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29,751.—W. H. Allen, of Brooklyn, N. Y., for an Improvement in Elevators for Store-houses:
I claim the arrangement and combination of the two double-threaded screw shafts, D D, sliding blocks, c, c, bars, B, platform, C, and guide frame, A, with the jointed levers, J J', as and for the purposes set forth and described.

[This invention consists in the employment of extension levers or joints, with right-and-left screws for distending or contracting the joints, which levers act upon the hoisting car, and move it up and down in grooves in guide timbers that extend perpendicularly from the bottom to the top of the building, the whole being arranged in such a manner that by turning the right-and-left screw shaft the platform may be elevated or depressed with a very little expense of power or loss of time.]

29,752.—James Alsop, of Clinton, Ill., for an Improvement in Seeding Machines:

I claim, first, The arrangement of the wheels, S' U, with the tubes X, and boxes, V, provided with the valves, q, and actuated through the medium of the arms, r, levers, t, weighted arm, Y, and the pins, w, on the wheels, U, as and for the purpose set forth.
Second, In combination with the wheels, S' U, and boxes, V, the cylinder, S, and hopper, R, when arranged as shown, to admit of the sowing of the seed either in hills or drills or broad-cast, as may be desired.

[This invention relates to certain improvements in that class of seeding machines which are designed for general use—that is to say, for planting various kinds of seeds, and either in hills or drills or broadcast, as may be required. The invention consists in a novel seed-distributing arrangement, and also in a peculiar arrangement of means for regulating the depth of the plows, whereby a very efficient implement is obtained for the desired purpose.]

29,753.—E. S. Bacon, of Albion, N. Y., for an Improvement in Beehives:

I claim a beehive constructed of cylindrical form, when provided with comb frames, E, constructed substantially as shown, to conform to the interior of the hive, for the purpose specified.
I further claim the flanges, a, when grooved at their under sides and attached to the base, C, as and for the purpose specified.

[The object of this invention is to obtain a hive that will admit of the bees remaining in a compact state within the hive, and still have access to all parts thereof, without materially spreading themselves or becoming detached from a general mass.]

29,754.—Edward Badlam, of Ogdensburgh, N. Y., for an Improvement in Seeding Machines:

I claim the combination and arrangement of harrow teeth, operating as described, with the shaking seed hopper, G, all receiving their motion from the two driving wheels, A' A', as used for the purposes set forth.

[This invention consists in arranging in a suitable frame, mounted at its rear end on driving wheels, between which may be placed a large cylinder that serves for a roller, a number of rockshafts parallel to each other, which shafts carry the harrow teeth that receive a transverse rocking motion as the machine is drawn along from the driving wheel as will be hereinafter described; and in conjunction with such a harrow it consists in the employment of a long seed box or hopper arranged either in front, in the middle, or in the rear of the harrow, and operated with a transverse shaking motion for equitably scattering the seed, while the rocking teeth harrow them in or prepare the soil for their reception.]

29,755.—F. S. Barnard, of New York City, for an Improved Automatic Terrestrial Time Globe:

I claim, first, The arrangement in combination with the clock movement, D, of a revolving terrestrial globe, A, on an inclined axle, C, and encircled by a bow, F, constructed and operating substantially as and for the purpose set forth.

Second, The arrangement of the indicator, H, in combination with the revolving globe, A, and with the bow, F, constructed and operating substantially in the manner and for the purpose specified.
Third, The arrangement of the fixed hand or pointer, J, on the toothed ring, G, in combination with the rotary rings, I and M, or their equivalents, constructed and operating substantially as and for the purpose set forth.

29,756.—H. M. Bearce, of North Auburn, and L. C. Peck, of Lewiston, Me., for an Improved Machine for Cutting and Swaging Shoe Tips:

We claim the die, I, constructed in the manner described, and in combination with plunger, K, operated by cam, L, gravity or adjustable percussive force, or both, the latter being imparted to the plunger by screw, E, and helical spring, Q, or otherwise, for swaging the tip, essentially in the manner and for the purposes fully set forth.

We also claim the cutter, J3, stamp, K2, and die, N2, constructed and arranged as described, for cutting the blank, when combined with die, I, for swaging the tip, essentially as set forth.
We also claim the combination of the tube, P2, stand Q2, and slide bar, R2, operated by cam, or otherwise, for constructing the blanks direct from the cutting die to the swaging die, essentially as set forth.

We also claim the rod, R, and its plate, T, guide plate, S, and helical spring, U, combined with die, I, the rod, R, being operated by percussive force to throw the swaged tip from the die, essentially in the manner and for the purposes fully set forth.

29,757.—David Bissell, of Detroit, Mich., for an Improvement in Crimping Machines:

I claim the supplemental jaws, E E, with their lugs, as described, in combination with the jaws, B B, levers, G G, and treadle, H, arranged, combined, and operating in the manner set forth.

[This invention consists in a novel manner of applying lateral pressure to the jaws, and at the same time stretching the leather tightly at the instep portion. It further consists in putting the clamping boards or jaws together in such a manner that they will admit of lateral adjustment, and at the same time yield to the inequalities in the thickness of the leather front during the operation of crimping.]

29,758.—Thomas Black, of Princeville, Ill., for an Improvement in Cultivators:

I claim the arrangement of the elastic traverse bow bar, C, adjustable rods, c, bow bar, B, beams, A A, double trees, K, chain, I, pulleys, H J J, beam, A, guards, G G, standards, E, and shares, D F, all as shown and described for the purpose set forth.

[The object of this invention is to obtain a cultivator that may be used for plowing or operating among plants of various heights without injuring the same, due provision being made against the breaking down of large plants by the passing along of the implement, and suitable protection being afforded small plants against stones, clods, &c., which may be cast towards them by the action of the shares. The invention also has for its object the equalizing of the draught, so as to insure equal pull on each beam of the implement, and a perfect operation of the same.]

29,759.—Thomas Board, of Ripley, Va., for an Improved Shoe-cleaner:

I claim the arrangement of the rising and falling slide, C, in combination with the side jaws, B B, constructed and operating substantially as and for the purpose set forth.

[This invention consists in arranging a rising and falling slides in combination with two spring side jaws in a suitable frame fastened to the doorstep or to any other convenient place, in such a manner that if a boot or shoe is placed between the spring jaws and the vertical slide is depressed on the instep, and the foot is now drawn backwards, the mud adhering to the boot or shoe is cleaned off on the top as well as on the sides.]

29,760.—Reinhold Boeklen, of Brooklyn, N. Y., for an Improvement in Hammers:

I claim, first, So magnetizing or applying magnetism in connection with a hammer that it may be capable of picking up tacks or nails, and inserting them in wood or other material, substantially as described.

Second, Coating the whole head of the hammer, so magnetized or rendered magnetic, with the exception of the face and opposite end, with poorly conducting material, substantially as and for the purpose specified.

29,761.—L. Bradley, of New York City, for an Improvement in Telegraphic Apparatuses:

I claim, first, The combination of a helix with a core arranged to pass through its center and around and in close proximity to its surface, with the poles also in near proximity to each other, for the purpose set forth.

Second, The combination of a magnet constructed substantially as described with a keeper arranged parallel to the legs of the magnet, and in close proximity to the periphery of the helix for the purpose set forth.
Third, The combination of the armature, or its equivalent, for breaking and closing the circuit, with two springs arranged to act on each other in opposite directions for the purpose set forth.

Fourth, The combination of a sectional helix with a double switch, arranged substantially as described for the purpose set forth.

Fifth, The combination of a vibrating armature, or its equivalent, in closing and breaking circuits with a sounding-board and tension wire, arranged substantially as described for the purpose set forth.

Sixth, The combination of an electro-magnet with an armature suspended by its center between the poles of the magnet, so as to come in contact with both poles at the same time.

29,762.—G. W. Brown, of Galesburg, Ill., for an Improvement in Cultivators:

I claim, first, So combining the frame wheels and plows with the levers, L M, as that the driver or operator, from his seat may turn or cramp said frame, wheels, and plows on the tongue, to cause the plows to follow the crooks in the rows of plants, substantially as described.

I also claim so combining the seat and tongue with the frame and with an axle set in advance of its supports in the wheels, as that the driver or operator in his seat, by shifting his weight, may raise, hold up, and lower the plows, substantially as described.

I also claim, in combination with the plows, the convex cutters or shields, N N, when constructed, arranged and operating as set forth.

29,763.—T. S. Brown, of Philadelphia, Pa., for an Improved Oscillating Ships' Berth:

I claim, first, The arrangement of a rockshaft, D, crossbars, E, and suspension rods, H, in combination with a boat berth, for the purpose of neutralizing the motion of a ship, substantially as set forth.

Second, The arrangement of hinged boards, 3 4 1 2 U L L, corks, 9 10 11 12, and air-tight tubes, J, forming a berth and lifeboat, substantially as set forth.

29,764.—George Buchanan, of Hickory, Pa., for an Improvement in Self-acting Wagon Brakes:

I claim the arrangement of the brake, e, bar, g, rods, x and m, strap, j, springs, q and v, and cords or chains, d, when used in combination with the car, wagons and carriages, the whole being arranged, combined, constructed and operated as described and for the purpose set forth.

29,765.—A. H. Burdine, of Chulahoma, Miss., for an Improvement in Cotton Gins:

I claim cutting away a part of the upper portion of the breast of a cotton gin, in the manner and for the purpose described, so that there shall be a horizontal opening across the breast the full width of the saws and of less depth than the size of a cotton seed, and so that the teeth of the saws shall extend a short distance beyond the upper end of the ribs of the breast and into the horizontal opening, substantially as and for the purposes described.

28,766.—L. S. Chichester, of New York City, for an Improved Meat and Vegetable-chopper:

I claim the combination of the bowl, A, of circular or semi-circular form, and the radius knife frame, D, so applied as to admit of a rising and falling movement and also a lateral one, as and for the purpose set forth.

I further claim, in combination with the bowl, A, and knife frame, D, the plate, C, applied to the bowl, and arranged relatively with the knife frame, D, to operate as and for the purpose set forth.

[The object of this invention is to obtain a simple, efficient and economical implement for the purpose of chopping meat and vegetables in a small way for family use; the device being intended for the kitchen, to occupy but little space, and to require but little labor to manipulate it.]

29,767.—A. M. Chisholm, of Antigonish, Nova Scotia, for an Improvement in Sinecal Quadrants:

I claim a mathematical mechanical scale, composed of the graduated plane square, A B C D E, divided and sub-divided into less squares of tenths each way, and having a graduated quadrant, E, in one of the four corners, the radius of which quadrant extends to 60 of the sub-divisions or sixteenths of the sides of the square, and also provided with an index, F, marked as described, and pivoted to the square in the vertex of the angle, agreeing with the quadrant and otherwise made as shown and described.

29,768.—Theodore Christian, of New York City, for an Improved Rotary Cutter Head for Planing Machines:

I claim, first, The combination of a rotary cutter and planing iron with an adjusting screw and nut, arranged to pass through the iron, substantially as described, whereby the cutters may be drawn out or thrown in as required to adjust them to each other.

Second, The combination of a rotary cutter head, a planing iron and a clamping iron, arranged as described, to hold the iron to the head and prevent its springing.

Third, The combination of a series of cutter heads and a series of cutters, constructed and arranged on one shaft, substantially as described, so as to abut and form a continuous line of cutters; and

also so that the position of the heads and cutters may be changed in relation to each other on the shaft, in order to produce a great variety of perfect compound moldings with a few varieties of cutters.

Fourth, The combination of a cutter head with a cruciform dividing saw arranged on the same shaft, so that it can be turned and the position of its arms, in relation to the cutterknives, changed as required, for the purpose as set forth.

29,769.—Edward Conway, of Dayton, Ohio, for an Improvement in Heating and Cooking Apparatuses:

I claim, first, The arrangement of valved compound burners, C E e, in the described combination, with a cooking stove, A, for the purposes set forth.

Second, The compound burner composed of a wick, t, and circular series of jets, u, communicating with the alcohol boiler, as set forth.

29,770.—Arthur de Witzleben, of Washington, D. C., for an Improvement in Holding Doors Open:

I claim the box, A, apartment, B, shank, C, knob, D, spiral spring, E, bottom, H, feet, m m, and plate, n, when used for the purposes specified.

29,771.—J. C. Dickey, of Saratoga Springs, N. Y., for an Improved Gold-washer and Amalgamator:

I claim the projections, c, made on the base and under-side of the revolving cone, E, working in one or more channels made on the base of the stationary cone, D, for the purposes set forth.

29,772.—T. S. Disston and Henry Disston, of Philadelphia, Pa., for an Improved Machine for Setting Saw Teeth:

We claim, first, Causing the saw blade to traverse over the anvil by means of the rotating cog-wheels, S and S', the same being rendered adjustable in respect to the platform, P, by the devices described, or by any other equivalent mechanism, for the purpose specified.

Second, We claim, in combination with the said conical cog-wheels, two or more hammers moving simultaneously, and being so arranged and furnished with such adjusting appliances that the heads of the hammer may be adjusted, in respect to each other and to the said conical cog-wheels, as and for the purpose set forth.

Third, We claim the platform, P, secured to the permanent frame and rendered adjustable thereon, substantially in the manner and for the purpose set forth.

Fourth, The guide plates, p and p', arranged in respect to the platform, P, and rendered adjustable in respect to the conical cog-wheels, substantially as set forth, for the purpose specified.

Fifth, The combination of the adjustable anvil with the conical cog-wheels and the hammer.

29,773.—H. T. Douglas, of Zanesville, Ohio, for an Improvement in Sugar Cane Mills:

I claim, first, Constructing on the top and bottom plates of a sugar mill V-shaped inclined planes which come between the rollers and prevent the cane from working between the ends of the rollers and the plates and thereby obstructing the working of the mill, substantially as set forth.

Second, The combination in a sugar mill of the inclined projections, r r, elliptical boxes, g, with shoulders, l, and the feed plate, E, the whole constructed, arranged and operating substantially as described for the purposes set forth.

29,774.—D. E. Fenn, of Tallmadge, Ohio, for an Improved Gate:

I claim the arrangement of the inclined planes, H L, extending across the open space between the posts of the frame, A A', the gate, C, posts, K, rod, J, arms, G, and ropes, M N, as shown and described, so that the front end of the gate will rise and fall upon the inclined planes, H L, while the rear end of the gate will ride upon the horizontal rod, I, and so that by pulling upon either of the ropes the gate will be opened or closed, being moved partly by the force applied and partly by its own gravity in descending the inclined planes—A' as specified.

29,775.—Frederick Fidler, of Batavia, N. Y., for an Improvement in Stalk and Root-cutters:

I claim, first, In connection with the knives, E E, the scorers, G, for the purpose specified.

Second, The serrated, reciprocating plates, I I, operated through the medium of the treadle, H, link, j, lever, J, and arms, K K, for the purpose of feeding the substance to be cut to the cutters.

[This invention relates to a certain improvement in that class of stalk and root-cutting machines in which knives are attached to the side of a wheel. The invention consists, 1st. In a peculiar shape or form of the knives, by which a regular or even cut is obtained. 2d. In a novel way of adjusting the knives. 3d. In the use of scorers in connection with the knives. 4th. In a novel feeding device—the whole being so constructed and arranged as to form a simple, efficient and easy-working machine for the intended purpose.]

29,776.—J. F. Finger, of Marion, S. C., for an Improved Circular Table:

I claim a circular pedestal table furnished with a rod, G, step bearings, G', and foot-levers, E E E E, and otherwise constructed in the manner and for the purposes set forth.

[This invention consists in hanging a circular top table, having drawers in it, in such a manner that the top will be firm and steady under ordinary circumstances, and whenever desired it may, by placing the foot on certain levers, be rotated on its pedestal.]

29,777.—F. G. Floyd and E. A. Floyd, of Macomb, Ill., for an Improvement in Corn Planters:

We claim the combination with a seed-planting frame constructed as described of the seed slide, a, vibrating arm, c, receiving its motion from arm, d, the wheels, g g', and shaft, l', arranged in the manner and for the purpose set forth.

[This invention is an improved corn planter for opening the furrow, dropping the corn and covering two rows at the same operation. The machine is provided with adjustable plows or shoes which open the furrows, for regulating the depth required to plant, that are controlled by the driver. The invention provides for carrying in the hopper a large supply of seed, which may be let into the dropping boxes in small supplies, regulated according to the quantity to be deposited at each movement of the seed slide, thus preventing the seed apertures or the boxes from choking up in consequence of the great body and, necessarily, weight of seed. Provision is made for turning the machine and for starting or stopping the motions of the dropping device at the option of the driver.]

29,778.—L. H. French, of Philadelphia, Pa., for an Improved Car Register:

I claim the combination with the turn-stile arranged substantially as set forth, of the strikers, a, spring bar, H, slotted arm, I, pawl bar, G', with its spring pawl, c, and ratchet wheel, G, combined with a suitable registering apparatus, and arranged and operating in the manner and for the purposes set forth.

29,779.—Ransom Gilbert, of Morrisville, Vt., for an Improved Clothes-dryer:

I claim the arrangement of the india-rubber straps, D D, and pins, f f, with the hubs, H H', and standard, arms, braces and cords, as and for the purpose set forth.

29,780.—John Goulding, of North Wilbraham, Mass., for an Improvement in Cotton Gins:

I claim, first, The concave or apron, O, in connection with the toothed plates, L, and wheel, C—said parts being constructed as shown for the purpose described.

Second, The combination of the toothed plates, L, comb wheel, C, concave or apron, O, stripper, F, and beater wheel, H—said parts being constructed as shown for the purpose set forth.

[The object of this invention is to obtain a machine by which cotton may be ginned or separated from its seed; the machine per-

forms its work in the most efficient manner without injuring the fiber of either the cotton or wool, but leaving the same in a loose, light state most favorable for subsequent manufacture.]

29,781.—C. A. Gregory, of Poughkeepsie, N. Y., for an Improved Apparatus for Filling Bottles:

I claim a machine for filling bottles and other vessels, constructed and operating substantially in the manner described, whereby any required number of vessels may simultaneously receive a measured quantity of liquid from a reservoir with rapidity, precision and safety, as set forth.

29,782.—Stuart Gwynn, of New York City, for an Improvement in Spading Machines:

I claim, first, The employment in combination with the spades and for operating them, of double cranks arranged to move in reverse directions and giving a compound action to the spade or spades essentially as specified.

Second, Providing the spade stock or holder with a spring stop or stops so constructed and arranged as to be capable of being thrust away or to one side of the spade in its descent or digging stroke to avoid striking a stone or other inverting obstacle calculated to injure it, and permitting of the yield or rise of the spade therefrom substantially as shown and described.

Third, Constructing and arranging the spade stock or holder as shown and described, with a twist screw or helical groove, or the equivalent thereof, so that the spade, in its reciprocating or longitudinal travel, shall, at a certain point or points thereof, be turned and made to assume different positions relatively to the line of cut, essentially as set forth.

Fourth, Causing the spade, after it has been pushed into its stock or holder by meeting with an obstacle in its descent, to be automatically returned to its proper position for further work, during the retreat of the holder, by means of the same device or pin which, in connection with the helical slot in the stock, serves to turn and alter the position of the blade of the spade relatively to the line of cut, essentially as described.

Fifth, Constructing the spade or spade blade with an articulation joint for action when in the soil or when freeing itself therefrom, and during the backward thrust or throw of the spade, to avoid injury or breakage from stones or other like obstacles in the soil.

29,783.—L. W. Harris, of Waterville, N. Y., for an Improvement in Presses:

I claim the employment of the open follower bars, l l, in combination with the hinged rack, C C, attached to the bed as shown and described, so that the said racks will serve as guides to the follower, and so that they can be readily turned down to a horizontal position away from the press when not required for operation, all as set forth.

Also, The combination of the pawls, m n, when connected by jointed arms, o, with cylinder, e', hinged rack, C, and open follower bars, l l, as shown and described, so that one of said pawls will be operated at each movement of either of the levers, E, and so that the cylinders, e', may be removed together with the pawls and levers, E, when desired, as set forth.

Also, The arrangement of the axes of the pawls, m n, within the circumference of the hollow cylinders, e', as and for the purpose shown and described.

[The object of this invention is to obtain a simple, efficient, and rapidly-working press for manual operation—one that will admit of a very ready application of power and may have the substance to be pressed readily placed into the press box and removed therefrom with facility when compressed into bale form. The invention is more particularly designed for compressing hops, but it may be used for compressing hay, cotton or other substances which are generally compressed for baling.]

29,784.—James Harrison, of Troy, N. Y., for an Improved Apparatus for Ringing Bells:

I claim distributing the blows of the hammer or clapper of a bell along or around the sound bow or circumference of the bell, substantially as described, by striking the bell or its clapper or hammer by the action of the bell-ringing mechanism in sounding the bell, substantially as described.

29,785.—David Haskell, of Georgetown, Mass., for an Improvement in Sewing Machines:

I claim the arrangement of the isolated, upright post, C, with the notched, movable plate, F, in the manner and for the purpose shown and described.

29,786.—Simson Heywood, of Claremont, N. H., for an Improvement in Operating Railroad Switches:

I claim the combination of a pivoted, slotted knee or tumbler with a traversing bar and cam, for the purpose of operating the switches of railroads substantially as described.

29,787.—P. B. Holmes, of Cincinnati, Ohio, for an Improvement in Rotary Engines:

I claim the described combination of collars, H, heads, K, and packing chambers, I, constructed, arranged and operating in connection with the packing, d d', in the manner and for the purpose explained.

29,788.—C. B. Horton, of Elmira, N. Y., for an Improvement in Machines for Hulling and Polishing Rice:

I claim, first, Constructing the concaves of hulling machines of flexible steel plates having a flexible lining, constructed as described in combination with elastic springs, in the manner and for the purpose specified.

Second, The combination of the hopper, B, cylinder, B, and screen, C, or its equivalent, when so constructed and arranged in relation to each other that the motion of the cylinder shall cause a circulation of the grains in the manner and for the purpose set forth.

29,789.—E. S. Huff, of Zanesville, Ohio, for an Improvement in Cultivators:

I claim the combination of the segmental arcs, e e', plow beams, b c e', and pivoted cross-beams, h h', substantially in the manner and for the purposes set forth.

29,790.—George Hull, of Port Crane, N. Y., for an Improvement in Cattle Ties:

I claim inbedding the spring, a, in the body of the snap by forming the latter with side guards, b b, constructed and arranged substantially y as shown and described.

Also, Constructing the clasp body of curvilinear or other equivalent form in direction of its length, and providing its interior with spiral grooves or ribs, z, substantially as set forth.

29,791.—Solomon Hunt, of Danville, Ind., for an Improved Washing Machine:

I claim the arrangement of the tension roller, G, weight, I, and rollers, b b, with the endless belts, E E, and drums, D D' and J J, whereby one weight answers for producing friction or tension on all the belts and upon the clothes as set forth.

[This invention consists in a novel arrangement of pressing rollers and endless aprons that are arranged within a suitable box and acted upon by a weight, so that the articles to be subjected to the washing operation will be alternately passed down into the water contained in the box or tub and subjected to a pressure which will have the effect of cleaning them with great rapidity.]

29,792.—G. K. Hyde, of Brooklyn, N. Y., for an Improvement in Operating Railroad Switches:

I claim the combination of the slotted cylinder, H, treadle, j, rod, g, spring, h, with the laterally moving slide, G, lever, e, and truck, A, as and for the purpose shown and described.

[This invention is designed for city and other railroads on which the cars are drawn by animals. The object of the invention is to place the operating of the switches under the complete control of the driver, thereby dispensing with the services of switch-tenders and the trouble and embarrassment attending the negligence of the same.]

29,793.—W. A. Ives, of New Haven, Conn., for an Improved Auger:

I claim the combination of the double twist with two cutting horizontal or floor lips with side cutters, a a, attached to one of said floor lips only, in the manner and for the purpose substantially as specified.

29,794.—Samuel Kennedy, of Hibbetts, Ohio, for an Improved Apparatus for Feeding Sawdust to Furnaces:

I claim the combination of the stepped plunger, B, cylinder, A, and hopper, f, with the box, D, scatterer, D', and shaft, C E, as and for the purpose shown and described.

I also claim the arrangement of the bearing of the lower end of shaft, E, within a stirrup, L, below the box, D, and upon a screw, J, which also connects the stirrup and the frame, K, together—all as set forth, for the purpose specified.

29,795.—G. S. Kinsey, of Reading, Pa., for an Improvement in Horse Rakes:

I claim, first, The stationary mortised cleaners, 4 4, when used for the double purpose as cleaners and tooth guides, as described and set forth.

Second, The combination and arrangement of the hand lever, h, spring latch, 6, semi-circular, slotted rack, e, and connecting bar, 8, when constructed and operated as and for the purpose specified.

29,796.—W. M. Knight, of Buffalo, N. Y., for an Improved Sad-iron:

I claim the jointed leg, B', and the slotted, locking, handle portion, G, with the recesses, a a, in the body of the iron, arranged substantially as and for the purposes described, represented and specified.

[This invention and improvement consists in jointing one of the legs to the horizontal or holding part of the handle, and in operating this jointed leg by a supplemental rotating handle having a ferule on its end, with an oblique slot cut in it in such a manner that the ends of the legs will be distended or made to approach each other, and locked in recesses formed in the "flats," or detached from the flats at pleasure.]

29,797.—E. D. Lady, of Nashville, Tenn., for an Improvement in Straw-cutters:

I claim the perpendicular feeding box, D, with its doors, F, pin, X, standard, E, and tongue, e, for the purpose described or any substantially the same, as set forth.

29,798.—R. Little, of Middle Branch, Ohio, for an Improved Coffee-roaster:

I claim the combination with the oval and divided shell, A, of the series of endless, reversed, inclined ribs, e e, arranged and operating as shown and described.

29,799.—Samuel Maitland, of Fort Wayne, Ind., for an Improvement in Beehives:

I claim, first, The swarming pole, G, provided with the ball or hub, H, and attached to the hive for the purpose specified.

Second, The queen cells, h', attached to the hive substantially as and for the purpose set forth.

Third, The feed drawer, D, fitted with in the box, C, on which the main portion, A, of the hive rests, and is made to communicate with the part, A, when desired, by the slide, E, substantially as described.

[This invention relates to means employed for facilitating the swarming of bees and the dividing of swarms, and also the rearing of the mother colony when necessary. The invention consists in the use of a swarming pole, queen-bee cells, and feed box, whereby the desired end is attained.]

29,800.—F. H. Manny, of Rockford, Ill., for an Improvement in Harvesters:

I claim the arrangement of the binged cap or bonnet, D, and shoe, C, in relation to each other and to the mechanism operating the cutter of the harvester, substantially as and for the purpose described.

29,801.—M. H. Mansfield, of Ashland, Ohio, for an Improvement in Seeding Machines:

I claim the described special arrangement of the teeth and deflectors, G, when these latter are composed of an elastic substance and operating substantially as set forth.

29,802.—Elisha Matteson, of Brooklyn, N. Y., for an Improvement in Converting Reciprocating into Rotary Motion:

I claim, first, The reciprocating ratchets, G and H, in combination with the ratchet wheel, E, when the same shall be arranged in conjunction with and operated by the lever, B, and cam guides, I, and f, or by means substantially the same and for the purpose specified.

Second, In combination with the same, I claim the lever, M, pawl, L, rod, N, and pins, j f k, for the purpose set forth.

Third, In combination with the ratchets, G and H, and ratchet wheel, E, I claim the friction wheel, O, handle, P, and spring, Q, arranged and operated for the purpose described.

29,803.—James McLaughlin, of Duncannon, Pa., for an Improvement in Seed Planters:

I claim, first, The arrangement of a seed-dropping and distributing plug-valve, L, with a vertical sliding frame, F F, and cams, E, substantially as and for the purposes set forth.

Second, The arrangement of slotted standards, N and R R, of the furrow-opener, M, and covers, P, in combination with a lever, F, rod, Q, and latch, S, substantially as and for the purposes set forth.

Third, The arrangement of double ratchet wheels, V W, upon the shaft of the driving-wheels, in combination with pawls, T X, cross bar, Y, and lever, Z, substantially as and for the purposes set forth.

29,804.—M. D. Meriwether, of Denmark, Tenn., for an Improvement in Harrows:

I claim, in combination with a slotted transverse arched beam, A, two or more adjustable harrows and harrow-blocks, when constructed and arranged substantially in the manner and for the purpose described.

29,805.—John Middleton, of New York City, for an Improved Window-washer:

I claim the window-washer described, as a new article of manufacture, the same consisting of a brush, B, a reservoir of changeable capacity, C, on or near the same level as B, the opening, D, between C and the front of B, and the rod, G, or its equivalent, whereby C is made to change its capacity, substantially as and for the purposes set forth.

29,806.—W. H. Miller, of Williamsport, Pa., for an Improvement in Railroad Car Couplings:

I claim the employment of hooked levers, D H D H, centered at K K, and the connecting links, E E, between them on the truck, and the adjustable knee, I I, on the body of the car, arranged to operate together substantially as described.

29,807.—J. R. Mills, of Bloomfield, Iowa, for an Improvement in Seed Planters:

I claim the relative arrangement of a detachable hopper, D, slides, G and N, seed distributor, I, square shaft, B, and lever, L L', constructed in the manner and for the purposes set forth.

29,808.—G. R. Moore, of Pittsburgh, Pa., for an Improved Gage for Double-seaming Machines:

I claim the rotary disk, r, face of the gage, m; also, the adjustable arbor, i, or any other equivalents.

29,809.—Alex'r Morton, of New York City, for an Improved Machine for Rolling Gold Pens:

I claim, first, The connecting of the axes of the rolls, C D, by means of the couplings, f, when said rolls are arranged substantially as and for the purpose specified.

Second, The forming of the eccentric portions, b, on the lower rolls, D, in such a way or in such positions, relatively with each other, that the bite of the rolls may act consecutively at different points on the blanks and produce the differential pressure, as set forth.

Third, In connection with the train of rolls, C D, the guides or rests, E, placed relatively with the rolls, as and for the purpose specified.

29,810.—H. G. Nelson, of Lockport, N. Y., for an Improvement in Water Wheels:

I claim the arrangement of the gates, I I, shafts, H H, and sectors, J J, with the shaft, D, vent, C, and case, A: all as shown and described, for the purpose set forth.

[This invention consists in a novel and improved manner of constructing the wheel, whereby a very cheap, simple and durable wheel, with oblique or tangential buckets, is obtained. The invention also consists in an improved gate, arranged and applied to the scroll so as to regulate the discharge of the water therefrom, and its consequent action on the wheel.]

29,811.—J. L. Newton, of Black Brook, N. Y., for an Improved Quilting Frame:

I claim the combination with standards, A A, of the quilting frame, composed of bars, B B and B' B', with their rollers, E E and F and G G and H, furnished with straps and hooks and ratchets and pawls, and otherwise constructed and keyed to the standards, A A, as and for the purposes set forth.

[The object of this invention is to construct a quilting frame that may be extended or contracted, to adapt it to quilts of different sizes, and which may be closed up so as to occupy very little space. The invention consists in jointing the arms and bars to which the quilt is attached to the top of two upright standards, in such a manner that the frame may be folded-up—or, rather, placed in a perpendicular state—when not in immediate use, and so that it may be locked rigidly in a horizontal state; and it consists in furnishing the quilting frame with rollers and adjustable arms, arranged and combined in such a manner that they may be extended or contracted longitudinally.]

29,812.—N. A. Patterson, of Kingston, Tenn., for an Improvement in Grain Separators:

I claim the arrangement, as shown and described, of the double-toothed spur wheel, J, platform, n, shafts, m, and fans, E E, with the feeding apron, D, bar, H, eccentric, I, and screws, F' G; all as set forth, for the purpose specified.

[This invention has for its object the combining of a more efficient screening device than usual with a stronger blast-generating mechanism, so as to obtain a more thorough separation of the grain from foreign substances, and have, at the same time, a simple, durable and economical machine.]

29,813.—David Pennoyer, of North East, N. Y., for an Improvement in Car Seats and Couches:

I claim, first, The combination, with each other and with the seat, A, back, E, and slotted pronged bar, C, of the bars, a a, in the manner and for the purpose shown and described.

Second, The arrangement of the folding boards, G, rods, F, pivots, h, curved guides, j, vertical strips, H, adjustable platform, E, and cords, k k, as shown and described, so that, by pulling the cords, the boards, G, will fold inward, and the platform, E, will rise to the roof of the car, and, by releasing the cords, the platform will descend to its place; all as set forth.

[The object of this invention is to obtain an arrangement of seats and adjustable platforms whereby comfortable seats are provided for day-travel, and comfortable berths or couches for night-travel; the device admitting of accommodating as many persons with couches as it can provide with seats, so that all the passengers in a car that can be provided with seats can also be provided with berths or couches, with proper division boards.]

29,814.—J. G. Perry, of South Kingston, R. I., for an Improved Sausage-filler:

I claim the combination of the vanes and case, substantially as described and for the purposes set forth.

29,815.—R. S. Potter, of Chicago, Ill., for an Improvement in Car Couplings:

I claim, first, The arrangement for coupling cars from the side, by means of two links, k k, and the projections, F F, on the draw bar, in combination with the bolts, h h, and the pins, i i.

Second, The arrangement for connecting a wrought-iron hasp, B, to the cast-iron draw bar, A, by means of the hooks or projections, l, the shoulders, g, and the bolt, a.

Third, The arrangement for inserting the bolt or bar, b, and holding it in place, without nut or screw, by means of the bolt, a, substantially as set forth and specified.

29,816.—J. E. Briest, of St. Louis, Mo., for an Improvement in Printing Presses:

I claim the use of the stationary cylinder, P, when it is arranged and operated, with reference to the linking rollers, I I I, and distributing rollers, L, in the manner shown and described.

29,817.—Montgomery Queen, of Brooklyn, N. Y., for an Improvement in Journal-boxes:

I claim, first, The combination of the self-adjusting key, D, with the check-plate, C, as and for the purpose set forth and described.

Second, The employment of the lip, m, in combination with the end-piece, n, journal, F, and check-plate, C, as and for the purposes set forth and described.

29,818.—J. M. Read, of Boston, Mass., for an Improvement in Ovens:

I claim my improved oven, having the several parts constructed and arranged in relation to each other, and so as to operate in the manner substantially as described.

29,819.—Ezra Reid, of Bazetta, Ohio, for an Improved Fastening for Paddle Wheels:

I claim the arrangement of the stationary wheel, A, rods, C, with their pinions, B and D, the buckets, F, and wheels, E, in their relation to each other and to the tangential arms, H, operating in the manner and for the purpose specified.

29,820.—H. N. Rhodes, of Richmond, Vt., for an Improvement in Sliding Switches for Railroads:

I claim a solid sliding switch with rails, or equivalents for rails, for directing a train upon either of two side tracks, as desired, and with grooves, affording a safe passage on to the single track to a train coming upon one of the side tracks, when the switch is adjusted for the other; the whole constructed and operated as described.

29,821.—H. N. Rhodes, of Richmond, Vt., for an Improved Safety Railroad Switch:

I claim the use of a switch upon one side of a railroad track, constructed as described, and which, combined with rails, constructed and arranged as described, will insure a train taking the desired branch, and, at the same time, however it is adjusted, will furnish a safe passage to the single track for the train coming on either of the branch tracks.

29,822.—L. P. Rice, of Adrian, Mich., for an Improvement in Slide Valves for Steam Engines:
I claim the employment of a box valve, A, that has its bottom elevated in the middle, as shown, when said box is arranged between two plates, A B; and the whole constructed so as to operate as represented and described, for the purpose set forth.

29,823.—A. Roden, of Talladega, Ga., for an Improvement in Plows:
I claim a sliding loop-brace, B C M, in combination with a wedge, V W, slotted swinging plate, L, moldboard-retaining hook, O P N, and standard, G; the whole constructed substantially as and for the purposes set forth.

29,824.—H. A. Roe, of Madison, Ohio, for an Improvement in Cheese Hoops:
I claim the arrangement and combination, in the manner shown and described, of the plate, G, eccentric, H, and bolt, F, with the slotted arm, E, yoke, D, guides, c, c, and plate, A, for the purpose set forth.
[This invention consists in the use of a cam and yoke applied to the ends of the hoop, and used in connection with guides, whereby a simple, cheap, durable and inflexible joint is obtained; one that admits of the ends of the hoop, as they are opened and closed, moving in the arc of a circle, so as to preserve the circular form of the hoop, and one, also, that will readily admit of the hoop being enlarged and diminished, as may be required, to suit the size of the churn.]

29,825.—J. A. Roebling, of Trenton, N. J., for an Improvement in Trussed Compound Girders:
I claim a trussed compound girder, consisting of an iron girder filled-in with wood, combined with tension rods, having their strain directly sustained by the wood.

29,826.—E. S. Scripture, of New York City, for an Improvement in Wrenches:
I claim the serrated roller, I, hung eccentrically within the movable jaw, E, in combination with the spring catch, L, arranged and operated in the manner described and for the purpose set forth.

29,827.—J. C. Sellers, of Woodville, Miss., for an Improvement in Cotton Presses:
I claim the combination of one or two press boxes, A A', and two followers, B B', with two rack bars, M M N N, and center cog-wheel, O, when the followers are connected to said rack bars by means of cam levers, E G H I F J G' H' I' P' Q' J', links, D C E L D' C' K' L', and inclined planes, R S R' S', as and for the purposes described.

29,828.—James Shaw, of Manayunk, Pa., for an Improvement in Gig Mills:
I claim the employment of a card cylinder or cylinders, arranged and operated as described, for the purpose set forth.

29,829.—A. L. Simpson, of Durham, N. H., for an Improvement in Working Ships' Sails:
I claim the combination and arrangement of devices applied to the yard, A, and the studding sail-boom, B, for the purpose of supporting such boom, and enabling it to run out and in under circumstances and in manner as described; such devices being the hanger, the foot rope, the runner, the ropes, K L, and the stop-hook and eye, as specified.
I also claim the arrangement of the screw, F, and the guide arm, G, with respect to the boom-hanger and rolling yard, A.
I also claim the arrangement of the top-gallant sheet-sheave, a, in or on the boom-hanger, as specified.

29,830.—H. E. Smith, of Philadelphia, Pa., for an Improved Washing Machine:
I claim the vibrating box, B, having its center of vibration situated below its center of gravity, as described, when the momentum of said box is arrested by its pins or projections, e and e', striking against the springs, d and d', or their equivalents, as and for the purpose set forth.

29,831.—T. B. Smith, of Marietta, Ohio, for an Improvement in Lamps:
I claim, first, The peculiarly-constructed burner described, consisting of the wick tube, T, and cup, C, constructed and united in the manner set forth.
Second, The shade, S, formed and operating as described.

29,832.—W. H. Tendler and J. F. Moeshlin, of Cambridge, Mass., for an Improved Sofa Bedstead:
We claim the described mode of arranging the mattress frames and applying them together and to the sofa frame, viz.: by means of a link or connecting bar, C, and a post, D, arranged at each end of the sofa and with respect to the parts, a, b, the sofa and its seat, and connected therewith substantially as specified.

29,833.—Nehemiah Upham, of Norwich, Conn., for an Improved Steam Trap:
I claim the combination of a valve chamber, C, having valve seats, a, and that has one of its extremities, C', fixed while the remainder of the chamber is allowed to expand and contract longitudinally with an adjustable valve stem, H, and valves, b, substantially as shown and described.
I also claim the arrangement, as shown and described, of the movable carriage or plate, E, chamber, C, valve stem, H, and bed-plate, G, for the purpose set forth.
[This invention is designed to facilitate the escape of the water which accumulates by condensation and remains in steam pipes that are used to warm buildings.]

29,834.—W. S. Wallace, of Americus, Ga., for an Improvement in Brick Machines:
I claim the arrangement of the pressing mechanism, consisting of the cams and eccentrics upon the central vertical shaft, H, with the lever-slides and plungers, in relation to each other, the hoppers, screens and frame, and operating in the manner and for the purposes described.

29,835.—Able Ware, of Athens, Maine, for an Improved Surveyors' Instrument:
I claim the combination of a single graduated limb, vernier telescope or sight, with substantially the means described for changing the position of the aforesaid parts 90°, all operating together substantially in the manner described.

29,836.—Ephraim Wells, of Auburn, Miss., for an Improvement in Cultivators:
I claim so connecting and arranging the sole piece of a plow in regard to the frame, beam and handles, as that its lower side shall assume an oblique position when the sole is secured to the vertical standard of the plow, for the purpose of retaining the plow in a vertical position when it is passed over the inclined sides of ridges, substantially in the manner and for the purpose described.

29,837.—James White, of Bangor, Maine, for an Improved Amalgamator:
I claim the employment of a mercury-tight cylinder, provided with conical ends and lifting buckets, with hooks arranged longitudinally upon the inside of the cylinder, as shown and described, so that while the quartz dirt and water are allowed to pass through the machine, the mercury will be hindered, and will be lifted from the bottom of the top of the machine, and discharged in showers upon and through the ore and other contents of the cylinder, and thus, by amalgamation, effecting the separation of the gold from the quartz, dirt and water, all as set forth.
[This invention consists in the employment of floats placed in a tangential or inclined direction into the inside of a rotary cylinder, for the purpose of taking up some of the quicksilver and dumping it into the liquid mass of the "tailings," so as to mix them thoroughly and to bring every particle of gold in contact with the quicksilver; and also in arranging said floats with hooks on both ends to prevent the quicksilver running off sideways.]

29,838.—J. T. Williams, of York Borough, Pa., for an Improvement in Lamps:
I claim the employment, in combination with a lamp that is supplied from an elevated reservoir of a transparent section, F, when said section is arranged between the lamp and the oil supply on a line horizontal to the proper oil level of the lamp, so as to facilitate the replenishing of the lamp without extinguishing the flame and without overflow, all as shown and described.

29,839.—D. Wolf and H. Wolf, of Lebanon, Pa., for an Improvement in Corn Planters:
We claim the arrangement of the conical cap, M, flanged perforated toothed plate, K, bar, N, adjustable plate, O, tube, R, notched share, S, shaft, Q, axle, D, and beam, A, all as shown and described, for the purpose set forth.
[This invention relates to an improved seed-distributing device, whereby the corn may be dropped or discharged from the hopper with regularity or in a uniform manner, and the device rendered capable of being adjusted to suit kernels of different sizes and forms.]

29,840.—D. T. Woodrow, of Cincinnati, Ohio, for an Improvement in Furnaces:
I claim, in combination with an outer casing, A, the fire-box, B, air tube, J, air chamber, K, and cylindrical chambers or radiators, F G, the latter containing the deflector, H; the whole being arranged in relation to each other and within the outer casing, A, as set forth.

29,841.—W. E. Wormell, of Germantown, Tenn., for an Improvement in Plows:
I claim the arrangement of the tri-lateral surface, a*, inclined shares, C, moldboards, A, and standard, B, as and for the purpose shown and described.
[This invention relates to certain improvements in what are generally known as "shovel plows"—those used in the cultivation of southern crops, and designed for cultivators only—that is to say, for eradicating weeds and loosening the soil around or between growing plants without turning the soil and forming a furrow. The object of this invention is to effect a more thorough pulverization or working of the soil than hitherto with an implement of much less draught than all those of previous construction, and also to obtain a self-stamping implement and one of greater durability.]

29,842.—E. H. Angamar, of New Orleans, La., assignor to himself and Tobias Marcus, of New York City, for an Improvement in Cane-coverers:
I claim the combination and arrangement of the twin adjustable covering plows, P P', with the adjustable scraper, S, substantially as and for the purpose specified.

29,843.—Joseph Hardey (assignor to O. Chamberlain and W. H. Babcock), of Moline, Ill., for an Improvement in Pumps:
I claim the arrangement of the axle, B, plow, G, beam, H, guide bar, J, rack, J, sector, K, standard, M, castor wheel, P, arbor, E, and frame, A, all as shown and described, for the purpose set forth.
[This invention relates to that class of plows which are connected to a mounted frame containing a driver's seat, and are generally known as sulky or carriage plows. The invention has for its object the ready and facile adjustment of the plow, and also of the wheels whereby the device may be adapted to its work so as to plow or form a furrow of greater or less depth as occasion may require, and also adapted so as to be readily drawn from place to place.]

29,844.—Peter Louis, of New York City, assignor to himself and Hiram Wandel, of Castleton, N. Y., for an Improved Valve Gear for Steam Engines:
I claim the arrangement of the two connected adjustable tappet pieces, I I N N', in connection with the valve yoke, G, and rocker, F G H, substantially as and for the purpose described.
And I also claim, in combination with the above-described arrangement of tappet pieces, the spring, J, applied in connection with the yoke and the rocker, substantially as and for the purpose specified.
[This invention consists principally in the combination of a yoke connected with the valve or valves employed for the induction and cutting-off the steam, and with a rocker deriving motion from the main shaft of the engine and operating within and upon the said yoke to open the valve or valves at the proper time for the induction of steam, of two adjustable tappet pieces fitted to the yoke, for the purpose of being operated upon by an arm of the rocker to effect the closing of the valve or valves, and consequent cutting-off of the steam at such points in the stroke of the piston as may be desirable.]

29,845.—J. W. Truax (assignor to himself and O. J. Smith), of Richmond, Va., for an Improved Head Block for Sawmills:
I claim the toothed segment, K, and arm, I, provided with the wheels, H and G, bar, I, provided with the swinging or adjustable pendant, J, the wheels, H G, being attached permanently to the shaft, F, and the segment fitted loosely thereon, substantially as and for the purpose set forth.
[This invention consists in a novel arrangement of parts for guiding the lateral movement of the log, so that the latter may be readily adjusted previous to the commencement of each cut to saw boards or "stuff" of uniform thickness from the log.]

29,846.—Lewis Whitehead and S. P. Kettle (assignors to S. P. Kettle), of New York City, for an Improved Spring Mattress:
We claim, first, The combination of the brace, 2, constructed as described, with the spring, 1, substantially as and for the purpose set forth.
Second, The combination with the slats, 5 (upon which the springs are secured), of the beveled intermediate block, 6, and the hinges by which the said blocks and slats are connected, substantially as and for the purpose set forth.
Third, The combination of the head blocks or raising blocks, g g', with the slats to which they are attached, and with the intermediate blocks which connect the lower one of these slats to the next one below it, when the head pieces, g g', are so beveled as to underlie this intermediate block and thus relieve the hinge, as described and specified.

29,847.—Sylvanus Walker (assignor to himself and S. S. Hemenway), of Boston, Mass., for an Improved Trace-fastener:
I claim covering and protecting the projecting head, D, of the whiffletree on the outside of the tug, by shield piece, C, in the manner and for the purpose set forth.

29,848.—C. Williams (assignor to himself and J. F. Deffenbacher), of Weston, Mo., for an Improvement in Beehives:
I claim constructing the feed apparatus so that a uniform quantity of food will always flow into the trough, said trough having a perforated cover for the bees to feed through, in the manner and for the purposes set forth.

29,849.—G. W. N. Yost, of Yellow Springs, Ohio, assignor to himself and J. F. Watson, of Edwards Depot, Miss., for an Improvement in Cultivators:
I claim the arrangement and combination of the two beams, A, cross braces, K and L, movable shares, D, and wheels, G, the whole being constructed as and for the purposes described.

RE-ISSUE.

Clark's Patent Steam and Fire Regulator Co., of New York City, assignees of Timothy Clark, of Bedford, N. Y., for an Improvement in Safety Apparatus for Steam Boilers. Patented August 21, 1847:
I claim the employment of a flexible vessel, substantially as described, when the inside of such vessel is combined and connected with a steam boiler to be expanded by the steam generated therein, and the outside with the mechanism which operates the damper, or its equivalent, for regulating the draught or blast of the furnace, substantially as and for the purpose specified.

EXTENSIONS.

T. W. Harvey, deceased, late of New York City (W. A. Harvey, administrator), for an Improvement in Machinery for Cutting Wood Screws. Patented August 18, 1846; re-issued Jan. 4, 1859:
I claim, first, The employment of a pair of spring pinchers which receive the blanks one at a time and presents them to the jaws point foremost, substantially as described.
Second, In combination with the mandrel and jaws, or equivalent means for receiving and holding the screw blanks, the employment of a punch and driver for inserting the blank to the required distance, substantially as described.
Third, The combination of the pinchers for transferring and presenting the blank to the jaws or equivalent therefor, with the punch or driver, substantially as described, for driving the blanks out of the pinchers and into the jaws, as set forth.
Fourth, The combination of the movable rest with the movable cutter head, substantially as described, and for the purpose of giving support to the blank while under the operation of the cutter, and to relieve the blank and get out of the way so soon as the cutting operation is completed; and this is claimed whether the cutting operation be performed on the head or any other part of the blank.
Fifth, The particular manner described of constructing the adjustable turning head, the slide or seat piece, C, the tool-holder D, sliding on the piece, C, between the check pieces, B', with the respective adjustments thereof, combined, arranged and operating so as to effect the setting of the tool, substantially as set forth.
N.B.—The manner of operating the gripping dies and of separating the blanks in the hopper and conveying them to the feeding fingers, being similar to those described and used in the machine for cutting the threads, are not claimed.

T. J. Sloan, formerly of New York City, now of Paris, France, for an Improvement in Wood Screws. Patented August 20, 1846; re-issued Feb. 22, 1848; again re-issued Nov. 23, 1858:
I claim, first, Making the core with a conical point, substantially as described, in combination with the body of a cylindrical form, or nearly so, substantially as and for the purpose specified.
Second, Making the core with a conical point, substantially as described, in combination with the thread formed on such conical point of a gradually less depth as it approaches the apex of the core, and with the several convolutions on the conical point and on the body at equal distances apart, substantially as and for the purpose specified.
Third, Making wood screws with the core of a conical shape along that part of the length of the screw extending from where the thread begins on the shank to where it becomes of full depth, substantially as and for the purpose specified.
Fourth, Making wood screws with the core of a cylindrical, or nearly cylindrical form, and with a conical point, in combination with the thread of equal pitch along the conical point and body, that is, with all the convolutions at equal distances apart and of gradually less depth from the base to the apex of the core, substantially as described.

Wm. Howe, deceased, late of Springfield, Mass. (Joseph Stone, administrator), for an Improvement in Truss Bridges. Patented August 28, 1846:
I claim, first, The manner in which I have combined the arch beam with the counter braces and the other parts of the truss frame, by means of the regulating screws that are made to bear on the arch beam or upon the bearing blocks or wedge pieces, c, c, so as to effect the same purpose.
Second, I also claim the manner of sustaining the bearing of the braces on the string pieces by passing the metallic sockets, E, E', entirely through the string pieces, so that the bearing blocks, c, c, and the nuts, F, operate on the upper and lower ends of the sockets, and are not affected by the shrinkage of the wood-work.

CORRESPONDENTS sending communications for publication in our columns are requested to avoid writing on both sides of a sheet of paper. This fault, though common to persons unaccustomed to writing for the press, gives great trouble to the printer (especially in long articles), and, when combined with illegibility of handwriting, often causes interesting contributions to be regretfully consigned to our waste-paper basket.

L. & K., of Ill.—The Patent Office has decided that where two parties apply for a patent jointly, and a caveat has been previously filed in the name of only one of the parties, the \$20 paid into the Office at the time the caveat was filed cannot be applied towards the government fee, although the invention may be precisely the same as the one described in the caveat.

F. G. W., of La.—If you wish to gain a great deal of information in regard to the patent laws and practice of the Office in examining inventions and granting patents, and also concerning transfers and other information regarding the management and sale of patents, inclose two three-cent stamps, and order from this office a supplement of the SCIENTIFIC AMERICAN.

J. McG., of Ga.—Two of the specimens of minerals which you have sent us resemble lumps of iron slag; the third is principally composed of lime. It would cost considerable to make a quantitative analysis of them; but, if you desire this, we can recommend you to a competent chemist.

S. C., of N. Y.—There is no patentable novelty in your alleged improvement in mowing machines. The device you claim is already secured under McCormick's patent. We think you can secure a patent for your seed-sowing machine. The arrangement seems to be a good one, and we should think it might operate well.

H. G., of Miss.—If you will send on your Letters Patent, Judge MASON will examine into the validity of your claims, and suggest how to amend the patent so as, if possible, to cover all you desire.

G. H., of Va.—If your model is ready, please to send it on to us by express; and do not fail to inclose a careful description of the model. We will proceed to the examination at once, and write to you our views respecting your chance for a patent.

