to be ignited or exploded, substantially as described.

**81,895.—SERVICE PIPE FOR BUILDINGS.**—Edward Hagan, New York city.  
I claim the casing, E G and N, inclosing the service pipes, forming spaces around the latter, the casings being provided with apertures, d, for the introduction of steam or hot air to the spaces surrounding the service pipes, which latter are connected by union joints immediately at the points of junction of the sections of the casing, E G, doors O P Q R, being formed in casing N, opposite the joints of pipes, L J K, all constructed and arranged d in the manner and for the purposes substantially as shown and described.

**81,896.—CHURN.**—T. Haigh (assignor to himself and C. M. Lightner), Harrisburgh, Pa.  
I claim, 1st, Suspending the cubical box between the posts, B B, by attaching the trunnions, b d, to two of its diagonally opposite corners, whereby, as the box is rotated, the inclinations of its sides are rapidly changed, as herein shown and described.  
2d, The cog wheels, E G, and pulleys, D H, and hollow trunnion, d, all operating together, substantially as described, in combination with the diagonally suspended box and its dasher, all substantially as shown and described and for the purpose set forth.

**81,897.—CRANBERRY GATHERER.**—Warren Hall, Dennis, Mass.  
I claim the arrangement of the joint axle with respect to the chute, when hinged to the carriage body, as set forth, the said axle, under such arrangement, being fastened to the chute.  
Also, the combination and arrangement of the series of knives, k k l, with the chute, its teeth and carriage combined, as set forth.  
Also, the combination of the receiver, made as described, with the carriage and the chute combined, and constructed in manner and so as to operate as specified.

**81,898.—PLANING MACHINE.**—S. M. Hamilton, Baltimore, Maryland.  
I claim the combination of the adjustable guides, D, with the cutter head, constructed and operating substantially as described and shown.

**81,899.—STOVEPIPE THIMBLE.**—Gunder E. Hammer, Rochester, Minn.  
I claim the stovepipe safe, s, constructed of the inner cylinder, B, outer cylindrical casing, A, and perforated h, and the lower head being made in two parts, one of which is fastened to the cylinders, A B, while the other, E, is hinged to the outer cylinder, and provided with fastening devices, as herein shown and described for the purpose specified.

**81,900.—COCK OR FAUCET.**—Chas. Harrison, New York city.  
I claim, 1st, The piston, h, formed hollow, in combination with the guide, m, valve, n, and cylinder, l, as and for the purposes specified.  
2d, The grooves, t, within the cylinder, l, in combination with the piston, h, and valve, n, as and for the purposes set forth.

**81,901.—BRICK MACHINE.**—Peter Hayden, Pittsburgh, Pa.  
I claim, 1st, The intermittently rotating cylinder, M, provided with the press boxes, L, followers, T, recesses, d, and teeth, l, in connection with the crank arm, f, on shaft, N, all arranged to operate in the manner substantially as and for the purpose specified.  
2d, The plunger, R, operated substantially as shown and arranged, in relation with the followers, T, for the purpose of compressing the clay in the press boxes, substantially as set forth.  
3d, The plunger, U, operated from the plunger, R, through the medium of the lever, V, for the purpose of discharging the bricks from the press boxes, L, substantially as shown and described.  
4th, The combination of the pressure rollers, F, I, rotary shaft, K, provided with the spiral wings or blades, b and b', the cylinder, M, provided with the press boxes, L, with the followers, T, therein, the plungers, R U, and the fixed cam, X, all arranged to operate in the manner substantially as and for the purpose specified.

**81,902.—FIFTH WHEEL BENDER.**—G. W. Heckart (assignor to himself and C. Kramer), Columbiana, Ohio.  
I claim a bending machine for fifth wheels consisting of a series of forms, B, clamping screw, C, and adjustable bending device, formed of the arm, x, rollers, l and h, levers, D F G and H, link, I, and arm, 10, the whole being constructed, arranged, combined, and operating as herein described and for the purpose set forth.

**81,903.—MANUFACTURE OF SHEET AND PLATE IRON.**—C. C. Hinsdale, Cleveland, Ohio.  
I claim, 1st, The herein described compound, and the manner of using the same, in the process of mode of making plate or sheet iron, substantially as and for the purpose set forth.  
2d, Coating the metal with plastic alloy separately, and in combination with lamp black, or its chemical equivalents, for the purpose set forth in the process described.

**81,904.—STOVE GRATE.**—Benjamin F. Holbrook and Ebenezer B. Humrill, Boston, Mass.  
We claim a movable bed-plate, B, substantially as and for the purpose set forth.  
Also, a bed plate, B, revolving on balls, c c c, substantially as and for the purpose described.  
Also, the movable bearing or loop, g, in combination with the revolving bed plate, B, and arbor, b, of the revolving grate, C, substantially as described for the purpose set forth.  
Also, the annular ring, H, for protecting the revolving bed plate and supporting the lining, substantially as described.  
Also, the sliding and removable port cover, F, in combination with the port E, and arbor, D, with its spring, m, constructed and operating substantially as and for the purpose specified.  
Also, an arbor, D, so pivoted to its grate as to admit of being readily connected therewith or disconnected therefrom, substantially as and for the purpose set forth.

**81,905.—VENTILATOR.**—William Holzhauser, Buffalo, N. Y.  
I claim, 1st, The combination with the system of pipes, B b' F, of a fan blower, C, for the purpose and substantially as described.  
2d, The combination with said system of pipes, of the revolving wind catcher, D, constructed and operating substantially as and for the purpose described.  
3d, In combination with the above, the main regulating dampers, G G', and registers, H H', arranged and operating as described.

**81,906.—COTTON SEED PLANTER.**—Gilbert Jessup, Shortsville, N. Y. Antedated August 17, 1868.  
I claim, 1st, The construction and arrangement of the revolving cylinder, B, with its shaft, I, and its connection with the stationary cylinder, A, or its equivalent, for the purposes herein described.  
2d, The rock shaft, b, arm, H, and spring, G, in combination with the revolving cylinder, B, all acting conjointly, in the manner and for the purposes shown and described.  
3d, The spring, G, or its equivalent, in combination with the pins, v, for the purposes set forth.  
4th, The longitudinal adjustment of the shaft, P, and cylinder, B, in combination with the stationary cylinder, A, or its equivalent, for the purposes of regulating the quantity of seed being distributed.

**81,907.—WATCH REGULATING ADJUSTMENT.**—Frank G. Johnson, Port Richmond, N. Y.  
I claim the fixed screw shaft, a, upon which the grooved nut, c, carrying the end of the regulating hand, d, is rotated, all arranged and operating as described, for the purpose specified.

**81,908.—MANUFACTURE OF IRON AND STEEL.**—John Allcock Jones, Middlesbrough, England.  
I claim, 1st, The production of iron and steel, from cast or refined iron, by first melting or puddling the same, adding thereto purifying agents or fluxes, then distributing a current of slag as described, and separating therefrom, and removing the crude iron or metal resulting to furnaces or crucibles, and melting the same, as hereinbefore described.  
2d, The preparing the crude iron or metal without the employment of a puddling process, and melting the same into cast steel, as hereinbefore described.  
3d, The conversion of cast iron from flexible iron without the employment of the puddling process, by allowing the metal to remain for a sufficient period in the puddling or other furnace, as hereinbefore described.  
4th, The employment of a bath, consisting of a slag or cinder, in which the crude iron resulting from the processes before referred to is melted, so as to be converted into steel, as hereinbefore described.  
5th, The subjecting the crude iron resulting from either of the processes hereinbefore described to pressure, so as to separate the portion of the cinder or slag therefrom, prior to its being placed in or upon the steel melting hearth or furnace.

**81,909.—ICE BOAT.**—Thomas B. Kelley, Dundee, Ill.  
I claim a boat, provided with the watertight compartment or case, B, open at top and bottom, with the propelling wheel, mounted in a sliding adjustable frame, D, fitted within said case, B, for the purpose of adapting the boat to use either on the ice or water, substantially as set forth.

**81,910.—ESCAPEMENT.**—Wm. C. Kellum, San Francisco, Cal.  
I claim, 1st, The detent, F, and the adjusting screw, d, together with the curved arm, H, a d the spring, l, operated by the liberating pin a, or its equivalents, working by spring or gravitation, substantially as and for the purpose a described.  
2d, The escape wheel, B, moving in a plane parallel to that of the balance staff and of the pallet, A, and giving impulse to the pallet, c, either from the sides or point of the teeth, in combination with the detent, F, arm, H, and spring, l, substantially as described.  
3d, The balance staff, C, standing parallel with the plate, A, and the liberating pin, a, passing alternately above and below the lip, J, at each vibration, substantially as described.

**81,911.—CORN PLANTER.**—I. J. Kidd, Young Settlement, Texas. Antedated August 28, 1868.  
I claim the arrangement of the feed wheel, c, pulleys, K K, plow beam, B, cords or bands, J, roller, I, spout, F, and spouts, B and H, the several parts being constructed and operated substantially as and for the purpose specified.

**81,912.—FACE TESTER FOR MILLSTONES.**—James Kuhn, Mount Pleasant, Pa.  
I claim the circular block, A, of wood or other suitable material, provided with concentric annular projections, a, on its face side, substantially as and for the purpose set forth.

**81,913.—BURGLAR ALARM.**—N. P. Larsen, Chicago, Ill.  
I claim, 1st, The lever, D, plate, E, with pin, f, spring, F, and wire H, all combined and operating as and in the manner herein described, and for the purpose specified.  
2d, In combination with the above, the pin, b, of the hammer, B, and the bobbin, O, arranged substantially as set forth.  
3d, The key, K, when used as described, and provided with cam, L, for the purpose of operating the trigger, N, as herein shown and specified.

**81,914.—SEEDING MACHINE.**—J. L. Linderman, Rockford, Ill.  
I claim, 1st, The wheel, E, provided with seed channels upon their peripheries, extending rearward from the seed cups, and made tapering in form, as shown and described, for the purpose set forth.  
2d, The wheels, E, constructed as described, in combination with partitions, F, constructed and arranged as described, with the rollers, G, and spouts, G', the whole being combined and operated substantially as and for the purpose described.  
3d, The wheel, C, and shaft, c, and slotted bearings, c', in combination with gear wheels, B D', and frame, A, as and for the purpose described.

**81,915.—LAMP SHADE.**—E. A. Locke and W. N. Weeden, Boston, Mass.  
We claim a lamp shade ring made from a strip, when the abutting ends of the strip are held together by projections, the ends, which are inserted into a loop formed on one of the spring supports, f, as specified.

**81,916.—VARNISH FOR METAL, WOOD, AND PAPER OR OTHER FABRIC.**—Robert Love Hoboken, N. J.  
I claim an enamel paint, or varnish, composed substantially as described, for the purpose specified.  
Also, forming or compounding an enamel, paint, or varnish of the materials specified, substantially as described.

**81,917.—LAMP CHIMNEY CLEANER.**—M. N. Lovell, Erie, Pa.  
I claim, 1st, The handle, A, of a lamp chimney cleaner, provided with the spring clamo, b, and hook, c, substantially as and for the purpose described.  
2d, The handle, A, of a lamp chimney cleaner, provided with the grooved and curved portion, B, in combination with the clamping spring, b, and hook c, substantially as and for the purpose described.

**81,918.—STUMP EXTRACTOR.**—Charles C. Manuel (assignor to himself, William G. Elkins, and O. N. Elkins), North Troy, Vt.  
I claim, 1st, The arrangement of the main timbers, A A and their accessory cross beam, B, braces, D and E, uprights, C and H, cross beams, G, boises, J, with the rollers, on four wheels, and constituting the frame of a machine for extracting and removing stumps and other heavy bodies, all substantially as shown and described, and for the purpose set forth.  
2d, The arrangement of the chain, a, and its accessory sheaves or pulleys, d e g, and books, b b' c, and roller, f, in combination with a frame mounted on wheels, substantially as described, and any suitable gearing for actuating the said chain, all as and for the purpose set forth.  
3d, The combination of the stump extractor, of the accessory gearing, k j h l m, and rope, n, all arranged to operate substantially as and for the purpose set forth.

**81,919.—GARBAGE BOX.**—John L. Mason, New York city. Antedated August 27, 1868.  
I claim, 1st, The rising and falling slide, S, in combination with the garbage receptacle, R, constructed and operated as and for the purpose described.  
2d, The revolving column, P, in combination with the slide, S, and receptacle, R, constructed and operated as and for the purpose set forth.

**81,920.—MEDICAL COMPOUND FOR CATTLE AND OTHER ANIMALS.**—David P. Mathews, Winthrop, Mass.  
I claim as my invention the said composition, composed of the constituents hereinbefore mentioned.

**81,921.—CLOTH MEASURING MACHINE.**—David Max (assignor to himself and Thomas Waltz), Newton, Ill.  
I claim, 1st, The indicator, consisting of the shaft, H, worm, I, spur wheel, F, pointer, G, and index, G', in combination with the rolls, O D L L', and friction brakes, N N' all arranged and operating substantially as described for the purpose specified.  
2d, In combination with a cloth measuring machine, substantially as herein described, the rolls, L L', composed of the roll proper, a, and diamond piece, a', connected by means of the flaring ferrules or bands, b, substantially as and for the purpose set forth.

**81,922.—GAS MACHINE.**—Hiram S. Maxim, New York city.  
I claim, 1st, A gas machine, in which the production of gas is automatically stopped when its pressure as well as its quantity is excessive, and as automatically re-started when the difficulty is overcome, as set forth.  
2d, The cylinder, e, connected with the enclosed tank, D, to show the height and pressure of the contents of the tank, and to convey part of them to the heating chamber as specified.  
3d, The burner tube, G, when provided with a valve, h, which is connected by a diaphragm, j, so as to be closed when the pressure of the gas is too high, as set forth.  
4th, The combination with each of the four separate vessels, A B D and I, the latter having the elastic diaphragm, J, stretched across it substantially as herein shown and described.  
5th, The device for automatically operating the valve, s, which regulates the flow of gas into the gas holder, I, said device consisting of the diaphragm J, pin, o, lever, L, lever, t, arms, w x, and springs, y, all arranged, combined, and operating, substantially as herein shown and described.  
6th, The pipe, M, for conducting the evaporated gasoline to the gas-holder, and for mixing it with the required quantity of air, said tube containing the perforated partition, b', the interior tube, c, and the valve, e', all made and operating substantially as herein shown and described.  
7th, The cam, z, for keeping the valve, s, closed, as set forth.  
8th, The pipe, r, for conducting illuminating gas from the gas-holder, I, to the heating chamber, a, substantially as and for the purpose herein shown and described.

**81,923.—SPRING BED BOTTOM.**—A. McDaniel (assignor to himself and S. J. Hinton), Dubuque, Iowa.  
I claim the combination and arrangement of the rails, B, rods, C, spring, D, and rails, F, provided with the upper springs, L, all substantially as and for the purpose described.

**81,924.—FORWARD AXLE FOR CARRIAGES.**—Hiram McIlroy, Poplar Ridge, N. Y.  
I claim, 1st, The central pivot and socket, in combination with the hooks and angles on the circles for unning the head block and axle, substantially as described.  
2d, The chambered upper circles and hooks and pivot socket, provided with the leather packing, substantially as and for the purpose described.  
3d, The upper circle bar or plate, provided with the chambered circles and hooks, and with the central pivot, all cast in one piece, and united to the head block in the manner described.

**81,925.—COMBINED SPUR AND CREEPER.**—Ferdinand Mehrmann, Fountain City, Wis.  
I claim a combined spur and creeper, made and operating substantially as herein shown and described.

**81,926.—CORSET.**—Emilie J. Meriman, New York city. Antedated September 4, 1868.  
I claim supporting the corsets and the clothing depending therefrom, by means of straps, I, L, the ends of which are attached by an adjustable lacing or other fastening to the waistband or middle of the corset, substantially as and for the purposes set forth.

**81,927.—MILSTONE VENTILATOR.**—John Metherell, Rockford, Ill.  
I claim the arrangement of the pipes, F, provided with fans, as described in combination with the cooling chamber, G, central passage, H, and fan, I, as and for the purpose set forth.

**81,928.—BRICK MACHINE.**—John C. Miller, Bushnell, Ill.  
I claim the tap, E, and shaft, G, in combination with the frame, A, ways, c, cog wheels, H and I, and molds, D D, all constructed as described, and operating substantially as and for the purposes herein set forth.

**81,929.—PLANE FOR CUTTING BLIND SLATS.**—John H. Miller, Oskaloosa, Iowa.  
I claim the pivoted arms, G, and connecting rod, H, upon the carriage, F, when constructed and operating substantially as and for the purpose specified.

**81,930.—BELLows PUMPING APPARATUS.**—Simon Motte, Paris, France, assignor to Isaac Hyneman.  
I claim, 1st, A bellows pump, having a depressed valve in its stationary base plate, and a removable cover in its vibrating piston or lid, all substantially as shown and described.  
2d, A bellows pump, in which the fluid is received and discharged from near the end opposite the axis of vibration, by means of the piston, B', through confluence pipes, substantially as described.

**81,931.—REVERSIBLE LATCH.**—W. T. Munger, Branford, assignor to P. Corbin and F. Corbin, New Britain, Conn.  
I claim the divided horse-shoe, formed of the part, l, pivoted to the portion, d, in combination with the latch, g, and shank, f, attached to the horse-shoe, so that it may be revolved for reversing said latch substantially as set forth.

**81,932.—ORE AND BONE CRUSHER.**—Amos Newell, Redwing, Minn., assignor to himself, Henry S. Brown, Frederick Arnold, and Alfred Arnold.  
I claim two distinct sets of hammers, so made and arranged as to revolve in opposite directions, adapted to and in combination with the case, A, substantially as and for the purpose described.

**81,933.—MILL FOR PULVERIZING BONE, ETC.**—Amos Newell, Redwing, Minn., assignor to himself, Henry S. Brown, George F. Arnold, and Alfred Arnold.  
I claim the case, A, hammers, B, and partitions, C, combined and arranged substantially as shown, for the purpose herein set forth.

**81,934.—WASH BOILER.**—Joseph Okey, Indianapolis, Ind., assignor to himself and Ferdinand A. Lebr.  
I claim the door, m, when constructed with slotted sides, in combination with the chambers, K K, and pipes, c, c', and f, substantially in the manner described, and for the purpose set forth.

**81,935.—SEEDING MACHINE.**—Lucius M. Olden, Pana, Ill.  
I claim, 1st, The application to the seed passage of a drill tooth, of a feeding device, l, or its equivalent, substantially as described.  
2d, The combination of feed wheel, y, hinged funnel, G3, and a drill tooth, which is constructed with a feeding device, l, or their respective equivalents, substantially as described.  
3d, The vibrating frame, C, carrying coulters, C1, and suspended by means of a lifting chain, L, in combination with drill teeth, which are suspended from said frame, C, by means of chains, L', substantially as and for the purposes described.  
4th, The devices, substantially as described, for disengaging wheels, D, from their axle, D', when frame, C, is lifted, in combination with drill teeth which have feeding devices applied within them, substantially as described.

**81,936.—BEDSTEAD AND QUILTING FRAME.**—John Park, Juliet, Ill.  
I claim the arrangement of the shaft, A, legs, B B B B, with their pawl, D, and rack bar, C, and the rollers, K K, with their ratchets, n, and spring pawls, z, the whole combined, adjusted, and operating as herein set forth.

**81,937.—STEAM GENERATOR.**—Quintin Parker, New York city.  
I claim the combination of the pipe, G, with the boiler sheet, A, suspended from the upper plate of the deflector, E, in rear of the flue sheet, substantially as herein shown and described.

**81,938.—SHAFT JOURNAL.**—Lewis Patric, Shortsville, N. Y. Antedated August 27, 1868.  
I claim, in combination with the socket gudgeons, or journals, G, and shaft, S, the screw or threaded eye-bolt, f, and clamping screw, s, as and for the purposes set forth.

**81,939.—MEAT CHOPPER.**—Thomas Payne, Grand Rapids, Mich.  
I claim the combination of the crank shaft, I, gear wheels, K and L, shaft, M, crank wheel, N, pitman, O, arm, P, rack shaft, Q, cross head, R, short connecting rods, S stems, T, and knives, U, with each other and with the frames B, and revolving chopping box, C, substantially as herein shown and described, and for the purpose set forth.

**81,940.—SHAFT COUPLING.**—Philip Pepper, Milroy, Pa.  
I claim the combination, with the shafts, D and E, when connected together by a point and socket, of the spring, C, substantially as and for the purpose described.

**81,941.—DROPPER FOR HARVESTERS.**—G. M. Peters, Lancaster, Ohio.  
I claim, 1st, Hinging or pivoting the platform to a bent arm or support, by means of which it is operated, in such manner as to admit of a reciprocating and tilting movement, substantially as described.  
2d, The bent arm or rod to which the platform is hinged, and by means of which said platform is vibrated, in combination with the rod or link for tilting the platform upon its operating arm.  
3d, The bent rod or arm, J, link, J', crank, K, connecting rod, L, and lever, M, or their equivalents, in combination with the platform, I, arranged and operating substantially as described.

**81,942.—GRASS SEED SOWER.**—Darius G. Pickett, Stockton, N. Y.  
I claim the combination, with the seed slide, B, of the pins, f, f', holes, d d, and cross partitions, g g, the whole arranged as described, and operated in the manner and for the purpose specified.

**81,943.—WHEEL FOR VEHICLE.**—Henry Poth, Pittsburg, Pa.  
I claim, 1st, The combination in a vehicle wheel, of the tenon plates, e, beveled ring, d, screw box, B D, and metal hub, A, substantially as herein shown and described.  
2d, The combination, in a vehicle wheel, of the screw box, B D, packing rings, c and f, when arranged to form an oil tight space, h, between the box, B, and the metal hub, A, and provided with holes for the screw, l, all substantially as herein shown and described.

**81,944.—GAS PRESSURE REGULATOR.**—Charles C. Ramsay, Chicago, Ill.  
I claim the combination of chamber, B, having the diaphragm, b, with the spiral spring, H, arranged as shown, with the valve, C, resting on the lever, E, connected to the diaphragm by a rod, F, all arranged to operate substantially as herein set forth.

**81,945.—CLOTHS-PIN.**—Joseph A. Rand, Morrisville, Vt., assignor to Thomas A. Mitchell, Washington, D. C. Antedated August 27, 1868.  
I claim the arrangement and construction of the pieces, A and B, with the square head, C, and its aperture, D, at one end, as herein described, and for the purposes set forth.

**81,946.—DEVICE FOR LOADING COAL.**—Daniel Risher, Jr., Dravosburg, Pa.  
I claim, 1st, The mode of loading coal to boats, flats or barges, by sliding the coal down a chute, into a hopper hung to a car, and thence running down an inclined track to the boat, flat, or barge, and discharging it from either end of the hopper into the boat, flat, or barge, substantially as hereinbefore set forth.  
2d, The tipping coal hopper, g, made with the bottom concave or sloping down toward the middle from the discharging end, substantially as and for the purposes hereinbefore set forth.  
3d, The tipping coal hopper, g, connected by bearers, d, with a rocking shaft, d', mounted on a car or truck, substantially as and for the purposes hereinbefore set forth.  
4th, Sliding bars, m', carrying a coal-hopper, so connected with the bearers, d, as that, by a slight longitudinal motion imparted thereto, the center of gravity of the loaded hopper may be shifted, substantially as and for the purposes hereinbefore set forth.  
5th, A tipping handle, l, attached to the rocking shaft, a, of a coal loading car, in combination with tripping devices, constructed and used substantially as and for the purposes hereinbefore expressed.

**81,947.—CHALK AND SAND-PAPER HOLDER FOR BILLIARD-TABLE.**—Charles F. Ritchel (assignor to himself and Henry S. Haynes), Chicago, Ill.  
I claim an improved chalk and sand-paper holder, formed by the combination of the recessed blocks, A and B, with each other, said blocks being constructed and arranged substantially as herein shown and described, and for the purpose set forth.

**81,948.—FAUCET.**—Francis Roach (assignor to himself and Joseph Zane), Boston, Mass.  
I claim the arrangement of the induction and ejection pipes, b c, the valve seat, a, the valve, D, the case, A, the spring, D', the stem, C, the cap, B, the neck, d, the key, E, and the pins, f, and stops, g, the whole being as and to operate as hereinbefore described, and as represented in the accompanying drawings.  
Also, the arrangement and combination of the two holes, h i, with the key, E, and the spring, C, arranged and combined with the valve, its spring, and case, as specified.  
Also, the combination of the adjusting screw, F, and the annulus, k, k', kn, pinned to the spindle, C, as described, with the key, E, arranged with the spindle, C, its valve, and spring, and the neck, d, substantially in the manner and under circumstances as hereinbefore specified.

**81,949.—SOFA BEDSTEAD.**—S. R. Koscoe, Obion County, Tenn.  
I claim the combination of the cushions, D and E, with the folding head-boards, A and B, the hooks, d d, the eyes, b b', and the couplings, m n, all constructed and operating substantially as and for the purpose described.

**81,950.—BRIDGE.**—Henry A. Rust, and Ludwig Hermann, Chicago, Ill.  
We claim, 1st, The arrangement of one or both ends of the main braces, when constructed in a convex or rounded form, in corresponding concave grooves or recesses in the blocks, B and E, substantially as specified.  
2d, The arrangement of the inclined end of the counter braces, in a corresponding inclined recess in the top block, to operate substantially as set forth.

**81,951.—GRAIN SEPARATOR.**—David Shannon, and William Spencer, Winslow, Ind.  
I claim, 1st, The combination of the cylindrical drum, M, case, C, with inclined plates, I, openings, H, lever, E, strap, G, and bar, D, all substantially as and for the purpose set forth.  
2d, The lever, E, pivoted at one end, and suspended at the other by means of a strap, G, in combination with the pivoted center bar, D, when operating for the purpose of giving proper pitch to the box, C, substantially as and for the purposes herein set forth.  
3d, The bent wires, l, on the end of the cylinder, d, when acting in combination with the spout, F, to feed the grain from the hopper, O, into the drum, M, substantially as and for the purpose set forth.

**81,952.—LATHE HEAD.**—Henry F. Shaw, West Roxbury, assignor to James A. Woodbury, and Solomon S. Gray, Boston, Mass.  
I claim, 1st, The combination of the gears, D and E, the disk, P, having the spring pin, p, and eccentric sleeve, c, attached thereto, and the pulley block, C, provided with the eccentric sleeve, d, all arranged substantially in the manner and for the purpose specified.  
2d, The combination of the pulley block, C, provided with the cam sleeve, d, disk, P, and eccentric collar, c, catch, S, and gear wheel, E, substantially as and for the purpose set forth.

**81,953.—MECHANISM FOR OPERATING THE BED OF PLANING-MACHINES.**—Henry F. Shaw, West Roxbury, assignor to James A. Woodbury, and Solomon S. Gray, Boston, Mass.  
I claim, 1st, In combination with the bed of a planing machine, the rack, e, pinion, d, and shaft, g, or their equivalent, and the internal and external gears, i, e, eccentric sleeve, i', and the fast and loose pulleys, when arranged and operating substantially as specified, and for the purpose set forth.  
2d, The arrangement on the shaft, g, of the fast and loose pulleys, the eccentric sleeve, i', and the internal and external gears, e, e', substantially in the manner shown, and for the purpose set forth.

**81,954.—LADDER OR STEP FOR STREET LAMP-LIGHTER.**—M. M. Smith, Nashville, Tenn.  
I claim a step ladder or step posts, constructed substantially as and for the purpose shown and described.

**81,955.—FANNING-MILL.**—H. A. Snyder, Shullsburg, Wis.  
I claim the hinged board, B, actuated by spring tension acting against the blast of a fanning mill, and connected with gates or valves, H, closing the ingress aperture, I, of the fan wheel box, A, all substantially as shown and described, and for the purpose set forth.

**81,956.—MACHINE FOR SEWING THE UPPERS TO THE SOLES OF BOOTS AND SHOES.**—Michael Joseph Stein, New York city.  
I claim, 1st, In combination with the needle and the self-adapting rest, which is to rest and ride on the sole of the shoe or boot that is being sewed, and which is to bear against the bottom of the inner channel cut in the leather, to resist the pull of the needle, a second rest, so formed that it shall rest and ride on the surface of the sole, that in sewing it may not interfere with the loop of thread, the two being connected and having a mode of operation in connection with the needle, substantially as herein described.  
2d, The curved needle, when made and mounted so that its inner curved surface is concentric with its axis of vibration, and eccentric on its outer surface, substantially as and for the purpose specified.  
3d, The pointed cast iron, or its equivalent, as a rest, in combination with the needle, the contiguous surfaces of the two being flat, and both being mounted, so that they shall work in contact, substantially as and for the purpose set forth.  
4th, Attaching the lamp and its cap, and the flue through which the thread passes, to the movable plate which carries the sewing mechanism, substantially as described, the flue means for heating and guiding the thread may be made in the same relative position, as set forth.  
5th, The feeding pawl, with its projections, working in cam-formed recesses, or the equivalent thereof, having a like mode of operation, in combination with the movable table on which the last holder moves, or the equivalent thereof, by means of which combination the feeding pawl spaces the stitches equally, notwithstanding it acts on the undulating surface of the sole, as described.  
6th, The welt guide, substantially as described, in combination with the mechanism, or the equivalent thereof, for guiding the sole on the last relatively to the sewing mechanism, as described.

**81,957.—FANNING MILL.**—William Stoddard, Winona, Minn.  
I claim, 1st, The combination with the hopper of a fanning mill, of the oscillating feeding bar, A, substantially as and for the purpose described.  
2d, The combination with the screen, C, of the endless apron or belt, D, substantially as and for the purpose described.  
3d, The rotary screens, L and M, arranged as described, in combination with the chute, G, screen, C, and fan blower, substantially as and for the purpose described.

**81,958.—SAFETY BRIDGE FOR RAILROAD CAR.**—Eli Sturgeon, Columbiana, Ohio.  
I claim the adjustable bridge, A, with spiral springs, b b, attached to the bumpers or platforms of railroad cars, C, by means of hook, d, on the four uprights, c c c, in the manner and for the uses and purposes set forth and herein more fully described.

**81,959.—TAILORS' PRESS BOARD.**—Howard M. Thompson and Charles W. Barbank (assignors to themselves and George H. Knowlton), New York, N. Y.  
We claim the press board supporter substantially as described, that is, as composed of the base board, D, the standard, C, the arm, E, and the clamp-jaw, F, connected in the manner so as to operate as explained.  
Also, the combination and arrangement of the adjusting screw, e, and nut, f, with the connection rod, c, the clamp jaw, F, the base board, D, the standard, C, and the arm, E, arranged and combined substantially in manner and for the purposes specified.  
Also, the combination of the press board, B, and mechanism, substantially as described, for supporting it above, and fixing or clamping it to a table, as explained, such mechanism consisting of the base board, D, the standard, C,

the arm, E, the clamp jaw, F, and the connection rod, C, or their mechanical equivalents.

**81,960.—BRIDGE.**—James K. Thompson, (assignor to himself and William B. Howard), Chicago, Ill.  
I claim the wrought iron chords, A, A', each consisting of several bars placed apart and sideways, and the plates, B, B', and stays, E, E', connecting the said bars, when used and arranged substantially as herein described and specified.

**81,961.—CAR COUPLING.**—Anson C. Tichenor, Council Bluffs, Iowa.  
I claim the combination of a draw head, A, constructed substantially as described, and provided with a transverse locking ledge, a, with a hinged block, B, constructed with a shoulder, c, when said block is so connected to the draw head that the forward motion of the cars will automatically lock the shoulder, c, beneath the ledge, a, in the manner and for the purposes specified.

**81,962.—ENVELOPE.**—Sigmund Ullman, New York city.  
I claim securing the eyelet, d, in the open flap, c, of the end, by gumming a strip of paper over said eyelet, at the outer side of the flap, as herein shown and described.

**81,963.—ENVELOPE.**—Sigmund Ullman, New York city.  
I claim an envelope having its ends cut and folded in the manner as herein shown and described.

**81,964.—STEAM CONDENSER.**—Augustus Van Orsdale, Jasper, N. Y.  
I claim the combination of the exhaust pipe, C, and deflector, D, with the plates, A, A', heater, A, and pipes, B, B', arranged and operating substantially as described.

**81,965.—MAKING FORKS.**—Heman Whipple and Elon Denio, Baldwinsville, N. Y.  
We claim, 1st, The cutters, e, e', formed wide apart near the stock than at the cutting edge, in combination with the shear, b, for the purposes and as set forth.  
2d, The rocking support, i, in combination with the cutter, e, and bed shear, h, for the purposes and substantially as set forth.  
3d, The swinging supports, 12, in combination with the winding wedge-shaped, bending plunger, m, arranged and operating substantially as set forth for the purpose set forth.  
4th, The connecting rod, b, and ball, 1, in combination with the screw, 3, head, 4, and hollow plunger, c, carrying the cutting or bending tools, substantially as set forth.

**81,966.—BRUSH.**—John L. Whiting, Boston, Mass.  
I claim the combination and arrangement of the series of projections with the other parts of the brush, as described, the series being productive of new and useful effects, as specified.

**81,967.—DOUBLE RATCHET LEVER POWER.**—John S. Williams, Chicago, Ill.  
I claim, 1st, The combination of the double ratchet pawl, A, D, ratchet pinion, F, lever, E, connecting rod, 14, lever, fig. 4, arm 22, treadle, fig. 5, and balancing weight, fig. 6, substantially as set forth.  
2d, The combination of the ratchet pinion, F, and gear wheel, g', as and for the purpose set forth.

**81,968.—OIL TANK.**—Arthur Gates Wilson, New York city.  
I claim, 1st, The bottom, F, strainer, H, and tube, G, all arranged and combined substantially as described and for the purposes set forth.  
2d, The oil head, B, and head, C, in combination with the cylinder, A, as to have its upper surface fall below the walls of said cylinder, to operate in connection with the supplemental cover, C, substantially as and for the purposes specified.

**81,969.—BOW SPRING FOR RAILWAY CARS.**—T. F. Allyn, Nyack, N. Y.  
I claim a bow spring, composed of one or more plates of metal, either square, rhombic, circular, oval, or any equivalent shape, bent to the form of a bow, so as to have two outside bearing surfaces or points opposite to each other, or nearly so, substantially as described.

**81,970.—COMBINED SCREW DRIVER AND WRENCH.**—Edgar John Amor, New York city.  
I claim the blade, B, provided with a series of angular-shaped openings, a, near its handle end, with an oblong slot, b, in combination with a removable or detachable fork screw, driving blade, or other bit, arranged to stand at right angles to the blade, B, near its forward end, for operation essentially as described.

**81,971.—FEED WATER HEATER AND FILTER.**—James Armstrong, Bucyrus, Ohio.  
I claim, 1st, The pans, B, B', when constructed and arranged substantially in the manner shown and described.  
2d, The combination of the steam pipe, G, chambers, F and F', substantially in the manner shown and described.  
3d, The chambers, F, F', and the filters, e and f, when constructed substantially in the manner shown and described.  
4th, The arrangement of the pans, B, B', and the disk, B'', substantially in the manner described.

**81,972.—STEAM GENERATOR.**—James Armstrong, Bucyrus, Ohio.  
I claim, 1st, The arrangement of the outer and inner tubes of the boiler whereby the heat is caused to circulate around the inner ones, substantially as shown and described.  
2d, The construction of the fire box with the surrounding tubes, as herein shown and described.  
3d, The construction of the hollow screws, a, and the arrangement of them with the tubes, B, as herein shown and described.

**81,973.—ROLLING MILL.**—J. H. C. Bachelder, Winsted, Conn.  
I claim, 1st, The slides, J, J', with their rack, O, movable bearings, H, H', graduated wedges, K, guards, L, and pinions, P, P', when arranged, constructed and operated as described, and so arranged as set forth.  
2d, The tongue, V, with their lever, Z, spiral spring, X, lever, W, and cam-wheel, U, when arranged, constructed, and operated as described, and for the purpose set forth.  
3d, The pin, b, on sliding wedge, in combination with dog, c, shaft, d, upright sliding arm, e', bell lever, f, horizontal side, g, clutch, h, move die coupling, i, rod, m, rod, n, spiral spring, w, loose sieve, s, arm, u, and shoulder, v, all arranged and operated as set forth.

**81,974.—APPARATUS FOR THE MANUFACTURE OF HEATING AND ILLUMINATING GAS.**—John A. Bassett, Salem, Mass.  
I claim, 1st, The arrangement of the valve, J, in connection with a reservoir of hydrocarbon liquid, for the purpose set forth.  
2d, The combination of the chamber, E, with the pump, B, the chamber containing a series of formidous diaphragms or fibrous material, for the purpose substantially as described.

**81,975.—YELLOW WASH FOR BARN, BUILDINGS, ETC.**—Henry Bechtold and John Nunamacher, Lancaster county, Pa.  
We claim the composition of a yellow wash or paint, combined substantially in the manner and for the purpose specified.

**81,976.—STEAM SAFETY VALVE.**—Horatio B. Beckman, Newburgh, N. Y.  
I claim the arrangement of the safety valve, A, adjustable elliptical springs 81, 82, 83, and plate, C, substantially as herein specified.

**81,977.—SEWER PIPE.**—Charles Birkenshaw, Chicago, Ill.  
I claim the combination of the chamber, B, pipes, B', and valve, C, arranged substantially as and for the purpose set forth.

**81,978.—HARVESTER RAKE.**—George Blake (assignor to himself and Thomas Connor), Whitby, Canada.  
I claim, 1st, The case, G, and hollow pedestal, F, for containing and supporting the gearing that operates the rake, substantially as herein shown and described.  
2d, The combination of the connecting rod, J, internally toothed segment, 1, gear wheel, H, shaft, E, bracket, D, and rake head, C, with each other and with the hollow pedestal, F, and case, G, substantially as herein shown and described and for the purpose of operating the rake, B, C, and at the other end of the rake head, C, by the pin, M, passing through a slot in the journal of the rake head, in combination with the finger, F, and fixed plane, O, all arranged and operating as described, for the purpose specified.  
4th, The combination of the finger, N, stop pin, P, and plane, O, with the rake head, C, and hollow pedestal, F, when the said plane is stationary or adjustable, substantially as herein shown and described and for the purpose set forth.

**81,979.—MODE OF PURIFYING WATER.**—M. S. Bringier, Ascension parish, La.  
I claim the process of filtering water by passing it through a vessel constructed and operating substantially as described, whereby it is subjected to the action of centrifugal force, and a more rapid filtration is effected, as set forth.

**81,980.—POTATO DIGGER.**—Albert Burhaus (assignor to himself and Henry A. Burhaus), Albany, N. Y.  
I claim, 1st, The scoop, E, furnished with the lateral slots, e, e, in combination with the rollers, r, r, or their equivalents, as and for the purpose set forth and described.  
2d, The double share, B, in combination with the land shoe, C, and the scoop, E, as and for the purpose set forth and described.  
3d, The sieve, J, operated by the rod, o, shaker piece, s, rod, d, crank, c, pinion, p, and gear, x, and all in combination with the wheels, N, N', and frame, G, and axle, F, as and for the purpose set forth and described.  
4th, The sled runners, L, L, and boxes, K, K', in combination with the sieve, J, and its carriage, as and for the purpose set forth and described.

**81,981.—STOCKING STRETCHER.**—K. K. Chandler, Rutherford Glen, Va.  
I claim, 1st, Constructing a stocking stretcher with the hinged sections, A, B, and the catching device, D, a r r' hinged at the upper side of the sections, in such a manner that the stretcher is expandible after the stocking has been drawn upon it, substantially as described.  
2d, Providing for lengthening or shortening the foot portion of a stocking by means of a longitudinally adjustable toe section C, substantially as described.  
3d, Forming knobs or serrations, C, upon the edges of a stocking stretcher, substantially in the manner and for the purpose described.

**81,982.—FARM GATE.**—Lewis Charles, Clear Springs, Md.  
I claim, 1st, The combination of the sill log gate, a, with the pivoted support, g, bar, d, d', substantially as described.  
2d, The combination of the spring stop, s, bar, d, d', panel, B, and gate, A, substantially as described.

**81,983.—STEAM GENERATOR.**—Jonathan M. Clark, New York city.  
I claim the angular hollow head, B, constructed with passages, c, for the circulation of water or steam, secured together by pin projections, g, and nuts, f, and with removable covers, a, combined with the tubes, A, substantially as shown and described for the purpose set forth.

**81,984.—SUSPENDER.**—C. H. Cleveland, Selma, Ala.  
I claim the suspender or shoulder brace, composed of two single straps, B, B, each passing from the attaching strap at the one side over the shoulder

to the attaching strap on the reverse side of the body, when shoulder straps are provided with eyelets, d, d, and a bracing cord, D, substantially as described and for the purpose specified.

**81,985.—CAR COUPLING.**—James M. Cook, Washington, D. C.  
I claim the coupling link, B, provided with a shoulder, b', the lever, C, spring, D, and rod, F, when the whole are arranged and combined substantially as described and for the purposes specified.

**81,986.—FLEXIBLE ABRADER AND POLISHING FABRIC.**—John H. Crane, Charlestown, Mass.  
I claim as a new article of manufacture, the double surfaced flexible abrader, substantially as shown and described.

**81,987.—METHOD OF PREPARING, DISICCATING, AND PRESERVING FISH.**—William D. Cutler, Philadelphia, Pa.  
I claim, 1st, The boned and disiccated fish, as a new manufacture and commercial article.  
2d, The herein described process or method of treatment of fish, substantially as set forth for the purposes and as described.

**81,988.—DOOR AND SAFE LOCK.**—John Dillingham, Turner, Me.  
I claim, 1st, The peculiar constructed key, having projections or bits, a, b, c, substantially as and for the purpose set forth and described.  
2d, The arrangement of the main bolt, in combination with the plunger m, and levers, g, g', substantially as described and for the purposes set forth.  
3d, The form and arrangement of the plunger, in combination with the levers, g, g', acting on the pawls, i, f, substantially as described.  
4th, The arrangement of the sliding pieces, which effectually close these several key-holes, as and for the purposes substantially as described.

**81,989.—LOW WATER DETECTOR FOR BOILERS.**—Thomas Durton (assignor to himself and Thomas Maguire), Fort Jervis, N. Y.  
I claim the construction of the plug, a, substantially as hereinafter set forth.

**81,990.—COMBINED LATCH AND LOCK.**—Nathaniel Edwards, Newark, Ohio.  
I claim, 1st, The manner of connecting and disconnecting the two knobs, in connection with any opening plate of locks, by making an indentation G', in connection with either one of the knobs, and a corresponding projection, G, in the other, substantially as above described.  
2d, The plate or tumbler bearer, E, in fig. 5, being a slotted plate, with a projection, F, turned out at one end to hold the tumblers in position so that the bolt may work as a latch and with another projection, y, or indentation in such a position as to enter a corresponding indentation, y', or projection in the spindle of the knobs, so as to engage with the same when the tumblers are dropped, when constructed substantially as herein shown and described.  
3d, The lever, D, fig. 7, which has a lifter, p, for the joint purpose of raising, the tumblers and bracing back the bolt, and in combination with the locking projection, a, and the stud, A, and the projection, R, or its equivalent on pulling on the tumblers, when made and arranged substantially as above shown and described.  
4th, The manner of converting the lock from a latch into a night bolt, by raising the tumblers too high to be operated upon by the key, and bracing the bolt in the same operation, by elevating the lifter, p, of the lever, D, by the assistance of x', with its connections, and then locking the same in its elevated position, by raising the stud, A, to engage with the projection, a, by pulling on the tumblers, when made and arranged as specified.

**81,991.—MEANS FOR SECURING SPRINGS FOR BEDS AND SEATS.**—J. resiah D. Eggleston, Canton, Conn.  
I claim the screw nut, A, combined with the spring, B, substantially as and for the purpose set forth.

**81,992.—DYE STUFF.**—C. E. Fox, and Mary E. Fox, Gilroy, Cal.  
We claim the extract, or coloring matter, of mancinella, as a new article of manufacture, for its various uses, as herein specified.

**81,993.—WEDGE-BUCKLE FOR HARNESS.**—Kasson Frazer, Syracuse, N. Y.  
I claim, 1st, The wedge, W, when made with the transverse slot, i, hole, m, and stop, r'; the tongue, T, made with the journal, o, shank, p, and guard q, each substantially in the form and for the purposes specified.  
2d, Also, the same parts, in combination with each other, when connected by a pin, and forming a wedge and tongue, substantially in the manner and for the purposes specified.  
3d, The wedge, W, and tongue, T, when made as aforesaid, in combination with the buckle frame, A, having an angular box, x, as described, all operating in the manner and for the purposes substantially as above set forth.

**81,994.—MALT MILL.**—John Gardiner, Philadelphia, Pa.  
I claim the construction of the cheeks, D, D, with steel plate, s, E, E, and the arrangements of the said cheeks with the mashing rollers, B, C, substantially in the manner hereinbefore described, and for the purpose set forth.

**81,995.—SMOKE HOUSE.**—Christian Good, Arcanum, Ohio.  
I claim a stationary smoke-house, when constructed as described, and provided with a fire pot, H, trap door, C, in the roof, and with openings in its sides, said openings being covered with wire netting and closed by means of casters, F, substantially as and for the purposes herein set forth.

**81,996.—PLOW.**—Charles T. Grimes, Garrard county, Ky.  
I claim, 1st, The modes of making handles, H and K, and so arranging them to be used as handles, in the manner substantially as herein described.  
2d, The mode of combining the handles, H and K, and beams, G and J, by means of cross-bars, A and B, and rods, C and D, and rods E and Z, so that the two plows are used by one person.

**81,997.—MOULDING MACHINE.**—J. P. Grosvenor, Lowell, Mass.  
I claim the described arrangement of the hand wheel, J, at the side of the machine, under the edge of the table, A, the pivoted gearing, h, i, shaft, H, pinion, G, screw, F, vertically sliding mandrel frame, D, and guides, E, as herein set forth, for the purpose specified.

**81,998.—ANTI INTERFERING BAND.**—William H. Hall and John R. Clifford, Boston, Mass.  
We claim, as a new article of manufacture, an interfering rubber guard, when constructed as described, and attached to kersey, as herein shown and for the purposes set forth.

**81,999.—CONSTRUCTION OF DOLLS' HEADS.**—George H. Hawkins, New York city.  
I claim a toy figure head, when composed of a textile fabric, which is previously stiffened with a glutinous material, then pressed in parts between heated dies, and afterwards having the edges or seams of such parts joined by means of heated dies, in the manner substantially as herein described.

**82,000.—CANDLESTICK.**—William H. H. Hinds, Groton, Mass.  
I claim, 1st, The cap, a, with its support or supports, n, for the purposes set forth, and substantially as herein described, and as shown in figures 1, 2, and 3.  
2d, The receptacle, g, and the slide or sleeve, h, with the catch, p, for the purposes set forth, substantially as herein described, and shown in figures 1 and 3.  
3d, The snufflers, f, f', supported and operated by means of the cylinder, c, and the collar, d, substantially as herein described, and as shown in figures 1 and 4.  
4th, The slit, o, and the notches, 1, 2, 3, 4, 5, together with the thumb piece, z, for the purposes set forth, substantially as herein described, and shown in figures 6 and 5.

**82,001.—ABDOMINAL SUPPORTER.**—S. L. Hockert, assignor to G. W. Perrine, Milwaukee, Wis.  
I claim, 1st, Connecting the side spring to the front pad by hooks, in the manner shown.  
2d, The side or hip pads, D, attached loosely to the cylindrical side springs, B, B, by staples, F, so that the said pads may be perfectly free to move in any direction to adapt themselves to the surface of the body.  
3d, The arrangement of the cylindrical side springs to the back pads by screwing the ends of said springs into the button studs, in the manner shown.

**82,002.—HORSE HAY-RAKE.**—William Holmes, Clarksville, N. Y.  
I claim, 1st, The locking bolt, M, moving on a guide way on the axle, and operated by means of the lever to hold the teeth down, substantially as set forth.  
2d, The combination, substantially as set forth, of the lever operated by the foot of the driver, and the device for depressing and elevating the rake teeth.

**82,003.—SMOKE STACK.**—George Holton, Chicago, Ill.  
I claim the inverted conical netting, D, attached to the top of the double conical case, B, arranged with reference to the pipe, A, and a d, d', door, C, the G, stays top, for supporting the lower end of said netting, substantially as and for the purpose specified.

**82,004.—MORTISING MACHINE.**—Jas. M. Johnson and John Herig, Cleveland, Ohio.  
We claim chisel holders, F, F, constructed as described, in combination with the cross head, E, to operate as and for the purpose set forth.

**82,005.—BUTTER COOLER.**—Ernest Kaufmann and Antony Weber, Philadelphia, Pa., assignors to Ernest Kaufmann.  
We claim, 1st, The construction of the part, A, with the flange, C, and combining the chamber, D, therewith, substantially in the manner and for the purpose above described.  
2d, The combination of the slip collars, E, journals, a, a, and bearings, b, b, with the part, A, and cover, B, and spring, C, substantially as described and for the purpose set forth.

**82,006.—BEE HIVE.**—H. A. King, Nevada, Ohio.  
I claim, 1st, The slots, z, in connection with a double tier of honey boxes with comb foundations, as specified, and for the purposes set forth.  
2d, Constructing the close fitting top bars, O, with comb guides, U, and slots, as specified, and for the purposes set forth.

**82,007.—ROTARY SUGAR ENGINE.**—Abraham Kipp, Jr., Sing Sing, N. Y.  
I claim, 1st, The combination of double cylinders, C, C, and D, D, open at their inner ends to a steam chamber or space, pistons, E, E, and F, F, with their rods, G, G, and H, H, crank, I, and valve controlling the flow of steam to and from the backs of the pistons, substantially as specified.  
2d, The combination of the double cylinders, C, C, and D, D, arranged, each pair at right angles, or thereabouts, to each other, and with their inner ends open, as described, and in communication with a central or intermediate steam chamber or space, pistons, E, E, and F, F, with their rods, b, b, and yokes, G, H, crank, I, and valve controlling the admission and escape of steam to and from the backs of the pistons, substantially as specified.  
3d, The valve, K, when connected and arranged for operation, in combination with the double cylinders, their pistons and crank, substantially as shown and described.

**82,008.—ANIMAL TRAP.**—T. B. Kirby, Flowerfield, Mich.  
I claim the combination and arrangement in the rectangular frame, A, divided into the parts, B, B, C, C, H, H, with the perforated bar, box, K, having a hinged cover, F, substantially as and for the purposes herein set forth.

**82,009.—PAVING ROLLER.**—Edmund W. Kittredge, Cincinnati, Ohio.  
I claim, 1st, The suspension of one or more cressets to the axle, within the revolving cylinder, substantially as and for the purpose set forth.

2d, The closing which covers the ends of a revolving roller, within which are suspended one or more cressets for holding fire, substantially as and for the purpose set forth.

**82,010.—JUG TOP.**—Peter Lauster (assignor to Lang & Lauster), All Gheny, Pa.  
I claim, 1st, The hinge, knob, and lid, made separate and distinct from each other, and united together by making perforations in the hinge and lid, as described, and casing the knob, to unite with them by means used in producing the knob entering said perforations, to form a rivet, and whereby, so as to establish the junction of said parts, is avoided, and, after riveting of the knob, dispensed with.  
2d, The combination, with the lid, hinged to rotate from the inside of the body, of the plate or flange, b, connected with the lower part of the interior flange, a, of the body, substantially as and for the purpose herein set forth.

**82,011.—FANNING-MILL.**—Elijah Lindsley, Neenah, Wis.  
I claim, 1st, The sieves, b and c, when bent as described, and operating as and for the purposes herein set forth.  
2d, The screen, d, in combination with the sieves, b and c, when constructed and operated as and for the purposes herein set forth.

**82,012.—SPRING BED BOTTOM.**—John M. Losie, Indianapolis, Ind.  
I claim the slotted metallic plates, E, F, constructed as described, in combination with the elastic gum, H, as and for the purpose specified.

**82,013.—HORSE SHOE.**—Henry D. Lyman, Kalamazoo, Mich.  
I claim the attachment of adjustable clips, B, to the heel of a horse shoe when operating with a pivot, substantially as set forth and shown.

**82,014.—VISE.**—Austin Z. Mason, and Richard B. Robbins, Adrian, Mich., assignors to Richard B. Robbins.  
We claim, 1st, In combination with the ring, C, constructed with the oblique faces, x and y, the recesses, m' and n, and one or more projecting stops c and e, to prevent it from turning more than one-fourth of a circumference, the whole constructed in the manner substantially as set forth and described.  
2d, The phetal hinge, D, with one or more ribs, m and n, or their equivalents, in combination with the ring, C, constructed substantially as set forth and described.  
3d, The semi-annular ring, K, in combination with the ring, C, and washer plate, B, substantially as described.

**82,015.—BREAST PUMP.**—Morris Mattson, New York city.  
I claim the combination, with a vacuum glass constructed substantially as described, of an exhausting mechanism or instrument, having a double valve apparatus operated, or substantially as and for the purposes set forth.

**82,016.—FIRE PROOF SAFE.**—Wm. McFarland and Wm. H. Butler, Westborough, N. Y.  
We claim, 1st, The inward door of each section or recess of the door, in combination with the air spaces, as and for the purposes herein set forth.  
2d, The method of forming spaces, in the filling of the safe, by inserting patterns of wood, to be withdrawn after the filling substance has set, and supplying said spaces with a vaporizing substance, substantially in the manner as and for the purposes herein described.  
3d, The manner of securing separate sections of the doors by placing supporting blocks, made of material which is a non conductor of heat between them, so that there is no continuation of metal or good heat conducting substance from the outside covering to the inside repository, as herein set forth.

**82,017.—HAMMER AND MALLET.**—Wm. S. McNeil, Springfield, Mass.  
I claim, 1st, A mallet and hammer combined, in which the mallet, B, fits in a socket, a, constructed in the piece, A, having the head, C, with peene, c, the parts being combined and arranged substantially as herein shown.  
2d, The arrangement of the peene, c, upon the head, C, of the hammer, substantially as shown.

**82,018.—SWING.**—Henry F. Metzler (assignor to Louisa Metzler), New York city.  
I claim, 1st, The four suspended vibrating rods or bars, in combination with the pivoted cross bars, for supporting the seat or seats, substantially as and for the purpose set forth.  
2d, The four suspended vibrating rods or bars, in combination with the pivoted cross bars supporting a seat or seats, and the lower pivoted cross bars and treadle or treads, substantially as described.

**82,019.—STOVE PIPE DRUM.**—Henry Meyer, Richmond, Ind.  
I claim the parabolical flues and damper, constructed and arranged in relation to each other and to the casing of the drum, substantially as set forth.

**82,020.—SEWER PIPE.**—Philip Meyer, Richmond, Ind.  
I claim the ingredients herein named, when manufactured into pipes, substantially as herein set forth.

**82,021.—GATE.**—Reuben C. Mighell, Plano, Ill.  
I claim, 1st, The lever, C, constructed and operating substantially as described.  
2d, The spring, V, in combination with the fulcrum, H, for the purposes specified.  
3d, The combination of the gate, A, lever, C, hinge, D, weight, E, roller, G, and pivot, F, all constructed as and for the purposes herein set forth.

**82,022.—SHOE LACING.**—Willard F. Oliver, Lynn, assignor to Boston Shoe-Stud and Button Company, Boston, Mass.  
I claim, 1st, A shoe, provided with a series of hooks, or their equivalents, for receiving and holding the string, when arranged substantially as set forth.  
2d, The catch or clamp, a, with its arm, c, pivoted to the hook, D, and arranged for holding the string, substantially as described.

**82,023.—LIME KILN.**—Clark D. Page, Rochester, N. Y.  
I claim, 1st, The combination and arrangement with the grate bars, g, g, of the cross bars, k, the first being fixed, and forming a fulcrum for the leverage of the grate bars in shaking, and the latter being hinged so as to turn up and down to secure the grates, or allow them to be shaken as herein set forth.  
2d, The flues, b, constructed as described, next to the inner edge of the wooden binders, a, of the kiln, to operate in the manner and for the purpose substantially as herein set forth.

**82,024.—SPICE BOX.**—Charles T. Palmer, Norwich, Conn.  
I claim, in the spine box or can, as made with a series of holes in its cover or end, or as having a disk or cap to cover such holes, the constructing both the cover or end of the box and the disk, with an annular groove in the one, and a corresponding annular head to project from the other, and fit to or into such groove, in manner substantially as described.

**81,925.—LOW WATER ALARM FOR STEAM GENERATOR.**—Stewart B. Palmer, Syracuse, N. Y.  
I claim, 1st, The combination of the chamber, B, tube, C, C, with their surrounding chambers, D, D, rods, E, E, links, a, a, and rod, H, arranged and operating substantially as shown and described.  
2d, The arrangement of the rod, H, lever, I, and spring, b, with references to the whistle, J, and its valve.

**82,026.—WHEAT DRILL.**—Charles W. Patton, Exeter, Ill.  
I claim, 1st, The hopper, divided into compartments by the partition, D, and door, D', substantially as and for the purpose set forth.  
2d, In combination with the perforated plates, E and F, the graduated key, G, for regulating the amount of grain to be sown, substantially as set forth.  
3d, The combination of the lever, H, shaft, H1, arms, H2, and the sliding plate, E, with projection, E2, substantially as and for the purpose set forth.  
4th, The combination of the sliding plate, E, key, G, stop, H1, and springs, I, arranged to operate substantially as described.  
5th, In combination with the cutters, O, and drag bars, K, the springs on the rods, M, segments, N1, shaft, N, and lever, N2, and cord, N3, for raising the cutters and forcing them into the ground, substantially as set forth.  
6th, The combination of the frame, the drag bars, the rear frame, and vertical guide rods, L, substantially as set forth.

**82,027.—RECIPROCATING STEAM ENGINE.**—Joseph B. Pedrick (assignor to himself and Joseph F. Gent), Lowell, Mass., Ind.  
I claim the arrangement of the valve, K, valve boxes, G, M, and the pipes, B, A, and C, D, substantially as shown and described.

**82,028.—APOTHECARIES' LABELS.**—G. G. Percival, Philadelphia, Pa.  
I claim the combination of a graduated scale with an otherwise ordinary paper label, substantially as above described.

**82,029.—MARINGALE.**—W. B. Perrie, Horse Head, Md.  
I claim, 1st, The loose ring, G, in connection with the part, D, provided with the stud, C, as shown in figs. 1, 2, 3, 4, 5, substantially as and for the purpose set forth.  
2d, A solid ring, marringale, D, with the stud, C, projecting from its periphery in the direction of its center, substantially as and for the purpose set forth.

**82,030.—ADJUSTABLE TUMBLER FOR PERMUTATION LOCK.**—O. E. Pillard (assignor to F. H. North), New Britain, Conn.  
I claim the circular tumbler, formed of the plates, 1 and 2, and flanges, 3 and 4, and divided as at 5, in combination with the link plate, e, and eccentric, i, constructed and applied in the manner and for the purposes set forth.

**82,031.—WINDOW SHUTTER.**—Niels Poulsen, Washington, D. C.  
I claim, 1st, The combination of the folding bars, A, A2, and corrugated plates, B, which said plates are attached rigidly to the inner bars, A, as herein described for the purposes specified.  
2d, The sliding plates M, in the described combination, with the folding shutter, A, A2, to mask or protect the vertical edges of the said shutter, substantially as explained.  
3d, The arrangement of the tenons, b, b', of the plate, B, alternately on opposite edges of the bars, A, substantially as and for the purposes set forth.

**82,033.—AWNING.**—Niels Poulsen, Washington, D. C.  
I claim, 1st, The folding bars, D, D', working upon inclined supports, A, and carrying pistons or studs, E, attached to the inner bars, D, substantially as and for the purposes specified.  
2d, The tubes, B, employed in combination with the awning, D, E, and trough, C, both as a means of support and for conducting water, as explained.

**82,033.—WRENCH.**—E. W. Quincy (assignor to himself and W. H. Copp), Lac in, Ill.  
I claim a sliding handle, as a constituent element of a hand wrench, substantially as described.

**82,034.—TILE MACHINE.**—William L. Reck, Drake county, Ohio.  
I claim the horizontal rocking frame, N, actuated by the sweep bar, J, and operating the gate, M, to open and close alternately the aperture, E, in the feeding box, L, of my improved machine, substantially as herein set forth.

**82,035.—BIN FOR SUGARS, ETC.**—Morgan L. Rich, Sand Bank, N. Y.  
I claim the bin, constructed as described, consisting of the radial portions, C, around the standard, B, in which the sliding doors, 1 and 2, having inclined sides, C, and hinged doors, 3, 4, the latter adapted to close against the edge of the op, D, which forms a scale support, as herein shown and described.

82,036.—HAY AND COTTON PRESS.—James Robertson, Gosport, Ind. I claim the combination of the press beam, A, rollers, B, B, connecting beam, C, C lever, D, which are axle, G, and rope connecting the axle, the lever, D, and the beam, A, and parts thereon arranged in relation to one another substantially as described.

82,037.—BRICK MOLD.—William Sangster and John Bretz Springfield, Ill. We claim the combination of the frame bars, B, with the bars, D, pivoted thereto, supporting the partitions, C, with the slotted mold box, A, handles, E, and ledges, F, all constructed in the manner described and for the purposes set forth.

82,038.—MEDICAL COMPOUND.—Irving W. Scranton, West Point, N. Y. I claim the above improved compound for the treatment of cholera in any of its stages.

81,039.—CORN SHELLER AND CLEANER.—Nicholas Shock, Baltimore, Md. I claim, 1st, the combination of the serrated disks, F, F, and feed spout, G, substantially as shown and described.

81,040.—CORN SHELLER AND CLEANER.—Nicholas Shock, Baltimore, Md. I claim, 2d, the combination of the toothed disk, C, the revolving apron, M, and chute board, N, all as shown and described.

81,041.—CORN SHELLER AND CLEANER.—Nicholas Shock, Baltimore, Md. I claim, 3d, the combination of the chute board, N, the elevator, A, and the spout, T, substantially as shown and described.

81,042.—CORN SHELLER AND CLEANER.—Nicholas Shock, Baltimore, Md. I claim, 4th, the combination of toothed disk, C, and the chute board, N, substantially as shown and described.

82,040.—HORSE RAKE.—Francis Smith, Highgate, Vt. I claim the lever, H, belt, I, pulleys, F and G, bar, b', arms, e', and rake teeth, t, in combination with the pivoted bar, L, bar, N, and fingers, p', all constructed, arranged, and operated in the manner and for the purpose set forth.

82,041.—BIT STOCK.—Robt. D. O. Smith, Washington, D. C. I claim a bit stock with the jaws, D, D, having a parallel movement, and sleeve, C, or the equivalents of these parts, constructed so as to hold the bit firmly centered by seizing it by the cylindrical portion in front of the bead thereof.

82,042.—DRIVE VICE FOR TURNING SHAFTING.—Norman C. Stiles, Meriden, Conn. I claim, 1st, the plate, A, and cutters, B, B, B, 2d, the arrangement of the centering device, the cutters, and the milling tool, substantially as and for the purpose herein described.

82,043.—POTATO PLOW.—Michael Stoll, Onestoga township, assignor to himself, Benjamin Snavely, and Anthony Is. Lancaster, Pa. I claim the arrangement and construction of my shovels, 1, 2 and 3, with their respective beams, slots, screw bolts, and counter sunk segment, G, and adjustable bearings, E, in combination, with or without the separate center piece, A, fig. 2, all made in the manner and for the purpose specified.

82,044.—BIT STOCK.—O. H. Taylor, Brooklyn, N. Y., assignor to Wm. E. Parrish, New York city. I claim the socket, A, contracted at one side, and adapted for the reception of a shank of a tool which may be secured in the stock by a screw, or its equivalent, so applied as to force the shank into the contracted portion of the socket, substantially as described.

82,045.—METHOD OF FASTENING HAMES.—W. S. Thompson and R. Vincent Love, Montgomery, Ala. We claim the bar, A, latch, B, hook, D, and button, c, constructed, operating, and arranged substantially as and for the purpose set forth.

82,046.—MEDICAL COMPOUND.—Thomas H. Upshur, M. D., Norfolk, Va. I claim a medicine for plums, compounded of the ingredients, in the manner and proportions of the proportions herein specified.

82,047.—SAW FILING MACHINE.—James H. Van Nortwick, Sargis, Mich. I claim, 1st, the combination of cam, G, secured to the shaft, D, arm, H, levers, I, I, connecting rod, d, pawl, f, and spring, e, all constructed as described, and operating for the purpose of turning the feed screw, M, by means of the driving wheel, K, thereby moving the carriage, N, substantially as herein set forth.

82,048.—BUTTER PAIL.—Henry P. Westcott (assignor to Seneca Falls Butter Manufacturing Company), Seneca Falls, N. Y. I claim the metallic ear, C, socket, d, as described, to contain the bar, E, in combination with the said bar, and ear, B, with inward projections, as described.

82,049.—SELF-BALANCING CENTRIFUGAL MACHINE.—David M. Weston, Boston, Mass. I claim, 1st, the application of the easily yielding spring, e, as the sole support of a centrifugal machine revolving upon an upright shaft resting upon a pivot at the base, and in combination with the shaft and pivot bearing, substantially as above described.

82,050.—HARVESTER REEL AND RAKE.—Wm. N. Whitely, Springfield, Ohio. I claim, 1st, the rake head, H, with the arms, G, G, and with a long tube bearing for the joint bolt, in the manner described, independent of the wooden arm, F.

82,051.—LAMP.—Abel Whitlock, Danbury, Conn. I claim a lamp pot constructed with the interior chamber, B, said chamber communicating with the reservoir, A, by an orifice, E, which may be closed with a suitable valve while the reservoir is being replenished, in combination with valves, G and I, substantially as shown and set forth.

82,052.—FLOWER POT.—Ephraim Whitman, Fitchburg, Mass. I claim a flower pot made with inner and outer walls, a, b, and an intervening water space, c, the walls, a, b, being connected or relatively fixed in position, substantially as shown and described.

82,053.—WINDOW SCREEN.—R. S. Whittier, Dorchester, Mass. I claim, 1st, the combination and arrangement of the shaft, B, bushings, C and D, disk, F, and spring, E, with the body, A, of the roll, in the manner and for the purpose specified.

82,054.—SPUR WHEEL.—C. F. Woodruff, Newbern, Tenn. I claim, 1st, the series of cogs, M, the rim, A, shoulders, m, m, and pins, e, constructed and arranged substantially as described.

82,055.—MOP.—John A. Wright, Keene, N. H. I claim a shifter and revolving handle, A, with its projection, c, and screw thread, d, in combination with the jaws, B, C, one or both of which are provided with a screw thread, h, substantially as and for the purpose set forth.

82,056.—EXERCISING CHAIR.—J. A. Wroe, Hagerstown, Md. I claim a springy and exercising chair when the same is constructed with hollow back, seat, arms, and foot board, and is supported upon pivots or rockers that the chair can be readily operated by means of springs or their equivalents, substantially as described, and for the purpose specified.

82,057.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 1st, the plunger, B, valve, J, and hollow spindle, D, with its groove c, substantially as shown and described.

82,058.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 2d, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,059.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 3d, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,060.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 4th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,061.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 5th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,062.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 6th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,063.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 7th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,064.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 8th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,065.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 9th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,066.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 10th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,067.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 11th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,068.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 12th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,069.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 13th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,070.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 14th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,071.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 15th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,072.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 16th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,073.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 17th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,074.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 18th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,075.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 19th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,076.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 20th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,077.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 21st, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,078.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 22nd, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,079.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 23rd, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,080.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 24th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,081.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 25th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,082.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 26th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,083.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 27th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,084.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 28th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,085.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 29th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,086.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 30th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,087.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 31st, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,088.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 32nd, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,089.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 33rd, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,090.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 34th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,091.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 35th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,092.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 36th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,093.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 37th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,094.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 38th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,095.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 39th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,096.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 40th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,097.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 41st, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,098.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 42nd, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,099.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 43rd, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,100.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 44th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,101.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 45th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,102.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 46th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

82,103.—VALVE FOR WATER CLOSETS.—David Morrison, New York city. I claim, 47th, the combination of the rod, K, valves, M and N, double valve seat, I, plunger, B, and spindle, E, when arranged and operated substantially in the manner shown and described.

65,202.—PROPELLER.—Dated May 28, 1867; reissue 3,113.—F. G. Fowler, Springfield, Ill. I claim, 1st, the blades, a, constructed, arranged, and operating substantially as and for the purposes herein shown and described.

65,203.—PROPELLER.—Dated May 28, 1867; reissue 3,113.—F. G. Fowler, Springfield, Ill. I claim, 2d, the eccentric, e, with its band, and the rods, e', arranged and operating substantially in the manner and for the purpose set forth.

65,204.—PROPELLER.—Dated May 28, 1867; reissue 3,113.—F. G. Fowler, Springfield, Ill. I claim, 3d, the eccentric, e, with its band, and the rods, e', arranged and operating substantially in the manner and for the purpose set forth.

65,205.—PROPELLER.—Dated May 28, 1867; reissue 3,113.—F. G. Fowler, Springfield, Ill. I claim, 4th, the screws, E, chain wheels, r and r', chain, r', and shaft, s, or their equivalents, when e, d, substantially as and for the purpose described.

65,206.—PROPELLER.—Dated May 28, 1867; reissue 3,113.—F. G. Fowler, Springfield, Ill. I claim, 5th, a propeller constructed of the parts above described, arranged and operating as a combined steering wheel and propeller, substantially as set forth.

20,647.—GANG PLOW.—Dated June 22, 1858; reissue 3,114.—Don Carlos Matteson, Stockton, Cal. I claim the arrangement as described of the false beam, N, goose neck, G, axle, D, lever, I, catch, L, and the system of plows attached to their frame, as set forth, the whole being constructed and operating substantially as and for the purposes specified.

14,245.—SEALING PRESERVE CANS.—Dated Feb. 12, 1876; reissue 3,115.—S. B. Rowley, Philadelphia, Pa., assignor of R. W. Lewis. I claim, 1st, a preserve can or jar having a plate intervening between the gum packing, A, a cover, or its equivalent, for compressing the packing to its seat on the jar.

14,246.—SEALING PRESERVE CANS.—Dated Feb. 12, 1876; reissue 3,115.—S. B. Rowley, Philadelphia, Pa., assignor of R. W. Lewis. I claim, 2d, the plate or its equivalent, situated below the packing, and filling the throat of the jar, as set forth, for the purpose specified.

14,247.—SEALING PRESERVE CANS.—Dated Feb. 12, 1876; reissue 3,115.—S. B. Rowley, Philadelphia, Pa., assignor of R. W. Lewis. I claim, 3d, ribs, H, or recesses on the jar, in combination with notches or projections on the plate above the packing, for the purpose specified.

EXTENSIONS.

MOLDS FOR CEMENT OR EARTHEN TUBES.—Bradford S. Pierce, and Charles M. Pierce, of New Bedford, Mass.—Letters Patent No. 11,440, dated August 1, 1854. We claim the combination of a core and spring case, substantially as herein set forth.

CULTIVATOR.—Daniel W. Shares, Hamden, Conn.—Letters Patent No. 11,460, dated August 1, 1854. I claim providing the expanding and contracting hooting wings, B, on either side with cultivator teeth, C, projecting downward on the inside of the hooting wings or crappers, as and for the purposes specified.

PLOWS.—Joshua Gibbs, Canton, Ohio.—Letters Patent No. 11,523, dated August 15, 1854. I claim making the working surface of the mold board in the form of a section of the interior surface of a hollow cylinder, the center or axis of said cylinder being parallel, or nearly parallel, horizontally to the base of the mold board, and the plow substantially as described.

MACHINE FOR PLANING LUMBER OUT OF WIND.—Solomon S. Gray, Boston, Mass.—Letters Patent No. 11,582, dated August 22, 1854; reissue No. 945, dated April 17, 1860. I claim, 1st, the peculiar construction of cutter head herein described, the cutter head itself being made use of to turn and break the shaving, in the manner of a double iron plane, and being furthermore made concave for the purpose of facilitating this operation.

2d, The clamp, as herein described, for the purpose of clamping the lumber to the bed of the machine, the bolt being clamped at d, a, d, and held together by the nut, or its equivalent, e, e, being adjustable thereon, in the manner and for the purpose set forth.

3d, The within described method of securing the dog, M, to the bed of the machine by means of the teeth or cogs, I, and the mortises in the side pieces M, for the purposes set forth.

4th, I claim the bar, D, or its equivalent, in combination with a rotary cutter, S, and traveling bed, I, provided with suitable dogs for planing straight and out of wind, substantially as set forth.

SEWING MACHINE.—Sidney S. Turner, Westboro, Mass. Letters Patent No. 11,588, dated August 22, 1854; reissue No. 363, dated March 25, 1856; again reissue No. 1,932, dated May 16, 1865. I claim the combination, in a sewing machine, of an automatic feed, a work supporting surface, and a needle, when the needle is arranged to operate from below the table or work supporting surface, and without the cooperation of a second thread (or a device carrying a second thread) above the table or work supporting surface.

Also, the combination together of a needle and awl when the same enter the work in opposite directions, and each withdraws in a direction opposite that from which it entered.

Also, the combination, in a sewing mechanism, of an automatic needle turner and automatic feed, by which the loop is kept in proper position with respect to the needle as the work progresses.

Also, the method of effecting the rotation of the book, substantially as specified.

CARDING MACHINE.—Horatio N. Gambrill, of Baltimore, Md., and Thomas D. Bond, of Washington, D. C., administrators of Singleton F. Burgee, deceased.—Letters Patent No. 12,494, dated February 27, 1855; aforesaid August 22, 1854; reissue No. 509, dated November 17, 1857. We claim the application of two or more sets or pairs of feeding rollers to the working cylinder of carding engines, substantially in the manner and for the purpose set forth, and this we claim with our said feed rollers deliver the main cylinder of the main cylinder or rollers, when said rollers are arranged as to work in connection with each other and with the main cylinder, for the purpose and in the manner substantially as set forth.

We also claim the reversing of the relative velocities of the peripheries of the main working cylinder and stripper, M, at intervals, by an automatic movement for the purpose of cleaning or preventing the clogging of the main cylinder, substantially as described.

MACHINE FOR GRADUATING CARPENTERS' SQUARES.—Norman Millington, of Shaftesbury, Vt., and L. J. Mattison, S. M. George, and A. B. Gardner, of the same place, executors of Dennis J. George, deceased.—Letters Patent No. 11,489, dated August 8, 1854. We claim, 1st, the arrangement to a single frame, substantially as set forth, of as many dividers as there are teeth to be divided, so as by the action of the cam wheel, W, or its equivalent, simultaneously to trace, of the proper length, each set of division and fractional lines.

2d, The balance frame, V, with its appendages, to equalize the pressure of the spiral springs, in the graver handles, e, so as to give the same depth of mark on the thin as well as the thick end of the taper square.

3d, The inclined plane, I, with its appendages for moving the square longitudinally, and dividing the in into any desirable number of equal parts.

4th, The carriage, C, arranged to press the square up against the points of the graters by a cam, or otherwise, all of the several parts, or their equivalents to be arranged and combined as above specified, or in any other manner substantially the same which shall produce the intended effect.

CENTRIFUGAL PUMP.—William O. Andrews, New York city. Letters Patent No. 11,544, dated August 22, 1854. I claim the construction of the pump as herein described and shown, viz., having a tub, E, in the shape of the base of a cone inverted, with arms, a, attached to its periphery of a gradually decreasing width as they approach its base, and with a spiral corresponding in shape to the outer circumference of the arms, and having inward passages of a spiral form, gradually decreasing in pitch to their point of delivery, and eduction passages of a spiral form, of a gradually increasing pitch until they attain a straight line, by which construction the water is made to pass, without sudden change of direction or eddies, in an unbroken volume through the pump; and I do not limit myself to the precise mechanical construction as shown, but may modify the different parts, only retaining the same general combination.

MACHINE FOR CASTING METALLIC EYES OR MAELS OF HEDDLES FOR LOOMS.—Jacob Sennett, of Philadelphia, Pa. Letters Patent No. 11,585, dated August 22, 1854. I claim, 1st, the method, within described, of casting the eyes or mails on the strands of yarn or other material, by inserting the yarns successively within the same of a vibrator frame, L, operated at the proper intervals of time by means of the cam, M, and having a series of grooves, opened at times to disengage the mail therefrom, and provided with core, 24, for forming the eye in the mail, and capable of being withdrawn therefrom before the mold opens, substantially in the manner and for the purpose herein set forth.

2d, The manner of operating the core, so as to enable it to be so withdrawn from the eye of the mail, after the same is formed, and while it is firmly embraced within the mold, by means of the spring, S, and screws, 25 and 23, operating in the manner described.

3d, The core carrier, 27, resting in a notch formed in the top of the spring, S, and having, 26, on its face, which passes through slots in the mold plates and spring, W, for moving the core horizontally from the stationary half of the mold, and keeping it midway between the mold plates, when they are opened to deliver, T, and preventing it being thrown violently either way, as herein set forth.

4th, The manner of operating the head frame holder, D, by means of the eccentric cams, I, on the shaft, B, capable of being moved longitudinally over the grooves in said shaft, right-angled levers, J, to which the head frame is secured, and spiral springs, 21, for keeping the ends of the levers always in contact with the eccentric cams, and, in combination therewith, I claim the screw shaft, C, and clamps, J, and the adjustable gearing, K, at the ends of the screw and main driving shafts, the whole being constructed and operating in the manner and for the purpose herein fully set forth.

PACKING FOR STUFFING BOXES, ETC.—Jos. H. Tuck, Brooklyn, N. Y.—Letters Patent No. 13,145, dated June 26, 1855; patented in England, August 25, 1855. I claim the forming of packing for pistons or stuffing boxes of steam engines, and for like purposes, out of saturated canvas, so cut that the thread or warp shall run in a diagonal direction from the line or center of the roll of packing, and rolled into form either in connection with the india-rubber core or other elastic material, or without, as herein set forth.

GOVERNOR OF WINDMILLS.—Daniel Halladay, Batavia, Ill.—Letters Patent No. 11,523, dated August 9, 1854. I claim attaching the spindles, b, of the wings or sails, F, to a sliding head, G, by means of the levers, fh, or their equivalents, and operating said head, G, by means of the lever, H, or its equivalent, and a governor of any proper construction, for the purpose of giving the desired obliquity to the wings or sails, and thereby insuring an equal motion and power during the variable velocity of the wind.

LEATHER-SPLITTING MACHINE.—Sarah W. Flanders, Newburyport, Mass., administratrix of Joseph F. Flanders, deceased, and Jeremiah A. Marden, Boston, Mass.—Letters Patent No. 11,604, dated August 23, 1854. We claim the use of the continuously revolving or endless belt knife, as applied to machines for splitting leather, and operating in the manner substantially as set forth.

MANUFACTURE OF INDIA-RUBBER.—Caleb Swan, Easton, Mass., executor of Daniel Hayward, deceased.—Letters Patent No. 11,608, dated August 23, 1854. I claim the improvement in the process of vulcanizing native india-rubber, or rubber once vulcanized compounded with other articles, as above set forth, which consists in heating and curing them with steam, and under pressure, and in regulating the application of steam, and the induration of the product by the production of steam and water, as described, by which a very great saving is made in the time and fuel required for the process, as hereinabove stated.

fort, which consists in heating and curing them with steam, and under pressure, and in regulating the application of steam, and the induration of the product by the production of steam and water, as described, by which a very great saving is made in the time and fuel required for the process, as hereinabove stated.

Inventions Patented in England by Americans.

[Compiled from the "Journal of the Commissioners of Patents."] PROVISIONAL PROTECTION FOR SIX MONTHS.

2,395.—FLAME SPREADER AND AERATOR FOR GAS AND OTHER BURNERS.—Joseph S. Macfar, Washington, D. C. July 30, 1868.

2,396.—DISTILLATION AND MEANS AND APPARATUS EMPLOYED THEREIN.—Thos. Prosser, New York city. July 30