

ISSUED FROM THE U.S. PATENT OFFICE

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23 Pamphlets containing the Patent Laws and full particulars of the mode of applying for Letters Patent, specifying size of model required, and much other information useful to inventors may be had gratis by addressing MUNN & Co., Publishers of the SCIENTIFIC AMERICAN, New York.

57,454.—METHOD OF PREVENTING THE COATING OF PIPES USED IN MASH TUBS.—Albert Adams.

Springfield, Mass.
I claim the process herein described of passing cold fluid through the pipes ordinarily used for heating a semi-fluid substance, when the same is used, substantially in the manner and for the purpose hereinset forth.

bereinset forth.

57,455.—Machine for Ironing Hosiery.—Walter Aiken, Franklin, N. H.

I claim the hosiery-ironing machine, made as described, viz: of the two hollow drums or cylinders, the flexible connection pipe, the driving shaft and gears, the stationary and movable boxes, tubular journals and stuffing boxes, arranged with and applied to a frame, A, substantially as and for the purpose and to operate as specified.

57,456.—Snap Hook.—Charles H. Alsop, Middle-

town, Ct.
Iclaim the hooks, BB, secured together at one end, one upon the other, and swiveled at each end to the eye-frame, E, substantially as and for the purpose described.

57,457.—Horse Collar.—Clark Alvord, Westford,

VY 1S.

I claim the mode of fastening the tops of horse collars by an lastic coupling, and for the purposes mentioned, as above decribed and shown.

scribed and shown.

57,458.—Manufacture of Bicarbonate of Soda,
Potash, and Hydrochloric Acid.—Hayda M.
Baker, Rochester, N. Y.
I claim the application of the principle of double decomposition of chloride of sodium or potassium, and nitrate of lead, for the formation and manufacture of nitrate of soda or potash, and the subsequent application to the manufacture of the decomposition of the said nitrate of soda or potash with silicia cald, for the purpose of forming soluble silicate of soda or potash, together with the utilization of the nitric acid, liberated by said decomposition, in the formation of nitrate of lead with the recovered oxide of lead.

lead.

I also claim the application of the processes herein described and set forth, for the recovery of the oxide of lead from the chloride of lead with oxide of magnesium, and subsequent recovery of magnesia by distillation, from chloride of magnesium.

I forthermore claim the application of carbonicacid under any degree of pressure, for the decomposition of clicate of soda or potash, in the manner herein described, for the purpose offorming carbonate, or bicarbonate of potash or soda.

57,459.—EVAPORATOR.—A. Belding, Madison, Ind.
I claim the pan, arranged as described, with the hinged skim
mer, C, scum pan, G, cooling opening, J, substantially as described
and represented.

57,460.—LAMP-CHIMNEY CLEANER.—William B.

Bernard, Waterbury, Ct.

I claim as a new article of manufacture a lamp-chimney cleaner having one or more arms, BB, hinged to a handle, A, and so combined with a spring, D, as herein described, so placed above the hinge or hinges as to force said arms outwardly, all substantially in the manner and for the purpose herein set forth.

I claim, also, corrugating the pads, E, of a lamp-chimney cleaner, substantially in the manner and for the purpose herein set forth.

57,461.—BRICK.—David L. Bartlett and George H. Johnson, Bultimore, Md.

We claim a brick having bosses projecting from one face thereof and counterpart recesses formed in its opposite face, each at a point midway between the sides, center, and end of the brick, substantially in the manner and for the purpose herein set forth.

57,462.—Construction of Double-Cylindrical Structures.—D. L. Bartlett and George H. Johnson, Baltimore, Md.

We chim granarics, reservoirs, towers, etc., constructed of bricks formed substantially as herein described, and laid in double concentric walls, in combination with metallic tie-plates, substantially in the manner herein set forth.

57,463.—Mold Board for Plow.—George A. Beard Cavetown, Md.
I claim the clevation and enlarged extension of the mold board of the plow, as described above, and nothing else or more.

57,464.—Post-office Delivery Box.—Jacob H.

Beidler, Lincoln, Ill.

I claim the combination of the lever lock bolt, C, with its hooked end, h, the corrugated plate, J), with the notch, b, and the sliding plate, E, with its projecting flange, f, and staple, d, all constructed, arranged, and operating substantially as and for the purpose described.

structed, arranged, and operating substantially as and for the purpose described.

Second, I claim the lever lock bolt, C, in combination with the corrugated plate, D, or its equivalent, when so arranged that said lock bolt may be operated to unlock the door from the outside by means of a key, and from the inside by a movement of the lever, substantially as shown and described.

Third, The combination of the sliding plate, E, with its staple, d, the lever lock bolt, C, and the bell, F, so arranged that the turning of the key to unlock the door will cause the lever, C, to strike and ring the bell, substantially as described.

Fourth, The inclined plane, J, of the corrugated plate, D, in combination with the lever lock bolt, C, so arranged that when the Front end of said lock bolt is depressed by turning the key, it will strike the said inclined plane, J, and start the door open, substantially as described.

57,465.—METHOD OF TREATING SUGAR CANE.—J
C. Bell, Pawnee City, Nebraska.
I claim the within described process of treating sugar cane previous to grinding, by exposing the same to the action of boiling water, or steam, or both combined, substantially as and for the purpose described.

57,466.—RATCHET DRILL.—George W. Bishop, Stam-

ford, Ct.
I claim the screw, G, fitted in an internal screw thread in the arbor, A, in connection with the friction device composed of the slotted tube, J, and band, K, or their equivalents, for connecting the screw with the head, I, substituting as and for the purpose

57,467.—RAILROAD RAIL.—J. L. Booth, Rochester, N. Y.

I claim a rail for railroads composed of the iron body, A, and steel cap, B, ween the latter is rolled and shrunk on the body, in such a manner as to unite the parts closely, as a unit or whole, but still allow them to be easily separated and replaced, substantially as hercin set forth.

57,468.—ARTIFICIAL RUBBER.—William F. Bond,

57,468.—ARTIFICIAL RUBBER.—William F. Bond,
Philadelphia, Pa.
I claim a compound made of shellac, glue, and borax, substantially as and for the purpose described.
Also, a compound made of glue, shellac, borax, and flour, substantially as and for the purpose set forth.
Also, a compound made of glue, shellac, borax, flour, and linsed oil, substantially as and for the purpose described.
Also, a compound made of glue, shellac, borax, and molasses, substantially as and for the purpose set forth.
Also, a compound made of glue, shellac, borax, molasses, flour, and linsed oil, substantially as and for the purpose described.
Also, a compound made of glue, shellac, borax, molasses, flour, linsed oil, and emery, substantially as and for the purpose set forth.

APPARATUS FOR DRYING PEAT.—Hezekiah 57.469.

Bradford, New York City.

First, I claim a series of cars, moved graduallythrough a heated chamber, and provided with ranges of platforms, holding the peat to be dried, and then cooled, or partially cooled, by the action of the air, substantially as set forth.

Second, I claim the cars for drying peat formed of a series of sectional platforms, in the manner specified, to facilitate the reception and discharge of peat, substantially as set forth.

57,470.—CAR VENTILATOR.—J. A. Caldwell, Springfield, Mass.

I claim the arrangement of the wings, DD, on the outside of the case, C, in combination with the rod, b, packing, g, spring, d, and catch, c, substantially as described.

case, C, in combination with the rod, b, packing, g, spring, d, and catch, c, substantially as described.

57,471.—MACHINE FOR GRINDING AND POLISHING BUTTONS.—G. J. Capewell, West Cheshire, Ct. First, I claim grinding and pollshing buttons by means of a machine, h aving suitable holders for the buttons, and so arranged and operated as c subject the buttons to the action of the grading and operated as c subject the button to the action of the grading and operated as c subject to the following surfaces, substantially in the name of described. Second, Imparting a rotary movement to the button holders while subjected to the action of the grinding and polishing surfaces, as and for the purpose specified. Third, so constructing and arranging the button holders with regard to the machine, that, as the machine is operated, the buttons shall be automatically delivered therefrom after having been both ground and polished, or either ground or polished, substantially as described.

Fourth, So constructing and arranging the button holders, with results of the machine, that, as the machine is operated and the button holders in turn pass to the grinding or polishing surfaces, such case in a be. they shall be automatically so operated upon as to sufficiently lift to clear the edges thereof, and thus prevent hold in produce the combination with a common head plate, having a secribed.

Fifth, the combination with a common head plate, having a secribed.

brought to bear thereon, with summent pressure to produce the cleared grinding and polishing of their surfaces, substantially as described.

Fifth, The combination with a common head plate, having a series of one or more holders suitable for the reception of the buttons to be ground and polished, and to which head plates a rotary or other proper movement is imparted, of the grinding and polishing wheels or surfaces, arranged and operating with regard to the said head plate and each other, substantially in the manner described and for the purpose specified.

Sixth, Holding the buttons, in their holders, upon their sides or edges, by means of a spring, or other device, suitably arranged therefor, and substantially as and for the purpose specified.

Seventh, The peculiar construction of the button holders herein described, the same consisting of the hollow shaft, I, with its collar, o, in which the buttons are placed and held, surrounding casing, s, having a coiled or other suitable spring upon its inside, cap or head, t, and center spindle, u, passing entirely through the hollow tube, I, with a spring, w, the whole heing arranged together as described and operating as the headplate is revolved, and the upper ends of the button holders pass over and under the fixed arms, if and gd, substantially in the manner and for the purpose specified. Eighth, The combination of the head plate, having arranged upon it a toothed disk, Q, and stationary plate, T, secured to the said toothed disk, Q, by means of a set screw, V2, or other suitable device, with the pinlon wheels, S, of the button holders, arranged upon the purpose secified.

57,472.—MELODEON.—Peter Carbach, Cleveland,

57,472.—Melodeon.—Peter Carbach, Cleveland, Ohio.

Ollio.

First, I claim the bellows, G, valve, a, exhaust pipes, i I', and valve opening, b b'b", in combination with the valve, c, join ted arm, I, fink, J, and lever, J, and pedal, B, as and for the purpose set forth.

Second, I claim the bellows, G, arm, M, and link, f, in combination with the two-armed lever, N', valve, N, and spring, g, as and for the purpose set for th.

Third, I claim the valve, a, spring, a', bellows, G, in combination with the induction pipe, b'', reserve bellows, F, exhaust bellows, C.C', as and for the purpose set forth.

57,473.—FRUIT GATHERER.—J. T. Carpenter, Thompsontown, Pa.
First, I claim the shank, C, provided with prongs, D D, which said prongs are covered with india-rubber, or its equivalent, and constructed substantially as herein represented.
Second, The cords, F F, arranged with the prongs and the ring or loop, E, for the purpose of conducting the fruit to the conductor, G, substantially in the manner herein set forth.

57,474.—MACHINE FOR GROOVING LUMBER.—Merrill E. Carter, Syracuse, N. Y.
I claim the combination of the angular cutters, D.D., and the horizontal cutter, G. operating substantially in the manner and for the purpose herein set forth.

the purpose herein set forth.

57,475.—Device for Shirinking The.—H. W. Caswell, Yarmouth, Me.

I claim the two parallel bars, A A, connected by the screw rods, B B, and provided with the clamps, C C, all constructed and arranged to operate in the manner substantially as and for the purposes herein set forth.

57,476.—Grappling Irons.—John H. Chapman, Utica, N. Y.

Utica, N. Y.

First, I claim the grappling irons with the hooked ends and extension points, or their equivalent, substantially as described for the use and purpose mentioned.

Second, The elevating implement with or without the detaching part, constructed and operating substantially as described for the uses and purposes mentioned.

Third, The grappling irons and the elevating implement with or without the detaching part in combination, substantially as described and for the uses and purposes mentioned.

57,477. — FEEDING TROUGH. — Robert Chesnut, Richmond, Ind.

Richmond, Ind.

I claim a feeding trough divided into a series of compartments communicating with one another, and so arranged as to receive the feed simultaneously from a tank located above the trough the supply being regulated by a valve, G, actuated by a lever, H, the several parts being respectively constructed and arrange for use, substantially as set forth.

57,478. — HAY-LOADING WAGON. — Angelos M.

O1,210.— HAY-LOADING WAGON.—Angelos M. Clara, Whitney's Point, N. Y. Iclaim the shaft, G. provided with the pulley, F. with the ropes, L. D. attached respectively thereto, in combination with the slide bar, M. applied to the draught pole, N. the upright pole, B, with arm, C. projecting from it, and the levers, H, in which the shaft, t, is fitted, and having the brake or shoe bar, J, attached, all arranged and applied to a wagon to operate substantially as and for the purpose specified.

57,479.—Tank for Petroleum.—Marius C. C. Church, Parkersburgh, W. Vu.
1 claim the combination of the tank, A, of the chamber, D, pro

vided with the safety valve, C, and connected by orifices as described and for the purpose of the storage and transportation of scribed and for the purpose of the storage and transportation of petroleum or other liquid.

Second, Thetank, A, segment shaped in transverse section, the flat upper surface forming the floor of a secondary chamber.

TRAP.—Daniel Cole, Ornell, Pa. Iclaim the treadle, c, arranged within the box, A, with the rod, d, springs, s and m, door, c, windlass, y, and cords, z z, by which means the animal is lowered into the underchamber of box, A, closing the door through which it entered and imprisoning itself after passing through the gates, g, into the supplementary chambers, when arranged in the manner herein specified.

57,481. — HEAT RADIATOR. — Jessie Conger and

John Borthwick, Philadelphia, Pa.

First, I claim the heat radiator composed of metallic disks permanently attached together and combined with the body or fireplace of any stove or any device or devices, substantially the same, for the purpose and in manner above described.

Second, The combination of our heat radiator with cylinder P, for the purpose and in the manner aforesaid described.

57,482.—Horse Rake.—A. J. Curtis, D. J. Roberts and W. Curtis, Swanville, Monroe, Me. We claim the arrangement and combination of the gears on the wheels with the rack bars and their operative incchanism as described, applied to the rakehead and the axle, the whole being substantially as specified.

57,483.—FANNING MILL.—H. W. Curtis, Lockport,

III.
I claim the combination of the bar, J, shafts, I, pins, m n, and suspenders, L, with the shoe, v v, shaft, H, and slot, K, substantially as described.

57,484.—CULTIVATOR.—Charles Daniel, Lamonte

57,484.—CULTIVATOR.—Charles Daniel, Lamonte, Mo.

First, I claim the jointed handled and vibrating cultivator, h h in combination with the plow beams, c c, the axle, B, and hounds, a a constructed and operated substantially as and for the purposes herein described.

Second, I claim the suspended plow beams, c c, in combination with the hounds, a a, and the stirrups, d d, constructed and operated substantially as and forthe purposes set forth.

Third, I claim the arrangement of the oblique hanging hounds, a in connection with the center beam. A, the plow beams, c, the side braces, e, and the axle, B, constructed and applied substantially as and forthe purposes herein specified.

Fourth, I claim thearrangement of the swinging seat, c, on the center beam, A, in combination with the vibrating cultivators, h, and their jointed handles, m m, applied in connection therewith, substantially as and for the purposes increin described.

57.485.—CLOTHES WRINGER.—J. C. Dicky, Saratoga

57,485.—CLOTHES WRINGER.—J. C. Dicky, Saratoga Springs, N. Y.

I claim two cores with alternate depressions and elevations meshing with each other through their entire length, in combination with the rubber covering that conforms both externally and internally to the inequalities of the core.

internally to the inequalities of the core.

57,486. — Printing Press.—Andrew Dougherty
Brooklyn, N. Y.

I claim the combination in a printing press of the following instrumentalities, viz: the printing cylinder, reciprecating carriage for flat printing surfaces, inking apparatus therefor, ampression cylinder for curved printing surfaces, inking apparatus therefor, and carriage for the inking apparatus, all operating in the combination substantially as set forth.

I also claim the combination in a printing pressof the following instrumentalities, viz: the printing cylinder, reciprocating carriage for flat printing surfaces, two impression cylinders for curved printing surfaces arranged at opposite sides of the main printing cylinder, two inking apparatuses therefor, and two carriages for the inking apparatuses, all operating in the combination substantially as set forth.

57 487 — HAND TRICK—Samuel R Dummer New

carriages for the liking appara uses, all operating in the combination substantially as set forth.

57,487.—HAND TRUCK.—Samuel R. Dummer, New York City. Antedated Aug. 17, 1866.

First, I claim the combination of the elastic studa, b, and wheels, D, constructed and arranged in the manner and for the purpose herein specified.

Second, The combination of the flexible washers, n, and hubs, g, arranged in the manner and for the purpose herein specified.

57,488.—HORSE RAKE.—D. M. Dunham, Jeremiah Webb, and Albion Webb, Bangor, Me.

First, I claim the combination of the ratchet wheel, H, pawl, N, or equivalent, and sleeve, J, with each other, and with the wheel, F, to which they are attached and by which they are operated, and with the shaft, C, which they operate, substantially as described and for the purpose set forth.

Second, The combination of the springs, P and O, and bent rod, R, with the pawl, N, for the purpose of causing the pawl to engage with the ratchet wheel, substantially as described.

Third, The combination of the stop, S, with the pawl, N, for the purpose of disengaging the pawl from the ratchet wheel, substantially as described.

Fourth, The combination of the bent lever, U, with the frame of the rake and with the shaft, C, substantially as described and for the purposes set forth.

57,489.—Apparatus for Preparing Peat.—Louis

57,489.—Apparatus for Preparing Peat.—Louis

57,489.—APPARATUS FOR PREPARING PEAT.—Louis

Elsbery, New York City.

I claim the combination in a machine of the following implements, viz: the agitator, agitator chamber and steam pipe, all operating in the combination, substantially as set forth.

I also claim the combination is a machine of the following implements viz: the chamber for the material, steam delivery lination, substantially as set fortheres, all operating in the combination of the piston and piston chamber of the press with a discharge passage composed of sections all operating in the combination in a machine of the following implements, viz: the agitator, agitator-chamber, steam delivery pipe, and reciprocating piston press, all operating in the combination, substantially as set.

I also claim the combination of the piston and piston chamber of the press with a discharge passage of the press of the combination of the piston and piston chamber of the press with a discharge passage whose interior is tapering; all operating in the combination, substantially as set.

57,490.—Steam-engine Governor.—Rudolf Eick-

57,490.—STEAM-ENGINE GOVERNOR.—Rudolf Eickemeyer, Yonkers, N. Y.
First, A governor consisting of an escapement and a balance
making isochronal vibrations connected with the valve, by which
the speed of the moter is controlled, so as to regulate the motive
power, substantially as herein described.
Second, The combination of the escapement, D, balance, H I,
and friction spring, d, or their equivalents, with the valve, in such
manner that the latter may cease moving after the supply of
motive power has been entirely shut off, and before the nor mal
speed of the motor is restored, substantially as herein set forth.
Third, The arrangement of the lever, L, with graduating
weights, connected with the escapement and balance by means of
a loose strap, w, substantially as and for the purpose herein
specified.

a loose strap, w, substantially as an action.

Fourth, The spring, d, applied to produce friction between the escapement wheel and its shaft, and to insure the falling of the pallets of the verge or anchor on the teeth of the said wheel, substantially as herein specified.

Fith, The counterbalance lever, N, in combination with the valve and escapement, substantially as and for the purpose here-

valve and escapement, successful of the escapement and balance, Sixth, The governor consisting of the escapement and balance, the friction spring, d, weight, s, counterbalance, h', stops, c' d', and their connections, the whole constructed, combined, and applied substantially as herein specified.

57,491.—APPARATUS FOR GENERATING GAS.—J.
J. Ensley, New York City.
I claim the construction of the perforated charge cylinder or cylinders, d, open at the inner end, and the horizontal close retort cylinder or cylinders, c, substantially as and for the purpose herein specified.
I also claim the condensing chambers, k k, connected by the pipes, I l, and provided with discharge cocks, in in, when used in combination with the inclosing water tank, B, substantially as described.

escribed. I also claim the combination and arangement of the tight bar-

rel, q, and pipes, p r, with the pipe, n, for the purpose of pumping off the condensed water that gathers, without admitting air or allowing escape of gas, substantially as set forth.

anowing escape or gas, substantianly as set form.

57,492.—Coal and ash Sifter.—Warren R. Evans, Thomaston, Mc.

First, I claim the combination of the ash receiver, B, with its performed plate, c, with the vessel, A, substantially as specified. Second, In an ash sifter constituted substantially as set forth, the pins, bc, in combination with the plate, C, substantially as and for the purpose specified.

57,493.—Boot AND SHOE EDGE PARER.—William Frederick, Ashland, Pa.
I claim an improved boot and shoe edge parer, formed by combining the holder, B, cutter, A, and block, E, with each other, the said parts being so constructed and arranged substantially as herefa described and for the purpose set forth.

57,494.—Funnel Measure.—Chauncey W. Fuller,

Earlville, Ill.
Light a measuring funnel constructed with a valve, C, raised by the bent rods, D, with a spiral spring, E, and lever, F, and taving also transverse rods, B, for measuring constitutes said several parts being respectively constructed and arranged by use in relation to the funnel and to one another, substantially as set forth.

57,495.—Stem-winding Watch.—Ε. A. Giles, New

York City.

I claim the sleeve, c, and pin, f, combined with each other and with the winding arbor, c, jondent ring, C, and spring catches, n, substantially as herein set forth for the purpose specified.

57,496.—Twine Spool and Stand.—George P.

Goodwin, Lowell, Mass.

I claim as a new article of manufact rea twine spool and stand composed of the hanger, bushings, friction centers and thumb seriews, all arranged to operate substantially as and for the purpose set forth.

57,497.—WHIFFLETREE.—D. A. Gorham, Lawrence, Mass

Mass.

First, The revolving trace hooks, D, and red of bar, c, constructed as described, in combination with the winfletree, A, substantially as asserts a und for the purpose set forth.

Second, Connecting the winfletree, A, to the forward part of the carriage, in such a way that the horse can be released from the carriage in and instant whenever necessary, substantially as described and for the surpose set forth.

Thad, The spring pin, it constructed as described, in combination with the strap, T, slotted bar, G, and lever, E, substantially as and for the purpose set forth.

57.498.—FASTENING FOR RAHROAD RAMS—E B

57,498.—FASTENING FOR RAILROAD RAILS.—E. B.

Graff, Baltimore, Md.

Graff, Baltimore, Md.

Iclaim a railroad rail, A, having its ends constructed as set forth, in combination with the saddle, D, plate, P, and bott Listenings, as described, the whole being constructed, arraaged, and operated substantially in the manner and for the purpose described.

scribed.

57,499.—Pour.—John P. Gruber, New York City. I claim the application of a valve, b, to a rotary ap the purpose of clevating water, substantially as des

57,500.—Sawing Machine.—William II. Halsey, Hoboken, N. J., and Maurice Fitzgibbons, New

York City.
First, We claim the combination and arrangement of the aping, E. and arm, p. with its camend, a constructed and operating substantially as in dior the parposes set forth.

Second, Forming the handle of the machine so that it will contain and support the spool, substantially as described.

57,501.—TURN TABLE.—Freeman Hanson, Hollis,

Mc.
I claim aturn table overlated in an inclosed pit by the weight of the car or engine to by turned, as and/or the purpose described.

of the car or engine to be furned, as and for the purpose described.

57,502.—APPARATUS FOR GENERATING AND BURNING GAS FROM PETROLEUM, NAPHTHA, ETC.—
Mark E. Hanson, Newport, Mc.

I claim the hereinbefore described arrangement of a gas generator and burner consisting of the generator a, with the ribs. by the eduction pipe, d. periorated cap. f. together with the line and privation and pin, i, the said several parts being constructed and the virale combined for use, substantially as and for the purpose set forth.

57,503.—Lock.—William W. Hardee, New York

City.

City.

I claim the combination of the doubly-hooked tumblers, DE (6, key and rotating slotted post, L, when coa tructed, aranged, and operating as and for the purpose settorth.

57,504.—CAR COUPLING.—Andrew Hartman, Can-

57,504.—CAR COUPLING.—Andrew Hartman, Canton, Ohio.

Iclaim, First, The arrangement of the hook. D, the crankrod, E. the rod, F. with its stop, and the plate, G, constructed and used as and f r the purposs specified.

Second, The arrangement with the bumper, A, of the eprings, B and C, with their ends forming portions of bettom and top of the receding mouth, as and for the purpose specified.

Third, The arrangement of the crank shaft, I, provided with prongs, J J, with the spring, C, and hook, D, the several parts being constructed substantially as and for the purpose specified.

57,505.—UTERINE AND ABDOMINAL SUPPORTERS.—
Joseph S. Havens, T. M. Johnson, and C. W.
Howe, Buffalo, N. Y.
We claim, First In providing the joint of the uterine supporter with a rack, a ret serew, and a segment of a pinion, as described, by means of which it may be either locked in position or swung loosely upon the rod, U. as described.
Second, In making the tube, P. with the supporting ring, L, adjustable vertically by means of the set serew, Q, and the tube, P', as described.
Third, The combination of the ring, M, with the ring, L, of said supporter, when constructed as and for the purposes set forth.

-PIPE Tongs.-Henry Herbert, Cincinnati,

Ohio.

First, 1 claim the adjustable pipe tongs constructed with a toothed pin, C G, substantially as and for the purpersesset forth. Scoond, I further claim the adjustable gage, consisting of the sliding collar.0, and set screw. N, when constructed and arranged to operate as and for the purposes specified.

57,507.—Tug B cckle.—Henry Hise, Ottawa, Ill. Autolated Feb. 28, 1866.

57,507.—TUG B CCKLE.—Renry Hise, Ottawa, III. Antedated Feb. 28, 1866.

I claim as an article of manufacture a buckle composed of the two parts, A and C, when the former has a projecting pin, a, and is generated to the latter by means of a spring. C, attached C, s id frame, C, having at its end, L, a loop, to which the tag strap is attached, so that the other part of the frame, C, remains uncovered, all said parts being constructed in the manner and operating substantially as described and for the purpose set forth.

stantially as described and for the purpose set forth.

57,508.—Lock.—E. R. Hopkins, New York City.
I claim the combination with the handle shaft and the bolt of a lock of two separats series or sets of concentric rings or disks, one of which series, by its holder or frame, is so connected with the handle shaft as to always turn with it, while the other series is susceptible of being brought in connection with or disconnected from threadd first series, when the two series of rings or disks are so constructed and arranged with regard to each other and with the handle shaft and lock casing as to allow the bolt of the lock to be drawn out or thrown in only by proper proving the handle therefor, after said disks have been broughtto certain possitions with regard to each other, substantially as herein discorbed, and

therefor, after said disks have been broughtto certain positions with regard to each other, substantially as herein described, and for the purposespecified.

I also claimadjusting the operating parts of the lock herein described for throwing, lisboit in accordance with a graduated disk attached to the Landle shaft, and turning in connection with it and the shoular fixed graduated ring of the lock casing, when

such graduation of the said disk and ring are so arranged with regard to each other that only one of the said graduations of both theiring and disk can coincide with each other at one and the same time, substantially as herein described and for the purpose

57,509.—AUTOMATIC STEAM VALVE.—George W. and Elisha Hopkins, Brooklyn, N. Y. We claim the combination with a piston valve constructed substantially as described, of the sliding rings, S. arranged and operating in connection with the valve heads and their necks, to produce the operation of the valves by steam from the cylinder, essentially as herein set forth.

57,510.—CALENDAR CLOCK.—Henry B. Horton,

1thaca, N. Y.

First, Iclaim the cam or silding surfaces on the month cam, I. for the purpose of stiding or revolving the thirty-one-days wheel the distance of one day, for the object described; and the said surface for one day's advance of the said wheel for any other purpose connected with the supernumerary days of a calendar clock.

Second, I claim making a four, eight, twelve or more year wheel, centaining virtually the uses and position of the wheel, P. moved by the pin or part, P. or equivalent, and controlled by the boar rod, a, or equivalent and its surfaces, Pa and Pi, etc., as described, And I claim they wheel, P. when tands of eight slots, six plain and two bregglar surfaces, as described or other correlative number of parts, Priphery, slots, and surfaces, when made substantially as described. And I claim the February can, c', constructed on the year cam, E for lamp year, as described, both when used in combination with the wheel, P, and when used with any other device or mechanism in place of the wheel, P.

Talird, i claim the immediate contact, or other suitable connection, of the pawls in a, with the pawl, R, for the purpose of rendering its action more sure, as described and the so shaping the pawl R, and thus be in mutual relation at all times to each other, as described.

Fourth I claim attaching the lever, S, to the weight lever, n, in guch a manager as tracery.

pawi. R. and thus bein mutual relation at all times to each other, as described.

Fourth 1 claim attaching the lever, S, to the weight lever, n, in such a maner as to receive the action of the eccentric, A, by the rod. B, and by its taux surface, S c, to carry the pawi. R, over the teeth of the thirty-one-days wheel, as described. And I claim the lover S, or its equivalent, for the purpose of raising a pawl over one tools of the thirty-one-days wheel, and also of the year wheel and of the days of the week wheel, while in the set of making their changes. And I claim the raising or thirting of the stop pawl, K, or correlative pawls of the week and year wheels over the teeth acted on by the same, when produced by the fall in changing of their respective rods or levers.

Fifth, I claim nucking the pawl, T, with a slot in it for receiving the lever of the devices connected therewish.

57,511.—CLOCK CASE.—Henry D. N. Y.

First, I claim the combination of the two cast frames, one for the back and the other for the front of the case, with the interposed piece or part between them, as described.

Second, I claim indicing the cast frames and middle piece to getter by the botts or rads, G, or other equivalent device, as described.

gether by the boits offices, 6, or other equivalent device, as accepted.

Third, I claim the use of the wooden plugs, in connection with the connecting rods or boits, for the described purposes and uses, and the use of the said wooden plugs in the holes of the frames for educating the fronts and backs when the rods are not used.

Fourth, I claim the combination of frames and interposed middle plees, rods and wooden plugs in the said holes, the same making a whole, as described.

57,512.—IIYDRAULIC ENGINE. — Horace Hubbell,

57,512.—HYDRAULIU ENGLE.

New Haven, Conn.
I claim the combination of the cylinders and their appendages with the sector and its appendages, when the whole is so constructed arranged, and fitted that the jet of water will alternately beforced into the lower and of one cylinder to act on and elevate its piston, while the lower and of the other cylinder will be cattrictly open for the discharge of the water and the descending of the piston, substantially as herein described and set forth.

57,513.—CUTTING BOARD.—Roland C. Hussey, Mil-

ford, Mass.

I claim the manner of claimping together two or more seasoned sections, A. B. that is, by using two bars, C, and rods, D, carrying nuise, c, by which the section may be held closely together, substantially as specified.

57,514—SEWING-MACHINE BOBBIN.—Cornelia F. Ingraham, Indhanapolis, Ind.
1 claim constructing the bubble of a sewing machine substantially in the manner and for the purpose above set forth.

57,515.—VAULT LIGHT.—George H. Johnson, Baltimore, Md.

more, Md.

I claim the combination of inverted or centrally enlarged girders, c., with elongated glasses, A. A., in the construction of a vault cover, substantially in the manner and for the purpose herein described.

Also, the arrangement and combination of retaining strips over and upon the joints of the glasses and frame of an illuminated vault cover, to secure satis glasses and protect the joints from moisture, substantially in the manner herein set forth.

57,516.—PUMP.—Nicls Johnson, Ripon, Wis. I claim the arrangement of chambers, K and M, with the sucker, G, and valves, E II and I, substantially as and for the purpose herein specified.

57,517.—CENTRIFUGAL MACHINE.—Jacob O. Joyce,

Dayton, Ohio.
I claim, in constitution with a centrifugal sugar separator, a revolving feeder, operating substantially in the manner and for the purpose described.

57,518.—Steam-engine Valve.—Wm. A. L. Kirk,

Hamilton, Ohio.

First, I claim the combination of the valve chamber, A, and contiauously revolving valve, H, provided with ports, substantially as described, and for the purpose specified.

Second, The combination of the cut-off valve, L, with the chamber, A, valve, H, and its ports, constructed and operating substants and for the purpose specified.

-Dress Elevator.-G. Kammerl and D.

L. Bollermann, New York City.
We claim the combination of the supplemental operating cords, h, with the lighting reords, n, and the operating cords, g, substantially as herein set forth, for the purpose specified.

57,520.—Horse Rake.—Chas. Kugler, Cadiz, Ohio. Iclaim the combination of the Jointed parts, dd, front foot-plete, rear foot-piece, e, eross-bar, G, aind arm, F, oftherake head, D, arranged and operating substantially as described, for the purpose specified.

57,521.—HANDLE FOR CUTLERY.—Taylor D. Lakin, Hancock, N. H.

I claim the central cast-metal plate, A, cast on a core, to form a longitudinal triper opening, a to receive the tang, B, of the blane, and also cost with projections, b c d, at each side, in combina ion with the side-piece, D D, secured to A by rivets, and the tang also secured in the opening, a,by rivets, substantially as and for the purpose herein set forth.

for the purpose herein set forth.

57,522.—MACHINE FOR HOLDING THE HEADS OF
CASKS.—Joseph D. Leach, Penobscot, Me.
I claim the disks, O and P, in combination with the planw, constructed and operating substantially as and for the purposes specified.

Second, A heading holder, having levers, B and C, spring, E, ratchet, I, treadle, il. disks, O and P, and pin, W. constructed, combined, and arranged substantially as and for the purposes set

57,533.—EVAPORATOR.—J. Little and S. W. Little, Patoka, Ind.
First, We claim the central supporting framework, E. in combination with the cycle, B. pan, D, and adjustable 188, F. con.

structed and operating substantially as and for the purpose described. id. The flaring sides of the arch, with recesses or grooves, including with the pan, D, substantially as and for the

a, in combination with the pair, b, shows a set forth.
Third, The skimming shelves, g, in the pair, G, as described.
Fourth, The V-shaped shelves, l, in the compartment, H, as set forth.
Fifth, The straining shelves, k, and box, l, in the compartment, I, as and for the purpose described.

1, as and for the purpose described.

57,524.—Machine for Applying Screw Mouth-Pieces to Cans, etc.—Henry O. Lothrop, Milford, Mass.

I claim the two the shelf, made, arranged, and combined substantially as specified.

I also claim the arrangement and combination of the lever, K with the handle, I, and the spring catch, H, applied to the two lawed plates, as specified.

57,525.—HAY-STACKING DEVICE.—William Louden,

57,525.—HAY-STACKING DEVICE.—William Louden, Fairfield, Iowa.

First, I claim the bracing of the upright, A, of the crane by means of the bars or braces, B C C, arranged substantially as described.

Second, The sweep, M, provided with the pendent pin, e, in connection with the arm, J, and fork tackle, all arranged to operate substantially as and for the purpose set forth.

Third, The armanging of the crane and tackle relatively with the arm, J, and with the stack and load, in such a manner that the fork in ascending and descending will under the pull of the tackle, swing from the load over the stack and vice versa, substantially as described.

57,526.—WATER-CLOSET VALVE.—Archibald and James Loudon, Boston, Mass.
We claim the combination of the passage, a, through the spindle or post, G, with the regulating screw, M, provided with a recess, c, as described.

c, as described.

Also, the combination of the cushioning channel, c, and its opening, t, with the valve, B, and its seat, I, when combined with the valve, D, and the chamber, A, so as to operate therewith, as specified.

57,527.—Bronzing Machine.—John K. Lowe.

77,527.—BRONZING MACHINE.—John K. Lowe-Cleveland, Ohio.

1 claim the bronze box, F, feed roller, F', and handle, G, in combination with the bronzing fur roller, B, as and for the purpose et forth.

Second, I claim the revolving brush, E, and bronzing roller, D, n combination with the sheet roller, C and bronzing roller, B, trranged in the manner and for the purpose substantially as set forth.

arranged in the manner and for the purpose constantially as set forth.
Third, I claim the belts, II II, and pulleys, (1 se f t'a' b b', 12 combination with the sheet roller, C, arranged and operating in the manner and for the purpose set forth.

57,528.—Composition for Putty.—John and William H. Lucas, Philadelphia, Pa.
We claim the composition of ground marble, whiting, and lineed olito form a superior putty, substantially in the manner hereinbefore described.

57,520.—SCREENING AND SIFTING APPARATUS—Sebeus C. Maine, Boston, Mass.
I claim as an improvement in apparatus for screening and sifting for family use, the shaft, B. constructed with its guide plates, E. or their equivalents, for receiving and operating a selve or screen of any size or form, substantially as described.
I also claim for family use a selve or screen with its removable bottom in combination with a receptacle provided with a shaft operated by a cam, C, or its equivalent, substantially as set forth.

57,530.—RAILROAD WEDGE RAIL.—W. M. Martin, New York City.
I claim the wedge-shaped auxiliary rail with a curved face and three downward-hearing surface and bearing on the claim, D, one on the bottom of the chair, and one, which is curved lengthwise, upon the lower flange of the rails, substantially as and for the purposes herein set forth.

7,531.—PUMP PISTON.—Sylvester G. Mason, Elbridge, N. Y.

I claim the combination of the segmental side valves, D. D. with the central plane-sided chamber. G. said Parts being arranged in onnection with the inclosing rim, A. and cover, C. as described, not the whole operating as set forth.

I also claim the construction of the segmental valves with plane idea and a circular rim or edge, as described, for the facilities of innufacture, as set forth.

manufacture, as set forth.

57,532. — CARPET-CLEANING MACHINE. — William McArthur, Philadelphia, Pa.

Firs. I claim the com ination, substantially as described, of a steam pipe, Goro ther equivalent heating apparatus, with a carpet-battigmachine, for the purpose described.

Second, Tubeombination of the beavers, II, their spiral springs and the roller, F, with its pins, n, the whole being arranged and operating substantially as and for the purpose specified.

Third, The inclined patter of the beavers, II, brush, J, and rollers, B C c d and c, the whole being arranged for joint operation, substantially as and for the purpose specified.

57.533.—Machinery for Culting Oval Holes in

BOILER HEADS.—James McBride, Alleghany City, Pa. Antedated Aug. 17, 1866.
I claim the combination and arrangement of the wheels, k and l, shafts, h and l, disk, g, table, c, pitmax, e, wrists, o. slots, f, and cutter, x, com bined, arranged, and operating substantially in the manner herein described and for the purpose set forth.

57,534.—Machinery for Cutting Oval Holes in Boiler Heads.—James McBride, Alleghany City, Pa. Antedated Aug. 17, 1866.
Iclaim the combination and arrangement of the wheels, head piece, f, and cutter, g, constructed, arranged, combined, and operating substantially as herein described and for the purpose set forth.

set forth.

57,535.—HOISTING MACHINE. — James McCalvey, Philadelphia, Pa.

First, I claim the combination of the griplevers I, spring, K, keys, L, and springs, M, arranged and operating any elastic octacl other and to tappermanent ratchets, E, substantially indice manner hereinbefore described and for the purpose set forth.

Second, The combination of the trip levers, II, with the yoke, F, beam, C, and grip levers, I, substantially as described and for the purpose specified.

Third, The Combination of the spring, O, with the beam, C, and yoke, E, for giving an instantaneous grop to the latter when the roppor chain breaks and thus throwing the griplever, I, sinstantly infoconnection with the permanent Fatchet, E, to securely lock the cage, A, substantially as described.

57,536.—DRILLING ATTACHMENT EOP TUDNING

the cage, A, substantially as described.

77,536.—Drilling Attachment for Turning Lathes.—James McCrum, Locust Grove, Ohio.

I claim the sliding rod, I, with the spring, O, and weighted cords, L, either or both applied to it, in connection with an advantable stop mechanism composed of the bar. K, attached to the rod, I, and a head, I, on the slide, Q, all being arranged and applied to the puppethad of a lathe, to operate in the manner substantially as and for the purposes of forth.

I also claim the calports P, applied to the tube, E, and slide, Q, no combination with the drilling attachment, substantially as and or the purpose specified.

I also claim the particular arrangement of the slide, Cube, E, is spring Q, and weighted cords, I, within pupper head, C, if a lathe or drilling mandrel, substantially as and for the purpose efforth.

57,537.-FARM GATE.-David McCurdy, Ottawa,

I claim as an improvement in gates the arrangement of the post, A, roller, d, and pin, o, in combination with the extension bar, f,

latch, n, slotted swiveled post, 1, roller, m, bars, a, and post,  $\Lambda 2$ , constructed and operating in the manner herein specialed and described.

-WAGON BRAKE. - John S. McGlumphy,

57,538.—WAGON BRABE.—John S. McGrumphy, Wind Ridge, Pa.
Iclaim in combination with the rubbers, F, and levers, D, the bifurcated bar, C, and adjusting nuts, E, the same being respectively attached to the lower end of the ling bolt, B, and to the brake levers, D, substantially as and for the purpose set forth.

57,539.—SEAL LOCK.—Ward McLean, New York

City.

City.

I claim a lock whose bolt has two catches which simultaneously ngage with or disengage from the hasp and from the seal cover of that a sci cannot be removed from the lock without unlocking he same, substantially as described.

57,540.—Banjo.—George Mein, Williamsburgh, N. Y

N. Y
I claim, First, The interior rim, c, in combination with the exterior rim, A, and wit him head, B, of the banjo, substantially as described and for the purposeset forth.

Second, The manner of attaching the stem, I, to the rim, A, with a dovetabled groove and strip, substantially as herein described and for the purpose set forth.

57.541.—THRASHING MACHINE.—James H. Melick,

57,541.—THRASHING MACHINE.—James 11. Menck, Albany, N. Y.
I claim, First, a series of bars cach fitted to yield separately and radially and forming the concave or rubber, in combination with the revolving thrashing cylinder, as set forth.
Second, I claim a yielding incline, a. between the feeding table and the concave or rubber, substantially as and for the purposes set forth. Third, I claim the arrangement of the slides, k, spri gs, i, and adjusting screws, I, to the yielding bars, i, of the concave or rubber, as specified.

57,54 .—Tool for Splitting Bark upon Trees.
—E. Michaels, Palermo, Me.
I claim atool for peeling off the bark of trees, consisting of the shank, A, the three-edged knife, B, handle, C, two hand rollers, a and E, substantially as shown and described.

shank, A, the three-edged Khite, B, handle, C, two hand rohers, a and E, substantially as shown and described.

57,543.—APPARATUS FOR CARBURETING AIR.—
Patrick Milhan, Boston, Mass.
I claim, First, An apparatus for carbureting air, conducting the airto be treated through an inlet tube, M, placed about the shaft of the apparatus and terminating near the remote end of the apparatus ina cone-haped mouth, M, so as to increase the distance to be traversed by the air after it is delivered within the generator, substantally as shown.

Second, I also chim in an apparatus for carbureting air, the use of open tubes supplied with birtles, or their equivalent, revolving through or in a bath of hydro-carbon and exposed, one merging threfrom, to currents of air, substantially as shown.

Third, I also claim the cover, Q, with its outlet pipe, Q, its cones, P and Q, and tubes, U, constructed and arranged substantially as sho n and described.

Fourth, I also claim forming a space, V, for receiving the carbureted air, i combination with the tubes, C, and the cone, O, and rubes, U, substantially as shown.

Fifth, I also claim covering the tubes, C, with an absorbing mate laif for the purpose of exposing to the fresh air a surface or suriaces wet with hydro carbon, while such air is on its way to the end of said tubes, substantially as shown.

57,544.—Stovepipe Damper.—Richard S. Miller,

end of said tubes, substantially as shown.

57,544.—Stovepipe Damper.—Richard S. Miller,
Battle Creek, Mich.

First, I claim the construction and arrangement of the two inverted half conce, C C, procs, b b, crank shan, 18 g, and link, h, incombination with the stove pipe, A, as herein described and shown for the purpose setforth.

Second, The combination of the pivots, b b, notches, c, e, and rock shaft, 18 g, in the construction of a damper formed of two inverted half conce, and arranged in a stove pipe, all as herein described and for the purpose set forth.

57,545.—BURIAL CASE.—William K. Miller, Can-

ton, Ohio.
I claimma ing and carbonizing burial cases of wood, as and for the purpose substantially as herein described.

57,546. — WATER ELEVATOR. — Jacob E. Moeller,

Terre Haute, Ind.
I claim the combination of the bucket, E, strap, D, pulley, C, ratchet wheel, R and m, crank, K, and spring catch, n, the whole being constructed, arranged, and operated substantially in the ma ner andror the purpose set forth.

57,547.—Wrench.—Isaac Morris and C. M. Morris,

Fair Haven, Conn.
I claim the combination of the movable jaw, and vibrating rack, with the main rack, and enlargement of the bar, near that attenancy jaw, when the whole is constructed and fitted for use substantially as herein described and a t forth.

57,548.—CARRIAGE.—J. J. Morris, New Bedford,

57,548.—CARRIAGE.—J. J. MOTTIS, New Deutiora, N. J.

Iclaim, First, The independent axle, C, having the hub and wheel-attached permanently thereto, and revolving with the wheel, substantially as set forth.

Second, The independent axles constructed as set forth, in combination with the sleeve, II, when arranged to operate as shown and described.

Third, In combination with the axles, C, as described, I claim the friction rollers, a, arranged and operating as settorth.

Fourth, I claim the combination of the bince, o, book, h, and spring, m, when said parts are arranged in connection with the vehicle, as shown and drescribed.

57,549.—REAPING MACHINE.—Robert Morris, Sa-

57,049.—IVEATING Lem, 1049.

lem, Ind.

lelain, First, The square, h, and spring, H, operating with the discharger, F, sub-tantially as and for the purpose specified. Second, The index, K, and set seriew, I, in combination with the spring, H, arranged with the bar, G, and square, h, substantially as described for the purpose specified.

57,550.—DRY DOCK.—John W. Munger and W. O.
Jones, Portland, Mc.
I claim, First, The combination and arrangement of the docks,
D123456, with the channel, B, and central basin, A, as and for
the purposes set forth.
Setond, The arrangement and construction with the docks, as
described, of the elsterns, 78 9 1011 12, in the manner and for the
purposes set forth.
The j, In combination with the docks so arranged and constructed, theways and carriages, ontlets and gutters, as and for
the purposes set forth.

57,551.—APPARATUS FOR GENERATING ILLUMINATING GAS.—Henry B. Myer, Philadelphia,

ATING GAS.—Henry B. Myer, Philadelphia, Pa.

I claim, First, The arrangement of the chambers, A B C D, in their relation to each other, for the purpose specified.

Second, In combination with the chambers, A B, I claim the pipe, b, and valve, b', constructed and operating substantially as and for the nurpose set forth.

Third, I claim the herein described construction and arrangement of the nurpose set forth.

Third, I claim the herein described construction and arrangement of the pump, as shown in Figs. 18, whereby it is adapted to the use of quicksliver as a packing, as specified.

Fourth, I claim such a structure of the pump, as shown in Figs. 18, whereby it is adapted to the use of quicksliver as a packing, as specified.

Fifth, I claim in combination the perforated coil, C, double flask, d, and perforated disk, I, arranged to operate as specified.

Seventh, I claim operating the valve, b', by means of the float, B'gath, I claim the arrangement of title pumps. E F, train of wheels, G, ratchet wheel, R, lever, Q, and gas holder, O, as and for the purpose herein specified.

57,552.—HARVESTER.—Wales Needham, Rockford,

Itla.

I claim, First, The head, H', spool, K, face plate, J'', in comitation with the arbor, m, crank, P, sping, i, reins, a' a'', aran; cdas and for the purpose set forth.

Second, The arm, B, rest, E, lever, I', tooth, c', spring, d, in ombination with the spool and reins, arranged as and for the untrocks specified.

urpose specified.
Third, The standard, A, and arm, B, in combination with the
ernated coupling, C, and rest, E, as and for the purpose set

forth.

57,553.—FRUIT PICKER.—John Neff, Jr., Pultney,
N. Y.

I claim the blades, A and B, when made substantially as specified, also the griper, C and sprig. D, when made and applied as specified, and used for the purpose set forth.

57,554.—HAT.—William S. Nelson, St. Louis, Mo. I claim the arrangement of the band, A, the connected side frames and rimframes with the hoops, E and G, substantially as described and for the purpose herein set forth.

57,555.—COVERED Button.-Nelson C. Newell,

Springfield, Mass.
I claim the disk, C. formed in such a manner that when inserted in the button it may be expanded laterally, substantially in the manner and for the purpose herein described.

-Saw Mall.-Isaac H. Newton, Oakfield, Mich.

MICH.

I claim the bars, G, arms, H, and frame, I J K, combined with each other and arranged in relation to the head and tail blocks, B B, substantially as herein set forth for the purpose spe ified. 57,557.—SORGHUM STRIPPER.—David H. Nichols,

Richmond, Ohio.

I claim the combination of the sliding plates, F, stationary plate, B, provided with apertures, c, and the springs, d, the whole being constructed, arranged, and operating substantially as herein set forth for the purpose specified.

in set forth for the purpose specified.

57,558.—PIANO.—John W. Otto, St. Louis, Mo.
1 claim, as my improvement in the pianotorte in general, and
also in the grand pianoferte in particular, First, The patticular
manner in withothe case of the piano (including wrest-plank, iron
frame, plane of stringing and soundboard) lainclined contracted,
elevated, and the area of the soundboard enlarged for the purpose of attaining convenient dimensions, a more effective soundboard, and other improvements resulting from this transformation, and claimed herein separately, substantially as described.
Second, The removable end casings, FF, as described and for
the purpose specified.

Third, The removable back casing, g, as described and for the
purpose set forth.

Third, The removable back casing, g, as described and for the purpose set forth. Fourth, The keylid, k, its joints, n, n, and their connecting rod, m, arranged as described and for the purposes specified. Fifth, Apertures, r, in the soundboard, serving as passages through wi ich the dampermovement is transmitted, as set forth. Sixth, The soft-pedal arrangement by means of a cointed rall, J, and india-rubber slips, K, or its equivalent, substantially in the manner and for the purposes set forth. Seventh, Setoffs, M, M, on each side of the keyboard, in the manner set forth and for the purpose specified.

57,559.—DISINFECTOR.—J. D. C. Outwater, New

York City.

f claim the combination of the glass vessel, C, with a depression on its bottom, and a metal cup furnished with hollow arms, the whole being adapted to revolve in adjustable bearings in a frame, substantially as described and represented.

57,560.—BED BOTTOM.—Joshua D. Patton, Daven-

port, Iowa.

I claim a bed bottom composed of a series of cords or other light series c, secured at one and to the frame of the bed bottom and passing loosely through the other, having heads, E, upon their other ends, substantially as and/or the purpose described.

57,561.—MEDICINE.—W. Petre, New York City.
I claim the within described medical composition, made of the ingredients in the manner and proportion as set forth.

57,562.—Cultivator.—Michael Porter, C. E. Jenkins, and G. F. Jenkins, Terre Haute, Ill.
I claim the combination of the adjustable swivel brackets, a, plow beams, E. E., and axic, A, arranged and operating in the manner as and for the purpose herein specified.

namer as and for the purpose herein specified.

57,563.—CORN CULTIVATOR.—H. S. Potter, Fairfield, Iowa.

First, I claim the frame, A, with the driver's seat, B, placed on to rear end, and connected at its front end to the hounds, D, of he drangly pole in front of the axie, E, substantially as and for the purpose set forth.

Second, The frame, J, in combination with the plow beams, L, connected by swivel joints to the rod, K, above the axie, E, tranged in connection with the frame, A, to operate substantially as and for the purpose specified.

Tilind, The lever, Q, attached to the front part of the frame, A, and applied to or arranged in connection with the frame, J, and the loop, I, with roller, m, substantially as and for the purpose set oth.

the loop, I, with roller, in, substantian, as standards, G M, to the forth.

Fourth, The connecting of the plow standards, G M, to the frame, A, and beams, L, by means of the pivoted bars, bg. provided with wheels, c h, substantially as and for the purpose specified.

specified.

57,564.—KNIFE AND SCISSORS SHARPENER.—T. T. Prosser and James Lawson, Chicago, Ill. We claim the toothed disk, D, in combination with the frame, A, having the notch, e, formed therein, when said parts are arranged to operate as and for the purpose set forth. 57,565.—Saw Mill.—Paul Pryibil, New York

City.
First, I claim the changeable guide, F, for the purpose set

forth. Scood, The construction of the guide, F, with shoulder, c, screw, f, nut, h, spring, j, and jaws, c d, substantially as and for the purposes described.

Third, The yielding spring arms, b, or their equivalent, in combination with the adjustable journal box of the sh ft, B, substantially as and for the purpose set forth.

57,566.—CAR COUPLING.—Samuel Y. Quest, Wellsburg, W. Va.

Claim the combination of the levers, G G 'H J K and M, together with the inclined plane, N, when properly constructed and adapted to each other, so as to secure the object proposed substantially as hercinbefore explained.

-Blacking.-W. F. Quinby, Wilmington,

claim a blacking composed of the within ingredients in the anner and about the proportion, substantially as described. 57,568.—POTATO DIGGER.—George Ray, Kinder-

Sixth, The lever, k, short levers or arms, i, links, i\*, and chains, i', arranged with reference to each other and with the bars, i, of the plow. D, and therearwardly projecting end of the draught pole. Bs, substantially as herein set forth for the purposes pecified. Seventh, The supplemental tilting frame, F, sustaining the platform, H, and goarranged aponthe rearmost end of the machine and combined with suitable operating mechanism, that its rearmost end will be raised simultaneously with the elevation of the forward end of the machine, substantially as herein set forth for he purpose specified.

57,569.—Propeller for Canal Boats.—Ebenezer

Raynale, Birmingham, Mich.

I claim a vesselconstructed with a submerged recess, A, at the stern divided through part of its length by a partition, B, and having in one of its compartments, A2: a reciprocating propeller. D constructed with valves, L, the said parts being respectively constructed and arranged for use, substantially as set forth.

constructed and arranged for use, substantially asset forth.

57,570.—VALVE FOR WATER CLOSETS.—Joshua Regester, Baltimore, Md.

First, I claim constructing a valve, G, of the parts, gh and i, and arranging it within a box through which waterflows, substantially as described.

Second, The continuation of the enlarged cupped portion, having flattened spaces, I, and the reduced cylindrical guide, h, with the packing, i, said parts being arranged within a chamber A, and allowe the outlet chamber, substantially as described.

Third Thestem, D, constructed with the parts, d, on it as described in combination with the device, h J, in the manner and for the purpose described.

for the purpose described.

57,571.—Machine for Grinding Tools, etc.—N.

B. Reynolds, Auburn, N. Y.

I claim in combination with a revolving grindstone a tapping instrument which on being vibrated backs the surface of the stone and thus preventes it from glazing or polishing, constructed and operating substantially as herein described.

I also claim in combination with a pair of damping tongs that are pivoted to a plate or rest traversed by grinding ways with hextend past the face of the stone, a tappet or cam. m. for vibrating sad tongs upon its pivots, substantially as herein described.

57,572.—STOVEPIPE DRUM.—Francis E. Ruth, and

57,572.—STOVEPIPE DRUM.—Francis E. Ruen, and Jos. De Long, Upper Sandusky, Ohio.

First, We claim the combination of the Interior tapering or thimble-shaped tube, F. with the exterior drum. A, and interior central pipe, I, substantially as herein described and for the purpose set? oth.

Second, The combination of the disk-shaped damper, J, rod, K. Second, The combination of the disk-shaped damper, J, rod, K. and lever, L, with each other and with the outer cylinder, A, the interior tapering tube, F, and the interior pipe, I, substantially as described and forthe purpose set forth.

57,573.—CHURN.—Geo. H. Sanborn, Boston, Mass. Iclaim the arrangement of the two sets officiats, 1 and 2 and 3 and 4, in the manner and for the purpose set forth when combine 6 with the truck, C, tho shaft, A, and the cream box, B, as shown and set forth, as also the use of the arms, k k k, and the projections, 111. when arranged and used as shown.

57,574.—Lock.—James Sargent, Rochester, N. Y. I claim the totating tumbler, I, when separated and isolated in action from the permutation wheels, and so arranged that any inward pressure upon the boit will be exerted on the bearing of said tumbler, and have no action or effect upon the said permutation wheels, substantially so and for the purpose herein specified

said tumber, and the station wheels, substantially as and for the purpose account field.

I also claim in combination with the turning tumbler, I, the cog bar, H, and lever, G, arranged as operating as herein set forth. I also claim the combination and arrangement of the wheels, C, cam disk, E, pivoted lever, G, cog har, H, and turning tumbler, I, the whole operating as herein specified.

CONDEDATOR—Herrman S. Saroni,

I, the whole operating as herein specified.

57,575.—STEAM GENERATOR.—Herrman S. Saroni, Marrietta, Ohio.

First, I claim the arrangement of the feed water pipein a coll beneath the bollers in and around the burners, as and for the purpose of secribed.

Second, The combination substantially as described of the boller, the branch pipe, the feed water pipe, and the burners, for the purpose of securing a circulation in the boller, as set forth.

Third, the arrangement of the burner with its conductors in contact with the boller, so that the boller forms the heater cap for the burner.

for the burner.

57,576.—Feed-water Heaters for Steam Generators.—Herrman S. Saroni, Marietta, Ohio. First, I claim the generator frum, A, arranged between the feed pump and boller, as described.

Second, The arrangement of the drum and burner so that the drum serves as the heater-cap for the burner, as described.

Third, The arrangement of the drum, the burner and the feed pipe, substantially as and for the purpose described.

Fourth, The combination substantially as described of a series of generators or drums each having its own burner and enterace, and exit pipe, but all having the same main feed pipe and escape pipe.

cape pipe.

57,577.—APPARATUS FOR STEAMING VEGETABLES,
ETC.—Herrman S. Saroni, Marietta, Ohio.

I claimas a new criticle of manufacture, a steaming apparatus,
having one or more appetures, each or all of them covered with
a hood, as above described, connecting with a boiler, for the admission of steam, and a separate pipe for the escape of the water
of condensation.

of condensation.

57,578.—VAPOR BURNER.—Herrman S. Saroni,
Marietta, Ohio.

First, I claim a vapor burner having a series of conductors surrounding the jet, but without a heater cap, substantially as and
for the purpose described.

Second, The combination of the burner and conductors with
removable ring and heater cap, substantially as and for the purpose described.

Third. As a new article of manufacture, a vapor burner or heater having the upper or heat generating portion made of metal of
high conducting power, while the lower or fluid converging portion is made of metal of lower conducting power, as described,
for the purpose of concentrating the heat at the generating or

Sault, New Haven, Ct.

Sault, New Haven, Ct.

First, I claim a valve suspended from the axles of the rollers, substantially in the manner and for the purpose herein set forth.

Second, The adjustable saddle plates, m m', adjusting screws, n n', and bridge pieces, 1 l', in combination with the slide valve, rollers and axle, substantially as described, for the purpose specified.

57,580.—GRAIN METER.—William Schnebby, Hack-

57,580.—Grain Meter.—William Schnebby, Hackcnsack, N. J.
Iclaims grain meter so constructed and combined with a velocity-registering apparatus that the velocity which a body of
grain moving through the meter imparts to its grain wheel will
be correctly registered, whereby the weight of the grain which
has thus passed through the machine may be correctly secrisimed.

Second, I claim a grain hopper and trough supported upon a
shaft or journals, upon which they may oscillate, in combination
with a grain wheel, so that a quantity of grain moving in said
hopper and trough and upon said wheel will have the effect to
start, operate, a d stop a velo city-registering apparatus, by which
means the weight of different qualities of grain may be correctly
determined.

57,581.—Fence.—Conrad Seabaugh, San Antonio,

Texas.

First, I claim an improved fence formed by securing the rails, B, to the poets. A, with wires, C, said wires being arranged and applied substantially as described and for the purpose set forth. Second, Securing the ends of the rails, B, to the poets, A, by a series of receivers formed of a single wire, C, extending from the bottom to the top of the post, said wire being attacked to the post either by passing it through the post or securing it with nails, substantially as described and for the purpose set forth.

orth. Third, Forming each receiver of a separate piece of wire, the

57,582.—CHURN.—Oran W. Seely, Buffalo, N. Y. Iclaim the removable and adjustable dashers when used in combination with one or more washers, as herein substantially

set forth.

I also claim the wedge and openings, in combination with the removable and adjustable dashers and washers, for the purpose and substantially as herein described.

57,583.—I Ohio. -HARVESTER.-John F. Seiberling, Akron

I claim the arrangement of the cut-off rod, D, with the crank arm, G, and arm, I, substantially in the manner described, so that the Urst movement of the rod in falling will be downward and away from the leaning grain, substantially as and for the purpose set forth.

-Button-Hole Cutter.—G.H. Seymour and

57,584.—BUTTON-HOLE CUTTER.—G.H. Seymour and V. R. Barnard, Vaterbury, Ct.

We claim one or more set screws so combined with one-half or division of a pair of sheam as to work through said division against the baring surface of the other division, to determine the lateral adjustment of the two, and of the cutting blades thereof, with reference to each other, substantially in the manner as hereinset forth.

We also claim an adjustable hearing styln or washer monones.

forth. also claim an adjustable bearing strip or washer upon one on of a pair of spears combined with two set screws in ivision, bearing against said strip or washer, substantially in anner and for the purpose herein described.

57,585. — SHUTTLE CARRIER FOR SEWING MA-CHINE.—John Shellenberger, Hampsh re, III. I claim the shuttle carrier, A, made substantially as described, with a cocket near it sim for the shuttle and a higged gate, D, which confines the shuttle and covers the bobbin, said gate being provided with suitable means for locking and unlocking the same, as above set forth.

as above set forth.

37,586.—Machine for Sawing Stone.—Simeon Sherman, Weston, Mo.

First, I clai m the bed, K, hung or arranged substantially as shown and described, to admit of being turned and also of being adjusted out of a horizontal plane, for the purpose specified. Second, The spring, N, and patterns, M M, in combination with the frame, F, and the frame, G, provided with the saws, II, substantially as and for the purpose set forth.

Third, The sic ec, a, applied to the shaft, B, in combination with the cords or chains, I, counterpoise, E, and suspended frame, F, containing the saw frame, G, substantially as and for the purpose specified.

57,587.—LAMP.—A. G. Smith, Jersey City, N. J I claim the reversible burner, B, constructed substanti described, to be used in lamps or lanterns, as set forth.

described, to be used in lamps or lanterns, as setforth.

57,588.—CALIPERS.—Philo Soper, Buffalo, N. Y.

First, I claim placing a yielding foot on one of the legs of a calipers, substantially as above set forth.

Second, I also claim the supplementary index, D, for indicating the movements of the yielding foot, substantially as described.

Third, I also claim the combination of the yielding foot, A, to arm, H, and the thumb set series. J, substantially as set forth.

Fourth, I also claim the combination of the graduated table, C, the index, D, and the yielding foot, A, substantially as shown.

57,589.—LAMP.—'Thomas E. Sparks, Norwich, Conn. I claim the combination, as well as the arrangement, of the elevator or wire, i, with the lamp, A, and the tube, B, applied to the wick tube of such lamp, in manner and so as to operate substantially as described in the combination of one or more standards, gg, or he equivalent thereof, with the lamp, A, the tube, b, and a mechanism applied to such tube for suspending or supporting it, whether such mechanism be composed in part of the finme guard, B, or the same and the disk, o, or be otherwise properly construct does not not be the fine and the wick to descend within the said tube for reduction of the flame, as specified.

descend within the said tube for reduction of the flame, as specified.

I also claim the combination of the flame guard, B, with the tube, b, and the lamp.

I also claim the combination of the disk, e, with theflame guard, B, the tube, b, and the lamp.

I also claim the combination of both the elevator and the ball (or their equivalents) with the lamp and the slide tube, b, provided with means of arresting the upward motion of such tube on and applied to the wick tube so as to perate with respect to the wick thereof substantially as specified.

I also claim the combination of the flame guard, B, or the same and the disk, e, with the clevator and the ball (or their equivalents) the lamp and the slide tube, b, provided with means of arresting the upward movement of such tube and applied to the wick tube, and so as to operate with respect to the wick, substantially as specified.

57,590. — Hepge Trimmer. — Wilson and Hiram

57,590. — HEDGE TRIMMER. — Wilson and Hiram Sperry, Trivoli, Ill.
We claim the hinged beam, d, having the kni e bar attached thereto, as arranged whiereby it may be elevated or depressed by the fever, g, and vertical nether bar, h, substantially in the manner and for the purpose as herein set forth.
Second, The arrangement of the circular saw, M, and circular bar, N, in connection with file finger bars, n, arranged substantially in the manner and for the purpose as herein set forth.
Third, Thie application of a circular plate, M, provided with saw teeth and suitable fingers, n, arranged and operating substantially in the manner described.
Fourth, The combination of the circular plate, M, with the kinfer are, the oncoperating simultaneously with the other, substantially in the manner as described.
Fifth, The arrangement of the foot lever, C, on the shaft of the driving wheel, G, substantially lin the manner and for the purpose as herein described.
Sixth, The arrangement of the driving wheel. B, large cog wheels, D, two smaller ones, G, large beyeled cog wheel, H, and smaller beveled one, I, on can'the shaft, J, substantially in the manner and for the purpose as herein set forth.

57,591.—Combined Sewing-work Holder and

SCISSORS SHARPENER. — Charles E. Staples, Worcester, Mass.

I claim a combined cam-formed cloth holder for sewing purposes and a scissors sharpener, all constructed substantially as described.

57.592---MACHINE FOR PRINTING YARN. -Edward J. Stephens and Hiram E. Green, Pawtucket,

R. I.
We claim the use in machines for printing yarn of the plain roller, B, and flute(i roller, B', in combination with each other, and with suitable color rollers, substantially as and for the purpose set forth.

-GRUBBING MACHINE.-W. W. St. John, St

Louis, Mo.

I claim the combination and arrangement of the roller, A, with the hounds or braces, B B, the springs, b b, and the pole, C, substantially as and for the purpose set forth.

57,594.—ARTIFICIAL ARM.—Ignatius Stoffel, Wash

ington, D. C.

First, I claim the construction of the last or outer articulations or joints, or means of operating the outer or last phalanges, by the steet bands without the guide, substantially as shown and described.

Second, Pivoting the thumb and lever connecting therewith at the second joint, in the manner and for the purpose substantially

as described.
Third, The construction, arrangement, and operation of trigger, n, in combination with levers, x x, connecting rods, h and k, substantially as described.
Fourth, The adjustable band, o, when constructed and arranged as described.
Fifth, The bent orbell-crank lever, 1, constructed and arranged to operate as and for the purpose described.
Sixth, The loops or rings, s and t, when arranged as and for the purpose described.

ends of which are passed through the post and secured thereto, 57,595.—Pump.—Ransom E. Strait, West Oneonta, substantially as described and for the purpose set forth.

N. Y.

I claim, in combination with the suction tube, A B, having aper-ires, P P, the thimble, F, with it openings, O O, constructed and perating in the manner and for the purpose set forth.

57,593.—EGG BEATER AND LIQUOR MINER.—E. C. Strange, Taunton, Mass.
I claim the combination of the piston, C, tube or cylinder, A, and one or more perforated or wire gauze olates, B, substantially as herein described and for the purpose set forth.

57,597.—SKATE.—Wm. A. Sutton, New York City. I claim the clamping bar. E. furnished with an inwardly projecting spur, m. when pivoted at or near the center of tac heel plate, C. in combination with the adjustable bars, D, turnished with spurs, c, substantially as described.

57,598.—Lady's Fan.—Billy Todd, Reading, Pa. I claim a fan consisting of the handle, I, body 5, and spring joint, 23 and 4 constructed and adapted for operation substantially as described.

57,599.—Expanding Cheese Hoop.—Robert Van

Horn, Northfield, Ohio.

I claim the herein described devices for contracting or expanding the hoop, consisting of the strap, D, and roller, E, or their substantial equivalents, the several parts being constructed, arranged, and operating as and for the purpose set forth.

57,600.- India-Rubber Car Spring. - Richard

•Vose, New York City.

I claim springs for railway cars and other purposes, formed by the combination of disks, rings, or transverse strips or layers of elastic or non-elastic fibrous material, with india-rubber, or its equivalent, by cementing or vulcanizing the same in contact with such material, all substantially in the manner and for the purpose herein set forth.

57,601.—WASHING MACHINE.—Daniel T. Ward, Cardington, Objo.

of, ool.—WASHING MACHINE.—Daniel I. Ward, Car-dington, Ohio.

First, I claim the wash-board, F, constructed and arranged with reference to the vessel, A, substantially as described, and for the purposes spec fied.

Second, The combination of the wash-board, F, and the roller, B, substantially as and for the purpose described.

Third, The arms, S and T, roller, X, spring, u, when arranged in connection with the wash-board, F, androller, B, substantially as and for the pur ose specified.

59,602.—Fluid Lens.—Oscar Warden, Cincinnati,

Ohio.

I claim the lamp, E, base, F, and reflector, T, connected and moving together, when used in combination with the guide ways, b, server, G, segment bar, K, and plane convex fluid lens, A a, all conscructed and operating as and for the purposes specified.

57,603.—WHIP SOCKET.—Theos. Weaver, Harrisburg, Pa. Antedated Aug. 13, 1866.

First, I claim the interposition of a rigid disk or disks between the inner walls of a whip socket tube, so as to lock in it the but of a whip stock, that it cannot be removed without the use of a key, or other equivalent instrument, substantially as herein described.

section. Second, The construction of the locking thimble, as shown in Fig. 2 and 3 with the crescent, B, springs, R R R, and keyhole, C; also the construction of the thimble chamber, as shown in Fig. 6, with the crescent, II. the notches, X X X X X, and key guard, O, substantially as iterein set forth.

Third, The combination and arrangement of the subjects of the second claim, when the thimble is so operated by the key, shown in Fig. 7, as partially to open or close the gibbous aperture. Of the tube, subjects of the second claim, when the thinble is so operated by the key, shown in Fig. 7, as partially to open or close the gibbous aperture. Of the tube, subject and it is the manner ancitor the purpose as herein shown and explanaed.

57,604.—SEED DISTRIBUTOR.—M. D., E. C. and A. Wells, Morgantown, West Va.
We claim the box, A, constructed as described, the shaft B, provided with the slot, a, or its equivalent, block, b, strip, d, and langes, S, the whole constructed, arranged, and operating substantially as herein set forth.

57,605.—Grain-hulling Machine.—J. A. Welsh,

Note: A. Welsh, Xenia, Ohio.

I claim the combination of the feeding tube, B, and the conical end or part, s, of the drum, d, or its equivalent, the amount icetimbeling regulated by a gate, b, substantially as and for the purpose herein specified.

I also claim the transferring cylinders, K L M, constructed and operating substantially as and for the purpose herein set forth.

I also claim the lining of connected sand, or ics equivalent secured to the grates, F F, substantially as and for the purpose herein specified. 57,606.—Churn.—Isaiah M. West, Wilmington,

Ohio.

I claim the combination of the dasher ring. A, and aperture, d. whether conical or not, in the dasher boards, B B, substantially as and for the purpose herein specified.

57,607.—Ordnance and Fire-Arm.—Rollin White,

57,607.—ORDNANCE AND FIRE-ARM.—ROHID WHITE,
Bridgeport, Conn.
I claim, First, The ring, F, of larger circumference than the
projectile, applied in combination with the calarged chamber, a
t of form aseat for the projectile, and to traverse in the enlarged
chamber and carry the ball to the rear of the bore of the barrel,
substantially as and for the purpose herein specified.

Second, Providing the accelerating chamber constructed in the
barrel of a piece of ordnance or fire-arm with vents, m, epening
into the barrel in front of the muzzle of the said chamber, substantially as and for the purpose herein specified.

08.—Horse-Power Apparatus for Elevat-ing Hay, etc.—Frank Wicks, Upper Sandusky,

I claim, in combination with the sweep and hoisting or rope wheel, a clutch, and a brake lever operating therewith, substantially in the manner and for the purpose described.

57,609.—Horse Hay Fork.—Frank Wicks, Upper

57,609.—Horse Hay Fork.—Frank Wicks, Upper Sandusky, Ohio.

Ichaim, First, The hinged self-acting brace, F, for setting the for kandholding it improper carrying position under its load, substantially as described.

I also claim the combination of the hinged ball. D, its shank, E, and the brace, F, pivoted to said shank, and carrying a roller, d, as and for the purpose substantially as here i described.

I also claim, in combination with the roller, d, in the brace, and the recess, c, in the shank, C, the pivoting of the trigger ent point behind and below said recess, so that when unrestrained it will swing out of the way, and allow the brace and its roller to find their proper setting positions, substantially as described.

I also claim, in combination with a trigger that is operated to throw the brace out of its place, by means of a cord passing over a pulley in rear of said seat, and arranged in the snankin rear thereof, the controlling devices, it, for restricting the motion of the trigger on each side of its center of motion or pivot, substantially as described.

I also claim, in combination with the self-acting hinged brace, F, a permanent notch, stop, recess, or its equivalent, for the purpose of receiving and retaining the brace, thereby holding the fork in proper position while clevaling its load, substantially as described.

BLOCK FOR HAY ELEVATORS.—

described.

57,610.—TACKLE BLOCK FOR HAY ELEVATORS.—
Frank Wicks and F. F. Fowler, Upper San-

HTANK Wicks and F. F. Fuwier, Opper Sandusky, Ohio.

We claim a hoisting block, the sheave of which is covered, where the rope runs in contact with it, with lead, or a composition of lead with other soft metals, for the purposs of coating or glazing an olled rope when used therewith, and to prevent it from cutting, chaing, and wearing, substantially as described.

57,611.—STOPPINGS FOR HORSE' FEET.—Albert S. Wilkinson, Pawtucket, R. I. First, I claim aspongostopping, having a V-shaped recess, a, cut in its rear edgelor receiving theires of the foot, substantially in the manner and

Second, I claim an air-cushion stopping, B, substantially in the manner and for the purpose set for the Third, I claim an clastic pad stopping, C, of rubber constructed either solid or hollow, and secured in place by a web, DD, substantially in the manner and for the purpose set for the Fourt. I claim's heel dup d, attached to a web covering the sole of the foot, constructed and operating substantially in the manner and for the purpose described.

57,612.—Sawing Machine.—George L. Wilcox,

Hebron, Conn.
Iclaim the arrangement of the double dog piece, M. ratchet, N. handle, O, and springs, Land P. with the guide piece, J. when arranged for forte peration, substantially as described and for the purposes specified.

57,613.—STEAM TRAP.—Joseph Wilson, Manchester, N. II.

ter, 18. 11.
I claim the arrangement herein set forth whereby the valve mayenter and traverse inits seat, sleeve or cylinder, and thereby prevent the straining, bending, or otherwise deranging some part of the apparatus.

And in combination with a valve arranged to enter and traverse in its seat or sleeve, I claim the rod which operates the valve, substantially as described.

57,014.—Exca Vating Machine.—Caleb Wineger, Union Springs, N. Y.
I claim the hinged shovel, A, operated by means of the handle C, notched bar. B, and spring. D, not confining myself to the precise arrangement, but by equivalent means, substantially the same, to accomplish the same object.

57,615.—NACHINE FOR MANUFACTURING EAVESTROUGHS.—Samuel Yates, Clarence, Iowa.
I claim the entire combination of the half oval bar, A, the bands, the epiraj springs, C, and c, ech and every part of the machine, which combination greatly facilitates the process of making tin spouting for houses, lessens the labor, and secures more perfect spouting when and ded.

57,616.—Door Bolt.—George T. Allamby, Bangor,

Alc.

I claim the combination of the socketed arm, f, or its equivalent, with the bolt, A, applied to the case as explained, the operate knob, G its shank, d, and the curved slot, b, made in the bolt case, the whole being arranged substantially in the manner and so as to operate as described.

I also claim the combination of the covering plate, c, the slot, b, the shank, d, the knob, C, and the socketed arm, f, as applied to the bolt and its case, the whole being arranged substantially in the manner and to operate as explained.

to the bolt and its case, the whole being arranged substantially in the manner and to operate as explained.

57,617.—Machine for Making Envelopes.—
Edward Allen, Norwalk, Conn.
I claim, First, Arranging the following apparatus of an envelope machine to revolve about an upright axis, substantially as epecified.
Scoonl, The combination in an envelope machine of one or moresets offolding apparatus and etatocary feed board or feed table, substantially as and for the purpose herein described.
Third, The combinationin as envelope machine of one or more volving plungers a fixed feed table or feed board, and a die plate which moves a certain distance with the said plunger or evolving plungers, and afterward returns to a fixed position relatively to the self decilooutly of feed table, substantially as and for the purpose cerein described.
Fourth, The silking plus, nand n', operating conjointly to deliver the envelopes from the rolding apparatus, substantially as herein act forth.

Eith. The chipping jaws, n' w', so arranged as to swing to and from the table, a, to remove the envelopes from the folding apparatus, substantially as herein act forth.

Sixth, The curved and inclined stationary cams, i's u.v. arranged in relation to the wings; c'd' e' foliate folding apparatus, substantially as herein act forth.

Seventh, The bright of the purpose specifical seventh, The bright of a propagation of the purpose precibed.

Eighth, The arrangement of the pivoted bars, b's, and their of the purpose precibed.

Eighth, The arrangement of the pivoted bars, b's, and their of the purpose precibed of the pivoted bars, b's, and their of the purpose precibed.

Eighth, The arrangement of the pivoted bars, b's, and their of the purpose precibed.

Eighth, The arrangement of the pivoted bars, b's, and their of the purpose of the proper pin act, b, when the proper pin act, and the proper pin act, and a proper pin a control of the proper pin act, and the proper pin act and

arranged with reference to the rotating cut. 1.1. but. U. interest roller f, and arm, N, substantially as herein set forth for the purpose; pee lifed.

Tenth. The spring, y', curved arm, x', and spring catch, b'', arranged with reference to each other and to the nipping laws, u'w' projection, d', and stationary cam, K, substantially as herein set forth for the purpose specified.

set forth for the purpose specified.

57,618.—CAR COUPLING.—Cyrus W. Baldwin (assignor to himself, W. D. Richards, and W. E. Russell), Boston, Mass.

Iclaim the cripleyment of the balanced lever, B, when made and applied substantially in the manner and to operate as before described.

I also claim, in combination with the said lever, B, the revolving bock, C, and locking bar, D, substantially as set forth and explained.

I also claim the peculiar construction of the block, C, as made with the recess, d, shoulders, d1 d2, and notch, g', all as described.

57,619.—CULTIVATOR.—Jacob Bergen (assignor to himself and Peter Kaufman), Plain Township,

Olijo.

First, I claim the peculiar arrangement of the bent axie, H G F G II, in connection with the frame, A, and the wheels, G, substantially in the manner and for the purpose specified.

Second, The peculiar arrangement of the back braces, E, and frame, A, in the manner and for the purpose specified.

57,620.—Apparatus for Turning Shafts.—John F. Begardus (assignor to himself, Joseph Anderson, and T. K. Schermerhorn), Brooklyn,

derson, and I. I. N. Y. N. Y. First, I claim the rings, c and d, divided and otherwise connected and fitted together as described, in combination with one one wheel, f, or other c gluvalent means for imparting a move-tent of rotation to said ring. d. Second, I claim the arrangement of the rests, k and I, and sols, I and o, with a rotating ring, substantially as described.

tools, I and o, with a rotating ring, substantially as described.

57,621.—Pipe VRENCH.—Amos Call (assignor to the Ben'is & Call Hardware and Tool Co.),
Springfield, Mass.

I claim the combination of the spring, F, with the parts H and E, of the wrench, when arranged and operating substantially in the manner and for the purpose herein described.

the manner and for the purpose herein described.

57,622.—REVOLVING FIRE-ARM.—Charles A. Converscand Samuel S. Hopkins (assignors to the Bacon Manufacturing Co.), Norwich, Conn.

We claim, First, The ring, D. encircling the pepper box, A, in front of its shoulder, g, in combination the rewith and with server, g, and bracket, C, arranged and operating in the manner and for the purpose herein represented and described.

Secontl, We also claim, in combination the base pin, F, about which the cylinder revolves, the ring, D, the many chambeired cylinder, A, and the bracket, C, substantially as above shown.

57,623.—METHOD OF PROPELLING STREET CARS.—
J. W. Conway (assignor to himself and Wm.
Convay), Madison, Ind.
I claim the endless serew, I.G. in combination with the driving or crank shaft, N. and the axle, D. of one pair of the wheels of a carriage or car, substantially as and for the purpose specified.

57,624.—STARTING CAR.—Henry H. Covert (assignor to himself and Smith R. Woolley), Detroit, Mich.
I claim the pinch bar or lever, D, one or more app lb d to a railroad car arranged in connection with a toggle, E, and bar, I, or

their equivalents, for the purpose of acting upon the wheel or wheels for the purpose of acting a car under the action of the team or other hotor, but the man as described.

I furth relain the draw har, it having a spring, M, upon it and provided with the probating road, N, pasting through a slot in the box or case, L, in example of the the noteh, e, in bar, I, substantially as and for the purpose set forth.

57,625.—Wagon Brake.—George W. Growe (assignor to himself and Benjamin Martin), Cincinnati, Ohio.

Climati, Otilo.

Iclaim an improved wagon brake, formed by combining the lever brake bars. D. and P. the connecting lever, I, connecting rod or bar, J. and the operator; I ver, Is, with each other, the said parts being contructed and arranged substantially as here in described and for the purpose set forth.

57,626.—ROOFING CEMENT.—Joseph Darby (assignor

to himself and Stephen Brewer), Cortlandville,
N. Y.
I claim an clastic cement or composition of matter composed
f the afore-aid herein named ingredients, as and for the puroses herein set forth and described.

57,627.—Saw.—J. E. Emerson, Trenton, N. J., assignor to American Saw Company, New York

Signor to America.

City.

I claim the teeth, B, fitted at the back by tongue and groove plats, 13, to the shoulders, c, . 4the saw plate in combin tion with vects, servers or keys, C applied to the heets, c, or the teeth, the tio parts are constructed and arranged substantially as crein represented, so that in inserting the Leeth the skionders, must be trist placed in position, and the heets afterward involved laterally to the saw plate and there secured by the rivets, as explained.

MACHINE.—Henry J. Ferguson,

troduced laterally to the saw plate and theresecured by the rivets, c., as explained.

57,628.—Brick Machine.—Henry J. Ferguson, New York City, assignor to Selah Reeve, Brooklyn, N. Y.

1chier, Brist, The combination of the rotating disk, J. having a centar cam, h, and outer eccentric or cam-shaped ring, I, with the pirman. I, to the plunger, II, and slide, K. to the pluman. I, for op and the pinner, II, eddied and substantially as described. Second, The combination of the disk, J, with its radial slide, f. priman, I, and planers, II, eddiedally connected as described through a slot in the standard, c. by keys, d, fitting in key ways or modely seen the set ferth. The lotted levers, I. S. pivoted together by joint pins, p. ta tandloos; collars, q. p. besses, s, and lock nuts, t, substantially as specified.

Fourth, The combination of the pitman. L, with the arm, P, on the rock shalt, Q genred together by a joint pin, u, arranged to fit in anoth at the back of the pitman and held in gear therewith by a catch, w, and spring, z, essentially as and for the purpose or purposes herein set forth.

57,629.—Breast Strap Hook.—Henry Foulkes,

57,629.—EREAST STRAP HOOK.—Henry Foulkes, Utica, N. Y., assignor to John II. Chapman. I claim the securing or closing the opening of the hook by the use of a serew in the manner substantially as described.

57,630.—HYDRAULIC GOVERNOR.—James E. Gilies-

57,630.—HYDRAULIC GOVERNOR.—James E. Gilicspie (assignor to Gillespie Governor Company), Boston, Mass.

I claim the combination of a governing device with the cylinder, d, its pisten. I, and the spring, n, or the equivalents of these, when arranged to operate together, substantially as specified.

Also, in combination with the foregoing of a passage capable of variation, when so arranged as that by such variation the rate of speed of the movement of the piston, under influence of its spring.

Also, combining a governor and the object governed thereby, in such a mannerthat, while the connection between the governer and the governed object on be broken to prevent his woment of the latter has no direction, the connection causing movement of the latter has no direction, the connection causing movement of the governed object in the reverse direction remains operative, substantially as shown and described.

57,631.—Machine for Bending Horseshoes.— William F. Goulding, Providence, R. I., assignor to The Goodenough Horseshoe Company, New

York City.

I chaim, First, The revolving flat bed or table, B, provided with suit by forming blocks, C, and guides, b b, in combination with suit by forming blocks, C, and guides, b b, in combination with suitable dationary bendied instruments, F F, arranged substantial, yes described, for the purposes specified.

Second, The combination of the stat onary finger, H, with the forming block, G, and the said revolving bed, B, arranged substantially as described, for the purposes specified.

57,693.—BUCKLE.—Henry C. Griggs (assignor to Smith & Chings) Woterbury, Conn.

Smith & Griggs), Waterbury, Conn.
I claim the combination of the frame part with the tongue part,
then they are consured, connected, and fitted to operate, subinitially as herein described and set to th.

57,633.—Life Boat.—Henry Hensel (assignor to Louis Sulter), Carver, Minn.
I claim the air chambers, G and H surrounding the self-adjusting cylinder boat. A operating independently on the center short, J, urranged and combined with end propellers, K, forthe purpose a steering and turning the boat flower, and the same time preventing the boat flow m shading, giving the greatest safety to the passengers as a baoyant its boat.

passengers as a bioyant regiont.

57,634.—Printing Press.—George J. Hill, Buffalo, S. Y., and Stephen Greene, Philadelphia, Pa., assignors to Stephen Greene and H. G. Leisenning, Philadelphia, Pa.

We claim First, The vibrating cam levers, constructed and arranged for the operating of a guided cross-head, D, substantially as herein set forth.

Eccond. The guides, M.M. composed of plates constructed and arranged for vertical settenth of the control of the cards differing in thickness and for the retention and guidance of the cards, substantially as set forth.

Third, The combination of the said guides, M. M', with the telector card low, N.

tially as set forth.

Third, The combination of the said guides, M M', with the tleker or eard box, N.

Fourth, The movable receiving box, N', where the vertical position of the same is controlled by the quantity of cards in the box, N through the medium of the devices herein described or any equivalent to the -ame for the purpose specified.

57,635.—Pump.—Edward B. Juckett, Roxbury, Mass., assignor to himself and Hunneman & Co.

I claim my improved doubleacting force pump, or peculiar arrangement of the valve chambers,  $D \cap G$ , the induction chambers or passages,  $E \in F$ , and the pump barred, A, as described, such valve or chambers to be provided with valves, and valve openings, and such barrel to have a piston to operate as specified.

36.—MAGAZINE FIRE-ARM.—Nelson King, Bridgeport, Conn., assignor to O. F. Winchester.

claim the arrangement of the retracting hook, a2, eve, d2, upon the breech pin, 1, so a3 to retract the shell, substantially in the manner herein described.

57,637.—STEAM GENERATOR — Charles Kinkel, New York City, assignor to Charles Wehle, Hoboken, N. J.

I claim the new method herein described for preventing ex-logicated steam boilers, by a combination of a steam boiler with on mech anism subtrantially and searched, which keeps the water a the boiler in constant and regular motion.

57,638.—HAT-PRESSING MACHINE.—Monroe Morse (assignor to himself and Aaron H. Morse), Franklin, Mass.

ination as well as the arrangement of a solid

elastic presser with the mold, its head, and mechanism for expanding such presser by pressure against it, substantially asspecified.

panding such presser by pressure against it, substantially asspectived.

I also claim the application of the head, C. to the mold by means of ceners, as deer had, so that such head, while bring withdrawn from the mold, such the regulation of an included position in order to facilitate the application of a hat to the presser laise claim the combination of the bar, G, the sides, II and their tins, with the toggies or progressive levers, opq qr, and the ool levers.

I also claim the combination and arrangement of botts, w w, cathes, v, and levers, yy, applied to the mold and the vibrating head, as described

I also claim the combination of the adjusting serew, g, and its nuts, ii, with the bar, G, the vibrating head, C, and dist, E, and presser, D.

57,639.—APPARATUS FOR CARBURETING AIR.—Junes F. Rowley, William M. Sloane, and James E. Woodruff, Buffalo, N. Y., assignors to themselves and John D. Cross.

We claim an apparatus for cachar-ting air or gas, baying a reservoir. B, for hydro carbon, a time chamber D, and chamber ers, E and F, containing parous substance, all arranged and constructed in the manner and for the purpose substantially as herein set forth.

strocted in the manner and for the purpose substantially as herein set forth.

57,640.—Platform Scale.—Elnathan Sampson, Lansingburgh, N. Y., assignor to Alfred Clark Hitchcock, Troy, N. Y.

First. I claim the location, under the platform of a scale, of a series of botterant levers, L. with yokes, F, and suspenden links, c.c. which connects said yellow with co-departing and competing parts for supporting the patherm of the scale, substantially as herein described and for the purpose set to the series of bell crank levers with their long arms in upright position below, and placed transversely to the length of the plat term, or to the trackway over the platform of the scale, substantially in the manner as herein described, and for the aurpose set forth.

Third, When arranged in combination with the lever, E with the yoke, F fulcium standard, D, and platform timbers, D. B. I claim the supporting plate or fraine, J, or its equivalent device, constructed and arranged substantially in the manner and for the purpos as herein set forth.

Fourth, I claim the arrangement, relatively to and with each other, and with the riatform timoers, of the respective bell crank levers with yokes, supporting plates of frames, and nicrom standards, as herein described, when the same are so connected with each other by connecting parts as to epecate together for the purpose of a platform scale, substantially in the manner as herein described, when the same are so connected with each other by connecting parts as to epecate together for the purpose of a platform scale, substantially in the manner as herein described.

purpose of a platform scale, substantially in the manner as herein described.

57,Gei.—Weigh-Lock Scale.—Elnathan Sampson, Lansingburgh, N. Y., assignor to Alfred Clark Hitchcock, Troy, N. Y.

First, I claim the combination of the bell crank lever, F, and the direct sustaining levers, C and C', when said sustaining levers are arranged in horizontal parallel positions to the side walls of the lock chamber, substantially as described, and for the purposes as sectorth.

Second, Arranged in connection with the bell crank levers, F, in manner as described, I claim the combination of the bell crank levers, c', and transmitting lever, i, substantially as and for the purpose herein set forth.

Third, I claim connecting the devices arranged on opposite sides of the lock chamber, and constituting a weighing apparatus for weighlock scales, by arranging the mechanical means employed for that purpose under the hoor of the lock chamber, in manner substantially as herein described, and for the objects as set forth.

Fourth, Arranged and connected with the bell crank levers, F, in manner as described, I claim the combination of the bell crank levers, tri, with the bell crank levers, erfor the purpose of transmitting the weight of the vessel resting upon the craftle, to the scale beam, in manner substantially as herein described.

Fifth, In combination with the bell crank levers, c', and trans-

scribed.

Fifth, In combination with the bell crank levers, c.c., and transmitting lever, i, the manner herein described of connecting the weighing apparatus of the opposite ideas of the lock chamber, and the bell crank levers, it and s, all arranged with reference to each other, substantially as herein sections, I claim the arrangement of the said direct sustaining levers, for the parpose of a weight-look scale, in manner substantially as herein described.

57,642.—VENTILATED LARDER.—John Sloan (assig or to himself and John W. Jones), Phila-

delphia, Pa.

I claim the combination of box, AA, air pipe, KK, and discharge pipe, K'k', charcoal box, AA, with larder, FF, in the manner as locatin described, orany other, and substantially the same, so as to obtain the desired and intended effect.

57,643.—Steam-generating Apparatus.-A. Smith (assignor to himself, G. V. Cresson, and George W. Hubbard), Philadelphia, Pa.

I claim the method substantially as described, of constructing a steam generating apparatus by combining a series of annular generating vessels with a bottom connecting reservoir.

generating vessels with a bottom connecting reservoir.

57,644.—Machine for Making Cast-steel Cast-ings.—John Blake Tarr (assignor to himself and P. E. Merrihew), Chica go, Ill.

I claim, First, subjecting the cast-steel, while in a liquid state, and with in the mold which is to give it the desired form, to such a degree of pressure as will cause the explaining of and hap from it and render it more solid, by means substantially as described.

Second, Constructing the bottom of the mold at those points which are directly under the meates, of adjustable blocks of plumbago, or other as alogous substance, substantially in the manner and for the purpose described.

Third, The manner, substantially as herein described, of constructing the ingates with cutters on them, when said ingates are applied and operated as described for the purpose as forth.

Fourth, The use of adjusting servers in conjunction with mold sections, A B C, and the hooks g b, or their equivalents, substantially as described.

57,645.—SAFETY WATCH POCKET.—T. W. Terry (assignor to himself and Geo. W. Hoff), Baltimore, Md.

I claim the combination of the plates, A.D., hinged staple, c, and button, c. con-tructed and operating substantially as and for the purpose described.

57,646.—TEMPLE FOR LOOM.—George L. White, Cumberland, R. I., assignor to W. W. Dutcher & Co., Milford, Mass.

I claim the combination of the tooth, g, and the notch, f, or their mechanical equivalent or equivalents, with the temple, its arm, D, spring, P, and frame. E. the said tooth and notch being for the purpose bereinbefore explained.

57,647.—OPERATING INDIA-RUBBER SPRINGS.

641.—OPERATING INDIA-RUBBER SPRINGS.—J. W. Wilder (assignor to himself and Ebenezer Butterick), New York City. claim the protecting case, B, and plunger, C, in combination h a piece of india-rubber, A, substantially as and for the pure described.

57,648.—Piston for Steam Engine.—Geo. Browcr, Ashton under Lyne, England, and John Quatter, Barnsley, Eng.
We claim in combination with springs composed of a series of plates, the wedges, e. and wedge pieces, d', combined, and arranged to operate in the manner and for the purpose substantially as herein described.

57,649.—BLEACHING ANIMAL AND VEGETABLE FI-BERS.—C. M. E. du Motay and C. R. Marechal, BERS.—C. M. E. du Motay and C. R. Marechal, Metz, France. We claim, First, the method of bleaching vegetable and animal

fibers and tissues by the employment of manganates, permanga-nates, and permanganic acid substantially as herein des ribed. Second, The metiod of producing the said manganates and per-manganites, substantially as herein shown and described.

57,650.—LUMBER WAGON.—C. F. Hall, Toronto, Canada West.

Cannum vvest.

I claim the roller A, with perforated projecting ends, the perperiod that, E in combination with the boxes, B, of the renaling
an of wager, provided at its forward end with rollers, G and
carriers in all constructed and operating substantially as describ
al for the purpose specified.

entor the purpose specified.

57,651.—Mode of Producing Etching Grounds.—
R. Gotigetrea, Munich, Bavaria, assignor to
Lenneig & Clemm, Philadelphia, Pa.

First, I china the entire process as above, preparatory to atching
the decign or designs on pates or surfaces of any description, said
control free process of thing crystalization of solutions.

Second I clean the process of thing crystalization and solutions for the
production of magay on surfaces: that can be etched, in the usual
method of engrave is.

incthod of engrave a.

57,633.—Steam Plow.—John Fowler, Jr., Cornhill, Fluy'and. Wm. Worby. Ipswitch, Eng., and David Greig, New Cross, Eng., assignors to Wm. P. Tatham, Philadelphia, Pa.

We claim, in machinery for actuating agricultural implements by steam power, combining the two drains, which districtly yield up and let off the rope by which the agricultural implement is drawn, with the driving shaft of the steam engine, or equivalent motor by means of the cogged or toothet wheels on the drain, the two sets of pinton-or the driving shaft, and the clutches and riction stepa or the equivalents thereof, substantially as and for the purpose specified.

the purpose specified.

57,653—STEAM PLOW.—Robert Fowler, London, Eng., and Robt. Wm. Eddison, Leeds, Eng., Executors of John Fowler, Jr., David Greig, and Richard Noddings, Leeds. Eng., assignor to William P. Tatham, Philadelphia, Pa.

We claim in gaiding the laying of the rope on to the per pheer of the drum. In machinery for drawing agricultural mplements by steam power combining that guiding lever for guiding the rope with the fluched drum for drawing and winding the rope by means of the earn and differential wheels, substantially as described and for the purpose specified.

We also claim can meeting the guiding lever with the winding the rope by means of the earn had differential wheels, substantially as described and for the purpose specified.

57,654.—BURGLAR ALARM AND DOOR FASTERIER.

Frederick Oakley, London, Eng., assigner to John Collins, New York City.

I claim. First, The revolving eccentric block, k. with pins. I, attained described.

Second, The combination of the barrel or powder chamber, f. with the street, g. naple, c, and bars, A and B, substantially as berein shown and described.

57,655.—METHOD OF TEMPERING KNIFE SECTIONS

FOR HARVESTERS, ETC.—Asa R. Reynolds, Auburn, N. Y.
First, I. Littu hard tempering the edges of steel blades or scoons by trans of a blow from a hammer or drop press delivered
nace conditions and with a reaction, substantially such as hereix
ceribed.

described.

Second. I claim supporting the blade, section, or blank, to be hard tempered by a drop die or hammer, upon or by the edges, upon to the described.

Third, I claim means for forcing or directing a blast of air upon that portion of the blade which is not to be highly tempered when used in connection with a hammer or drop press conditioned for giving a blow and for reaction, substantially as herein described.

## REISSUES

REISSUES.

2,342.—Gas-Pipe Joint.—Henry L. Case (Administrator of the Estate of Richard C. Robbins, deceased), Henry L. Case, and Jesse M. Keen, Jersey City, N. J., and John W. Mason, Brooklyn, N. Y., assignees of said Richard C. Robbins, deceased. Patented Jan. 13, 1863.

Claims a joint forgas and of the slimitar pipes, constructed in the manner horoin bove described, that is to say, the socket end of length or resulted of the lawing strong formed in it caps a property of the strong strong strong for the said of the lawing as constructed in the strong strong strong and strong as covered a property of the strong stron

2,344.—METALLIC STIELD FOR BREAST STRAPS.—
Martin W. Pond and Henry E. Mussey, Elyria,
Ohio, assignors to Martin W. Pond. Patented

Sept. 6, 1864.
We claim, First, The seat, f, and base of horns, d.d., the same being constructed and operating in the manner and for the purposes substantially as specified.
Second, The curved metallic slide, having curved metallicorns, as described, in combination with the projections or base of forms forming the camping seat, f, of the safety, the whole being constructed in the manner and for the purpose described.

-BAG FRAME.—Albert J. Sessions, Bristol, onn. Patented June 12, 1866.

Conn. Patented June 12, 1866.
I claim shtting or punching the strip substantially as described, on a to form the side and rim of the corner or corners of a frame none piece of a ctal.
I also claim forming the inside corners square at a, substantially

as descrined.
Third, Forming the inside corners of a baz frame square, while
throutside corners are flattened, curved, or rounded, by means
substantially as described.

substantially as described.

2.846.—REFRIGERATOR. — Peter A. Vogt, Buffalo, N. Y. Patented May 22, 1866.

I claim the door, D. constructed as described, combined and arranged with the rack, r, of the fee compartment, so a to turn down and form a platform to continuation thereof, or latroducing and conveying fee from the chamber, B, substantially in the manner specified.

I also claim the arrangement of the induction air passage through the arrip sipe, 1, and extension pipe, m, in combination with the trap, k, or its equivalent, whereby the air entering is carried to the top of the fee chamber and cooled in its passage, substantially as set forth.

RECEIPTS.—Whenmoney is paid at the office for subscriptions, a receipt for it will always be given; but when subbers remit their money by mail, they may conside arrival of the first paper a bona-fide acknowledgment of the reception of their funds.