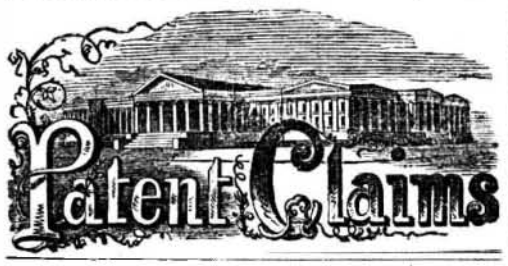

ISSUED FROM THE U. S. PATENT OFFICE

FOR THE WEEK ENDING OCT. 30, 1866.

Reported Officially for the Scientific American.

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59,156.—MODE OF EXTINGUISHING FIRE.—Charles Alden, Newburgh, N. Y.

First, I claim a building composed of a series of air-tight compartments separated from each other by air spaces or air chambers, for the purpose specified.

Second, The arrangement of pipes, d e f g, in combination with the air spaces, C D, and air-tight compartments, B, constructed substantially as described.

59,157.— APPARATUS FOR TANNING.—Alexander Appleby, Bromfield, Me.

I claim the hide-handling drum, as made, with inclined partitions, combined with and arranged within it, for the purpose of producing reciprocating movements of the pipes, while the drum may be in revolution, as stated.

I also claim the arrangement of the grated mouths, E, in the drum, and with its inclined partitions, substantially as specified.

59,158.—CLOTHES SPRINKLER.—Frederick Ashley, New York City.

I claim the arrangement of the spout, E, with the perforated plate, F, and the nozzle, C, with the screw cap, D, in combination with the reservoir, A, combined and operating in the manner and for the purpose herein specified.

59,159.—PROCESS OF MAKING RING JAR.—Jas. S. and Thos. B. Atterbury, Pittsburgh, Pa. Antedated Aug. 30, 1866.

We claim the arrangement of the parts forming a mold for producing jars and other articles of glass, substantially as herein described.

59,160.—WATER ELEVATOR.—W. E. Babcock, East Pembroke, N. Y.

I claim the shaft, B, provided with the ratchet, D, in connection with the drum, E, placed loosely on the shaft, and provided with the ratchet, F, and loose collar, G, and the case, H, having the oblique slots. b, made in it, through which pins. c c and d, attached to the collar pass, one pin, d, being provided with a weight, e, and all arranged to operate in the manner substantially as and for the purpose set forth.

59,161.—DEVICE FOR DISCHARGING BILGE WATER FROM THE HOLD OF A VESSEL.—Moses F. Bagley, Alton, Ill.

First, The hollow plunger, D, the bed plate, B, and the gland, C, when constructed and arranged substantially as herein described and set forth.

Second, I claim the plunger, D, the lever, E, and the fulcrum, E', when constructed and arranged as described and set forth.

59,162.—CARRIAGE AXLE.—Silas Barker, Hartford, Conn.

I claim the combination of a sleeve, C, with an axle, A, when the said sleeve is constructed and arranged so as to be adjusted thereon, substantially in the manner and for the purpose specified.

59,163.—FURNITURE CASTER.—James T. Barnes, Hudson City, N. J.

I claim the arrangement of the wheels, a a, in combination with the shoulder shank, A, arm, B, with its axles, d d, and the washers, c, and bolt, b, substantially as and for the purpose herein represented and described.

59,164.—WHIFFLETREE.—Lewis Barnes, Waterford, Mich.

I claim the malleable cast-iron plates, B, secured to the front and rear sides of the doubletree, A, by screws, b, and the shanks, c, of the hooks, C, and the malleable cast-iron plates, E E, secured to the front and rear sides of the whiffletrees, D, by screws, f, and the shank, g, of the eye, h, together with the trace hooks, F, provided with rings or bands, J, having internal screw threads to screw upon the ends of the whiffletrees, substantially as shown and described.

59,165.—QUARTZ CRUSHER.—Monroe L. Battell, New York City.

I claim the within described ore-crushing machine constructed with two sets of crushing jaws, and operated by a single intermediate or central shaft, substantially in the manner herein set forth.

59,166.—ROTARY STEAM ENGINE.—Joseph B. Bennett, South Brooklyn, N. Y.

First, I claim the combination, substantially as described, of the spring packing plates, F F, with the pistons of a rotary steam engine or rotary pump, for the purpose of greatly reducing the loss of power by friction and other causes, as herein before set forth.

Second, I claim the spring valves, G G, arranged and operated substantially as and for the purpose described, in combination with the cylinder, B, with its pistons and spring packing plates, as set forth.

59,167.—SLEIGH.—D. J. Bigelow, Barre Center, N. Y.

I claim the plates, d and c, and bolt, a, constructed as described, and arranged with the bars, B B, and bolster, E, as and for the purpose herein fully set forth.

59,168. — PRUNING SHEARS. — Frederick Bender, Baltimore, Md.

I claim the convex-edged knife, working in a slot in the concave holding jaw, and operating substantially as described.

59,169.—BEEHIVE.—T. F. Bingham, Gowanda, N.Y.

First, I claim the application of waxed cords, f, to frames, B, and to the spare honey-boxes, to insure the building of straight combs, as set forth.

Second, The combination of the cap, G, and case, H, with the spare honey boxes, walls, A A, and comb frames, B, all arranged substantially as and for the purpose specified.

59,170. — BEEHIVE. — T. F. Bingham, Gowanda, N. Y.

First, I claim the triangular frames, D, divider, I, and notched end pieces, E, and guides, F, resting thereon, the triangular end pieces, E, slots, a, links, G, bar, H, spare boxes, J, and slats, g, when combined and operating substantially as described for the purpose specified.

Second, The construction of the triangular end pieces, E E, with the entrances and vestibules, as set forth.

Third, A triangular divider, I, with guides, constructed substantially

Fourth, The clamp, G, constructed as described, and arranged in connection with a bar, H, substantially as and for the purpose specified.

Fifth, Arranging the comb frames, D, end pieces, E, divider, I, clamp, G, cover strips or slats, g, boxes, J, and outer case, A, substantially as and for the purpose specified.

59,171.—DECK FOR CANAL BOAT.—Amos A. Bissell, Lockport, N. Y.

I claim the combination of the series of curved panels constructed of narrow jointed strips or boards, c c, segmental ribs, B, and cleats, d, with rope, g, and eyes. f f, or their equivalents, arranged as described, to form a portable deck covering, substantially as set forth.

59,172. — PULLEY. — Amos S. Blake, Waterbury, Conn.

First, I claim journaling a sheave or roller, D, in a swivel frame, C, substantially as and for the purpose specified.

Second, The combination of the swivel sheave frame, C, with the angular arms, B B, and bed plate, A, substantially as shown and described.

59,173. — STOVEPIPE DRUM. — Edward S. Blake, Pittsburgh, Pa.

First, I claim a radiator so constructed that the soot, dust, and other refuse of combustion will tend by its gravitation to collect to one point when released from the shell of said radiator, substantially as herein described and for the purpose set forth.

Second, The radiator, B, provided with the flues, R and C, openings, O and f, and valve, J, constructed, arranged, and operating substantially as herein described and for the purpose set forth.

59,174.—VARNISH.—Joseph Braddock, Indianapolis, Ind.

I claim a combination varnish compounded from the ingredients named, or their chemical equivalents, substantially in the manner and for the purpose set forth.

59,175.—SMOKE STACK FOR LOCOMOTIVES.—Hugh Brooks and James Ball, Zanesville, Ohio.

We claim the arrangement and combination of the curvilinear deflectors, c c c c, and cylinder of wire cloth, d d d, with the feathers or guides, f f f, placed between the inner or smoke tube, a a a, and the outer case, b b b, with the perforated base, h h, when constructed and arranged substantially as herein described and for the purpose specified.

59,176.—FENCE.—Jonathan Bundy, West Liberty, Iowa.

I claim the combination and arrangement of the blocks or cross pieces, H, wires, G and anchoring stones I, with each other and with the fence posts, B, substantially as herein shown and described and for the purpose set forth.

59,177.—MODE OF PREPARING BURNING FLUID.—R. E. Campbell, New York City.

I claim treating the first runnings of the distillate of petroleum, petroleum oil, or coal, by passing them through or mixing them with burnt clay, chalk, chloride of sodium, or other equivalent absorbent substances, in the manner and for the purposes substantially as herein set forth.

59,178.—UPPER JAW BIT.—F. B. Carleton, Jeffersonville, Vt.

I claim the arrangement with an ordinary bridle and bit, of the supplementary bit which is strapped to the upper jaw of the horse forward of the ordinary bit, substantially as described.

59,179.—CHEMICAL COMPOUND FOR THE MANUFACTURE OF MEDICATED GAS.—A. H. Carpenter, New York City.

I claim compounding certain chemical salts in the manner and proportions herein specified, for producing an electro-medical gas to be used and applied in the manner and for the purposes herein described.

59,180.—RAILWAY CHAIR.—Hiram Carpenter, New York City.

I claim the railway chair constructed with an elastic support combined with a loose jaw that locks into the body of the chair and is tightened by a key, substantially as described.

59,181.—TOOL SUPPORTER.—Asa L. Carrier, Washington, D. C.

I claim the slotted disk, B, rim, C, and spike or screw, A, when constructed, arranged, and used in the mode described so as to constitute a new article of manufacture, for the purpose specified.

59,182. — BURNING FLUID. — Benjamin H. Chadbourne, St. Louis, Mo.

I claim the combination of the ingredients herein described.

59,183. — MANUFACTURE OF SORGHUM SUGAR.—Francis M. Chalfant, Morgantown, West Va.

I claim the process of making sugar from sorghum, or its allies, substantially as above described.

59,184.—SMOKING PIPE.—George H. Chinnork, New York City. Antedated Oct. 19, 1866.

I claim the pipe stem consisting of the parts, A B C E F and G, combined, constructed, and arranged as and for the purposes herein described.

59,185.—PORTABLE FENCE.—Frederick C. Class, Roanoke, Ind.

I claim the brace post in combination with its lock and key, also the corner post in combination with the panel, as described. I claim the lattice panel with supporting bars as giving greater strength as a fence. I claim the peculiar construction of the lock and key in combination with the brace post, essentially as described.

59,186.—VARIABLE MEASURE.—Lewis Coates, Collamer, Pa.

I claim the notched staves, c, and catches, a, in combination with the movable button, B, and measure, A, constructed and operating substantially as and for the purpose described.

59,187. — DISTILLATION. — John F. Collins, New York City.

I claim the process, substantially as above described, of separating and obtaining alcohol or other volatile matters by constantly agitating the "wash" or other contents of the still or retort, by means of a current or currents of steam or gas or air forced into the same, and bringing the vapors in contact with currents of air from without, while passing from the still or retort into the conductor which leads to the worm or condenser, as above set forth.

59,188.—VESSEL FOR BEER, ETC.—William Compton, New York City.

I claim the flexible bag fitted as specified within a vessel and adapted to the reception of beer and other liquids and the exclusion of the same from contact with the air, as set forth.

59,189.—SAFE.—John B. Cornell, New York City.

I claim uniting parallel and contiguous plates of metal with each other by the act of filling the spaces between said plates with molten iron, or other metal or composition, and the inflow of a portion of the same into channels or recesses of a dovetail shape formed in the inner surface of said plates but not entirely through the same, substantially in the manner represented in the drawings and herein described.

59,190.—STANCHIONS FOR CATTLE.—John B. Crowell, Newport, N. H.

First, I claim the combination of the bolts, L, and rope, N, with each other and with the movable stanchions, D, and timber, B, substantially as herein shown and described and for the purposes set forth.

Second, The combination of the bolts, F, and springs, H, with the movable stanchions, D, and timber, B, substantially as described and for the purpose set forth.

Third, The combination of the bar, I, and lever, K, with the bolts, F, and timber, B, substantially as shown and described and for the purpose set forth.

Fourth, The combination of the springs, E, with the stanchions, D, and timber, B, substantially as herein shown and described and for the purpose set forth.

59,191.—SHOVEL PLOW. — John C. Daugherty, Bridgeport, Ky.

I claim each and every part of the fender described as above.

59,192.—PITMAN FOR HARVESTER, ETC.—J. W. Doty, Lockport, N. Y.

First, I claim the combination of the forked or pronged pitman head, D, secured to the ears or lugs. f f, by a screw bolt, j, taper, conical, or spherical wrist pin, A, and box, B, the whole arranged substantially in the manner and for the purpose set forth.

Second, I claim the tubular conical projection, m, of the lower end of the pitman, E, in combination with the socket, n, on the cutter bar, G, the bolt, H, provided with a nut, o, having a ratchet attached, with which a pawl, p, on the pitman engages, substantially as and for the purpose specified.

59,193. — SAW-FILING MACHINE. — John W. H. Doubler, Chicago, Ill.

First, I claim the combination and arrangement of the stationary jaws, E, a stationary rack, F, file guide, T, and holder, a, wheel, V, shaft, G, and screw, H, as and for the purposes specified.

Second, I claim the combination of the wheels, J I, spring catch, M, arms, L, shaft, G, and screw, H, with the stationary rack, F, substantially as and for the purposes set forth.

Third, I claim the combination with the arm, L, the arrangement of the movable slotted arc, N, and pin or stop, o, as and for the purpose described and set forth.

59,194.—WHEEL VEHICLE.—Jas. W. Drew, Stockbridge, Mich.

First, I claim the sliding boxes, h h, constructed and operating as and for the purpose herein set forth.

Second, I claim the tongue support, l, in combination with spring, m, constructed and operating substantially as herein specified.

Third, I claim the spring bars, g g, boxes, h h, tongue support, l, spring, m, the whole constructed and arranged substantially as herein described.

59,195.—WASHING MACHINE.—Noah Drew, Howell, Mich.

I claim the employment of the plungers, E, attached as described, in combination with the molded end board, D, and a yielding suds box, B, arranged and operated substantially in the manner and for the purposes herein set forth.

59,196.—GATE.—Eli Duncan, West Milton, Ohio.

I claim a gate composed of a series of horizontal bars, when the upper bar, A', is notched near one end, x, to catch a pin, d, which connects the upper ends of the bases, C C, and arranged with the roller, e, in the manner and for the purposes specified.

59,197.—TRAINING HOPS. — William C. Dunn, Greene, N. Y.

I claim the construction or use of a hop trainer, constructed and used substantially as described.

59,198.—STEAM HEATING APPARATUS.—John Elder, Jr., New York City.

I claim the coil of pipes, f g, extending up in the air pipe, a, and connected with the steam box at the lower end of the said coil, substantially in the manner specified.

59,199.—FENCE.—David S. Evans, Richmond, Ind.

I claim the arrangement and combination of the wedge post, d, the catch, m, and bevel, n, when used in a portable fence, all arranged and operating as set forth and described.

59,200.—SAW MILL.—W. W. Ewing, Mahoning, Pa.

I claim, First, The construction and arrangement of the two pairs of converging vibratory tension beams, F F, clamping the ends of the saw between their converging ends, substantially as and for the purpose herein specified.

Second, The combination of the pivot blocks, c c, having dovetail shanks, with the adjustable clamp bars, B B, having corresponding forms to fit the shanks of the pivot blocks, substantially, as herein set forth.

Third, I also claim the method of hanging the saws between the tension beams by the V-shaped notches therein, and the peculiarly formed pivot bolts, H H, substantially as and for the purposes herein described.

59,201.—HANGING MILLSTONES. — Lewis Fagin, Cincinnati, Ohio.

I claim, First, The arrangement of the cock eye, A, cock head, B, openings, K, in the balance rim and driving lugs, c c, by which the point of balance is adjusted as described and for the purpose set forth.

Second, The construction of the balance rim with openings, K K, by means of which the driving lugs and driving surfaces are brought to view and rendered accessible, for the purpose of fitting.

59,202.—GATE HINGE.—Wickum Field and Robert Carruthers, Bergen, N. Y.

We claim the combination of the braces, h h', or equivalent, with the bearing, b, and jaws, d d', operating substantially in the manner and for the purpose specified.

59,203.—MACHINE FOR LEATHERING TACKS.—Wm. H. Field, Taunton, Mass.

First, I claim the elevators, P, for the purpose of elevating tacks from the hopper, J2, and depositing them upon the slide, K2, for the purposes and substantially as herein described.

Second, I claim the peculiar construction of the shaft or rod, A2, in halves, so that one or more nails or tacks may be leathered, substantially as herein described.

Third, The straight heading bar, with its end reduced to about the size of the tack, and working at right angles with the slide or nail, for the purposes and substantially as described.

Fourth, The quadrant, B2, in combination with the heading bar, for the purposes and substantially as set forth.

59,204.—CORNET AND OTHER WIND INSTRUMENTS. —Isaac Fiske, Worcester, Mass.

I claim, First, Interposing rubber or some other suitable elastic substance between the attachment or attachments of the main pipe with the bell and the bell of a wind instrument, to give greater freedom to the vibrations of the bell, substantially as set forth.

Second, The combination of ring or rings, a, and rubber, b, or its equivalent, with the bell, A, the main pipe, B, substantially as set forth.

Third, The combination and arrangement in a wind instrument of the cylinders in which the piston rods work and the valve stems in such a manner as to obviate the necessity of interposing anything between the valve stems and piston rods in order to operate the stems and valves except the cord, substantially as described.

Fourth, The special arrangement and combination of the valve stems, e f, and g, and rods, 1' 2' 3', and cylinders, 1" 2" 3", whereby the valves, cylinders, and finger pieces are of equal distances from each other, and yet all of the valve stems and valves are operated by cords attached directly to the ends of the rods which move in a line parallel to each other, substantially as set forth.

Fifth, The combination and arrangement with the cylinders, 1" 2" 3", of the supporting bar, G, as shown and described.

59,205.—MACHINE FOR RAKING AND LOADING HAY. —Thompson Frame, Barnesville, Ohio.

First, I claim the cam, w, on the shaft, f, in combination with the reciprocating levers, p q, the connecting rods, t s, and the reciprocating cross rakes, n n, for drawing the hay by their reciprocating motion into the chute, c, constructed and arranged as herein described.

Second, I claim also the platform, E, in combination with the reciprocating rakes, n n, and the chute, c, constructed and arranged as and for the purposes herein described.

59,206.—MANUFACTURE OF VINEGAR.—Terah M. Freeman, St. Louis, Mo.

I claim the formation of vinegar wash by adding alcoholic va

pors to the liquids used and usually containing water, vinegar or acetic acid and ferment, substantially as set forth.

59,207.—SAFE.—Thomas D. Furlong and De Witt C. Freeman, St. Louis, Mo.

We claim the outside case, A, the inside safe, B, the cap, C, and the door, E, constructed and hermetically closed, and connected in the manner and for the purposes herein specified.

59,208.—CLOTHES WRINGER.—A. C. Gallahue, New York City.

I claim the tubular springs, H, in combination with the hollow screws, I, or their equivalents, and rod, G, arranged or applied to the upper ends of the parts, A B, to operate substantially as and for the purpose specified.

59,209.—LAST.—E. T. Green, Stoneham, Mass. Antedated October 20, 1866.

I claim a metallic pan or basin, E, or its equivalent, constructed and arranged for holding a false or movable bottom of a shoe last, in the manner and for the purposes substantially as herein set forth.

59,210.—HAND SPINNING WHEEL.—John Green, Joliet, Ill.

I claim the peculiar and particular arrangement of the cords and pulleys described, in combination with the inclined ways, b, and for the purposes described.

59,211.—GATE HINGE.—Burton Greenside, Fort Dodge, Iowa.

First, I claim the cogged hinge, E, formed in two parts, e1 and e2, when constructed and arranged substantially as herein described and for the purpose set forth.

Second, The combination of the bent lever, F, connecting rod, G, and arm, H, with each other and with the gate, A, the weight and post, D, substantially as described and for the purpose set forth.

59,212.—BRICK MACHINE.—Isaac Gregg, Philadelphia, Pa.

First, I claim the brush, M, so arranged and operated as to clear the upper surfaces of the pistons from superfluous clay in advance of the oiler.

Second, The combination of the revolving brush, M, and revolving oiler, N, in the same box, k, substantially as described.

Third, The combination of the heads or flanges, g, of the rods of the two sets of pistons with the stationary inclined projections, d and d', when the said heads and projections are so formed that when the heads of one set of piston rods traverse over one of the said projections, the former will be elevated by the latter, but will remain depressed while traversing over the other projection, all substantially as set forth for the purpose specified.

Fourth, The combination of the wheel, F and F', with the heads of the rods of the two sets of pistons, when the said wheels and rods are recessed or halved, substantially in the manner and for the purpose described.

59,213.—GRAIN GAGE.—Henry Haak, Myerstown, Pa.

First, I claim the measure, A', provided with the spring and striker, A and B, constructed and operated substantially as described.

Second, I claim the graduated beam, F, the bearing beam, E, tube, D, and stem, E', arranged and operated as described.

59,214.—PUDDLING FURNACE.—Daniel and Joseph Hall, Wheeling, W. Va.

First, We claim the improved iron-cased smoke stack of unequal diameters at the upper and lower parts, lined with fire brick of unequal thickness, supported on the pillars, b b b b, and constructed and arranged substantially as and for the purpose herein specified.

Second, We claim also the outer shell or casing, d d, constructed and arranged substantially as and for the purposes herein specified.

Third, We claim also the wrought-iron fore plate, r r, and the recess in the doorway in which it is inserted, in combination with the furnace door, p, constructed and arranged substantially as and for the purpose herein described.

Fourth, We claim also the wrought-iron side bits, s s, placed in a recess in the doorway of the furnace, substantially in the manner as herein specified.

Fifth, We claim also the horizontal or straight bottomed neck, E, supported on the foundation plate, q, resting on bearers, i i, which are sustained by the projections, h h, on the pillars, b b, constructed and arranged substantially as and for the purposes herein described.

Sixth, We claim also the ribbed binding plates, k k, in combination with the neck, E, constructed and arranged substantially as and for the purposes herein described.

Seventh, We claim also the improved inclined fire bridge, G, constructed substantially as and for the purposes specified.

59,215.—COTTON CULTIVATOR.—Joel A. Hall, Columbus, Ohio.

First, I claim the combination of the curved blades or scrapers, with the plows, B2, substantially in the manner herein shown and described, so as to plow the furrow, cut the weeds, and throw the earth upon the roots of the plants, all as set forth.

Second, I claim the combination of the toggle levers, I, with the plow beams, substantially as herein shown and described.

Third, I claim the combination of the guide with the toggle levers, I, substantially as herein shown and described.

Fourth, I claim the combination of the walking beam and treadles with the toggle levers, substantially as shown and described.

59,216.—MEDICINE FOR HORSES.—C. L. Hammond, North Java, N. Y.

I claim the above-described ingredients mixed as specified and for the purposes set forth.

59,217. — GRAIN-TALLYING MACHINE. — Andrew Harter, Delphia, Ind.

I claim the combination of the platform, B B', arm, C, and wheels, D, with the wheels, L, sleeve, h, and under plate, E, constructed, arranged, and operated in the manner substantially as shown and described and for the purpose set forth.

59,218.—RAILWAY CHAIR.—Nicholas Headington, Cincinnati, Ohio.

I claim the railroad chair composed of the seat, C, having the pendants, ribs, or flanges, C'' C''', in described combination with the strap, F, and gib and key, D E, or their equivalents, for the purpose set forth.

59,219.—MACHINE FOR WRINKLING THE INSTEPS OF BOOTS AND SHOES. — Christian Heisterman, Brownville, Pa.

I claim board, A, and blocks, a and A', when constructed and operated by a press, substantially in the manner and for the purpose set forth.

59,220.—SORGHUM STRIPPER.—John D. and Isaiah Hess, Union, Ohio.

First, We claim the combination of the cutter, G, with the device herein described for carrying the cane through the cutter or its attachment, to a sorghum mill, substantially as and for the purpose specified.

Second, The arrangement of the frame, A, cylinder, B, pulley, D, rollers, C, frame, B, spring, F, cutter, G, and support, M, substantially as described and represented.

59,221.—STEAM AND AIR EJECTOR.—L. E. Hewes, Albany, N. Y.

First, I claim the combination of the injector, W, projecter, Y, and ejector, Z, operating together substantially as described.

Second, The adjustable nozzle, h i, operating substantially as described.

Third, The expansible or contractible slit nozzle, i, constructed as described.

Fourth, The slotted nozzle, h', substantially as described.

59,222.—WELDING OR BRAZING.—A. J. Hindermeyer, Rohrertown, Pa.

I claim the use of the herein specified mineral substance as a flux for welding and brazing steel, iron or other metals.

59,223.—INK CUP.—P. K. Holbrook, Malden, Mass.

I claim the combination of the india-rubber cup, B, with the stand, A, both constructed and adapted to each other, substantially as described so as to form an ink stand which can be cheaply made and easily cleansed.

59,224. — WASHING MACHINE. — Reuben Hoover, Boonsborough, Iowa

I claim the revolving corrugated jointed cover, D, fitting loosely on the shaft, E, in combination with the tub, arranged to operate with the rock shaft, F, and strap, a, substantially as described and for the purpose specified.

59,225. — CANCELING APPARATUS. — Thomas S. Hudson, East Cambridge, Mass.

I claim the movable type as made with the longitudinal and transverse dovetails and with parallel plane surface sides, as and for the purpose set forth, in combination with the type chase as made with its type sockets or recesses, dovetailed longitudinally and transversely, or so as to hold the type in manner as specified, and with a wheel receiving space or chamber arranged within it and opening into each of such type sockets.

I also claim the ribbon box or case, as constructed, with the ribbon-receiving opening, the removable cap and winding spindle and its holding ring, or the equivalent thereof, the whole being applied substantially as specified.

59,226.—AUTOMATIC BLAST FOR CARBURETORS IN RAILROAD CAR, ETC.—Elias S. Hutchinson, Baltimore, Md.

I claim a pendulum suspended in a railroad car, carriage or vessel, and applied in connection with an air-pump bellows or compresser, to furnish a blast to a carburetor, substantially as described and represented.

59,227.—COMBINED VICTORINE CAPE AND CUFF.—D. Isaacsohn and Adolph Cohn, New York City.

We claim a victorine, collar or cape, made up of a collar or cape, A, proper, front lappets, a a, having combined at the extremities of the latter, so as to form one with the same, cuffs, B B, capable of being made convertible at pleasure into a muff, substantially as specified.

59,228.—WATER-PROOF MAIL BAG.—J. M. Jarrett, Brooklyn, N. Y.

First, I claim a floating compartment or pocket, O, in combination with the cover, A, arranged with the parts of a mail bag here in described, substantially as and for the purpose specified.

Second, I claim the hinged false bottom, L, in combination with the frame, B, springs, M, and catches, N, when arranged with the parts of a floating bag herein described, substantially as and for the purpose specified.

59,229.—MACHINE FOR CUTTING THE FRONTS OF BOOKS.—Isaac Jones, Camden, N. J. Antedated Oct. 20, 1866.

First, I claim the bar, P, with its gouge, T, in combination with the within described devices or their equivalents for holding the book, the whole being constructed and operating substantially as and for the purpose described.

Second, The combination with the above of an adjustable soft metal or wood strip, d, substantially as and for the purpose specified.

Third, The adjustable frame, C, with its adjustable plates, H H', in combination with the traversing bar, P, and its knife, T, substantially as and for the purpose set forth.

59,230.—GANG PUNCH.—John Halbrook Keating, Marblehead, Mass.

First, I claim the sliding punch-holding blocks, G, in combination with the screws, I, within the ways, H, operating substantially as and for the purpose specified.

Second, The former, P, in combination with the flexible strip, O, of the punches, E, substantially as described for the purpose specified.

Third, The combination and arrangement of the sliding blocks, G, screws, I, ways, H, rubber, O, punches, E, former, P, and vibrating arm, C, substantially as described and for the purpose specified.

59,231.— CULTIVATOR. — William Kiddoo, Keithsburg, Ill.

I claim the plow beam, F, in combination with the lever, G, or equivalent means for raising and lowering the plow beam without changing it horizontally.

The combination of the plow beam, F, lever, G, cord, E, and link, L, substantially as and for the purpose set forth.

The combination of the plow beam, F, and draft bar, K, substantially as and for the purpose set forth.

The combination of the plow beam, F, draft rod, K, and guide rod, S, for the purpose of retaining the said beam in proper horizontal position.

The adjustable suspended frame, N, provided with the lever P, and link, Q, or their equivalent, for the purpose set forth.

The shield, U, suspended by the rods, V, so that the plows may be raised or lowered without adjusting the hight of the shields.

The levers, G and P, and their attachments, substantially as described, so as to enable the attendant to adjust the plows vertically or horizontally without leaving his seat.

59,232.— SULKY PLOW. — George Knight, Boone, Iowa.

I claim the attaching of the front end of the plow beam, H, to the pendent bar, E, through the medium of an adjustable plate, F, substantially as and for the purpose set forth.

I further claim the suspending of the plow beam, H, from the axle, C, by means of the cords or chains, c c, and the retaining or holding of the plow beam so as to prevent it from moving laterally by means of a chain or cord, d, substantially as set forth.

59,233.—WASH BOWL AND WATER CLOSET COMBINED.—Angelina J. Knox, Boston, Mass.

I claim the bowl, d, shelf c, door, b', privy bowl g, pipe, e, and pucking, c', all arranged substantially in the manner and for the purpose set forth.

59,234.—MACHINE FOR MAKING BUTTONS. — William Kraemer, Cincinnati, Ohio.

First, I claim making buttons by means of the traveling or shifting die, J, moving horizontally and transversely to, and adapted to work in co-operation with, a series of consecutively acting dies moving vertically, substantially as described.

Second, In the described combination with such traveling die, I claim the concentric arrangement of the compound die or punch, P P', shouldered counter, C C', and compound arm, c c', as and for the purpose set forth.

59,235. — WASHING MACHINE. — Daniel Kunkel, Oregon, Mo.

First, I claim the combination and arrangement of the frame, B, toothed wheel, E, toothed wheel, F, with pendent arms, b, and tub, A, with its projection, a, substantially as and for the purposes specified.

Second, The frame, B, forming the bearing for the shaft, C, and the upper end of the spindle, G, arranged with the toothed wheel, E, and wheel, F, provided with pendants, b, in combination with the tub, A, having studded bottom, all in the manner and for the purpose specified.

59,236.—SHEEP RACK.—Henry H. Ladd, Worcester, Vt.

I claim the combination of the trough, C, and sliding frame, B, with each other and with the frame, A, of the sheep rack, when said trough and sliding frame are constructed and arranged substantially as herein shown and described, for the purpose set forth.

59,237.—LAMP WICK.—Charles W. Le Count, Norwalk, Conn.

I claim a lamp wick composed of felt with longitudinal threads of cotton or other fibrous material running through it, substantially as and for the purpose herein described.

59,238.—MANUFACTURE OF ACETATE OF ALUMINA. George T. Lewis, Philadelphia, Pa.

I claim the manufacture of acetate of alumina by mixing the alumina extracted from kryolite with acetic acid, substantially as described.

59,239. — MANUFACTURE OF SULPHOACETATE OF ALUMINA.—Geo. T. Lewis, Philadelphia, Pa.

I claim the manufacture of sulphoacetate of alumina by mixing the alumina extracted from kryolite with acetic acid and sulphuric acid, or in the place of the sulphuric acid sulphate of alumina or alum, substantially as described.

59,240.—SEWING TABLE FOR BOOK BINDERS.—Marshal T. Lincoln, Washington, D. C.

I claim the adjustable sewing bench, A B, constructed and operating substantially as described.

59,241.—CORK PULLER.—Karl Loeffler, Hoboken, N. J.

I claim as a new article of manufacture a cork puller, composed of a thin shank, A, handle, B, and a tooth, C, as described.

59,242.— DOUBLE HEADED WRENCH. — John J. Love, New York City.

I claim an improved wrench formed by the combination of the right and left screw, C, with the parallel-moving bars, A and B, having the jaws, a1 and a2, and b1 b2, formed upon their ends, the parts being constructed and arranged substantially as herein described and for the purpose set forth.

59,243.—HOISTING AND DUMPING COAL. —George Martz, Pottsville, Pa.

First, I claim the combination of the platform, constructed and operating as described with the breast of the chute, which tilts the rising platform into an inclined position.

Second, The arrangement of the section blocks, L L, and the gaps, N, in the guides, operating as described.

Third, The curved face to the platform acting in combination with the supporting breast, H, as and for the purpose described.

59,244.—SLEIGH BRAKE.—J. R. McAlister, Richville, N. Y.

I claim the brake shoes, C, and chains, D, connecting them to the pole, G, hung to the roller, I turning in the sled frame when combined and arranged together, substantially in the manner and for the purpose described.

59,245.—MACHINE FOR BORING WAGON HUBS.—J. R. McAlister, Richville, N. Y.

I claim the boring machine herein described, the same consisting of the chuck, B, shaft, I, curved arm, M, having slotted end, L, and eye, N, knife-carrying bar, Q, sliding frame, S, adjustable clasps, U, arranged and operating substantially as described for the purpose specified.

59,246.—METHOD OF DECOMPOSING STEAM.—James McGeary, Salem, Mass.

First, I claim subjecting steam for decomposition to the action of alternate superheating and decomposing surfaces, in the manner substantially as and for the purpose herein described.

Second, Subjecting the resulting gases to the action of bituminous coal, petroleum, or other carbonacious material, when used in the manner and for the purpose set forth.

Third, The apparatus, as shown and described, when used for the purpose set forth.

59,247.—PROCESS FOR PRESERVING MEAT.—Harrison B. Meech, Fort Edward, N. Y.

First, I claim the within-described process of curing meat by subjecting the same first to a pressure under water and then to a pressure under the antiseptic material used in the process, substantially as and for the purpose set forth.

Second, Washing the meat under the pressure, substantially as described.

59,248.—FASTENING FOR BARN DOORS.—David N. Minor, Bridgewater, Mich.

First, I claim the combination of the spring, I, with the door, D, and with the standard, F, substantially as described and for the purpose set forth.

Second, The combination of the guide, O, with the sill, B, of the door frame and with the standard, F, substantially as described and for the purpose set forth.

Third, The combination of the three catches, J, with the standard, F, substantially as described and for the purpose set forth.

Fourth, The combination of the sliding bar, L, clasps, K, and hooks, M, with each other and with the door, E, and with the catches, J, substantially as described and for the purpose set forth.

59,249.—WIND WHEEL.—John H. Morse, Peoria, Ill.

I claim the regulating fan, A, in connection with its balance weight, R, cog wheel, M, rack, L, steel rod, J, clutch, K, collar E, lever rods, c c c c c, attached to fans, B B B B B, working in eyes, f f f f, in flange of collar, E, substantially in the manner and for the purpose specified.

59,250.—FASTENING FOR KNOBS FOR FURNITURE. L. B. Myers, Elmore, Ohio.

I claim fastening furniture knobs to drawers or doors by means of two pins and a central screw, substantially as and for the purposes herein specified.

59,251.—CURING HIDES AND SKINS.—Henry Napier, Elizabeth, N. J.

I claim the use of carbolic acid, or of creosote, in any form, and either alone or in combination with each other, and with other substances, such as a metallic salt, glycerin, etc., for the purpose herein set forth.

59,252.—STEAM PISTON VALVE.—William Nichols, Elmira, N. Y.

I claim the valve shell, A, constructed as described, being enlarged at a, and provided with cup, B, cast as a part of the shell and attached at b b, so as to form the enlarged circular port, G, in combination with the valve, E, and rod, D, in the manner and for the purposes described.

59,253.—CORN POPPER. — William W. S. Orbeton, Haverhill, Mass.

I claim, in combination with the basket, A, and the handle and supporting device or devices, a mechanism or means whereby a reciprocating rotary or partially reciprocating rotary motion may be imparted to the said basket, substantially as and for the purpose set forth.

59,254.—BIT STOCK.—Wm. W. S. Orbeton, Haverhill, Mass.

I claim the bit stock, composed of the body portion, A, the furcated head or jaws, a, the rotary sleeve, D, and its operative mechanism or equivalent, the centralizer, C, and the spring, G, the whole being constructed and combined together in manner and so as to operate as set forth.

I claim my improved centralizer, C, constructed in the manner as described, and applied to the bit-receiving socket, and so as to operate with the jaws, a, as specified, and by means as set forth.

I also claim the jaws, a, constructed of one piece of metal and of the tapering form, and with lips, b, as described and shown, when combined with the sleeve, D, made and applied to the said jaws, in manner and so as to operate therewith, and by means substantially as set forth.

59,255.—COMPOUND FOR FEEDING STOCK.—Charles G. Otis, Troy, N. Y.

I claim the compound feed of ground grain and oil, or flax-seed meal, compressed into packages for transportation, substantially as described.

59,256.—PULLEY.—R. W. Parker, Woburn, Mass.

First, I claim the pulley, D, with its movable rim, d, attached to the arms, e e e e, by the screws, 1 2 3 4, through holes in the ends larger than the shanks of the screws, in combination with the friction wheel, F, or their equivalents, constructed substantially in the manner and for the purposes described.

Second, I claim the loose, self-adjusting roller or detached revolving weight, E, in combination with the belt, C, and pulley, D, constructed and operated substantially as and for the purposes herein set forth.

9,257.—Rubber Attachment to Washboard.—Samuel Peck, West Haven, Conn.

I claim the rails, a, on the sides of the washboard, A, in combination with the slotted ears, b, on the ends of the rubber, B, substantially as and for the purpose set forth.

59,258.—Trace Connection.—James E. Pierce, West Boylston, Mass.

I claim the combination, as well as the arrangement, of the shield, b, with the guard, D, and its latch, applied to the trace pin, as set forth.

I also claim the combination of the fingerrest, C, with the guard, D, and its latch, applied and arranged in manner and so as to operate with the trace pin, substantially as specified.

I also claim the combination of the notch, a, in the trace pin, with the shield, the guard, and the spring latch, arranged together and so as to operate with the said trace pin, substantially as hereinbefore set forth.

59,259.—Machine for Preparing Cotton for Carding Engine.—Robert Pilson, Laurel, Md.

First, I claim the combination of two or more sets of drawing rollers with two or more toothed cylinders, when the rollers and cylinders are arranged in the order described, and the teeth of the second, and each succeeding cylinder are finer and more thickly set than those of the cylinder immediately preceding it.

Second, The combination of two or more sets of drawing rollers and two or more toothed cylinders, the teeth of the second and each succeeding cylinder being finer and more thickly set than those of the cylinder immediately preceding it, with two or more previous cylinders, through which dust and other impurities may pass, and between the surface of which and a suitable roller the opened fibrous material is delivered from each toothed cylinder, passes, and is partially condensed before it is presented to the action of the next cylinder.

Third, The combination, in a suitable case or apartment, of the previous cylinders, E1 E2, and deflectors, F, when the said apartment is provided with an exhaust, arranged in respect to the said rollers and deflector, substantially as shown and described.

Fourth, The combination of the previous rollers, E1 E2, and fluted roller, I' the three operating to condense the loose fibrous material as received from a toothed cylinder, and the roller, I', so arranged in relation to the roller, E2, as to act as a doffer for that roller.

Fifth, The combination of the fluted drawing rollers, B, smooth roller, B1, cleaning knife or bar, C, and toothed cylinder, D, substantially as and for the purpose described.

Sixth, The tapering lap roller, H, as and for the purpose described.

Seventh, The combination and arrangement of the several devices, as a whole, herein described and constructed, and operating to draw, open, clean, condense, and wind into a lap, cotton or other fibrous material, ready for the carding machine.

59,260.—Apparatus for Preventing the Escape of Gases from Soap Kettles, Rendering Apparatus, etc.—William H. Pinner, New York city.

I claim the condensing tube, d, and vapor tube, f, in combination with the kettle and furnace for boiling fats, soap, or other similar substances, for the purposes and as specified.

59,261.—Piano Seat.—Louis Postawka, Boston, Mass.

I claim the combination of the socket sleeve, a, the hand wheel, f, connected therewith by the hub or revolving nut, d, and the slotted screw, b, for elevating and depressing piano seats without turning them round, constructed and operating substantially as herein described.

59,262.—Plow.—Jackson Price, Greenfield, Ind.

First, I claim the arrangement of the plow frame, K, and springs Q R, for regulating its motions, substantially as described.

Second, The pivoted tongue, D, and latches, G H, operating substantially as described.

Third, The foot levers, I J, in combination with the tongue, D, and latches, G H, operating substantially as described.

59,263.—Seed Drill.—Thomas D. Price, Carrollton, Ill.

First, I claim the covering wheel, B, when constructed with the adjustable rims, b2 and b3, substantially as and for the purpose described and set forth.

Second, I claim the covering wheel, B, in combination with the disk, F, when these two parts are constructed as to operate conjointly, as herein described and set forth.

Third, I claim the disk, F, in combination with the brush, H, and spring, I, for the purpose of preventing the clogging or stoppage of the seeds, as described and set forth.

Fourth, I claim the arrangement of the gate, K, and its operating devices substantially as herein described and set forth.

59,264.—Wind Sail.—John C. Raymond, Greenpoint, N. Y.

First, I claim a wind sail, provided with four or more wings and center partitions or gores, C, substantially as and for the purpose described.

Second, Providing the wind sail with a top which extends beyond the circumference of the barrel, substantially as and for the purpose set forth.

59,265.—Sewing Machine. — E. P. Richardson, Lawrence, Mass.

I claim the combination of the foot, F, and the guard or guide, G, arranged to operate substantially as and for the purpose specified.

59,266.—Nutmeg Grater.—John Riddell and Boyd Allen, Boston, Mass. Antedated Oct. 18, 1866.

First, We claim the spherical grater, C, arranged within the casing or chamber, E, and operating as and for the purpose specified.

Second, We claim the combination of the spherical grater, C, with the casing, E, and chambers, A, as and for the purpose specified.

59,267.—Mold Board for Plow.—L. P. Rider, Munson, Ohio.

I claim the construction and arrangement of the plow mold board in the manner and for the purpose set forth.

59,268.—Chalk-line Winder.—J. H. Rose, Mount Sterling, Ill.

I claim, as a new article of manufacture, the line winder herein described, the same consisting of the coil spring, b, spindle, c, and reel, d, in combination with the partitioned box, A, and handle, B, substantially as and for the purpose specified.

59,269.—Horse Cultivator and Hoe.—Amos W. Ross, Northfield, Mass.

First, I claim the combination of the adjustable wheels, E, and adjustable supporting arms, D, with each other, and with the front and rear ends of the central beam, B, substantially as herein shown and described.

Second, The teeth, F, and adjustable uprights, C, in combination with the cultivator beams, A B C, substantially as herein shown and described.

Third, The long hoes, H in combination with the central tooth, F, and the rear side teeth of the cultivator, substantially as herein shown and described.

Fourth, The combination of the adjustable curved hoes, I, with the rear ends of the long hoes, H, substantially as herein shown and described.

Fifth, The combination of the rear governors or adjusting rods, J, with the curved hoes, I, and the rear ends of the side beams, B C, substantially as herein shown and described.

Sixth, The combination of the central or adjustable governor, K with the central beam, B, substantially as herein shown and described.

Seventh, The combination of the guard knife, L, and draft hook, M with each other, with the forward end of the central beam, B, and with the front central tooth, F, substantially as herein shown and described.

Eighth, The combination of the slotted adjusting bars, N, bolt, n1, and nut, n2, with each other, and with the beams, A B C, substantially as herein shown and described.

Ninth, A combined horse cultivator and hoe constructed and arranged substantially as herein shown and described.

59,270.—Carpet Bag.—E. A. G. Roulstone, Roxbury, Mass.

First, I claim the method connecting the open part of each half of the bag together to its frame, by fastening the edge to the outer surface of the frame, said frame projecting into instead of over the bag, substantially as set forth.

Second, Also the band, i, doubled over the edge of each frame, and embracing between its edges the adjacent edges of the frame and bag leather, substantially as set forth.

Third, Also applying the lock to the inner surface of one of the frames, substantially as described.

Fourth, In combination with a carpet or leather bag having two compartments connected as described, the protecting band, k, and the fastening of the flap or fall, when made to slide or catch into the frame, as described and set forth.

59,271.—Traveling Bag.—E. A. G. Roulstone, Roxbury, Mass.

First, I claim a metal bag frame, when constructed and arranged with a groove for receiving and securing the bag leather, or body, as described.

Second, Also a traveling bag in which the frame is united to the leather or body thereof as described.

Third, Also the locking spring device, as described and set forth.

59,272.—Trunk.—E. A. G. Roulstone, Roxbury, Mass.

I claim the employment of the angle frames to support and strengthen the trunk body, when applied to the interior of the body, with each frame bent transversely and longitudinally, as described, and with the side of the body lapped over the end, or vice versa, and riveted to the angle frame, substantially as described.

I also claim the guards, e, when made with extensions, f, and riveted to the frame, x, substantially as set forth.

I also claim the guards, h and i, when shaped and riveted to the angle frames substantially as set forth.

I also claim making the guards, i, with projections, l2, and shoulders, l, to protect the casters, k, substantially as set forth.

I also claim the hinges, m, when each is bent around and riveted through the back and end of the body to the frame, x, and is extended below the top line of the lower part, b, in the manner described.

Also the spring latches, O, when made and applied substantially as set forth.

Also the application of springs, v, to the webbing, substantially as and for the purpose set forth.

59,273.—Car Brake.—Lorenzo D. Rundell, South Westerlo, N. Y.

I claim the combination of the lever pawl, i, and link, e, when hinged and pivoted as herein described, and arranged in relation to the ratchet wheel, c, in the manner and for the purposes herein specified.

59,274.—Washing Machine.—N. M. Sanford, Vienna, Ohio.

I claim the hinged hub, I, arranged with the lever, A, and movable brace, C, in combination with the post, H, substantially in the manner and for the purpose as herein set forth.

59,275.—Sawing Machine.—Charles W. Sappenfield, Crawfordsville, Ind.

I claim the operating device of a sawing machine herein described, consisting of the clutch, I, fly wheel, H. shaft, B, lever, J, crank wheel, L, pitmen, M and N, swinging pitman, O, and guides, P and R, arranged and operating substantially as and for the purpose specified.

59,276.—Hitching Device.—Charles H. Sawyer, Hollis, Me.

I claim the combination of the V-shaped spring and case, constructed, arranged, and secured in the modes and for the purposes herein set forth.

59,277.—Halter.—Charles H. Sawyer, Buxton, Me.

I claim the clamp having the three holes, when applied to a halter, as and for the purposes set forth.

59,278.—Whip Socket.—Henry Sayler, St. Paris, Ohio.

I claim a whip socket provided with the clamping jaws and a lock, when arranged to operate as and for the purpose set forth.

59,279.—Cultivator.—E. S. Segar and J. C. Ormiston, Erie, Ill.

We claim the application to a corn plow or cultivator of the crotch, beams, and strap, revolving hinge, and pitman rod, iron cranks, ratchet circle, and spring catch lever attached to the beams by the pitman rod and hinge to raise and lower the beams and shovels, and the blade hinges to attach the inside shovel standards to the beams; the brace foot stirrup to guide the inside shovels and the crutch bearing seat, as herein described, reference being had to the drawings herewith submitted.

59,280.—Spittoon for Railroad Cars.—J. H. Seymour, Hagerstown, Md.

I claim the arrangement, in combination substantially as herein described, of the bowl, A, lid or cover, B, with the valve, C, and rod, f, when operated automatically by the opening of the lid, essentially as and for the purpose or purposes herein set forth.

59,281.—Manufacture of Paper.—Tal P. Shaffner, Louisville, Ky. Antedated Oct. 17, 1866.

First, I claim the depositing distributively in pulp one or more kinds of metallic powder immediately before said pulp is woven into paper, the object being to scatter the metallic particles into the body of the paper manufactured from said pulp, substantially as hereinbefore described.

Second, The covering or saturating paper with dissolved caoutchouc or india-rubber, for the purpose of holding metallic powder upon the surface of, or for carrying the said powder into the body of the paper covered or saturated, substantially as hereinbefore described.

Third, The manufacturing of paper by placing upon an inner surface thereof a coating of dissolved india-rubber or caoutchouc, either mixed or unmixed with metallic powder, or by spreading the powder over the surface of the india-rubber coating, contemplating the covering of said metalized surface with a film of paper woven thereon from pulp or by pressing another sheet of paper in such a manner as will unite the whole practically as one body of paper, substantially as hereinbefore described.

59,282.—Churn.—Zaccheus B. Shannon, Port Washington, Ohio.

First, I claim the rotary dasher, C, constructed and operating substantially in the manner and for the purposes herein before described.

Second, The rotary dasher, C, center box, B, and churn, A, constructed and operating substantially in the manner and for the purposes hereinbefore described.

59,283.—Seeding Machine. — Joseph D. Smith, Peoria, Ill.

First, I claim the bar, q, the pin, e, or its equivalent, and the bars, A' and P, constructed and used for forming an adjustment, as herein fully set forth.

Second, The bar, q, the pin, e, and the slides, a a, arranged and constructed as and for the purpose herein specified.

Third, The combination of the slides, T and U, constructed and arranged together, as and for the purpose herein specified.

Fourth, The combination of the scraper, g, the slotted piece, f, the rod, h, and the foot piece, j, constructed and used as and for the purpose set forth.

Fifth, So arranging the hounds, H H, with the hounds, C C, that when the driver changes his position to the rear of the seat, the said hounds, H H, bear against the under side of the hounds, C C, and thus make a rigid machine, as and for the purpose set forth.

59,284.—Dental Plugging Instrument.—George B. Snow and T. G. Lewis, Buffalo, N. Y.

First, We claim causing the tool holder to recede from the hammer immediately after a blow is given, in order to obtain distance between the hammer and the head of the tool holder for a new blow, substantially as described.

Second, Placing a spiral spring, G, in the top of the case to act upon the hammer in combination with either the adjusting stopper, I, or screw stop, H, for the purpose of causing the hammer to give heavier or shorter blows, as required.

Third, The combination of the ring, R, and stopscrew, S, and collar, u, for the purposes and substantially as set forth.

Fourth, We claim constructing the tubing bar, D, with a bent end, in combination with a receiving hole in the upper end of the tool holder, as shown at d', and with a notch or shoulder at its upper end, as shown, d3, to allow it to engage with the stops, L L', on the hammer, for the purpose of forming a direct connection between the tool holder and hammer, substantially as set forth.

Fifth, The feather, O, in combination with the hammer, F, for the purpose of arresting the descent of the hammer, and holding it at that point until again raised, substantially as described.

59,285.—Wagon Brake.—T. G. Springer, Conneautville, Pa.

First, I claim pivoting eccentrics, g g', h, which are constructed substantially as described, to a fixed bar, F, and a movable bar, E, in combination with brake shoes, k k, or their equivalents, substantially as specified.

Second, The hooded brake shoe, k, applied to rocking eccentrics or cams, g, substantially as described.

Third, Connecting the pivoted eccentric, g g, to the sliding brake bar, E, by means of pins passing through slotted portions, h, substantially as described.

59,286.—Machine for Assorting Bristles.—Nathan H. Spafford, Baltimore, Md.

First, I claim the box, H, as constructed with the slide, v''', and spring, x, as arranged and operated for the purposes set forth.

Second, I claim the knives, a', as arranged in combination with the box, H, for the purpose set forth.

Third, I claim the combination of the box, H, with the feed carriage, O, and slide table, Y, the whole being constructed, arranged, and operated in the manner substantially as and for the purposes described.

Fourth, I claim the method of regulating the forward feed of the bristles without altering the speed of the main shaft by means of the cam, g, the lever, S, and pins, i i, the slotted plate, K, spring, j, and frictional pulley, R, the whole being arranged and operated in the manner substantially as set forth.

Fifth, I claim the combination of the box, H, or its equivalent, with the jaws, G' and G'' or their equivalents, when the former is kept stationary during the descent of the latter to seize the bristles and is afterward fed forward when the jaws near the highest point of their ascent, for the purpose described.

Sixth, I claim the slide, G', and jaws, G'', the spring, 18, cam, 20, shaft, 9, and crank, K, in combination with the adjustable stops, L and l2, the whole being constructed and operated in the manner and for the purposes described.

Seventh, I claim the combination of the jaws, G' and G'', with the arms, n, the lever, U, and slide bar, F, the whole operating in the manner and for the purposes described.

Eighth, I claim the combination of the arms, n, of the lever, U, and slide bar, F, with the friction slide, I', and receiving box, I, all being arranged and operated in the manner and for the purposes set forth.

Ninth, I claim the box, I, as constructed in combination with the slide, I', rod, 3, and spring clamp, c, for the purpose of receiving bristles.

Tenth, I claim the india-rubber, 14, or its equivalent, fixed to the jaw, G'', when used in connection with the fluted steel, 15, or its equivalent, fixed to the jaw, G'.

Eleventh, I claim the adjustable rod, N, in combination with the slide, G, as and for the purpose set forth.

Twelfth, I claim the slide, 4, the cam, 10, the adjustable slotted standard, 5, operating as and for the purpose described.

Thirteenth, I claim the gear, P, the rack bar, Q, the carriage, O, and the thumb screw, w'', in combination with the shaft, h, as shown and described.

Fourteenth, I claim the combination of the box, H, and its attachment, the platform, Y, the rack bar, S, carriage, O, gear, P, thumb screw, w'', shaft, h, feed wheel, R, friction spring, W, spiral spring, j, lever, S, cam, D, slotted plate, K, jaws, G' G'', slide, G, connecting rod, N, slide, 4, lever, U, slide, F, receiving box and slide, I, substantially as and for the purpose set forth.

59,287.—Letter-box File.—T. K. Sterrett and W. R. Farrell, Philadelphia, Pa.

We claim the boards, C, staples, D, the frames, F and G, and their extension portions, I, slotted bar, K, rack, N, pinion, O, shaft, P, and spring, R, toothed collar, T, notched collar, U, arranged with the box having grooves, S and L, as described, and operating substantially as and for the purpose specified.

59,288.—Boots and Shoes.—Oscar Stoddard, Jackson, Mich.

I claim constructing the heels of boots and shoes of two parts, A B, the former part, A, being permanently attached or secured to the boot or shoe, and the other part, B, made separately or detached, and secured to A by means of a fastening, substantially as shown and described.

59,289.—Raising and Lowering Carriage Tops.—George Stover, Centre Hill, Pa.

I claim combining with the bows of a buggy or carriage top the hinged arcs, and rigid arms, with suitable catches for connecting or disconnecting them, and so arranging them on the inside as that the person occupying the seat may raise or lower the top at pleasure and hold it at half or full up, substantially as herein described and represented.

59,290.—Fruit Basket.—M. L. Stray and O. A. Stray, Willoughby, Ohio.

We claim the described basket, when constructed and arranged in the manner specified, being a new article of manufacture.

59,291.—Thrashing Machine.—E. Dwight Street, East Haven, Conn.

I claim the combination of the beater, D (one or more), the table, A, treadle, E, and spring, I, arranged to operate in the manner described.

59,292.—Device for Stretching Leather.—W. Strevell, Jersey City, N. J.

I claim the combination with the sliding jaws or clamps, E, of the cross bar, H, connected therewith by rods, I, having rubber or other elastic cushions or springs, J, substantially as and for the purpose described.

59,293.—Cotton Tie.—Marcus A. Tarleton, New Orleans, La.

First, I claim the tie or buckle, A, when constructed and operating as herein described for the purpose set forth.

Second, The combination of the tie or buckle, A, with hook iron, when those parts are united and operate as described, for the purpose set forth.

59,294.—Regulator for Hot-air Furnace.—Albert H. Tingley, Providence, R. I.

First, I claim the combination of the two vessels, A C, connected together by the pipe, D, substantially as described and for the purpose set forth.

Second, The adjuster, E, constructed as described, by means of which the general effects of the expansion and contraction of the air, gas, or expansive fluid in the vessel, A, upon the damper, R, is controlled, substantially as set forth.

Third, The combination of the indicator, L, or its equivalent, by which the condition of the fire or the position of the damper is indicated by the expansion or contraction of the air in vessel, A, with the vessels, A C, substantially as described and for the purpose set forth.

Fourth, The arrangement of the damper, R, and ventilator, t, upon the same spindle, b, substantially as described and for the purpose set forth.

59,295.—Pianoforte Action.—William V. Wallace, New York City.

I claim making the connections or joints between the key and hammer of a piano action, of hard rubber, or its equivalent moisture-resisting gum or compound to prevent swelling and consequent binding of said parts, substantially as described.

59,296.—Rudder. — Maximilean Wappick, Sacramento, Cal.

I claim providing the rudder blade with slots forming openings through the entire body of the rudder in such a manner

as to allow a partial efflux through said openings and thereby prevent the backing of water at the same time that the comparative vacuum on the aft side of the rudder blade in steering is being filled with increased rapidity for the purpose of more equally balancing the pressure of the water on the forward and aft side of the rudder so as to reduce the strain on the pintles and facilitate the turning and handling of the rudder in steering a vessel.

Second, I claim constructing a rudder of tubes or rounded bars firmly braced and framed, substantially as specified, for the purpose of obtaining with a small rudder blade a great effective steering action, and with a reduction of weight of material an increased strength of rudder.

Third, I claim providing the rudder step and shoe, and the pintles and braces, or their equivalents, with concentric grooves and rings, substantially as and for the purpose set forth.

59,297.—Extension Ladder.—Thos. Watson and Chas. Berry, Brooklyn, N. Y.

We claim, First, The frame, F, constructed as herein described when used for supporting and operating an extension ladder, substantially as described.

Second, The combination of the windlass, N, with the rear end of the frame, F, for the purpose of raising and lowering an extension ladder, substantially as described.

Third, Connecting the rear carriage frame, F, to the forward part of the truck, in the manner described and for the purpose set forth.

Fourth, Constructing the side bars of the ladder in the forms herein shown and described, so that the side bars of each part may form slide guides for the adjacent parts, when raising and lowering the ladder.

59,298.—Carpet Fastener.—Willis Weaver, Salem, Ohio.

I claim the carpet fastener consisting of a wire with hooked ends, b, and bent or turned at the middle to form eyes, a, as and for the purpose specified.

59,299.—Mop Head.—Irving E. Weston, Winchendon, Mass.

I claim uniting the outer jaw of a mop to the socket by means of a collar and projection, and the inner jaw to the socket by means of a screw and thread, and so that by turning either the mop head or the handle the inner jaw will travel to or from the outer one, but when the material is clamped between the jaws, then the collar shall be rigid on the socket by means of the screw drawing and holding them tightly together, in the manner and for the purposes set forth.

59,300.—Machine for Sowing Plaster, etc.—Seth Wheelock, Richmond, Va.

I claim the arrangement and combination of the triangular spiked bar, D, and connected lever, L, with the hopper, B, and bed frame, A, substantially in the manner and for the uses herein specified.

59,301.—Decarbonizing Furnace.—Samuel H. Whitaker, Covington, Ky.

I claim, First, The inclosed auxiliary chamber or chambers, B, communicating with the bottom of the furnace, and provided at the top with one or more downward discharging tweers, placed out of contact of the molten metal, for the objects stated.

Second, The annular blast chamber, B, which surrounds the lower portion of a blast furnace, and is provided with one or more pairs of opposite and downwardly directed tweers out of contact with the molten metal, substantially as set forth.

59,302.—Harvester.—William N. Whitely, Jr. Springneld, Ohio.

I claim, First, The diagonal back brace, E, in combination with the main frame, A A B C, and the drag bar, D, as and for the purpose set forth.

Second, The sector standard, I, constructed in the form shown and described, in combination with the driving wheel and main frame of a harvester.

Third, The sector plate, H, provided with the hooking flange, f, in combination with the curved sector standards, I, and the main frame of a harvester, for the purpose set forth.

Fourth, The brackets, K, in combination with the curved sector standards and driver's foot board, K, of a harvester, for the purpose of strengthening and supporting said standards.

Fifth, The driver's foot board, K, and tool box, L, when arranged as shown and described.

Sixth, The adjustable lever, O, in combination with the tongue, M, for the purpose of controlling and changing the angle of the tongue to the main frame.

Seventh, The levers, O and p, spring, r, and pin, m, in combination with the disk, P, and tongue, M, for the purpose set forth.

Eighth, The spring foot latch, Q, in combination with the strap, R, tongue, M, and main frame of a harvester, for the purpose set forth.

Ninth, The box, U, constructed as described, in combination with the crank shaft, T, cross bar. C, and diagonal brace, E, for the purpose of protecting the shaft, T, and strengthening the frame, as set forth.

Tenth, The vertically and laterally-adjustable, spring-tightening pulley, W', when constructed as described.

59,303.—Harvester.—William N. Whitely, Jr. Springfield, Ohio.

First, I claim, in combination with the quadrant, J, end rake, N, arranged and operating substantially as set forth, the guides, E and F, and arm, M, substantially as and for the purpose described.

Second, I claim the stationary hollow spindle, T, its outside surface forming the bearing for the master wheel and its inside surface forming the bearing for the rake crank shaft, substantially as shown.

Third, I claim supporting the master wheel upon a stationary hollow spindle secured at one end only, in combination with the rake crank shaft running within the spindle.

Fourth, Driving an automatic rake, through the center of the driving wheel, and from the outer side thereof, substantially as and for the purpose described.

Fifth, I claim communicating motion to the rake shaft from the outer side by means of the plate, W, or its equivalent, and the clutch pin, Y.

Sixth, I claim the combination of the sector plate, Q, hollow spindle, I, and rake shaft, V, substantially as shown and described.

Seventh, The combination and arrangement of the sleeve, C, stationary spindle, F, projecting from one side of said sleeve, and reel pulley, g, substantially as and for the purpose set forth.

59,304.—Water Wheel.—J. M. Williams, Connersville, Ind.

First, I claim the water wheel constructed as described, combining the disk, a, and buckets, c, with an annular flange, for a base, in the manner and for the purpose specified.

Second, The combination of the dome chute case, with its chute, d, and gate, g, arranged as described for the purpose specified.

Third, The combination of the wheel with the chute case and gate, arranged and operating conjointly, as and for the purpose specified.

59,305.—Floor Clamp.—Jacob D. Winslow, Wilmington, Del.

I claim the combination of the block, A, composed of wood or other suitable material with or without cars or lugs, d d, with the iron dogs, b b, and the wedge, c, as herein above described, or any other appliances substantially the same as and for floor clamp.

59,306.—Artificial Leech.—Frederick Wolff, New York City.

I claim, First, The construction of the mechanical leech with a lancet or puncturing device and with a suction piston in such manner that the lancet can be raised and set independently of the piston, operated to puncture the skin and then both the lancet and piston raised together, so as to draw the blood within the same air pump tube, A, in which the lancet and piston are arranged, all substantially in the manner described.

Second, The elastic cushion, h, in combination with the stop, b, substantially in the manner and for the purpose described.

Third, Extending the lancet handle through the cap, C, and making it capable of being set for use, independently of the piston, substantially in the manner and for the purpose described.

Fourth, The combination of the lancet, hollow piston rod, air pump barrel, A, stop, b, and spring catch, all arranged substantially as described.

59,307.—Burglar Alarm.—Henry Yerty, Sidney, Ohio.

I claim one or more barrels mounted upon a pivot or axis and employed in connection with a rod, I, extending forward of the axis, E, and having attached to it one or more cords, I', whereby the barrels are directed toward an approaching object by the object itself and then discharged, substantially as described.

I further claim the combination with the swiveled gun, A A, of the shaft, G, arm, H, rod, I, and cord, I', the whole being arranged to operate in the manner and for the purposes herein described.

59,308.—Machine for Oiling Wool for Carding Engines.—John H. Aiken, Norwalk Conn., assignor to himself and Reuben Rowley, New York City.

First, I claim giving to a perforated oil distributor an abrupt or sudden falling or dropping motion, by means of a cam or equivalent device, for the purpose of sprinkling the oil on the wool as hereinbefore set forth.

Second, I also claim, in combination with an oil distributor having an abrupt or sudden falling or dropping motion, a vibratory oil box, substantially as hereinbefore set forth.

Third, I also claim, in combination with a vibratory oil box, the crank, I, and levers, J and K, or their equivalents, for the purpose set forth.

Fourth, I also claim, in combination with a vibratory oil box, the adjustable shield or case, L, for the purposes substantially as hereinbefore set forth.

59,309.—Baling Press.—Heman A. Ashley (assignor to himself and Edward M. Doty), Springfield, Ohio.

I claim the arrangement, herein described, of the base bars, A A, press box, P S (at or near the level of the ground), double follower, K K, cross beams, a a, vertical toggle levers, I J J, cord, M, and pulleys, L j, all constructed and operating as set forth, to provide for the delivery of the bale at or near the ground.

59,310.—Pitman Connection.—M. L. Ballard (assignor to Ballard, Fast & Co.), Canton, Ohio.

I claim a pitman connection formed by the hemispherical head, B, fitting into a similarly shaped recess, the crown, a, and its opening, c, and the flanged screw bolt, E, or its equivalent, a pin, combined to operate in the manner and for the purpose described.

59,311.—Grate Bar.—Geo. H. Clarke and Charles Van Wagener (assignor to Geo. H. Clarke), New York City.

We claim, in combination with the arched bar, A, the bars, B and C, provided with vertical dovetails or similar interlockments, the slitted rods dividing the bars to admit of longitudinal expansion, and the grooves or depressions in the supports, aa, the whole constructed substantially as described and for the purposes specified.

59,312.—Rendering Apparatus.—Charles J. Everett (assignor to Lockwood & Everett), New York City.

I claim, First, Consuming the noxious or offensive gases and vapors from a rendering tank, apparatus or contrivance, by introducing them in, over or under the furnace, along with an artificial current of air induced by the flow of said steam and gas from the rendering apparatus or superheater.

Second, Uniting or mixing over the furnace of the consumer or deodorizer, an artificial current of air and the heat of the furnace, with the noxious or offensive gases and vapors, from a rendering apparatus, for the purpose of consuming them without materially increasing the consumption of fuel in the furnace.

Third, I claim the use of jets and blow pipes, applied so as to introduce the noxious gases and vapors, along with a current of air, into, over or under the furnace, substantially as shown and described.

Fourth, I claim concentrating the heat with the noxious gases and vapors from a rendering tank, along with the current of air over the furnace, and arresting their too rapid ascent by the use of a receiver, to insure their ignition and consumption, as set forth.

Fifth, I claim the use of the pipe, P, fig. 3, in the tank, substantially in the manner described for the purpose specified.

59,313.—Spring Bat.—George W. Hill, Deep River, Conn., assignor to himself and C. A. Moore, West Brook.

I claim the ball bats (or clubs) substantially as specified and for the object set forth.

59,314.—Cotton-seed Planter.—W. A. Horreell (assignor to himself and Richard Bruner), Washington, Ind.

I claim the hopper, E, with the narrow bottom grating formed by the rods, d, and the endless belt, e e, with the teeth, m, combined therewith, constructed, arranged and operating together for planting cotton seeds, substantially as herein described.

I claim the adjustable clevis, h, in combination with endless belt, e e, arranged and operating as and for the purpose herein specified.

I claim the combination of the plow, a, the furrow-opening blocks, b, and the furrow cover, c, with the hopper, E, and the endless belt, c e, arranged and operating substantially as herein described.

59,315.—Flour Sifter.—B. Illingworth (assignor to J. P. Byerly and C. A. Sheetz), Freeport, Ill.

I claim the box, A, provided with legs having a horizontal bar, d, with the disks, D and rods, b b, operating upon the semi-circular sieve, G, when arranged in the manner substantially as herein specified.

59,316.—Harness.—Amor D. Kendig, Safe Harbor, Pa., assignor to himself and John Miller.

I claim the pulley, A, attached to the bit in combination with the pulley, B, attached to the breeching, and having the line arranged in connection therewith, as shown and described.

59,317.—Still for Petroleum.—Allen Lapham, Brooklyn, N. Y., assignor to himself and Job Johnson.

I claim the arrangement of the flues, g and h, and dampers applied to the still, a, substantially as set forth, for preventing the still becoming heated above the liquid therein, for the purposes set forth.

I also claim forming the lower portions of the still over the fire narrower than the upper portion, as shown, and combining therewith the flues, g, as and for the purposes set forth.

59,318.—Telegraph Cable.—James N. Phelps (assignor to himself and Joseph Bailey), Brooklyn, N. Y. Antedated Oct. 16, 1866.

I claim the employment in a cable of one or more spiral metallic conductors, C, wound around a core of india rubber or elastic insulating material, B, which constitutes a loose insulating covering to a central conductor, A, substantially as herein described.

59,319.—Packing for Oil Wells.—Owen Redmond (assignor to Rufus F. Osgood), Rochester, N. Y.

I claim a packing device for artesian wells, packing both the tubing and the sides of the well, when the said device is capable either of being adjusted higher or lower upon the tubing, or vice versa, the tubing adjusted higher or lower within the packing, substantially as specified.

I also claim the combination of the hollow wedge, G, and screw collars, D E, for the purpose of expanding the packing disk, b, substantially as described.

I also claim securing the packing device to the oil tube at any position by means of the screw, r, provided with a head or rim around which passes a wire, cord or chain, s, substantially as specified.

59,320.—Curtain Eyelet.—John Starkey (assignor to Byron D. Verrill), Portland, Me.

I claim the eyelet, E, having shoulder, S, and terminating in oval rim, R, with or without the washer, W, and in combination with the disk, C, all constructed as described and for the purposes set forth.

59,321.—Cherry Stoner.—J. W. Thompson (assignor to himself and H. Barnaby), Salem, Ohio.

I claim, First, The combination of the griping knives, a a a, with the stripper, C, arranged to operate substantially as described.

Second, The rotary plate, D, upon the shaft, D', in combination with the cherry receptacle, B, and a stripper, C, substantially as described.

Third, The construction of the pivoted knives, a, with notches in them for receiving and holding the cherry stone during the stripping of the pulp from it, substantially as described

Fourth, The construction of the stripper, C, of spring segments, adapted for receiving through them the cherry stones and discharging the same at the opposite end of the cylinder to that from which the pulps are discharged, substantially as described.

59,322.—Slat Iron for Carriage Tops.—George W. Traphager (assignor to himself and A. M. Decker), Glen's Falls, N. Y.

I claim, First, Attaching the bows to the hinge by screws, substantially in the manner herein shown and described and for the purposes set forth.

Second, The combination of the straps, A, and finger irons, C, within each other, with the bows, B, and with the supporting iron or rail, D, when the said straps and finger irons are constructed substantially as herein shown and described and for the purpose set forth.

59,323.—Photographic Album.—Richard Van Velthoven, Philadelphia, Pa., assignor to Wm W. Harding.

I claim forming one or more flaps, b, in the strips, C, in the manner and for the purpose substantially as shown and described.

59,324.—Machine for Peeling Almonds.—Henry Wathew (assignor to Thomas and George M. Mills), Philadelphia, Pa.

I claim the two elastic endless aprons, A A, with their respective rollers and mountings, when constructed substantially as described and for the purposes set forth.

59,325.—Confection Pan.—Henry Wathew (assignor to Thomas and George M. Mills), Philadelphia, Pa.

I claim the pan, A, having the described wabbling motion imparted to it by means or devices equivalent to those herein set forth, and being provided with the described arrangement for heating by steam or hot air, the whole being arranged substantially as and for the purpose specified.

I also claim supporting the weight of pan, A, at or near its center of gravity, upon the annular bearing, L, substantially as and for the purpose set forth.

59,326.—Manufacture of Liquid Glue.—Wm. C. Watson, Paterson, N. J., assignor to himself and Ira W. Gregory, Brooklyn, N. Y.

I claim a liquid glue cement composed of the ingredients and about in the proportions specified.

59,327.—Horse-shoe Nail Machine.—H. E. and C. W. Woodford, Keeseville, N. Y., assignors to themselves and P. S. Whitcomb.

I claim, First, The intermittingly rotating anvil provided with dies in connection with the vertical and lateral hammers, and arranged to operate substantially in the manner as and for the purpose herein set forth.

Second, The securing of the dies, G, in or to the periphery of the wheel, F, by means of the dovetail groove in the flange, c, bearing against the opposite ends, substantially as shown and described.

Third, Giving the anvil an intermittingly rotating motion by means of the cam, C, and worm wheel, D, constructed and arranged substantially as set forth.

Fourth, The cutters, K K', in combination with the intermittingly rotating anvil, substantially as and for the purpose specified.

Fifth, The vibrating bed piece, B, provided with the roller, E, in connection with the plate, F, provided with the roller, G, the toothed wheel, C, having a smooth portion, n, on its periphery, and the projection, s, on said wheel, with the pendant, M, of plate, F, all arranged to operate substantially as and for the purpose set forth.

Sixth, The screw, K, and worm wheel, H, in combination with the vibrating bed, B, and the plate, F, substantially as and for the purpose specified.

59,328.—Manufacture of Sulphur.—L. A. C. St. Paul de Sincay, La Vieille, Montagne, Belgium.

I claim the within-described method of reducing sulphurous acid gas, consisting of a series of retorts, e, condensers, g, and collecting chambers, h, in combination with the main pipe, a, and secondary pipes, b, substantially as set sorth.

59,329.—Locomotive Fire Grate.—R. Eaton, Lee, England.

I claim, First, A grate composed of a series of grate bars, A, either square, round, oblong, or polygonal, and placed one above the other in the form of terraces or gradually decreasing size, substantially as and for the purpose described.

Second, The ash pan, D, provided with front guard, G, front damper, F, and back damper, E, in combination with the grate, constructed and operated substantially as and for the purpose set forth.

59,330.—Process for Making Extracts.—Julius Robert, Leelowitz, Austria.

I claim the within-described process of extracting juice from vegetable substances by subjecting them to "diffusion," substantially in the manner set forth.

59,331.—Method of Extracting Fiber from China Grass, etc.—James Steart, Bermondsey, England.

I claim the obtaining the fiber from China grass, Rhea, or Siam grass, Spanish grass, weed, flax, and other analogous vegetable substances, and the preparing, cleaning, and purifying of goat, camel, and other hair, silk, wool, and other analogous substances, by subjecting the same to the process above described.

59,332.—Clasp for Belting, etc.—George Frederick White, Hornsey, England, and Harvey Chamberlain, London, England.

We claim the apparatus constructed and operated substantially as herein described and represented in the drawings, when applied to the elongation and contraction of articles in the manner and substantially as specified.

59,333.—Construction of Glass Bottles.—Franklin N. Bullard, Worcester, Mass.

I claim the construction or making of glass or other bottles of a triangular form, and of such relative greater and lesser angles as that two, four, eight, or multiples of these numbers will pack up in a square form for economy, facility, and security in packing and transporting them, substantially as described.

59,334.—Apparatus for Distilling Petroleum.—John F. Collins, New York City.

First, I claim so constructing the mouth, a, of the still, and combining it with the gooseneck, C, or exit pipe as to provide for the admission of air around the mouth, substantially as herein set forth for the purpose specified.

Second, The construction of the gooseneck, C, or exit pipe, with the collecting channel, d, substantially as herein set forth for the purpose specified.

Third, The conducting tube, f, combined in relation with the collecting channel, d, and the exit pipe, c, of the gooseneck, substantially as herein set forth for the purpose specified.

REISSUES.

2,385.—APPARATUS FOR RENDERING LARD, TALLOW, ETC.—Radcliffe B. Lockwood and C. J. Everett, New York City, assignees of Carrol E. Gray. Patented Jan. 31, 1865. Reissued Aug. 8, 1865.

We claim, First, Making a close water jacket in combination with the tank, and a part of it, and arranging said water jacket so made a part of said sank in direct communication with the furnace, so that the water jacket shall intervene between the fire and the tank, and act as a means of conducting and distributing the heat from the fire to and around the substance cantained in the tank.

Second, Using the steam generated in a close tank from the constitutional water in the fat for the purpose of aiding and controlling the escape of the noxious gases and vapors either to a superheater for consumption in the furnace, or to a deodorizer for the purpose of deodorizing them, in the manner substantially as described for the purpose specified.

Third, Controlling and superheating the noxious gases and vapors as they escape from a rendering apparatus by passing them through a pipe or flue leading from said apparatus to a superheater, preparatory to their consumption.

Fourth, Controlling the escape of the noxious gases and vapors from a rendering apparatus by passing them through a pipe or flue into a surface condenser, for the purpose of condensing the vapor and absorbing in the water of condensation the noxious gases or as much of them as may be possible, substantially as shown and described.

Fifth, Deodorizing the water of condensation holding said noxious gases in solution by passing it through a deodorizer after it leaves the condenser, substantially as described.

2,386.—BOTTLE STOPPER.—John Matthews, New York City, assignee of Albert Albertson. Patented Aug. 26, 1862.

First, I claim a stopper which is inserted through the mouth of a bottle or other vessel and which when inserted is closed perfectly tight against a seat formed within the bottle itself by pressure in an upward direction.

Second, A prolongation of such stopper by means of a central stem, rod or other extension of the stopper in an outward direction beyond the seat of the valve for the purpose of affording facility for opening the stopper or that of receiving the upward pressure of a spring or other means of drawing the valve to its seat, substantially as herein specified.

Third, The two disks, B C, of unequal size and the interposed flexible disk or diaphragm, D, in combination with each other and with a stem or standard, A, substantially as herein specified.

DESIGNS.

2,497.—MILITARY MONUMENT.—J. S. Armstrong, Prarie du Chien, Wis.

2,498.—PAPER COLLAR.—J A. Charnley, Providence, R. I.

2,499 and 2,500.—COACH LAMP.—A. P. De Voursney, New York City. Two patents.

2,501.—TRADE MARK.—William Freudeman, St. Louis, Mo.

2,502.—CLOCK CASE.—Nicholas Muller, New York City.

Improved Metallic Cotton-bale Tie.

Producers, purchasers, and dealers in cotton understand the difficulties attending baling and re-baling by the use of the common rope ties. The rope must be large enough for the adequate strength, which makes it clumsy and inconvenient to handle, and its cost is quite an item of expense. The tie represented in the engravings is claimed to be cheaper, stronger, more readily applied, neater, and affords perfect facility for re-baling; and besides, in the matter of insurance, a great saving is made to the shipper.

A, Fig. 1, is the band or tie ready to be applied to the bale. It is a strip of thin metal—hoop iron—of the proper length, folded diagonally across itself near one end, in order to form a lap which engages with the enveloping portion. B, Fig. 2, is the tie, as it appears around the bale, ready for tightening.

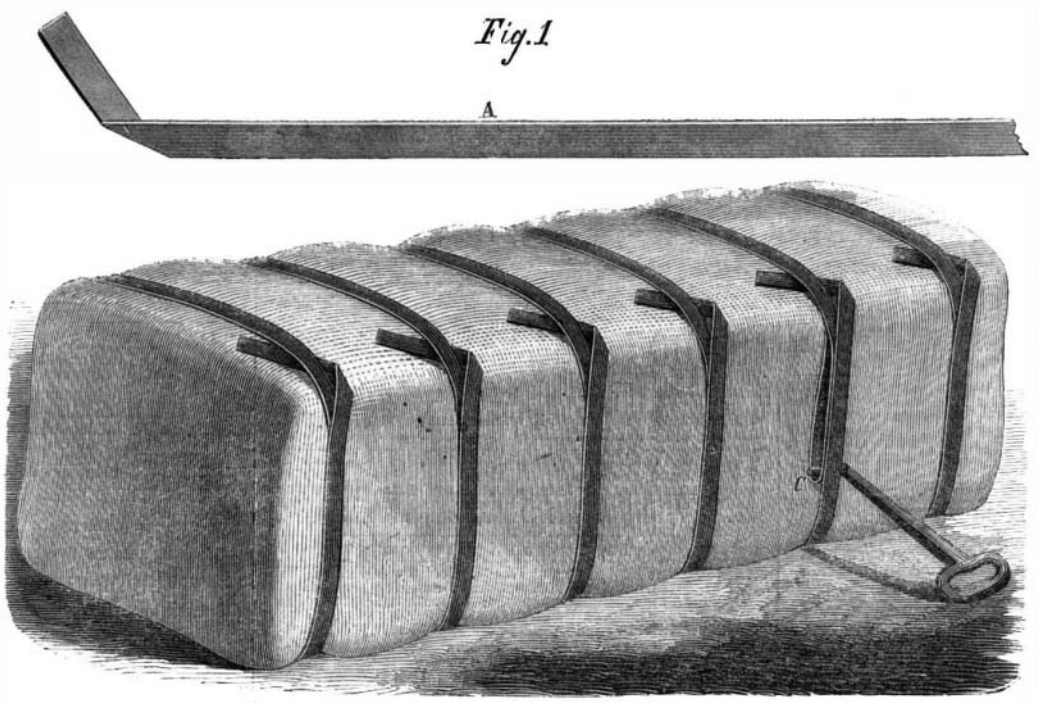
The operation is simply to place the lapped part of the tie on the corner of the bale, pass the strap around, bringing it over the lap, and tuck it inside the main portion. The end may be turned up slightly, when, by inserting a common bale hook in the loop thus formed, as at C, the application of a little muscle draws the band very tight. This simple fastening is thorough and effectual. It cannot move and will not break.

If the fastenings are to be loosened for re-baling. by pulling the looped end out from the enveloping portion with a bale hook, the tie is instantly unloosed, while it is in perfect order for being again used. There are no knots to make, no ropes to break, and no time to be wasted in securing a bale. This method has been used with great success at the general compress at Savannah, Ga.

Fig. 2

Patented through the Scientific American Patent Agency Oct. 16, 1866, by Z. W. Lee, Blakely, Early County, Ga.

Fig. 1



LEE'S METALLIC COTTON-BALE TIE.

Colors in Photography.

M. Niepce de St. Victor, in a paper addressed to the Academy of Sciences on the reproduction of natural colors by photography, describes a process for reproducing black, together with all other colors. The silver plate chlorized must be first dipped into a bath containing an ounce of an alcoholic solution of soda for every two ounces of water, to which a small quantity of chloride of sodium is then added. The temperature of the bath is to be 140 deg. Fah., and the plate is only left in for a few seconds, when it is taken out, washed, and warmed until it acquires a bluish violet hue. The plate is now coated with a varnish composed of dextrine and chloride of lead. In this way all the colors of the original, including white and black of more or less intensity, are reproduced according as the plate has been prepared, and as the blacks of the copy are either dull or brilliant.

Intensification of Negatives after Varnishing.

In answer to a correspondent, the editors of the *British Journal of Photography* furnish the following process, by which a negative, almost worthless from want of density, can have its printing qualities greatly improved. Place the plate in a dish containing methylated spirits of wine; then by gentle agitation the varnish will dissolve off, leaving the picture in a condition for being intensified to any extent, either by the deposition of silver in the usual way, by means of pyrogallic acid, or by being converted into a more adiactinic substance, which may be effected in various ways, one of the simplest consisting in pouring over its surface a tincture of iodine.

The same paper publishes a formula for the preparation of negative varnish, cheap, durable and having no tendency to crack. It is composed of methylated alcohol, 5 ounces; gum sandarac ½ ounce; when the gum is dissolved castor oil must be added in the proportion of ten drops to the ounce of varnish. If found too thick it must be thinned by the addition of alcohol.

Spontaneous Explosion of Kerosene Oil.

From a correspondent in Salem, Mass., we have received an account of the explosion and burning of kerosene oil in that city, accompanied with the loss of one life, that of Mr. William Gray. The circumstances, as related in the local prints, and in our correspondent's letter, are briefly these: The oil was being drawn from a barrel in a portion of the store separated from the other portion by an iron door. Several bucket-fulls had been drawn and emptied into a tin canister, when it flashed up, instantly setting the store on fire. This was in the day time, about noon. From one statement it is evident that the iron door was not closed until after the fire occurred. It is claimed that there was no fire of any sort in the vicinity of the oil.

Our correspondent desires to know if kerosene can ignite and explode without the agency of fire. We answer: Decidedly not. We believe that a rigid investigation into the circumstances of this occurrence would show that open fire was in the vicinity. The gas rising from some qualities of kerosene is highly volatile, explosive, and inflammable, and fires have occurred by its ignition at a distance of forty feet from the oil which generated the gas.

Important Patent Case Decided.

The case of E. D. Jordan in equity *vs.* the Agawam Woolen Mill Co., which was argued before Judges Clifford & Lowell, in May last, was decided in favor of the complainant, as the owner of the Goulding Patent All Woolen Machinery, by a decree sustaining the patent, and ordering a perpetual injunction against the sale of the machinery. This is a final decision of a case which, in its effects, is one of the most important ever argued in this circuit.

Gaining Power by a Lever.

A correspondent, J. B., asks: "Is there any power gained by connecting the piston rod of a horizontal engine with the middle of an upright lever, pivoted at one end, and connected by a pitman at the other end with the crank?"

The diagram accompanying the letter represents the piston rod of an engine of twelve inches stroke, which, being connected with a lever twenty-four inches long, at the center, gives motion, by a connecting rod, to a crank as long as the full stroke of the engine—twelve inches. Certainly there can be no gain of power in such an arrangement. The lever is one of the third class, where the power is applied between the fulcrum and the weight to be moved. On the contrary, there is a loss of power by friction, which, in this case is considerable, and no advantage—unless the increased length of the crank may be supposed to be advantageous. It must be evident that if the piston rod, or power, instead of being applied to the center of a vibrating lever, to actuate a weight removed twelve inches from that point, was attached directly to the end of the lever, at the point of resistance, it would require less power to overcome that resistance. The further from the weight and the nearer the fulcrum the power is applied, the greater the resistance and the less the effective power.

FROM THE STEAM PRESS OF JOHN A. GRAY & GREEN.