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46,201.—Rotary Engine.—Edgar B. Adams, Robt. P. Trimble and Horatio N. Adams, Salem, Ohio: We claim, first, The combination of an eccentric bub, D, having a groove, g, formed in it, with the revolving ring, B, elongated yoke, A, and shiding pistons. b b', operating substantially as described. Second, The application of springs, 8 s', to piston rods, e e', which are connected to a yoke, E. by means of pins, f f, working in slots, ii, substantially as described.

11, sustaintiany as described:
46,202.—Churn.—David C. Aldrich, Anamosa, Iowa:
Iclaim the partition plates, B B, perforated at their lower ends and provided with an oblong opening, g, in connection with the au tube, H, in the central compartment, e, and the dashers, C C, in the compartments, d, all arranged to operate substantially as and for the purpose begin set torth.

compartments, d d, all arranged to operate successions the purpose herein set torth.

I also claim the concave under surfaces, a*, of the dashers, in connection with the upper in:lined surfaces, b*, the perforated partition plates, B, B, and the air tube, H for the purpose specified.

Ifurther claim the water chamber, b, in combination with the perforated partition plates B, dashers, C, c, air tube, H, and thermometer, I, as and for the purpose set forth.

nmonly termed atmospheric, and it consists in the employment commonly termed atmosphere, and it commons in the employment for use of the dashers, perforated partition plates, an air tube, and a water chamber, all arranged in such a manner as to cause butter to be rapidly produced in good condition, and to separate the butte

46.203.-Steam Boiler .- John H. Ames. Baltimore.

Md.:
I claim, first, The arrangement of flues, E'E', substantially as and for the purposes set forth.
Second, Producing superheated and saturated steam in a boiler and separating these two forms of steam from each other without niguriously interrupting the water level, substantially as described. Third, Mixing together superheated and saturated steam in the steam pipe within the boiler, substantially as described.

5,204. Machine for Separating Lard, Tallow and Grease from the Refuse of Rendering Tanks.—Peter Andrew, Cincinnati, Ohio:

Andrew, Cincinnati, Ohio:

In the trap, B, arranged as specified and shown, opering substantially in the manufer described for separating the grease om the water, and for the separation of liquids of unequal specific gravity.

ating substantially in the manuer described from the water, and for the separation of liquids of unequal specific gravity.

Second, I claim the use of wire screens, substantially as described and set forth, for the separation of lard, tallow or grease from the refuse or shash taken from steam rendering tanks, and for the separation of any liquid having no affinity for water, and of less specific gravity from any substance that is not liquid.

Third, I claim the trough or gutter. D, for the purpose of skimming the grease from the surface of the water in the vat, as specified and in the manner described.

Fourth, I claim the perforated water pipe, F, for the purpose of lifting the grease above the screens until it howsinto the trough, D, and for continuing the flow and diving it into the trough, substautially as described and shown.

Fifth, I claim the bottom of the vat, formed and arranged as described and for the purpose set forth.

46.205.—Presses.—Stephen J. Austin, Freeport, Maine:

46,205.—Presses.—Stephen J. Austin, Freeport, Maine: I claim, first, The expanding press box, B, constructed substantially as and for the purpose described.

Second, The ropes or chains, d d'e, pulleys, g g'h h'i m, and windlass, j, applied in combination with the movable side, a, o' the press box. B, in the manner and for the purpose substantially as herein sectorth.

Box. B, in the mainer and to the pulper Bet forth.
Third, The pulleys, q q'rr's s' and t t', applied in combination with the chains, o', levers, D D, and follower, C, in the manner and for the purpose substantially as shown and described.
Fourth, The double drums, u u', in combination with the chains, o', levers, D D', and tollower, C, applied and operating substantially as and for the purpose set forth.

Long M. Batch.

6,206.—Vessel for Holding Petroleum.—John M. Batch-elder, Cambridge, Mass.: I claim a barrel or other vessel having a lining or interior coat, ormed substantially as herein described and for the purpose speci-

fied.

46,207.—Cartridge Retractor for Breech-loading Fire-arms.—Foruyce Beals. New Haven, Conn.:

I claim, first, The hammer, F, provided with the notch, lm, in combination with the ejector, G, when constructed and operating as hereinset forth.

Second, I claim the spring, H, when constructed and arranged to operate in combination with the ejec.or, G, as and for the purpose set forth.

set forth.

46,208.—Process for Manufacturing Twine from Paper.

—E. B. Bingham, Newark, N. J.:

I claim in the manufacture of twine from paper, adding a waterproof sising to the paper pulp, or applying the same to the paper
while the latter is in a moist or green state, on the frame or web,
previous to its passage through the final heated pressure cylinders,
and previous to its being cut into strips and receiving its twist, as
her sin set forth.

46,209, -Molder's Bench. - Chas. L. Bishop, Meriden. Conn.:

COhn.: [Composed of a bracket, A, ribs, a, an lease, d, horizonal arms, B, and brace, C, all constructed and fitted by the manner substantially as herein set forth.

46,210.—Mess Kit.—Erastus Blakeslee, New Haven.
Conn.:
1 claim attaching the pan to the kettle in the manner and for the purpose substantially as herein set forth and described.

-Tobacco Stopper.-John M. Brown, Portland,

46,211.—TOURCEO Stopper.—ounn m. Brown,
Maine:
I claim, first, The pipe cover, perforated at the center, and fitted
with spring arms, having shoulders, substantially as and for the purposes described.
Second, The stopper or plunger, m combination with the rod and
appral sprint; substantially as and for the purposes enumerated.
Third, The combination of the detachable cover, as described, with
the spring stopper or plunger, as described.

Morgan W. Brown.

46,212.—Handle for Lamp Chimney.—Morgan W. Brown, New York City:

I claim a metallic handle, formed as set forth, to clasp upon and be attached to an ordinary glass chimney, in the manner and for the purpose specified.

46,213.—Crane.—Benajah J. Burnett, Mount Vernon,

N. Y.:
I claim, first, The cast-iron tower or column, of one or more piece
in hight, with bottom flanges or base, a, vertical cylindrical surface
d, and shoulder, f, all substantially as and tir the purpose herei
specified.
Second, The construction of the top of said tower, substantially
as herein described with a seat in its interior for the reception of
the lower ring, i, of the box which contains the anti-friction ball

in high, with out-tim manges of base, a, vertical cylindrical surface, d, and shoulder, f, all substantially as and fir the purpose herein specified.

Second, The construction of the top of said tower, substantially as herein described, with a seat in its interior for the reception of the lower ring, i, of the box which contains the anti-friction balls upon which the cap or revolving head of the crane is supported. Third, The cast-ineravolving head of the crane is supported. Third, The cast-ineravolving head of the crane is supported tension bar pins. In and central downwardly-projecting journal, p, entering the box which receives the anti-friction balls upon which the said cap of head is supported, and receiving upon it the upper ring, i, of the said box, all substantially as herein specified. Fourth, The annular box for the reception of the anti-friction balls which support the cap or revolving head, c, constructed of two rings, it, the one forming the bottom and outer sides of the box, fitted into a seat in the top of the tower or column, and the other forming the top and inner sides of the box, fitted to the journal of the cap or revolving head, substantially as described.

Fifth, The construction of the circular traveler, B, with a flange for the reception of the suspending side branch rods, and with bearings for the reception of the jib shoes, and counter-weight sills, so that each thrusts against the ether, and a roling joints provided or the Sixth, The branch side rods for suspending the circular traveler from the revolving head or cap, constructed with their upper parts single, as shown at 0, and with their lower parts in two or more branches, as shown at 0, and with their lower parts in two or more branches, as shown at 0, and with their lower parts in two or more branches, as shown at 0, and with their lower parts in two or more branches, as shown at 0, and with their lower parts in two or more branches, as shown at 0, and with their lower parts in two or more branches, as shown at 0, and with their

46.214. Bottle for Oil. Charles W. Cahoon, Portland.

46,214.—Bottle for On.—Charles Maine:

Maine:

First, I claim a wooden bottle, made by boring a solid block of wood, and fitted with a stepper, rendered impermeable to liquids, substantially as herein described.

Second, Fastening a stopper into a bottle by mean sof a button, the ends of which fit mto niches, substantially as described. Third, A bottle having a shoulder and a flaring neck, in combination with a straight side, uniform stopper, as herein described. Fourth, A bottle fitted with channels, as herein described.

46,215.—Whip-socket Fastening.—H. W. Catlin, Burlington, Vt.:

lington, Vt.:

I claim the washer, B, in combination with the screw, C, passing through the dash, D, into the socket, A, to be arranged substantially n the manner as and for the purpose set forth. through the dash, D, into the socket, A, to be arranged substantially in the manner as and for the purpose set forth.

46,216.—Bean Harvester.—Norman Chappell, East Avon, N, Y:

I claim the clearer or clearers, H, in combination with the cutter or cutters, G and a suitable frame, A, arranged and operating substantially as herein set forth.

In combination with the clearers, H, cutters, G, and frame, A, I also claim the coulters, I, arranged and operating substantially as herein specified.

46,217. - Packing for Uil Wells. - John R. Cross, Chicago,

46,217.—Packing for Oil Wells.—John R. Cross, Chicago, III.

I claim the arrangement for artesian oil wells of a fibrous material, D, consisting of hemp or other elastic substance, in combination with the rings, A A', or other suitable frame therefor, so arranged that when said rings approach each other the packing material is compressed laterally, so as to nil the space between the tube and sides of the well, and relaxed when the rings are made to recede, the same being operated from the top of the well by the screw rods, d d substantially in the manner and for the purpose set forth.

I also claim, in combination with said packing device, the valve, f, and tube, g, operating in the manner and for the purpose herein set forth.

46,218.-Ladies' Dress Protector.-Theodore D. Day,

New York City:

1 claim an interior lining or facing for the lower edge of the skirt of ladies' dresses or other garments, formed with springs introduced in the manner and for the purposes specified.

46,219. - Fire Engine. - John N. Dennisson, Newark.

N. J.:
I claim the increasing or diminishing the effective area of the pump or pumps by means of a valve placed in the partition between them, or other means, substantially the same as when attached to the steam fire engines, so that the quantity of water discharged at a stroke can be increased or diminished at pleasure without altering speed or stroke, for the purposes herein set forth.

46,220.—Ball Screw for Fire-arms.—Arthur De Witzleben, Washington, D. C.:
I claim the tines or javs, b b, with their threads or shoulders, a a, forming in combination the concave screw for the uses and purposes a above described.

a above described.

46,221.—Paper-covered Wooden Boxes.—M. P. Dorsch,
New York City:
I claim a box for collars and similar articles, made of a thin ven
eer of wood, with the top and bottom pieces secured to the sides by
a strip of paper or other similar macerial glued around the said
edges, and the box covered with paper, as specified, the whole forming a new article of manufacture

46,222. Opposeting Course in Theorem.

46,222.—Operating Guns in Turrets.—James B. Eads, St. Louis, Mo.:

St. Louis, Mo.:

First, I claim mounting a gun or guns upon a rotary platform, arranged to bring the muzzles of the guns to different ports in the turret or defense, within which it rotates, when the power which operates the guns is communicated through devices acting concentrically with the axis of rotation of said platform.

Second, Mounting guns on a rotating platform, which is arranged to rotate with a turret, when the power to operate the guns on said platform is conveyed to them through nechanical devices acting concentrically with the axis of said platform's rotation.

46,223.—Operating Guns and Gun Turrets.—James B. Eads, St. Louis, Mo.:

First I claim the use of a rotating tower, in combination with a rotating gun platform, when each is arranged to rotate independently of the other.

Second, The combination in one turret of devices for training ordered by means of power transmitted through the pivot or shaft of the platform on which the ordnance is mounted with a rotating platform and a rotating tower, each arranged in such a manutating the training of the guns, the rotating of the platform and the revolving of the tower may be performed independently of each other, substantially as described.

46,224.—Bread and Meat Slicer.—John E. Dow, Boston, Mass.:
I claim the application and arrangement of the slicer in the mobile described, or substantially the same.

46,225.—Revolving Fire-arm.—Wm. H. Elliott, Platts-

46,225.—Revolving Fire-arm.—wm. H. Elliott, Platts-burgh, N. Y.:

I claim, first. Dividing the cylinder, a, through its circle of chambers into two concentric parts, and having the recoil plate or breech permanently attached to the outer section, so that the core or central portion may be drawn out in a forward direction, for the purpose of introducing the cartridges, substantially as herein described. Second, Charging the cylinder of a revolving pistol by first introducing the cartridges into the courter offit, and then by pushing them in a lateral direction to their places, as herein described.

46,226.—Machine for Clipping Hair or Wool from Animals.—Charles W. Enery, Dorchester, Mass.:

I claim the upper guard, i. for holding the hair or wool erect to facilitate the cutung, as herein set forth.

46,227.—Lanterns.—Chas. Engelskirken, Buffalo, N. Y.: I'claim the expanding and contracting button, F, constructed and operating for the purposes and substantially as described.

46,228.—Fire-proof Safe.—John Farrell, New York to, 220.—Fire-proof.

City:
I claim the employment of sulphate of magnesia in filling in the dre-proof chambers of safes, chests and other like structures, when prepared and put in, substantially as and for the purpose specified.

U.E. Ressel and F. Kraut-

46,229.—Trip Hammer.—H. E. Fessel and F. Krautwadl, Chicago, Ill.:

I claim the combination and arrangement of the devices, e f g, on stituting both a tripping and adjusting contrivance, with the

friction rollers. c c', crank shaft, E, and hammer, F C. inthe manner and for the purpose described.

and for the purpose described.

46,230.—Combining Aluminum with Vulcanite and other materials.—Nathl. C. Fowler, Yarmouth, Mass.: I claim so combining granulated aluminum with vulcan te or rubber or analogous material, such as gutta-percha, forming a compound or composition of matter substantially as described. Second, I claim the use of aluminum for the purpose of forming the joinings of articles made or vulcanite, for attaching rubber or vulcanite to other material, and for inlaying and ornamenting articles of vulcanite.

Third, I claim the use of vulcanite, for the purpose of attaching articles made of aluminum to other materials, or to other articles made of aluminum to

rticles made of aluminum to other materials, or to other articles nade of aluminum.
Fourth, I claim inlaying articles made of aluminum with vul-anite and imitating articles made of aluminum by a clasp, rivet r other fas.ening or ornamental device made of vulcanite.

46,231.—Lubricator.—Thomas W. Goodwin, Ports-

46,231.—Lubricator.—Thomas W. Goodwin, Portsmouth. Va.:

First, I claim the arrangement within a lubricator of a single cock, having three or more openings, arranged in such a manner as to make an induction and eduction passage, when used as and for the purposes herein described.

Second, In combination with a lubricator. I claim the mode of charging and discharging the reservoir, by means of a single cock, arranged within a lubricator, when used substantially as described.

46,232.-Ladies' Paper Collar.-Solomon S. Gray, Bos-

ton, Mass.:

I claim as a new article of manufacture a paper, or cloth and paper of which the requisite curve or shape is given by contracting ne of its edges, substantially as described.

46,233.—Tobacco Paper.—Holman J. Hale, New York

City:

I claim tobacco paper made substantially as above described.

I also claim the use of tobacco paper made substantially as decribed. In the manufacture of tobacco cartridges and tobacco rettes, nade from said material, substantially as above set forth.

46,234.—Voltaic Shoe Soles.—Thomas Hall, Boston,

Mass.: I claim the confidence foliation of the non-conducting sole or base with a series of alternate plates of dissimilar metals lapping upon each other, so that their points of contact may be kept bright by the friction curved by the motion of the foot, and allowing the moisture or perspiration of the foot to act upon both metals at the juncture of the plates.

46,235.—Wire Fork for Toasting, Etc. -Thos. Geo. Har-

40,233.—Wire FORKIOT IOASLING, Etc.—IROS. Geo. HAR-old, Brooklyn, N. Y.:

I claim, first, Constructing an apparatus for toasting, broiling, etc., of two clamps, pressed toward each other by a spring or springs, in substantially the manner described and shown.

Second, I claim retaining the said clamps, in correct position to each other byguides, in the manner and for the purpose specified. Third, I claim the combination of the clamps, a a, spring, b, and guides, c or e, for the purposes set forth.

guides, c or e, for the purposes set forth.

46,236.—Hanger for Lamps.—Thomas S. Hudson, East Cambridge, Mass.:

I claim the lamp-support hanger, as composed of the series of glass tubes, the end caps or cups, the rod or its equivalent, and the end attachments, arranged relatively to one another, substantially as described.

46,237.—Shears for Cutting Metal.—Julius Hornig, Os-

wego, N.Y.:
I claim, first, the metal shears connecting the shear-lever to the eccentric by means of a strap guide in a groove on the eccentric, in combination with a radial arm secured to the lever by means of a pin, L, on which it is free to vibrate, substantially as above described.

Second I shears the strain of the strain secured to the lever by means of a pin, L, on which it is free to vibrate, substantially as above described.

seribed.
Seco. d. I also claim the curved face, d.of the upper end of the shear lever, in combination with an eccentric against whose face it moves, and against which it is held by means of a radial vibrating arm, K, substantially as described.
Third, I also claim forming shoulders, s, on the faces of the washers, O, and shoulders, t, on the faces of the bosses or projections, q, in order to prevent the rotation of the washers during the vibrations of the lever, substantially as described.

[This invention consists in a novel method of holding the free end of the lever of a shears up to, or rather of connecting it with, the eccentric which operates the shears and also in the application of a

eccentric which operates the shears, and also in the application of a washer to the hub or trunnion of the shears.]

46,238.—Device for operating Safety Valves.—William S. Hudson, Paterson, N. J.: I claim the bell crank levers in combination with the means, I. M. or their equivalents, for rapidly changing the initial tension of the spring, I, within wide limits, substantially as and for the purpose herein set forth.

46,239.—Key Fastener.—Henry Hungerford, Brooklyn, N. Y.:
1 claim the combination and arrangement of the bolt, C. constructed substantially as described, and its guide or case, B, with the perforated key, the whole combined and operating substantially as and for the purposes set forth.

46,240.—Extension Table.—Anthone Iske, Lancaster,

Pa.:
I claim the central column or support, A, with its cross pieces, B C, and slots, d, in combination with the cr.ss slats, s, and their sliding pivots, 2 3 4 and 5, in said slots, d d d d, arranged and operating substantially in the manner and for the purpose specified.

46,241.—Lock.—Henry Jackson, Brooklyn, N. Y.:
I claim stub, F, constructed as described of a plurality of no
plates, c c, of unequal length or projection, employed in com
tion with the tumblers, E, in the manner and for the purpose The object of this invention is to prevent a lock being picked or

pened illegitimately by obtaining a pressure of the stub on the tumblers-a means usually resorted to by burglars in order to ascertain the position the tumblers must be brought to in order to admit of the bolt being liberated.

of the bolt being liberated.
46,242.—Machine for Pointing Wires in the Coil.—C.
Jillson, Worcester, Mass.:
I claim combining the cutter head and pattern with a revolving shaft having a spring or yielding roll within it, as and for the purpose herein described and represented.
I also claim, in combination with a revolving cutter head and pattern, the extending of the cutter stock or cutters that are operated by said pattern clear through the cutter head, so that said cutters will not be thrown out or in any wise moved by the centrifugal force of the revolving head, substantially as described

46,243.—Revolving Firearm.—Benjamin F. Joslyn, Stonington, Conn.:

I claim the rod, I. and its transverse rod, m, in combination with the recessed and inclined end of the hammer—the whole being arranged and operating for the locking and unlocking of the cylinder substantially as and for the purpose herein set forth.

substantially as and for the purpose herein set forth.

46,244.—Apparatus for Evaporating and Calcining Alkaline Solutions.—Morris L. Keen and Hugh Burgess, Rogers Ford, Pa.:

We claim a furnace constructed for the purpose of evaporating the alkaline solutions used in the pulping and disintegrating of vegetable ubstances, in which the heat is utilized by means of an arrangment of pans, or their equivalents, substantially as and ion the purpose described.

We also claim, in combination with the main evaporator, the finishing or caccining furnace or furnaces, substantially as described.

ishing or cacining furnace or furnaces, substantially as described.

46,245.—Corn-sheller.—Charles Ketchum, Penn Yan, N. Y. Ante-dated Jan. 29, 1865:
I claim, first, The cylinder, H, when made as specified and used for the purpose set forth.
Second, I claim the concave when composed of the sections, F, substantially as specified.
Third, I claim the guides, M, and agitators, I, when constructed, arranged and used as specified.
Fourth, I claim encasing the concave, substantially as specified, and for the purpose set forth.
Fifth, I claim the plates, B and C, and hopper, L, when constructed

as specified and used in combination with the other parts of the ma-chine as set forth.

46,246. "Tapping Branch for Water and other Pipes.—
Henry Knight, Brooklyn, N. Y.:
I claim as a new and improved article of manufacture the flanged cup. A, having one end closed, and otherwise adapted to form connections for pipes.

46,247.—Process for Preserving and Restoring Natural Flowers.—Angelina J. Knox, Boston, Mass.: I claim the process for restoring, treating and preserving natural flowers, substantially as herein before described.

46,248.—Car-bumper Attachment.—John P. Laird, Al-

16,248.—Car-bumper Attachment.—John P. Laird, Altoona, Pa.:
I claim, first Tie guide plates, F, imbedded in the wooden blocks, E, and secured to the beams of the car, all substantially as and for the purpose herein set forth.
Second, The stirrup, N, confined between the beams, E E, and secured to the bumper beams, substantially as specified.
Third. The adjustable stopping blocks, M, ad pted to the plates, F and G, and to a bolt, b, which passes through the same, all substantially as set forth for the purpose specified.
46,249.—Ventilating and Check Draught Damper.—James A. Lawson, Troy, N. Y.:
I claim the employment of a horizontal damper in any stove or furnace exit-pipe, and of less diameter than such pipe, and sbove a vertical cylinder damper around such pipe, so as to more effectually check the draught by bringing the hot ar within the said pipe in contact or conjunction with cold air admitted from room surrounding such pipe through said vertical cylinder damper, E in the manner substantially as herein described and set forth.

J also claim the combination of the vertical cylinder damper, B2, with the horizontal damper, C, arranged immediately over the said vertical cylinder damper, B2, in the manner substantially as and for the purposes herein described and set forth.

46,250.—Heaters for Buildings.—James A. Lawson,

the purposes herein described and set forth.

46,250.—Heaters for Buildings.—James A. Lawson,
Troy, N. Y. Ante-dated Nov. 15, 1864:

I claim the employment of the return flue space or chamber, G, in combination with the vertical pipes, D and E, an 1 with the fire chamber A, in the manner and for the purposes substantially as herein described and set forth.

herein described and set forth.

46.251.—Shutter Hinge.—Robert Lee, Cincinnati, Ohio: I claim as a new article of manufacture the shutter hinge herein described, consisting of the parts, A B, flange C, the radial notches, c c, gravitating catch, D, fulcrum pin, d, and hand lever, E, all constructed, arranged and operating as specified.

46,252.—Feed Water Heaters for Steam Boilers.—Wm.
A. Lighthall, New-York City:
I claim the heater, I, arranged as described, and placed between the exhaust of a steam engine and the condenser, A, as and for the purpose set forth.

46,253.—Condenser Case.—Wm. A. Lighthall, New

York City:

I claim the manner of constructing the sides, A A', of the case, with the apertures, a combined with the manner of securing the ube sheets, B B', and division plates, D D (or either of them), in clace, as herein set forth.

46,254. -Condenser. - Wm. A. Lighthall, New York

46,254.—Condenser.—Wm. A. Lighthan, New 10rk City:
I claim, first, The combination of the division plate, C', with the section of cooling tubes, A, as and for the purpose set forth. Second The combination of the division plate, C', with the tube sheet and cover to the end of the case (as shown), for the purpose of dividing the space between the said tube sneet and cover into two sections as set forth. Third, The arrangement of the cooling water receiving rozzle, B, the cooling water eleivery nozzle, D, the steam nozzle, E. the condensed water rozzle, G, and the division plate, C', placed at the same end of the apparatus as shown, and for the purposes set forth.

46,255.—Funnel.—C. L. Lochman, Carlisle, Pa.:
I claim the valve or stopper, c, with its handle and connecting rod
h and 1, or their equivalents the clastic cone or washer, g, or it
equivalent, the cock, d, and springs or catches, m m, constructed
and connected substantially as and for the purposes specified.

46,256.—Drafting Scale.—Josiah Lyman, Lenox, Mass. First, I claim such an arrangement application and graduation of the beveled edge of the scale herein set forth as render it a universal rehableguide to the needle point in making a dot on the paper at the end of any required or given distance.

Second, Thearrangement and application of the slide spring, as set forth, to the scale herein described, by which it is brought in contact with and becomes a part of the programment trigonometer, or of a Tsource.

46,257.-Hoisting Apparatus.-Walter K. Marvin, New

York City:

I claim the method herein described of applying power to hoisting apparatus by the employment of friction pulleys operating by compression upon a rope or cable or the equivalent therefor, substantially in the manner herein set forth.

5,258.—Hobby Horse.—P. J. Marqua, Cincinnati, Ohio First, I claim the combination rearing hobby horse, A, vibrating tam B, seat, I, and spring, K, arranged and operating substantially seat forth.

beam B, seat, I, and spring, K, arranged and operating substantially as set forth.

Second, The slots, G G', and the devices for the relative adjust ment of the seat and horse as explained.

Third, The arrangement of the rearing hobby horse, A, seat, I reins, O O', and pulley, T, adapted to operate as set forth.

Fourth, I claim the india-rubber thong, K, and clamp, L L' M, ar ranged as set forth.

Angel as set form.

(A. Z59.— Breech-loading Ordnance.—John A. Miller, Paducah, Ky.:

I claim the shape and construction of the balance, C, operating in a corresponding curved aperture, E, in the breech of the gun, in combination with the support, B, as herein described, for the purpose of firing cannon rapidly.

pose of firing cannon rapidly.

46,260.—Evaporator for Saccharine and other Liquids.—

Junathan E. Morse, Boston, Mass.:

I claim a train of evaporating pans with furnaces and flues arrangel to operate in connection therewith, substantially as described.

Also, the employment with an open evaporator of a cover and steam jets, when arranged to operate substantially as specified.

46,261.—Machine for Bending Sheet Metal.—Samuel Pennock, Kennett Square, Pa.:
First, The h ngod removable and adjustable bedplate, C, constructed and operating as described.
Second, in combination with the above, the mode described of adjusting the bedplate, C, horizontally by means of the eccentric, G, arranged and operating as shown, or in an equivalent manner, Grappoducing the same result.
Third, In a machine for bending metal constructed as described, adjusting the bedplate, C, vertically, by the employment of the eccentric, R, arranged and operated as shown, or its equivalent, substantially in the manner specified.

46,262.—Horse-shoe Calk.—James L. Pike, Lynn

46,262.—HOUSE-SHOE CARA.—CARA.

Mass.:

I claim as a new article of manufacture a horse-shoe calk of chilled or "case-hardened" cast iron, constructed substantially as and for the object specified.

46,263.—Mangle.—Wm. Radbourne, Rahway, N. J.:

I claim the application to a mangle of the semi-elliptical spring, D, acting simultaneously on both boxes of the roller, C, in combination with friction rollers, e, supporting the gudgeons of the lower roller, constructed and operating substantially as and for the purpose set forth.

This invention relates to a mangle the lower roller of which has its bearings on friction rollers, while its upper roller is pressed down by the action of a semi-elliptic spring and thumbscrew in such a manner that one spring and screw are sufficient for both ends of said roller, and that by the action of the friction rollers the power requisite to operate the mangle is materially reduced. The frame of this mangle is provided with two hinged tables, one on either side of the rollers, and provided with hinged legs insuch a manner that when the mangle is not used, said tables can be readily turned down out of the way, and when the same is used, one or both tables car lers with great convenience.]

46,264.—Belt Coupling.—A. C. G. Rathburne and A. M. Comstock, Lyme, Conn.:

We claim the plate, A. provided with a slot, a, and operating in combination with the toggle jaws, B, substantially in the manner and for the purpose set forth.

The invention consists in the employment or use of a plate pro ded with a slot to admit the ends of the belt to be coupled and with two toggle jaws in such a manner that when the jaws are thrown open, the ends of the belt can be easily passed up between them, and the jaws are depressed after the ends of the belt hav been adjusted; they clamp the same tight without the use of rivets or any other fastening, and a belt coupling is effected which leave the inner or working surface of the belt perfectly flat and intact.]

46,265.—Washing Machine.—Orrin Reeve, Greenport. N. Y.:

'N. Y.:

I claim in combination with a tub having ribs, a, on its inner perimeter extending from the bottom to the top thereof, and radial lutes or ribs on its bottom, a rubbing board to act in conjunction herewith, having a scalloped perimeter and radial ribs on its under ide, as and for the purpose herein described and represented.

16,266.—Vapor Lamp.—J. J. Riddle, Cincinnati, Ohio: I claim, first, The use of the needle, n, working through the burner and from the outside of the lamp into the valve, d, in combination with the oil tube, O, reservoir, A, and air pump, I', all constructed and operating in the manner and for the purpose substantially as herein shown and de-cribed.

herein shown and de-cribed.

Second, The valve, S', applied in combination with the case, t, and air pump, P, as specified.

Third. Placing the valve seat, d, in the top of the burner, substantially as shown in figure 3, for the purposes set forth.

Fourth, The combination of the socket, R', and pipe, g'', with the oil tube, O, needle, n, valve seat, d, air pump, P, and reservoir, A, constructed and operating in the manner and for the purpose herein specified.

[The object of this invention is a vapor lamp which combines cheapness and simplicity with few or no joints liable to work loose, and in which all the parts are so arranged as to be repaired easily and quickly.]

46,267.—Trip-hammer.—T. J. Root, Galena, Ill.:
I claim the rock shaf, B. with hammer rod, C, attached, in combination with the knuckle-jointed arm, H I, provided with the spiral spring, J, and treadle, F, all constructed and arranged to operate as and for the purpose herein set forth.

[This invention consists n attaching the rod of a hammer to a

rock shalt or head which is connected by means of a bent arm and rod to a treadle, the treadle rod having a spring applied to it, and all arranged in such a manner that the operator by means of his foot acting upon the treadle is enabled to give the proper movement to the hammer—the latter after giving its strokequickly using and operating smoothly throughout without any irregular movement, and with but a moderate effort on the part of the operator.]

46,268. — Machine for Jointing Oval Frames. — James E.

Rogers, Chelsea, Mass.:

I claim as my invention the jointing apparatus or machine, composed of the two platforms, A. B., the stops, '); and adjustable rests, C.D., arranged and constructed substantially in manner and so as to operate as and for the purpose specified.

46,269.—Tobacco Pipe.—Louis Saarbach, Philadelphia,

Pa.:
I claim the curved tube, A, combined with the detachable bowl, c, stem, B, and reservoir, D, as and for the purpose described.
46,270.—Mode of constructing Dolls' Heads and other Toys.—Lucretia E. Sallee, Decatur, Ill.:
I claim, first, Mak ng dolls' heads and other toys of an outer covering of leather, or its equivalent, and an inner body of cement, which sets and hardens, so as, o support the said covering in shape, substantially as above described.
Second, I also claim the cement or composition above described for making a body or backing to sustain the outer surface of the toy.
IThis invention consists in making the heads of dolls and other toys of such materials and in such a way as to prevent them from

toys of such materials and in such a way as to prevent them from being easily broken by falls or other violence which may happen to

-Seeding Machine.-William Saxton, Venice,

46,271.—Seeding Machine.—William Saxton, Venice, Mich.:
I claim, first, The pivoted seed distributing plates, H, arranged within the seed-box, D in combination with the projections, d, on the wheels, B B, the springs, c, on the adjustable seed-box, D, all aranged substantially as and for the purpose herem set forth.

Second, The coverers, J J, attached to the seed-box by links, K K, n connection with the cord or chain, L, substantially as and for the surpose herein described.

[This invention relates to a new and improved seeding machine of that class which drops the seed n hills, and it consists in a novel and improved seed-dropping mechanism, and in a novel arrangement of the seed-box or hopper and coverers, whereby several ad-

46,272.—Brick Molds.—John F. Schuffenecker, Saint Louis, Mo.:
I claim operating the bottoms of the molds by means of the lever, D, rod, F and G, link, I, and axles, E E, for the purpose above speci-

ited.

46,273.—Machine for making Bricks.—John F. Schuffenecker, Saint Louis, Mo. Ante-dated Feb. 3, 1865:
First, I claim the manner adopted by using the toe, j. pan, i. cup, k, and tube, h in combination, for the purpose herein de cribed. Second, i claim the scraper, A, operated by the cams, i i, fork lever, j. and joint, K, as for the purpose above described.

Third, I claim the manner to ecure the position of the scraper, A, by means of the spring, Z, and arm, I, as shown in the specification. Fourth, I claim the manner adopted to regulate the friction of the machine by the cams, u, u, lever, I, guide, S. set & Srew, h, in combination of the slot of the rod, x, as shown and described in the foregoing specification.

Pitth, I claim the mode adopted to prevent the clay from settling between to opper and the quadrant by means of the plate. S, groove, R, steel bar, m, and set screws, Q Q Q Q, or their equivalents, for the purpose set forth.

the purpose set forth. 46,274.—Cultivator and Harrow.—Thomas Short, Fair

16,274.—Cultivator and Harrow.—Thomas Short, Fairmount, Ill.:

First, I claim the frames, D D, provided with shovels, E, and the First, I claim the safety of the provided with shovels, E, and the first of the safety of the saf

is provided to facilitate the vertical adjustment of the shovels to avoid obstacles: and in addition to this feature the cultivator frames are provided with harrow teeth, and the frames are adapted to be reversed in such manner that the said teeth may be presented in a downward direction, so as to convert the implement into a harrow

46,275.—Drying and Glazing Gunpowder.—William S. Bates, Westfield, Mass., and Catharine S. Smith, Kingston, N. Y., executors of John Smith (dec'd).

We claim the application of heat to the cylinders or other vessel

in which powder is glazed, while the process of glazing is going one for the purpose of glazing and drying the powder at one operation, substantially as above described.

We also claim the method of carrying the same into operation by means of hot air and the apparatus above described, substantially as above set forth.

above set forth.

46,276.—Buildings or Rooms for the preservation of Food and for other purposes.—Daniel E. Somes, Washington, D. C.:

I claim, first, The walls and chambers as described in combination with the cooling an 'ventilating pipes, constructed and used as and for the purpose set forth.

Second, The series of rooms and buildings, substantially in the manner and for the purpose shown.

Third, The series of walls and chambers when used in combination with a process or rarification and ventilation and cooling appliances, Fourth, I claim cooling the air in buildings in which water tanks or pipes are used by passing the air tubes or ducts through, in between, or sround the water pipes or tanks.

46,277.—Refrigerator for Preserving Articles of Food.
—Daniel E. Somes, Washington, D. C.:
I claim first, A refrigerator with multiple wall and so constructed that the nterior shall be separated from the cooling substance thereby excluding dampness.

Second, The use of cork for the walls in the manner and for the

purpose shown.

Third, I he use of glass for the walls as and forthe purpose set ath, The pipe larger at the bottom than top substantially as

Fourth, The pipe larger at the bottom than top described.

Fifth, The air tight compartments substantially as and for the purpose shown.

Sixth, The vulcanized rubber tubing or its equivalent when used in the manner set forth.

seventh, The vulcanized rubbertubing when applied to any door or drawer for a similar purpose.

46,278.—Eccentric Adjustment.—J. M. Stone, North An dover, Mass.:

I claim for the purpose of adjusting the amount of throw of any of two or more eccentrics on the same shaft. The construction and arrangement operating substantially as described.

of two or more eccentrics on the same shaft. The construction and arrangement operating substantially as described.

46,279.— Paper Collar Button-hole Punchers.—Samuel S. Stone, Troy, N. Y.:

I claum, first, Two oblong, male end button-hole ounchers, L. L. arranged lengthwise or nearly so to each other unon, and adustable longitudinally with two separate simultaneously reciprocating silves. H H; In combination with two corresponding oblong lemale punch receiving dies, N. N, having like arrangement and longitudinal adjustment on a stationary bed, substantially as herein described.

I also claim two oblong end button-hole punchers adjustable exceiving dies having like axial and longitudinal adjustment of a stationary bed, substantially as herein described.

I also claim two blong end button-hole punchers, L. L, arranged lengthwise or nearly so to each other and a central one, M, arranged lengthwise or nearly so to each other and a central one, M, arranged lengthwise or nearly so to each other and a central one, M, arranged lengthwise or nearly so to each other and a central one, M, arranged lengthwise or nearly so to each other and a central one, M, arranged lengthwise or nearly so to each other and a central one, M, arranged lengthwise or nearly so to each other and a central one, M, arranged lengthwise or nearly so to each other and a central one placed cross was thereto on a stationary bed substantially as herein de-cribed.

I also claim two oblong end button-hole punchers arranged lengthwise or nearly so to each other, and a central one placed cross was thereto on separate reciprocating sildes, and "ith the end punchers and third silves adjustable longitudinally in combination with corresponding central and longitudinally adjustable ended crosswise thereto, on separate simultaneously reciprocating sildes, with the end punchers and their sildes adjustable longitudinally and the central ones transversly in combination with corresponding longitudinally and the central ones transversly in combination with corresp

able central one on a stationary bed, substantially as herein described.

I also claim a central oblong button-hole punch and two axially adjustable end ones, on sepa ate simultaneously reciprocating slides with the end punches and slides djustable properties and slides and strains berein described.

Lasso canne two oblong button-hole punches and a central one, at adjustable axially on separate simultaneously reciprocating slides with the end punches and slodes adjustable longitudinally add the central onestransversely in combination with corresponding axial-y and longitudinally adjustable central one on a stationary bed substantially as herein described.

And I also caim the arrangement of adjustable guides, d, in combination with end or end and central button-hole punchers arranged on and adjustable laterally with separate simultan ously reciprocating slides and working into corresponding adjustable punchers earing slides and working into corresponding adjustable punchers arranged on and adjustable laterally with separate simultan ously reciprocating slides and working into corresponding adjustable punchers propose herein set forth.

pose herein set forth.

46,280.—Apparatus for Carbureting Oil.—John B. Terry. Auburndale, Mass.:
I claim the combination of one or more air cells, and vibratory scoops or buckets applied together and within the cistern, A, substantially in manner and so as to operate herewith as described. I also claim the combination of the "Barker's Mill." or rotary air and agitating distributer, K, with the vaporizing cistern, B, the cistern, A, and its air forcing apparatus.

I also claim the combination and arrangement of the shaft, F, its arms and sponges, or their equivalents, with the agitating and air distributer, K, the cisterns, A, B, and the air forcing apparatus of the cistern, A.

I also claim the combination of the friction brake apparatus, consisting of the lever, W, the constructing rod, Y, the arm, z, the screw shaft, a', and the stud, b', or its equivalent for the purpose set forth with the air for ding apparatus and the vaporizing cistern, B, provided with the bell, c, to operate as specified.

I also claim the sand friction apparatus constructed substantially as described as well as its arrangement with respect to the bell, c, and the vibratory sector as specified.

and the vioratory sector as specined.

46,281.—Machine for Planting Potatoes.—Joseph S. True, Garland, Maine:
I claim, first, A reciprocating slide provided with one or two boxes and arranged in relation with bottom plates one or more to operate in the mainer substantially as and for the purpose herein set forth. Second, A herizontal stationary cutter or knife arranged with a reciprocating slide and boxes to operate substantially as and for the purpose specified.

Third, The placing of the cutter or knife in such a relative position with the sliding boxes that the latter will feed or convey the position with the sliding boxes that the latter will feed or convey the position with the sliding boxes that the latter will feed or conveying tube, F, the covering shares, G G, and roller, I, when used in combination with the porato-dropping-device, substantially as and for the purpose set forth.

|This invention relates to a new and improved machine for plantng potatoes, and it consists in a novel arrangement of parts where ing potatoes, and it cois sis in a novel arrangement of parts where by the potatoes may be cut or not as desired, planted either in hills or drills, different quantities of seed discharged at regular intervals as may be required, and the machine rendered capable of being manipulated or worked with the greatest facility and adapted for use on various kinds of ground, rough or smooth, mellow and friable or hard and clayey.]

46,282. -Bill Holder. -Charles T. Wakeley, Madison,

I claim the hasps or fasteners, C, and D, in combination with the raps and bands, I, and H, adjustable in the manner and for the urposes shown and described.

46,283.—Soda-water Apparatus,—Frederic A. Weber and Wm. H. Greene, Woonsocket, R. I.. We claim the valve case, d, when arranged within the box, a, and with the system of s rup pipes, i, fountain pipe, e, and outlet pipe, f, comecting therewith, the valves in the strup and fountain pipes being operated by a system of levers and valve rods, and the whole constructed and arranged substantially as shown.

46,284.—Draught Tube for Soda-water Apparatus.—Figrick A. Weber and Wm. A. Greene, Woonsool

erick A. Weber and Wm. A. Greene, Woonsocket R. I.:

We claim the construction of a draught tube for soda-water apparatus, with an inner tube, b, having an outlet, d, and lateral ornices, opening into the tube, a, and controlled by a gate, f, the whole being constructed and arranged to operate substantially as set forth. 46,285.—Corn Plow.—Wm. S. Weir, Jr., Monmouth, Ill.: I claim the curved rods, M, attached to the back end of the bars, I d, and bent in the form of hooks, k, at their lower ends, in connection with the lever, o, attached to the back end of the dr. ught pole, C, all being arranged and applied substantially as and for the purpose specified.

(This invention relates, first, to a new and useful equalizing attachment, for equalizin; the draught of the machine; second, in an inproved manner of attaching the plows to the main frame of the machine, whereby the former may be raised and lowered, and adjusted laterally, as may be required, with the greatest facility; third, in a novel and improved means for holding the plows in an elevated state out of the ground, when the machine is being drawn from place to place, or when being turned at the ends of rows.]

46,286.—Magazine Breech-loading Fire-arms.—Henry F.

16,286.—Magazine Breech-loading Fire-arms.—Henry F. Wheeler, Boston, Mass.:
I claim a fire-arm, having a sliding barrel, the charge of which, nestred at the breech, is fired by driving bark the barrel against a percussion or breech block.
I also claim the swinging breech or percussion block, constructed and arranged to operate with respect to the barrel and the magazine or carridge tubes substantially as set forth.
I also claim the magazine or cartridge tube, when arranged to operate with respect to the barrel, substantially as set forth.

set forth.

I also claim holding the arrel in forward position, or the arm cacked, by the employment of the forward end of the magazine tube, substantially as described.

I also claim the arrangement of the breech or percussion block to swing above the path of movement of the cartridge tube, to permit the connection of the cartridge tube and barrel and the cocking of the piece.

the connection of the cartridge tube and barrel and the cocking or the piece.

Also the arrangement of the cartridge tube, to allow of its movement to permit the descent into place of the breech block, and the spring movement of the barrel.

I also claim the manner of withdrawing and expelling the shell of the exploded cartridge by detaining it upon the cartridge tube or breech block, and throwing it therefrom, substantially as set forth.

I also claim producing the forward movement of the barrel and the downward movement of the cartridge tube by the direct action of the trigger lever, substantially as set forth.

I also claim the arrangement of a barrel within a case or cylinder containing the spring, by which the rear or percussion movement of the barrel is produced.

I also claim to combining the magazine tube and percussion block that they move together or as one piece, substantially as set forth.

that they move together or as one piece, substantially as set forth.

46,287.—Apparatus for Calcining Ores.—George W. White, New York City:
I claim, first, The combination in the rotating cylinder of separate combustion and calcining flues or passages, substantially as and for the purposes herein specified.

Second, The furnace located at the opposite end of the rotating cylinder to that at which the ore or other substance to be calcined enters, substantially as and for the purpose herein set forth. Third, So combining, the calcining flues or passages of the rotating cylinder with the furnace, that the gases eliminated from the ore or other substance in the said passages may enter into combustion in the furnace, substantially as and for the purpose specified. Fourth, In a rotating cylinder, with separate combustion and calcining fluesor passages, combined with a furlace, as described I claim constructing the inner surfaces of the separate calcining passages with grooves, cavities or projections, substantially as and for the purpose projections, substantially as and for the purpose herein specified.

46,288.—Clasps for Wearing Apparel.—Frederick Wood,

46,288. —Clasps for Wearing Apparel.—Frederick Wood, Somerville, Mass.: I claim the improved fastener, as composed of two parts, A B made substantially as described.

made substantially as described.

46,289.—Pencil Sharpener.—Rufus Wright, New York City:
First, I claim the spiral and tapering cutter, A, constructed in the manner and employed for the purpose herein specified.
Second, I claim the guard, B, formed in one piece, with the cutter, A, and employed to protect the same, and as a protection from the same, as set forth.

Third, In combination with a guard, B, constructed as herein described, I claim the angular groove, O', for pointing the lead.

46,290.—Mop Holder.—Thomas C. Ball (assignor to Lewis Graham, Henry Harlow and A. G. Washbura), Springfield, Vt., and said Henry Harlow and A. L. Thompson, administrator of the estate of Lewis Graham, assignors to A. G. Washburn. Ante-dated Feb. 14, 1863:

I claim the combination and arrangement of curved springs, a a a a, substantially as described, with the slotted head, B, as set forth.

46,291.—Forming Paper Collars.—William S. Bell (assignor to himself and W. S Bell, Jr.), Boston

signor to himself and W. S Bell, Jr.), Boston Mass.: elaim the improved method of treating paper collars or colla ks, to define and determine the line of fold, substantially as se

pp2.—Cartridges for Breech-loading Rifled Fire-arms.—Hiram Berdan (assignor to Levi P. Morton, trustee of Hiram Berdan, Abia A. Selover and Wm. 46,292.

Fusice of Hiram Berdan, Abla A. Selover and wm. B. Benson), Boston, Mass.:

I claim an indestructible cartridge case, with an irregular exterior to correspond with the counter bore, with which it is to be used, and a rilled interior, to correspond in size and form with the bore proper, in combination with one or more projecties previously prepared, to fit the riding of the bore, the whole constructed and arranged substantially as herein described, so that the claimber will be protected from fouling, and the balls properly located in respect to the rifling of the bore, without the necessity of their entering the latter in the act of loading.

act of loading.

46,293.—Coal and Ash Sifter.—Abijah E. and Josiah B. Blood (assignor to themselves and Wm. J. and Benjamin F. Larabee), Lynn, Mass.:

We claim, first, The construction of coal sifters with a vibratory bottom, C.C., separate from the inclosing case, B.B.A.A., carrying the screen, D., or wire cloth, E, with free movement independently of the stationary case.

Second, The construction of the vibratory bottom or screen, E, with a decided convexity upward.

Third, The combination of the case, A.A. B.B., with the cross bar, Q, fastened thereto, the operating rod, D, and the independent convex screen, E, substantially as described and for the purpose set forth.

46,294.—Picking Cylinders of Machines for Disinte

grating Fibrous Materials.—Seth Boyden (assignor to Henry H. Jacques), Newark, N. J.: claim binding the picker cylinders of pickers for disintegrating rous materials, as and for the purpose described.

46,295.—Flexible Pipe for Mining.—Anthony Clark (assignor to himself and Gorham Blake), Todds Valley, Cal.:

I claim the improved flexile conduit, made as described, viz., of metallic pipes, cloth connections, clamping rings, valves and valve openings, constructed and arranged together, substantially as represented and explained

46,296.—Coat and Hat Rack.—George F. J. Colburn,
Newark, N. J., assignor to James T. and Horace A.
Pratt, New York City:
Iclaim the combination of the hook, C, ba or strip, A, attach-

ments, DD, constructed, arranged and applied in the manner for the purpose set forth.

6,297.—Rivets.—John N. Dennison (assignor to him-self and Gould Brothers). Newark, N. J.: I claim a rivet or a washer, with a projecting edge, constructed in he manner and for the purpose herein above specified. 46,297

dence, R. I., assignor to himself and Wm. D. Hilton, Cranston, R. I.:
First, I claim the hood, C, for a tree protector, composed of the flanch, b, rod, c, and lip, a, and united by means of a clasp, e, the whole constructed substantially as described.

Second, I claim the construction of a hood, as described, or its equivalent, with a trough or its equivalent, entireling the trunk of a tree, substantially as and for the purpose specified.

equivalent, with a trough or its equivalent, centreling the trunk of a tree, substantially as and for the purpose specified.

46,209.—Shoes.—Joseph B. Johnson (assignor to himself and Charles Buffune). Lynn, Mass.:

I claim the abeve-explained improvement in lasting a shoe the same consisting in the employment of a false inner sole, B, in connection with the last, E, and upper, A, and drawing the upper on the sail sole and last by means of thread or seving f, or the equivalent thereof, extended across the inner sole, but without goingin's or through it.

I also claim the combination of two, or any other suitable number sole, B, and for the jurpose of holding the man sole in place with respect to the upper, when the latter is confined to the false sole by thread or sewing, f, or its equivalent, going across the false sole, in manner substantially as specified.

I also claim the combination of the spurs, g, or their equivalents, with the false sole, B, and the upper, A, when lasted as specified, such spurs being for the purpose of maintaining the said upper and the outer sole in their proper relation at or near the ball of the foot. I also claim the combination of one or more pins, a c, or their equivalents with the false sole, B, and the sewing, i, extended across such as about the said pin or pins substantially in manner as herein before explained.

I also claim the arrangement of the inner sole, B, and the sewing, i, extended across such as a specified across such as a such as a specified across such as a specified across such and about the said pin or pins substantially in manner as herein before explained.

I also claim the arrangement being carried around and outside of the periphery of but not through the inner sole, B, and the sewing, i, which the outer sole, C, and the upper, A, are united, the said sewing under such arrangement being carried around and outside of the periphery of but not through the inner sole, B and the vesters.—

sewing under such arrangement being carried around and outside of the periphery of but not through the inner sole.

46,300.—Combined Rakes and Reels for Harvesters.—

Samuel Johnston, (assignor to himself and Rufus L. Howard), Buffalo, N. Y.:

First I claim making an automatic rake and reel combined so that the operator carby means of a lever and cord, and the arrangement of two tracks or ways in whigh the elbow of the rake moves, cause either rake head to operate at.pleasure as a rake and at the same time act continuously as a reel, all constructed in the manner herein described and substantially as and for the purposes set forth.

Second, I claim in a nautomatic rake and reel combined for harvesting machines, the arrangement whereby the operator without stopping the action of reeling can drop either of the rake heads down to the platform and hold it thereon, while removing the grain therefrom, constructed substantially as described and for the purposes set forth.

Third, I claim the arrangement of the tracks or ways when they are arranged so that in reeling the rake or rake head wild drop down nearly to the cutters and move the cut grain back from them and then rise up and pass over the cut grain, substantially as described and for the purposes set forth.

Fourth, I claim the arrangement of the driver's seat in connection with the lever cord, and gate, substantially as described and for the purposes set forth.

Fifth, I claim the arrangement of the driver's seat in connection with the lever cord, and gate, substantially as described and for the purposes herein set forth.

Sixth, I claim the arrangement of the two tracks or ways in combination with the gates or switches, for the purposes herein set forth.

Seventh, I claim the lever and spring, attached to the forward taste in connection with the same for the same for

Seventh, I claim the lever and spring, attached to the forward gate, in connection with the cord for operating the same, for the purposes set forth.

Eighth, I claim the use of the pointed washer attached to the elbow of the rake below the roller for the purposes set forth.

Ninth, I claim the hinged extension attached to the outer end of the rake head applied substantially as described and for the purposes set forth.

And, tenth, I claim the combination of the elbow of the rake head with the roller and the outer and inner tracks or ways, constructed substantially as described and for the purposes set forth.

49,301.—Coffee Roaster and Grain Dryer.—Gilbert D.
Jones, (assignor to himself and Charles Place,)
New York City:
I claim forming a crifee roaster, of a series of horizontal plates, each arranged to rotate within a closed box, the bottom of which is also horizontal, and which boxes receive and discharge near the center, substantially in the manner set forth herein.

center, substantially in the manner set forth herein.

46,302...Apparatus for Carbureting Air.—Hugh L. Mc-Avoy, (assignor to himself and Elias S. Hutchinson,) Baltimore, Md.:

I claim manufacturing air gas and enriching other gas, by the described mode of using a holder, C, to contain air, receive the carbonaceous matter as it rises from the oil in the form of vapor, and force the gas nut of the pipe, wherein it is confucted off, as explained. Second, I claim the plate, E2 employed in connection with the pan, E, to cause the air to pass to the pipe, B, in contact with the oil and in a state of compressure substantially as set forth. Third, I claim the sealing device consisting of the cup, F, cylinders, G G, and a body of liquid between the latter, substantially as described.

103.—Sewing Machine.—James S. McCurdy, Bridge port, Conn., assignor to Elias Howe, Fairfield, Conn.:

ast ferth.

I also claim the combination of the feeding instrument of the sewing machine with a shaft making one revolution to two descents by the needle carrier through the intervention of two cams of unequal projection, the whole operating substantially as set forth. I also can the combination of the feeding instrument with a shaft making one revolution to two descents by the needle carrier through the intervention of two cams and two adjustable wipers, one of said cams having two protuberances of equal projection, and the other having one protuberance of greater projection than those of the other cam, the whole operating substantially as set forth

of the other cam, the whole operating substraintly as set forth
46,304.—Table Cutlery.—Nathaniel Miles, Buckland,
Mass., assignor to "Bay State Hardware Co.,"
Northampton, Mass.:
First, I claim in table and other cutlery the bolster, C.D. formed
separately from the tang and having the fastening part, D. narrower
than the scale, B. and let into and concealed within the latter substantially as and for the purpose within set forth.
Second, I claim in connection with the above the employment of
the books or additional parts, E.E., adapted to lock the separate bolster pieces to the scales, B.B. the whole being concealed within the
latter substantially as within set forth.

46,305.—Metallic Window Sash.—Charles Neer, (a or to the "Architectural Iron Works,") New

Of the control of the

46,306.—Machine for Washing Wool.—John Petrie Jr., and John Kenworthy, Lancaster, Eng., administrators of the estate of Samuel Taylor, deceased assignors to Thomas Clegg, North Andover, Mass. Patented in England, July 8, 1853.

What is considered to be new, and therefore claimed as the on of the said Petrie and Taylor, is the combination of a ror r reciprocating plunger, c, one or more reciprocating beats

agitators, e.e.* and a rotating wheel or drum cylinder or frame, rarmed with teeth, prongs or times, the whole of such parts being applied to a trough and actuated by mechanical means substantially as described.

We also claim the combination of the rotating plunger, c, and the vibrating or reciprocating arms, e, for stirring, agitating and moving forward the wool in the trough.

We further claim in combination with the trough the endless apron, w, or its equivalent, and the squeezing rollers, the lifting drum or frame, r, above shown and described for raising the was hed wool out of the water, and depositing it on the traveling endless band or other contrivance for conveying it to the squeezing rollers or some receptacle for receiving it.

We also claim the combination of the squeezing rollers, the lifting wheel, one or more strrers or agitators, and the plunger, the whole being arranged and applied to a trough substantially as and to operate as specified; and also their combination with the vibrating frame, d, arranged in the trough as described.

46,307.—Spark Arrester.—August Prusman, Lingen, Hanover, assignor to Bernhard Schaffer and Christian Budenberg, New-York City:
I claim the arrangement of the inverted coulcal tube, F, cylindrical deflector, H, jacket, K, and water tank, I, in combination with the smokestack, E, jacket, C, and exhaust pipe, A, all constructed, applied and operating as and for the purpose herein set forth.

[This invention relates to an improvement in that class of spark arresters in which by a superincumbent tube the products of combustion are separated from the jet of steam and returned to the lower space of the spark arrester, without interfering with the free passage of the jet of steam or with the draught of the smoke

46,308.—Spark Arrester.—August Prusman, Lingen, Hanover, assignor to Bernard Schaffer and Christian Budenberg, New York City:
I claim a smokestek, A, for locomotives, expanding from the point, a, toward the top and bottom in about the proportion herein specified, and applied in combination with the exhaust pipe, B, in the manner and for the purpose described.

[The object of this invention is to increase the draught created by the action of the exhaust on the column of air in the smokestack o locomotives.1

46,309.—Mode of Compensation for Loss of Motion.
Thomas Shaw (assignor to himself and Philip S. Justice), Philadelphia, Pa.:
I claim the combination of spring, k and m, crank wheel, d, and rod, f, when connected with the recording movement, n, in order to operate engine counters requiring a regular measured stroke, in the manner and for the purpose herein described.

46,310.—Paper Shirt Collars.—George K. Snow, Watertown, Mass., assignor to himself, March Brothers, Pierce & Co., Boston, Mass.:

I claim my improved manufacture of paper collar, that is one having on each of J's two opposite sides indentatione or imprints in imitation of stitching, the whole being substantially as and for the purpose specified.

purpose specified.

46,311.— Machine for Making Metallic Tubes.—E. Valentine and M. T. Ridout (assignors to themselves and Win. Beck). Milwaukee, Wis.:

We claim in combination with a movable mandrel, G, or its equivalent, the linged sliding jaws. A A, pivoted upon a supporting block or table, B, and operating substantially in the manner and for the purpose herein set forth.

We claim, also, in combination with the jaws, A A and movable mandrel, G, or its equivalent, securing said laws by adjustable pivots so as to adapt them to mandrels of different proportions, substanstially in the manner herein set forth.

46.312.—Fanning Mill.—Henry W. Veregge (assignor to Benjamin C. White. Marshall Henry, and William Cain, Jr.), Richmond, Ind.:

I claim hanging the sli ies or shutters of fanning or other similar mills to the frame, or to a piece connected to the frame, by means of a tongue, strip or block on said slides or shutters and a horizontal groove or grooves in the face of said frame or piece, as and for the purpose set forth.

purpose set forth.

46,313.—Ship's Galley.—William Young, Washington, D. C., assignor to himself, and Chas. F. Stansbury, Philadelphia, Pa.:

I claim, first, The combination and arrangement of the fireplaces, A' B' C' and D', and the oven, E', substantially in the manner and for the purpose specified.

Second, The arrangement and combination of the fireplaces, A' B' C' and D, with the oven, E', substantially in the manner and for the purpose described.

Third, The arrangement and construction of the fireplaces, A' B' C', oven, E', and side recesses, J K L and J' K' L', substantially in the manner set forth.

Fourth, The arrangement in a ship's galley of three or more fireplaces varying in capacity, substantially as and for the purpose described.

46,314.—Machines for Dressing and Finishing Threads,
Etc.—Emanuel Burgy, Hasle, Switzerland, and Louis
Guillemin, Dieboldsheim, France:
We claim the combination of a winding frame, substantially such
as herein described, with the bobbins, b. bath, e, wipers, g, and
steamchests, h and i, all constructed and operating in the manner
and for the purpose substantially as setforth.

[This invention relates to an apparatus which is applicable for the surpose of dressing, finishing, and imparting luster or gloss to all threads or filaments of slik, cotton, flax, and other fibrous sub stances, but more especially to yarn, thread, or filaments of waste salk or floss silk, which by the use of this apparatus can be rendered equal in appearance to silk, and thereby much enhanced in value.

46,315.—Hydraulic Apparatus.—Auguste Desgroffe and Achille Ollivier, Paris, France:
We claim the employment or use of a rope, h, or i's equivalent, in combination with a box, A, provided with one or more plungers or movable sides, or made of some expansible material, substantially as and for the purposes set forth.

[This invention consists in gradually introducing into a water-tight ressel or box, which is filled with water or other non-compressible liquid and provided with one or more movable sides or fixtures or ade expansible, a cord or rope in such a manner that by said rope the liquid in the box, or a portion of the same, is displaced and a powerful pressure is exerted on the sides of the box, which, when movable or expansible, transmit the power thus exerted on their inner surfaces to bodies placed against their outer surfaces, and a powerful pressure can be exerted with comparatively little power and with an apparatus of a simple and cheap construction.]

46,316.—Mode of regulating Motion of Railroad Car Trucks.—Charles Schoubersgky, St. Petersburg, Russia: I claim the fly-wheels, A A, connected to an axic, B, and supported by the peripheries of the driving wheels of a truck, with or without intermediate friction wheels, substantially as and for the purpose set forth.

This invention consists in the employment or use of two beavy trins invention consists in the employment of use of two nearly by-wheels secured to the ends of an axle which rests, either directly or indirectly, upon the driving wheels of a truck in such a manner that by the action of said fly-wheels the velocity of the truck is rendered uniform and the momentum stored up in said fly-wheels when the truck is going down hill will revert to the locomotive in drawing

1,861.—Cartridge Box.—Erastus Blakeslee, New Haven,
Conn. Patented Dec. 20, 1864:
I claim a cartridge box constructed in the manner described, to
carry one or more movable tubes, each tube containing two or more
cartridges, as and for the purpose specified.

Totalin a common invalile tubes, each tube containing two or more cartridges, as and for the purpose specifical.

1,862.—Supplemental Valves for Steam Engines.—

Richard Colburn and L. W. Hanson, Norwich, Conn. Patented May 20. 1856:

We claim as our invention the combination of an apparatus, substantially as described and for the purposes specified, with the cylin der and piston of a steam engine—such apparatus consisting of the passages, f. g., the valve boxes, E.F., the valves, K.K., their seat passages, f. h., and the lever, D., or its equivalent.

We also claim the said apparatus constructed substantially as described and for the purpose specified.

1,863.—Valve Gear.—Joseph F. Hamilton, Pittsburgh, Pa. Patented July 14, 1863:

I claim the arrangement of the regulating coupling arms, h, lifters or propeller arms, j.k., springs, l, levers, m and n, and link, d, when engines, the whole being constructed and operating substantially as herein described and for the purpose set forth.

1,864.—Arrangement of Valves for Steam Engines.—

Joseph F. Hamilton, Pittsburgh, Pa. Patented July 24, 1860:

I claim the use of the valve, i, placed in one of the receiving ports of steam engines, as herein described, and for the purpose set forth.

1,855.—Curding Machines.—Lawrence O'Brien, Indian—

of steam engines, as herein described, and for the purpose set forth.

1,855.—Carding Machines.—Lawrence O'Brien, Indianapolis, Ind. Patented Oct. 6, 1863:

I claim the arrangement of the roll, D, between the main card cylinder. A, and the endless apron, C, substantially as and for the purpose set forth.

Also the construction of the endless apron, C, substantially as herein described, so as to carry the fibers on top of the slats and dust and other foreign matters between them, the fibers being delivered to the roll, D, and the foreign matters discharged in passing over the upper roll, F, when the same is applied in the manner specified.

1,866.—Keyed Instrument of Music.—Francis Peabody,
Salem, Mass.—Patented Nov. 10, 1863:
I claim as my improvement in mechanism for operating the
sound-producing parts of a musicalinstrument the above-described
arrangement of dents, or their equivalents, on a rotary plate, G
viz. in concentric circles, and with the circle of treble and base
dents alternating with respect to one another, substantially as set
forth.

dents alternating with respect to one another, substantially as set forth.

And in combination with the said arrangement of dents on a rotary plate, I claim the arrangement of the bass and the treble-key levers, or the parts which produce or aid in producing the musical sounds, in two separate series or sets, whereby those of the bass notes are in one set and those of the treble notes are in the other set, substantially as specified.

And in combination with the keys of a keyed musical instrument, I claim a series of operative key levers and a rotary plate, provided with dents, arranged on its face, as specified. I also claim the combination of the separate operating wheel, D, and its operative mechanism, substantially as described, with the plate, G, provided with dents, or their mechanical equivalents, arranged as explained. I also claim the combination of the hinged or elevating frame, M, with the plate, G, and the series of operating levers, C C', or their equivalents.

at also claim the completion of the hinged or elevating frame, M, with the plate, G, and the series of operating levers, C C', or their equivalents.

I also claim the improved speed regulator, composed of one or more adjustable wings, N N, and their stationary surface or wing or wings, and nechanism for varying the position of the adjustable wing or wings relatively to one or more stationary wings, substantially as and for the Durpose specified.

I also claim a combination, consisting of the rotary plate, G, with its arrangement of dents, the series of key levers, C C', or their mechanical equivalents, and a mechanism for imparting a rotary motion to the plate, G, the said key levers being applied to the keys and tothe dents, by means, and so as to operate therewith, substantially as specified.

1,867.—Paper Collars.—Wm. E. Lockwood, Philadelphia, Pa., assignee by mesne assignment of Walter Hunt. Ante-dated July 24, 1854:

As a new manufacture, a shirt collar, in which paper is used to impate starched linen, and which is made of the desired shape by dies or forms applied under pressure.

2,028.—Military Belt Hook.—Erastus Blakeslee, New Haven, Conn.

2,029.—Badge or Breastpin.—Michael F. Ryan, New York City.

2,030.—Trade Mark.—Stephen S. Winchester (assignor to E. A. & W. Winchester), Boston, Mass.



MATENTS

FOR SEVENTEEN YEARS.

MUNN & COMPANY,

In connection with the publication of the SCIENTIFIC AMERICAN, have act

ed as Solicitors and Attorneys for procuring "Letters Patent" for new inventions in the United States and in all foreign countries during mteen years. Statistics show that nearly ONE-THIRD of al applications made for patents in the United States are solicited ough this office; while nearly THREE-FOURTHS of all the patents taken in fereign countries are procured through the same source. It is almost needless to add that, after seconteen years' experience in pre paring specifications and drawings for the United States Patent Office the proprietors of the SCIENTIFIC AMERICAN are perfectly con versant with the preparation of applications in the best manner, and the transaction of all business before the Patent Office; but they pleasure in presenting the annexed testimonials from the three last ex-Commissioners of Patents.

last ex-Commissioners of vaccions.

Messrs. Munn & Co. :—I take pleasure in stating that, while I held the office of Commissioner of Patents, more than one-fourth of all the business of the office came through your mands. I have no doubt that the public confidence thus indicated has been fully deserved, as I have always observed, in all your intercourse with the office, a marked degree of promptness, skill, and fidelity to the interests of your employers.

Yours very truly.

Chas. Mason.

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

MESSES. MUNN & CO.:—It affords me much pleasure to bear test many to the able and efficient manner in which you discharged you natus as Solictors of Patents, while I had the honor of holding the pitce of Commissioner. Your business was very large, and you sus taned (and I doubt not justly deserved) the reputation of energy marked ability, and uncompromising fidelity in performing your professional engagements.

ments.
Very respectfully, your obedient servant,
J. Holf.

Hon. Wm. D. Bishop, late Member of Congress from Connect

eded Mr. Holt as Commissioner of Patents. Upon resigning the

succeeded Mr. Holt as Commissioner of Laceuro or the vote to us as follows:

MESSES, MUNN & CO.:—It gives me much pleasure to say that, ing the time of my holding the office of Commissioner of Paten very large proportion of the business of inventors before the 1'm Office was transacted through your agency; and that I have found you faithful and devoted to the interests of your clients, as as eminently qualified to verform the duties of Patent Attorneys skill and accuracy.

Very respectfully, your obedient servant, WM. D BISMO

THE EXAMINATION OF INVENTIONS.

Persons having conceived an idea which they think may be natent Able, are advised to make a sketch or model of their invention, and submit it to us, with a full description, for advice. The points of novelty are carefully examined, and a written reply, corresponding

with the facts, is promptly sent, free of charge. Address MUNN & CO., No. 37 Park Row, New York.

As an evidence of the confidence reposed in their Agency by in ventors throughout the country, Messrs. MUNN & CO. would state that they have acted as agents for more than TWENTY THOUSAND inventors! In fact, the publishers of this paper have become identified with the whole brotherhood or inventors and patentees, at home and abroad. Thousands o inventors for whom they have taken out pat ents have addressed to them most flattering testimonials for the vices rendered them; and the wealth which has inured to the individ-uals whose patents were secured through this office, and afterwards illustrated in the SCIENTIFIC AMERICAN, would amount to many millions or dollars! Messrs. MUNN & CO. would state that they never had a more efficient corps of Draughtsmen and Specification Writers than those employed at present in their extensive offices, and that they are prepared to attend to patent business of all kinds in the quickest time and on the most 'beral terms

PRELIMINARY EXAMINATIONS AT 'THE PATENT OFFICE.

The service which Messrs, MUNN & CO. render gratuitously upo office, to see if a like invention has been presented there; but is an opinionbasedupon what knowledge they may acquire of a similar invention from the records in their Home Office. But for a fee of \$5, accompanied with a model, or drawing and description, they have special search made at the United States Patent Office, and a report setting forth the prospects of obtaining a patent, &c., made up and mailed to the inventor, with a pamphlet, giving instructions for further proceedings. These preliminary examinations are made through the Branch Office of Messrs. MUNN & CO., corner of F and Seventh streets, Washington, by experienced and competent per sons. Many thousands of such examinations have been made through Address MUNN & CO., No. 37 Park Row, New York.

THE VALIDITY OF PATENTS.

Persons who are about purchasing patent property, or patentees who are about erecting extensive works for manufacturing under their patents, should have their claims examined carefully by connectent attorneys, to see if they are not likely to infringe some exist ing patent, perore making large investments. Written opinionsor the validity of patents, after careful examination into the facts, can be had for a reasonable remuneration. The price for such services is always settled upon in advance, after knowing the nature of the invention and being informed of the points on which an opinion is solicited. For further particulars address MUNN & CO., No. 37 Park Row, New York.

e Patent Laws, enacted by Congress on the 2d of March, 1861 are we in full fo ce, and prove to be of great benefit to all parties who e concerned in new inventions.

The law abolishes discrimination in fees required of foreigners, excepting natives of such countries as discriminate against citizens of the United States—thus allowing Austrian, French, Belgian, English Russian, Spanish and all other foreigners, except the Canadians, to enjoyall the privileges of our patent system (except in cases of designs) on the above terms. Foreigners cannot secure their inventions by filing a caveat; to citizens only is this privilege accorded.

CAVEATS.

Persons desiring to file a caveat can have the papers prepared in the shortest time by sending a sketch and description of the invention. The Government fee for a caveat is \$10. A pamphlet of advice regarding applications for patents and caveats is furnished gratis, on application by mail. Address MUNN & CO., No. 37 Park Row, New

REJECTED APPLICATIONS.

essrs. MUNN & CO. are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. The close proximity of their Washington Agency to the Patent Office affords them rare opportunities for the examination and comparison of ref erences, models, drawings, documents, &c. Their success in the prose cution of rejected cases has seen very great. The principal portion of their charge is generally left dependent upon the final result.

All persons having rejected cases which they desire to have prosecuted, are invited to correspond with MUNN & CO., on the subject giving a brief listory of the case, inclosing the official letters, &c.

FOREIGN PATTENS.

Messrs. MUNN & CO., are very extensively engaged in the prepara tion and securing of patents in the various European countries. For the transaction of this business they have offices at Nos. 66 Chancer tane. London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eper enniers, Brussels. They thing they can safely say that THREE-FOURTHS of all the European Patents secured to American citizensare pro

cured through their agency.

Inventors will do well to bear in mind that the English law does no limit the issue of patents to inventors. Any one can take out a pat-

lars of information concerning the proper course to be p in obtaining patents in foreign countries through MUNN & CO'S Agency, the requirements of different Government Patent Offices, &c. may be had, gratis, upon application at the principal office, No. 37 Park Row, New York, or any of the branch offices.

HOW TO MAKE AN APPLICATION FOR A PATENT.

Every applicant for a patent must furnish a model of his invention susceptible of one; or, if the invention is a chemical production, he must furnish samples of the ingredients of which his composition consists, for the Patent Office. These should be securely packed, the inventor's name marked on them, and sent, with the Governmen fees, by express. The express charge should be pre-paid. Small models from a distance can often be sent cheaper by mail. The safest way to remit money is by a draft on New York, payable to the order of Messrs. MUNN & CO. Persons who live inremoteparts of the country can usually purchase drafts from their merchants on their

New York correspondents: but, if not convenient to do so, there is outlittle risk in sending bank bills by mail, having the leared by the postmaster. Address MUNN & CO., No. 37

Patents are now granted for SEVENTEEN years, and the Government fee required on filing an application for a patent is \$15. Other changes in the fees are also made as tollows .-

On filing each Caveat	210
On filing each application for a Patent, except for a desig	
On issuing each original Patent	\$20
On appeal to Commissioner of Patents	\$20
On application for Re-issue	\$30
On application for Extension of Patent	\$50
On granting the Extension	. \$50
On filing a Disclaimer	\$10
On filing application for Design (three and a half years)	\$10
On filing application for Design (seven years)	. \$15
On filing application for Design (seven years) On filing application for Design (fourteen years)	\$30

SEARCHES OF THE RECORDS.

Having access to all the official records at Washington, pertaining to the sale and transfer of patents, MESSRS. MUNN & CO., are at all times ready to make examinations as to titles, ownership, or assignments of patents. Fees moderate.

INVITATION TO INVENTORS.

Inventors who come to New York should not fall to pay a visition extensive offices of MUNN & CO. They will find a large collection Inventors who com of models (several hundred) of various inventions, which will afford them much interest. The whole establishment is one of great interest to inventors, and is undoubtedly the most spacious and best arranged

MUNN & CO. wish it to be distinctly understood that they do speculate or traffic in patents, under any circumstances; but that they devote their whole time and energies to the interests of their clients.

COPIES OF PATENT CLAIMS.

MESSRS. MUNN & CO., having access to all the patents granted since the rebuilding of the Patent Office, after the fire of 1836, can tur nish the claims of anv patent Tranted since that date, for \$1.

EXTENSION OF PATENTS.

Many valuable patents are annually expiring which might readily be extended, and if extended, might prove the source of wealth to their fortunate possessors. Messrs. MUNN & CO. are persuaded that very many patents are suffered to expire without any effort at extension, owing to want of proper information on the part of the patentees, their relatives or assigns, as to the law and the mode of proce dure in order to obtain a renewed grant. Some of the most valuable grants now existing are extended patents. Patentees, or, if deceased their helts, may apply for the extension of patents, but should give ninety days' notice of their intention. Patents may be extended and preliminary advice obtained, by con-

Patents may be extended and preliminary advice obtained,by colling, or writing to, MUNN & CO., No. 37 Park Row, New York.

ASSIGNMENTS OF PATENTS.

The assignment of patents, and agreements between patentees and nanufacturers, carefully prepared and placed upon the records at the Patent Office. Address MUNN & CO., at the Scientific American the Patent Office. Address MUNN & CO., at Patent Agency, No. 37 Park Row, New York.

UNCLAIMED MODELS.

Parties sending models to this office on which they decide not to apply for Letters Patent and which they wish preserved, will please to order them returned as early as possible. We cannot enga retain models more than one year after their receipt, owing to vast accumulation, and our lack of storage room. Parties, therefore, who wish to preserve their models should order them returned within one year after sending them to us, to insure their obtaining them. In case an application has been made for a patent the mode is in deposit at the Patent office, and cannot be withdrawn,

It would require many columns to detail all the ways in which the inventor or Patentee may be served at our offices. We cordially invite all who have anything to do with patent property or inventions to call at our extensive offices, No. 37 Park Row, New York, where any questions regarding the rights of Patentees, will be cheerfully

Communications and remittances by mail, and models by express (prepaid) should be andressed to MUNN & CO. No. 37 Park Row, New



S. J. A., of Vt .- No power is actually gained by either the lever, inclined plane, screw or wedge; what is gained in power is lost in time. This applies to them all equally.

O. M., of Ind.-You have doubtless seen that the true ntor of the Ruhmkorff coil has already been named in our paper.

D. B., of Wis.—The "natural lime" in soil is carbonate lime, and this would not injure guano. Sulphuric acid, if mixed with guano, would combine with the ammonia to form sulphate of ammonia, and then this would be slowly decomposed during the growth of the plants, yielding the ammonia as wanted. Sulphuric acid is destructive to both animal and vegetable compounds, and would require diluting with many times its weight of water to be harmless to vegetation. It is not a fertilizer C. T., of Mass.—We know of no method by which you

J. W. P., of Me.—A sand bath for bluing steel is simply white beach sand, such as is used for scrubbingfloors. Place it in an iron pan, over the fire, and heat it hot. The steel must be polan iron pan, over the are, and near it not. The steel must be poished bright, and laid on the sand, when it will gradually acquire a bluish tint. At the right shade take it off and plunge it immediately in cold water. Anything that diffuses the heat evenly will do as well as sand; this material is only used for that purpose.

can mix claine oil with water.

J. M., of N. Y.-Ede, on steel working, is the book you want. Address D. Appleton & Co., New York City, or go there

G. F., of Mass.—The sample of paper you send is made