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** Pamphlets giving full particulars of the mode of applying for patents, size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

28,821.—P. Z. Allen, of Knox, N. Y., for an Improved Washing Machine:

I claim the combination and arrangement of the convex rubbers, C C C, upright arms, D D, slot, d, cross-bars, E, bracket arms, F, pivots, f, cross-bars, J J J J, connecting-rods, I k, shaft, m, when used for the purposes specified.

28,822.—H. H. Angell, of Clermont, Iowa, for an Improvement in Unloading Hay:

I claim the employment or use of the carriage, C, fitted on the ways B B, provided with a tackle frame, G, and hooks, H H, and used in connection with the rope mechanism, M, and the hook separator formed of the bars, L d, and beveled projections, e, or their equivalents, all being arranged and applied substantially as and for the purpose set forth.

[This invention has for its object the facilitating of the unloading of hay and other crops from carts or wagons direct from the field, and moving the same as it is unloaded. The invention consists in the employment of a carriage placed on suitable ways within the barn at its peak, said carriage having a tackle connected with it, and a catch or fastening; the above parts being used in connection with a detaching device.]

28,823.—M. S. Beach, of Brooklyn, N. Y., for a Printing Press:

I claim, first, Closing the fingers of printing cylinders by the combined operation of the coil spring, G′, the finger crank, H and friction roller, H 2, and the cam, J 2, or their equivalents, constructed and operated substantially as described.

Second, Closing the fingers of printing cylinders by means of the pendulum switch cam, L, and the operating pin, N, or their equivalents, constructed and operated substantially as described.

Third, Closing the fingers of printing cylinders by means of the cam, K, and the combination of friction roller, I 2, and pin, I 1, or their equivalents, constructed and operated substantially as described.

Fourth, Opening or throwing backwards the fingers of printing cylinders or paper rollers by means of the coil spring, a′, and closing them by the combined operation of the finger crank, c, crank pin, c′, and the cam, e, or their equivalents, constructed and operated substantially as described.

Fifth, Depositing sheets on a board or table by means of the rollers T T, or their equivalents having an axial combined with a planetary motion, constructed and operated substantially as described.

Sixth, The rollers, T 2, used in connection with the rollers, T T, in drawing forward and depositing sheets or their equivalents, constructed and operated substantially as described.

Seventh, The concave form of the fly-board, D, Fig. 1, as described.

Eighth, The deflecting points, F, or their equivalents, used in connection with the rollers, T T, in depositing the sheet, constructed and operated substantially as described.

28,824.—L. A. Beardsley, of South Edmeston, N. Y., for a Machine for Removing Bark from Willows, &c.:

I claim, first, A rubbing slab having its acting surface of undulating form, as described, the said surface being formed of yielding segments, the whole being constructed substantially as described and for the purpose specified.

Second, The rubbing slab, H, having a flat, elastic, and yielding surface, acting in combination with another properly formed slab and a feeding device acting substantially as specified.

Third, Receptacles for water forming part of the rubbing slab, as described.

Fourth, Giving to the rubbing slabs or one of them a motion, at times and by means of the cams, d d, or their equivalents, which shall separate the two slabs, and prevent their action upon the twigs, while the twigs are moved, for the purpose of feeding,

Fifth, A yielding clamping surface in combination with another surface, the said surfaces acting in combination with a separate rubbing device, when the said clamping surfaces act to feed the twigs, substantially in the manner described.

Sixth, The mode substantially as specified for presenting different portions of the twigs to the action of the rubbing surfaces, its characteristics being that the twigs are moved by the feeding device during the time when the pressure of the rubbing surfaces upon the twigs is relieved, and that the feeding device ceases to act upon the twigs at a time when the pressure of the rubbing surfaces is upon the twigs.

Seventh, In combination with a rubbing mechanism for loosening the bark and a feeding device, an automatic raking or scraping device, constructed substantially in the manner described and for the purpose specified.

28,825.—C. C. Bier, of New Orleans, La., for an Improved Iron Tie for Cotton Bales:

I claim the particular novel mode of making an iron tie, for the purpose of securely fastening of cotton bales, or other baled goods, as described, using for the manufacture of the same any metal suitable for the purpose.

28,826.—Caleb Bond, of Richmond, Ind., for an Improvement in Water Wheels:

In combination with the passages, g, I claim the hinged auxiliary buckets, h, the whole being constructed and arranged to operate, substantially in the manner as specified, for the purposes described.

28,827.—N. W. Bonney, of Victoria, Texas, for an Improved Bolt for Doors:

I claim the combination of lever stop, j, cam, i, and spring, b, with the two wings, m n, of a door, when the same is so applied that the closing of two wings brings the bolt into effective action, and the opening of the wing which has the lock applied to it allows the bolt to automatically cease its action, as set forth.

28,828.—E. W. Brettell, of Newark, N. J., for an Improved Lock:

I claim the employment or use of the tumblers, b, placed within the tube, F, which is fitted within the cylinder, E, attached to the lock case, in connection with the plate, I, stationary or yielding, the tube F, having the dog, J, attached, and all arranged substantially as and for the purpose set forth.

28,829.—R. M. Brooks, of Greenville, Ga., for an Improvement in Cultivators:

I claim the arrangement of the seed-box, H, as constructed with the standard, B, distributing cylinder, G, provided with pins or teeth x x, and with the slide, I, provided with an opening, S, when the same are used substantially as and for the purpose specified.

28,830.—W. W. Burson, of Yates City, Ill., for an Improvement in Grain-binders:

I claim extending and contracting the fore-arm, A, by the action of the rear portion of A′ upon the cords, B and C, substantially as set forth.

The combination of the hooks, Z P u, and the bent lever, S, operating substantially as described.

The arrangement of hooks, P and u, whereby the latter is passed through the loop, substantially as and for the purposes described.

The arrangement of lever, S, in combination with shield, h, acting substantially as and for the purpose set forth.

The slotted hook, Z, in combination with hook, a, substantially as described, for the purposes specified.

The hook, a, and receptacle, c, arranged and operating together substantially as described and for the purposes set forth.

28,831.—J. F. Cameron, of Livingston county, Mo., for an Improvement in Cultivators:

I claim the described arrangement and combination of the rotary coulters, Z Z, beam, B, bar, C, helves, A F G H I K and L, cross-bars, M N, and braces, D E O P Q R S T U V, in the manner and for the purposes set forth.

28,832.—John Champlin, of East Middlebury, Vt., for an Improvement in Water-elevators:

I claim, first, The buckets, F, one or more attached to the pulleys, C C′, of shaft, B, in connection with the tilting shoes, E, through the medium of the links and rims, j j, or their equivalents, and the pawls arranged relatively with the ratchet, a, as and for the purpose set forth.

Second, The ball, I, and box, H, on shaft, G, in connection with the pawls, b b′, attached to the inner side of the curb, A, the shaft being connected to the shoes, E, through the medium of the links and arms, j i, or their equivalents, and the pawls arranged relatively with the ratchet, a, as and for the purpose set forth.

Third, The adjustable spout, L, arranged in connection with the slide, M, and tilting shoes, E, and adjusted respectively within and to the curb, substantially as and for the purpose set forth.

28,833.—James Charlton, of Alleghany, Pa., for an Improvement in Cultivators:

I claim the arrangement of the flanged bar, e, bent so as to form the segment of a circle and furnished with slots, x and i, the bar point or moldboard and scraper being attached to said flanged bar, arranged, constructed and operated as described and for the purpose set forth.

28,834.—E. D. Clark, of Earlville, N. Y., for an Improvement in Mills:

I claim so combining a fanning device with a mill for crushing and shelling corn as that, by the movement of the shifter, N, the contents of the hopper, G, may be discharged into mill, B, or through spout, C; the parts composing said mill being arranged substantially as described and for the purposes set forth.

28,835.—J. M. Cobb, of Jackson, Tenn., for an Improvement in Cotton-scrapers:

I claim the construction and arrangement of the frame, sole and moldboard, when united in the manner and for the purposes represented and described.

28,836.—J. M. Cobb, of Jackson, Tenn., for an Improvement in Plows:

I claim the combination and arrangement of the moldboard, standard and sole with landside plate, H, and beam, A, and with the subsoiler, I, as represented and for the purpose set forth.

28,837.—C. L. Daboll, of New London, Conn., for an Improvement in Fog Alarms.

I claim, first, The general method, substantially as set forth, by which air which has been mechanically condensed shall be applied to the sounding of a trumpet or whistle for the purpose of giving marine signals by sound.

Second, The use of the cam, C, when used for the purpose of communicating a series of signals more intelligible than mere independent sounds, substantially as set forth.

Third, The combination of the cam, C, the stem, D, and valve, E, for the purpose of giving a variety of sounds of a trumpet or whistle, for the purposes and in the manner described.

Fourth, The trumpet, T, in combination with the reservoir, R, and connecting pipe, I, when used for the purpose set forth.

28,838.—Wm. A. Crowell, of Salisbury, Conn., for an Improvement in Spring Balances:

I claim arranging the adjustable index finger, I, relatively to the rod, E, and shoulders, K, substantially in the manner and so as to secure the advantages set forth.

28,839.—Wm. Dixon, of Chicago, Ill., for an Improvement in Loading Hay:

I claim the arrangement of the endless chains, K, rake teeth, J, guide pieces, L, stationary rake, P, apron, R and caster wheel, S, as and for the purpose shown and described.

[This invention consists in an arrangement of rakes upon endless chains which are made to move in a direction suitable for gathering and elevating cut hay from the surface of the ground and conducting the hay over a wagon placed in the forward part of the machine; the rakes are operated by suitable gearing driven by the wheels upon which the machine is supported.]

28,840.—Wm. C. Drum, of Bellevernon, Pa., for an Improvement in Feed-water Heaters for Steam Boilers:

I claim the heater composed of the vessels, A and B, the tubes, C C, with inlet and outlet pipes, D E F G, sediment collector, H, and receiver, L; the whole combined and arranged substantially as described.

[This improved feed-water heater consists of a vessel of cylindrical or other suitable form, having inclosed within it a smaller vessel so arranged within it as to leave a space between them above, below and on all sides, such smaller vessel having tubes running through and communicating at each end with the interior of the larger, but not with the interior of the smaller vessel, and the interior of the smaller vessel constituting a water space having an inlet from the feed pipe and an outlet to the boiler and a receptacle below it for sediment; and the space surrounding the smaller vessel and the tubes, constituting a steam space, having an inlet from the exhaust pipe of the steam engine or other apparatus supplied by the boiler, and an escape pipe to the atmosphere, with a receiver below said pipe for the collection of the water of condensation; the object of such apparatus being to heat the feed-water by the escaping waste steam.]

28,841.—J. P. Fuller, of New York City, for an Improved Garter:

I claim, as a new article of manufacture, the garter constructed substantially as described.

28,842.—E. N. Foote, of New York City, for a Watch Chain Hook:

I claim the watch hook, constructed as described and represented.

[This invention consists in the employment of a jointed ring or two elliptical bows, having a pointed tenon at the point where the two ends come together that fits into a corresponding hole made in one end of the bows, in combination with a female screw socket that confines the jaws of the bows together.]

28,843.—O. F. Fitch, of Morristown, Ind., for an Improvement in Cultivators:

I claim the described combination and arrangement of braces and frames, arranged in the relations set forth, and made to serve the purposes described.

[This invention consists in combining a large and small wheel with a plane beam that is made of two bars, and, with this beam, using curved handles that serve both for plowing and harrowing, while one wheel is only used in harrowing, and in applying such a plane stock and sector brace for adjusting the plow and bracing it to the beam that they will serve an important object in attaching the harrow to the plow, bracing it, and assisting in the extension and contraction of the harrow wings; the whole making a very cheap and convenient machine for the cultivation of drill husbandry.]

28,844.—Wm. C. Fisher, of Charlestown, Mass., for an Improvement in Bolts for Store Shutters:

I claim, as a new article of manufacture, the described bolt for securing store window-shutters, operating substantially as set forth.

28,845.—J. P. Fisher, of Rochester, N. Y., for an Improvement in Iron Bridges:

I claim, first, Combining the posts and the sections, A A and F, of the lower chord of the truss by means of the double dovetail lower portions, b, of the post, the dovetail grooves in the ends of the said sections, the shoulder, x, and the screws, c, on the posts, and the plates, i i, and nuts, g g; the whole applied and operating substantially as set forth.

Second, In combination with the sections, A and C, posts, B, saddles, j, connected and secured together, as described, I claim the transverse girders, G, and the tension braces, H I and J, applied and arranged relatively to each other and to the said sections and posts, substantially as specified.

Third, The tightning of the wire rope braces, H H and I, or any other wire rope tension braces of a bridge, by means of screws and nuts, r s and t u, constructed and applied substantially as described—that is to say, so that the screws tighten the braces by twisting their parts together and hold them tight, and serve to tighten them further by bearing in recesses in a rigid part of the structure, substantially as specified.

28,846.—D. F. Elmer, of Haydenville, Mass., for a Watch Key and Guard Bar:

I claim the combined watch key and guard bar, constructed as described, with a sheath having an L-shaped slot fitted to the key tube and to a pin or projection thereon, substantially as described.

[This is a very convenient and durable arrangement for combining the watch key and guard bar.]

28,847.—Davis Dutcher, of Blue Grass, Iowa, for an Improvement in Corn Planters:

I claim, first, The combination of the seeding and marking apparatus, operating together in the manner and for the purpose substantially as described.

Second, I claim the combination of the plows and supporting and gaging wheels, f, so that they may be self-yielding to pass over any intermediate obstacle and be raised up by the driver from his seat, in the manner and for the purpose mentioned.

Third, I claim, in combination with the rear supporting wheels and the front self-yielding wheels, the marking and seeding devices arranged between them, and a driver's seat behind, for the purpose of balancing the machine, and still allowing the front wheels to rise and fall with the plows, as represented.

28,848.—D. M. Dumzack, of Salem, Mass. for a Chisel for Opening Boxes:

I claim the arrangement and combination of the several parts, when arranged and combined as described, for the purposes set forth.

28,849.—F. N. Du Bois, of Chicago, Ill., for an Improvement in Machines for Crushing Quartz:

I claim, first, So constructing and arranging the stationary back of the hopper and the vibrating front of the hopper that the escape passage, S, shall extend on a curved line in rear or on one side of a line drawn vertically through the apex of the angle formed by the two inclined sides of the hopper, substantially as and for the purposes set forth.

Second, An adjustable stirrup, u, in combination with eccentrics, e f, and the arms, g h, of two or more vibratory jaws, p p, for the purpose of limiting the extent of the motion of these jaws, substantially as set forth.

28,850.—J. W. Gaines, of Melrose, Texas, for an Improvement in Millstone Dress:

I claim making each of the main grooves in five sections, a a b b a h i e j f g k c h l d m d n d, in combination with the shoulders, b c i j, and inclined planes, o e f p m l, in the manner and for the purposes described.

28,851.—J. E. A. Gibbs, of Mill Point, Va., for an Improvement in Sewing Machines:

I claim, first, So constructing a rotating looper and a stationary thread guard or guide, and applying the same in combination with the needle of a sewing machine, as to effect the twisting of the loop and the passage of each loop twice through its predecessor, substantially as described, for the production of the stitch specified.

Second, The employment of a stationary thread guard or guide, in combination with a rotating looper, for the purpose of spreading the loops to facilitate the entrance of the needle thereinto, substantially as specified.

Third, The stationary guard, M, applied in combination with a rotating looper, substantially as described, to prevent the looper from entering the loop which is being drawn up towards the cloth.

28,852.—J. J. Greenough, of New York City, for an Improvement in Pegging Machines:

I claim transferring the contact between the sole of the boot or shoe and the rest-piece, e, or its equivalent, to the block, d, or awl stock, a, or their equivalent, while the lateral movement is made to space the distance between the pegs, substantially as and for the purposes set forth.

I also claim driving the stock, a, by the combined action of the cam, f, or its equivalent, for raising the same, and the spring for forcing it down to drive the awl or peg.

I also claim the boot-clamp described, consisting of a heel and toe-rest and intermediate forceps or clamps, substantially as and for the purpose specified.

28,853.—Thomas Grundy, of Boston, Mass., for an Improvement in Water-closets:

I claim the arrangement of devices described, the same consisting of the piston valve, k, playing up and down in the cylinder, j, and operated substantially as and for the purpose specified.

28,854.—Daniel Guptail, of Elgin, Ill., for an Improvement in Raking Attachments for Harvesters:

I claim, first, The employment or use of lazy-tongs, I, with rake, J, attached in connection with the bar, H, with the rake or plate, M, attached; the lazy-tongs and bar being operated by the revolving arm, E, pin, K, and slot, G, substantially as described.

Second, The frame, N, in combination with the lazy-tongs, I, for the purpose of preventing the grain that is being cut, while the rake is in operation or passing over the platform, interfering with the operation of the rake, as specified.

[This invention consists in an arrangement of a system of levers known as the lazy-tongs, with rakes and a peculiar operating mechanism, whereby a very simple and efficient reaping device is obtained, and one that may be applied to all harvesters that have their sickles behind the ground wheel.]

28,855.—E. J. Hale, of Foxcroft, Maine, for an Improvement in Lamps:

I claim so combining or arranging a tubular air guard, D, within or with the cone or deflector, C, and with respect to the wick tube,

that air passing up through the cone or deflector, C, shall be caused to freely circulate not only against the sides and edges of the flame of the wick, when inflamed, but against the outer surfaces of the sides and ends of the air guard.

I also claim so combining an air guard with the cone or deflector as to be removable with and by it, with respect to the wick tube, as set forth.

28,856.—John Hamlyn, of Bellevue, Mich., for an Improvement in Stump Extractors:

1 claim the application and use of the described arrangement of toggle bars, T T, disks, G and H, rollers, c c c, &c., rack bar, E, and catch pins, p1 p2, in combination with an auxiliary lever, L2, substantially in the manner and for the purposes described and set forth.

28,857.—Henry Harger, of Delhi, Iowa, for an Improvement in Setting Type:

I claim, first, The follower, C, with the arm, c, in connection with the pawl, E, and rod, D, or their equivalents, substantially as described and for the purpose seth forth.

Second, The finger, G, or its e uivalent, substantially as described and for the purpose set forth.

Third, The composing stick, H, in connection with lever, K, bent lever, L, connecting rod, M, spring, N, follower, S, finger, P P, and bar, I, substantially as described.

Fourth, The guides, V V, or their equivalents, substantially as described and for the purpose set forth.

28,858.—H. M. Hartshorn, of Malden, Mass., for an Improved Carpet-stretcher:

I claim the combination of the tack-holding cup with the carpet-stretcher, composed of a toothed plate and provided with a handle, as specified.

28,859.—James Hathen, of Philadelphia, Pa., for an Improved Carpenters' Square:

I claim the use of one or more adjusting clamps, J, attached to either end of the square stock, and made to serve in conjunction with the pins, C and C', for securing the blade to the stock and setting the same in a proper poeition substantially as described and represented.

[This invention consists in attaching the blade of a square to the stock by one or more adjustable screws, applied at either end of the stock, in connection wth a clamping plate or plates and a pivot attachment of the blade. This admits of an adjustment of the blade in case it should be out of true.]

28,860.—H. L. Haynes, of Keene, N. H., for an Improved Coupling for Shafting:

I claim, in combination with the keys, D D, and coupling, A, the scarfs, J J, in the ends of the shafts, B B, constructed as described.

28,861.—G. J. Hill, of Buffalo, N. Y., for a Dating Machine:

I claim the relative arrangement of the type apron, G, type, D, and platen, H, with the inking rollers, E K K', and automatic lever, M, for the purposes and substantially as described.

28,862.—J. J. Holwell, of New York City, for a Fire-escape:

I claim, first, The arrangement and combination of the wheeled tormentors, F, pointed rods, e, windlass, E, truck, B, and ladder, A, constructed and operating substantially in the manner and for the purpose specified.

Second, The arrangement of the adjustable cross brace, d, in combination with the tormentors, F, constructed and operating substantially as and for the purpose set forth.

[An engraving and a full description of this invention will appear in our paper in a few weeks.]

28,863.—J. W. Houghtelin, of Du Quoin, Ill., for an Improvement in Bran-dusters:

I claim the employment or use of the bolt or screen, F, plates, f, and gatherers, g, placed within a case, A, and arranged to rotate in reverse directions, when combined with the spiral wiro or ledge, G, feeders, h, and scrapers. d, substantially as and for the purpose set forth.

[The object of this invention is to obtain a machine that will cleanse the bran thoroughly, and, at the same time, allow the same to pass readily through without the liability of choking or clogging.]

28,864.—G. C. Howard, of Philadelphia, Pa., for a Printing Press:

I claim the combination of the plate, A, the sliding rod, L, the shifter rod, B B, and the treadles, H H', or their equivalents; the whole being connected by levers or their equivalents, and so arranged that the machine cannot be started in the wrong direction, substantially as described.

28,865.—J. C. Howels, of Madison, Wis., for an Improved Nozzle for Fire-engines:

I claim the arrangement and combination of the rotary collar, C, cap, F, the ears, b b, the pins or screw heads, c c, with the adjustable mouth-pieces, B B, substantially as and for the purposes set forth and described.

28,866.—A. P. Hutchinson, of Pembroke, N. H., for an Improvement in Attaching Whiffletrees to Sleighs:

I claim arranging the whiffletree so as to project beyond one of the thills, in the manner described.

I also claim the application of the whiffletree to the thill bar, by an adjustable slider or its equivalent.

I also claim the arrangement or combination of the spring stops, c d, with the thill bar and the adjustable slider applied thereto and made to support the whiffletree, substantially as specified.

28,867.—W. H. Jenifer, of Baltimore, Md., for an Improved Military Saddle:

I claim the combination and arrangement of the flat English seat, H, the curved cantle, B, the pommel, A, the curved valise, C, the flaps, F, surcingle, D, slots, E E; tho whole constructed and used as specified.

28,868.—T. J. Jolly, of Olean, Ind., for an Improvement in Loading Hay:

I claim the reciprocating toothed rods, H, constructed and operating in combination with gathering mechanism, E F G, in manner substantially as and for the purposes set forth.

28,869.—George Juengst, of New York City, for an Improvement in Shuttles for Sewing Machines:

I claim the brush, b, in combination with the center, a, spring, c, and screw, d, as specified, whereby the whole of the parts can be removed for changing the spring and the position of the center, a, can be adjusted, as set forth.

28,870.—Thomas Kinghorn and Robert Kinghorn, of Morgan, Ohio, for an Improvement in Cultivators:

We claim the combination of the adjustable side-pieces, B B, with their teeth, H, and adjusting rear supports, D D, with the central beam, A, hooks, e e, and caster wheel, E, arranged to operate in relation to each other substantially as and for the purposes set forth.

28,871.—K. P. Kidder, of Burlington, Vt., for an Improvement in Beehives:

I claim the removable and reversible bee-catcher or passage way, g (shown in Fig. 2), provided with a series of pivoted pendant doors or slats, R, arranged and applied to the beehive in the manner and for the purposes specified.

28,872.—George Lavally, Jr., of Champlain, N. Y., for an Improvement in Couplings for Railroad Cars:

I claim the application to rail car bunters of slots, T V and L, a lever, N, supported at center by a fulcrum, G, and attached to the pintle, A, a bar, S, a spiral spring, R, the steel spring, C, and the cord or chain, M, constructed and arranged substantially as described.

28,873.—O. L. Lawson (assignor to the New York Car and Steamboat Gas Company), of New York City, for an Improvement in Gas-holders:

I claim the reservoir, E, composed of one or more cylinders, or its equivalent placed between the force pumps, B, and holders, K, for the purpose of facilitating the filling of said holders, substantially as set forth.

28,874.—John Lee, of Bolivar, Ohio, for an Improvement in Post-hole Diggers:

I claim, first, The hollow self-discharging digger, constructed and operating as set forth.

Second, I claim the wheel, A, and levers, B, in combination with the digger, C, operating as described and for the purposes set forth.

28,875.—Wm. H. Letterman, of Philadelphia, Pa., for an Improvement in Desulphurizing Ores and Coal:

I claim the described process of treating oil and coal with chemical ingredients and steam, substantially as set forth, for the purposes specified.

28,876.—William Lewis and Wm. H. Lewis, of New York City, for an Improvement in Photographic Baths:

We claim securing the edges of the glasses, d g, in grooves in the frame, a a b, in the manner and for the purposes specified.

28,877.—Austin Leyden, of Atlanta, Ga., for an Improvement in Sewing Machines:

I claim giving the swivel hook the necessary movement upon the spindle, n, which carries it around the spool-carrier bed, N, by means of two eccentrics, r and s, attached to the hollow stem and working in eccentric ways, t and u, surrounding the said bed, N, substantially as described.

[This invention consists in an improved mode of operating what is termed the swivel hook, employed in combination with a spool applied as described in the Letters Patent granted to the above inventor, dated Jan. 3, 1860.

28,878.—Leon Londisky, of New York City, for an Improved Mode of Binding Cap Fronts:

I claim the binding of cap fronts with japanned, colored or enamcled metal, by means of flexible tools, substantially as described and for the purpose set forth.

28,879.—D. W. M. Lower, of Albia, Iowa, for an Improvement in Seeding Machines:

I claim, first, The connecting of the wheels, B B, and roller, C, by means of the cranks, a a b b, and rods, E, when said wheels and roller have the pins, l l, and rib, c, attached respectively to them as shown, and fare used in connection with the seed distributors, H, or their equivalents, substantially as and for the purpose specified.

Second, The attaching of the shares, J, hoppers, G, and seed-distributing devices to adjustable frames. F, arranged as described, to admit of the varying of the depth of the furrows as circumstances may require.

[This invention relates to that class of seeding machines designed for planting corn and other seeds in hills and in check rows. The object of the invention is to place the machine under the entire control of the attendant or operator, and insure an uniform dropping of the seed as well as to regulate the depth of the planting of the same as circumstances may require.]

28,880.—William McCord, of Sing Sing, N. Y., for an Improved Fire-escape:

I claim, first, The arrangement and combination of the rising and falling frames, G H I (more or less), links, F, braces, i, and platform, L, constructed and operating substantially as and for the purpose specified.

Second, Arranging the links, F, and braces, i, with rounds, substantially as described, so that the same form the means to go up to and down from the platform, L.

Third, The combination with the platform, L, of a ladder, N, and swivel, M, constructed and operating substantially as and for the purpose specified.

Fourth, The arrangement of the derrick, O, and rope, T, to operate in combination with the ladder, N, and swivel, M, substantially as and for the purpose described.

[This invention consists in arranging a series of rising and falling frames on links supported by self-acting braces and operated by two windlasses, in combination with a platform, in such a manner that by raising one frame after the other, the platform can be elevated to a considerable hight, convenient for the firemen to reach the fire in a building or to assist the persons inclosed in a burning building to escape.]

28,881.—Robert McCormick, of Greenville, Va., for an Improved Machine for Stoning Fruits:

I claim the combination and arrangement of the right and left screws, A A', the brushes, B B', the cog wheels, D D', the bands, E E', the pulleys, f f', the hopper, H, the follower, h, the screw check, i, the gage, a, the band-tighteners K K—all substantially as and for the purpose specified.

28,882.—John McCullock, of San Francisco, Cal., for an Improved Process of Treating Ores of Gold, Silver or Copper:

I claim the mode of reducing and liberating the metals—gold, silver and copper—from their ores, together or separately, by mixing with any one or more of the said ores, in a very finely powdered or comminuted state, and when intimately mixed with grond charcoal or other carbonaceous matters, a certain proportion of plastic material, as common brick clay, china clay, or any other natural or compounded materials, that will agglutinate only at temperatures under a white heat, forming the metalliferous and carbonaceous mixture so compounded with plastic material into masses, bricks, blocks or cakes, and then submitting the whole to artificial heat, which is continued while the carthy frame-work, which forms a porous matrix commanding a great extent of internal as well as external surface, holds and exposes the metallic ores or compounds; and also the carbonaceous matters to the decomposing action of atmospheric air, oxygen, carbon and heat, in a kiln, clamp, oven or furnace. The reduced metallic constituents may then be collected by pulverization, washing in water, and subsidence therefrom, by melting and fluxing, or by amalgamation, as may be most convenient.

28,883.—J. W. McLean and A. Gummer, of Indianapolis, Ind., for an Improvement in Lath Machines:

We claim the rack, d d, the angular slot, g, Fig. 2, the section of wheel, e e, or their equivalents, in connection with the rod, k, Fig. 1, the two supporters, I I, and the set screw, m, substantially as and for tee purpose set forth.

28,884.—D. M, Mefford, of Jeffersonville, Ind., for an Improvement in Corn-huskers:

Rclaim, first, The combination of spiral beads and grooves on vertical or inclined rollers adapted in the manner set forth, to act continuously during the descent of the ear, substantially as described.

Second, The use of teeth or serrations in the bead substantially in the manner and for the purpose set forth.

28,885.—G. E. Mills, of New York City, for an Improved Amalgamator:

I claim a series of floors inclined reversely one above another, in combination with the several dams and compartments to retain the minerals as described and for the purposes specified.

28,886.—T. S. Mills, of Iberia, Ohio, for an Improvement in Corn Planters:

I claim the cam, E, when formed of two parts, h i, for operating the seed slide, F, and markers, H, and fitted in the adjustable frame, D, having the shares, G, attached by the rods, n, for the purpose of admitting of the connection or disengagement of the wheels, d g, and the adjustment of the shares, G, substantially as described.

[The object of this invention is to obtain a corn-planting machine of simple construction, by which corn may be planted in check rows without previously furrowing the ground. The invention consists in the use of markers combined with a seed-dropping mechanism, all being arranged in such a way that, as one row of hills are planted, the spots for the hills in the succeeding row will be marked, and the seed-dropping mechanism placed under the complete control of the driver or operator, so that the latter can cause the seed to be dropped at the desired spots.]

28,887.—G. A. Mitchell, of Turner, Maine, for an Improved Machine for Cutting Blanks for Shoe Tips:

I claim the double die-holder, E and G, and cutting die, H, in combination with cutter, J, stamp, S, and guide, U, to cut and stamp the blank at one operation, essentially in the manner and for the purposes fully set forth and described.

28,888.—G. A. Mitchell, of Turner, Maine, for an Improved Machine for Swaging Shoe Tips:

I claim the combination of the die, G, guide, K, die box or holder, E, and follower, J, arranged and operated in the specific manner described and for the specific purpose fully set forth and described.

28,889.—W. P. Mitchell, of Baltimore, Md., for an Improvement in Hemming Attachments for Sewing Machines:

I claim the arrangement and combination described of the toothed wheel, C, and the non-metallic concave wheel, D, of larger diameter formed of india-rubber, leather or their equivalent flexible material, both wheels being attached to and revolving on the same axis, g, as and for the purposes set forth.

28,890.—S. A. Morgan and C. C. Morgan, of Auburn, N. Y., for an Improvement in Harrows:

We claim a harrow composed of at least two hinged and separately-adjustable segments, A A, furnished with adjusting bars running across the frames, and so that they may be detachable and capable of use when so separated, as cultivators by applying handles to the adjusting bar, substantially in the manner and for the purpose set forth.

28,891.—Levi Morris, of Woodbury, Ill., for an Improvement in Corn Planters:

I claim the combination of the double crank, L, with the pitman, K, the rod, R, the slide, P, the levers, J J, the hoes and handles, m and n, and the mechanism connecting and regulating them, for the purposes and substantially as described.

28,892.—J. A. Naylor, of Rahway, N. J., for an Improvement in Adjustable Carriage Seats:

I claim the jointed and branched bars, C C, and the rod, N, in combination with the slots or slides, I, and the seats, A and B, when constructed substantially in the manner described.

28,893.—Cæsar Newman, of New York City, for an Improvement in Machines for Making Hoop Skirts:

I claim, first, The twisting apparatus constructed substantially in the manner and for the purposes set forth, and consisting of a spool-holder and tension apparatus as described, and strand guides or head and cap, as described.

I also claim the hedd and cap, i', as specified, however combined in the manufacture of hoop skirts,

I also claim the tension apparatus and flyer frame constructed and applied as set forth in the manufacture of skirts by machinery.

I also claim the guides, g, for guiding the springs or loops into place, in the manufacture of hoop skirts however made, so that a spring can be inserted by one end and pushed around into place without being guided by hand into the curve—all as specified.

I also claim the employment of the elevating cord, c, and drum, d, combined with the machinery for forming the spring skirts, as specified.

28,894.—John Ollis, of Bloomington Ill., for an Improvement in Automatic Rakes for Harvesters:

I claim the mechanism substantially as described for operating the rake.

28,895.—Andrew Overend, of Philadelphia, Pa., for a Machine for Wetting Paper:

I claim the reciprocating carriage, C, combined with the perforated water tubes, I I J J, the feed and receiving platforms, V R E', and the paper-holding and discharging device formed of the rod, D', and plate, C', or their equivalents arranged for joint operation substantially as described.

[The object of this invention is to obtain a machine by which paper may be moistened in a very expeditious and thorough manner preparatory to the printing thereof. The invention consists in the use of a reciprocating frame, perforated water-supply tubes, feed and receiving boards or platforms and a holding device, arranged for joint operation to effect the desired end.]

28,896.—Benjamin Owen, of Dayton, Ohio, for an Improvement in Cotton-seed Planters:

I claim the arrangement of the cylinders, D D, with the slides, C C, when said cylinders are provided with teeth and revolve in opposite directions to each other, and when the slides are provided with seed apertures and have an alternate reciprocating motion under the cylinders, substantially as and for the purpose specified.

28,897.—Nathan Parish (assignor to G. B. Peters), of Galesburgh, Mich., for an Improvement in Stump Extractors:

I claim the arrangement of the rocking lever, b, with the frame, a, the cords, e and m, the tackle block, d', and with the chain or its equivalent which passes around the stump or grub in such a manner that power may be exerted by both ends of the lever, substantially as specified.

28,898.—J. W. Patten and G. P. Terry, of Albany, N. Y., for a Fire-escape:

We claim the arrangement of the spring, S, and the check rope, N, in their relation to the brakes, K K', and to the drum or reel, F, as set forth.

28,899.—J. G. Pavyer, of St. Louis, Mo., for a Machine for Scouring Type:

I claim, first, The application of endless aprons or their equivalents to stones or their equivalents, substantially in the manner described for the purposes specified, and—

Second, Connecting the upper and lower stones and aprons with each other by means of yielding connections, so as to allow the type to pass between them, and so that they will adjust themselves to the different thicknesses of type, substantially as described.

28,900.—J. G. Perry, of South Kingston, R. I., for an Improved Sausage-filler:

I claim the combination of the cylinder, B, and stud slips, D, substantially as described herein and for the purposes set forth.

28,901.—Ludlow Pierson, of Jeffersonville, Ind., for an Improvement in Making Eave Troughs:

I claim, first, The combination of block, A, rocker, B, and jaw, C c D—the whole being constructed and operating substantially as set forth.

Second, The crimping clamp composed of the hinged blocks, G G, jaw, G'', lever, H, and staple, I I'.

Third, The final soldering clamp, J K L M, constructed and operating as explained.

28,902.—A. D. Purinton, of Dover, N, H., for an Improved Hat Cushion:

I claim the elastic felted cushion, C, interposed between the sweat leather, A, and the crown of the hat, substantially as described for the purpose specified.

28,903 —T. H. Quick, of New York City, for an Improved Machine for Cutting Sugar:

I claim the arrangement and combination of two pairs of movable cutting surfaces having their cutting edges at right angles to the other, and at such distances one from the other that, by the successive action of said cutting surfaces, the sugar is cut up in the desired shape, substantially as described.

[The object of this invention is to cut up loaves of sugar in regular cubic lumps of a convenient size for daily use. To accomplish this, the loaf is first cut up in slabs or disks of the thickness of about three-quarters of an inch, and these disks are passed through between two pairs of rollers or through between two different pairs of movable cutting surfaces, one pair to cut up the disks into four-sided prisms, and the other pair to cut up these prisms into cubic lumps of the desired size.]

28,904.—J. J. Reeves, of Sulphur Springs, Texas, for a Medical Compound:

I claim the medical compound described.

28,905.—John Rix and J. S. Shaw, of Springfield, Mo., for an Improvement in Rotary Engines:

We claim the combination of the two hollow, sliding abutments, E E′, and the slide valve, K, the said abutments being provided with parts, d d′, as described, and applied within separate compartments of a box, D, to which steam is admitted by the said valve alternately, and the whole operating as set forth.

[The nature of this invention is ixplained by the said claim.]

28,906.—Charles Seltman, of Washington, D. C., for an Improved Shutter Operator.

I claim the combinat on and arrangement of the shank, A, notches, f f′, cog plate, d, spring, i, pinion, D, rack, d, wedge-shaped tongue, k, correspondingly-grooved bar, h, crank hinges, E E′, and the metal boxing, F, when used in the manner and for the purposes specified.

28,907.—J. W. Shipp and C. W. Crenshaw, of La Grange, Tenn., for an Improvement in Plows:

We claim the arrangement of the handles, H, standard, B, ring, a, notches, l l, bar, A, standard, C, mold board, E, heel, G, and double point, F—the whole ope ating substantially as set forth.

28,908.—C. W. Smith, of Evans, N. Y., for an Improvement in Window Blinds:

I claim, first, The descr bed method of operating the blind slats, a a, by means of jack levers.

Second, The described method of attaching them to the levers.

Thir d Weighting said levers to assist in elevating the blinds.

28,909.—Hervey Sloan, of Franklin, Ind., for an Improvement in Seed Planters:

I claim the arrangement of the seed boxes, A A′ A″, which are provided with three slides connected together and to a pitman or driving rod, a, by means of a cross-head, d, substantially as and for the purpose specified.

The arrangement of the seed boxes, A A′ and B B′, in the relative positions seen—their seed slides being connected together by the bars, c c, substantially as and for the purpose specified.

The combination of the gear-frame, F, provided with levers, m and n, and chains or cords, p, with the frame upon which the seed boxes are placed, when the same are arranged substantially as and for the purpose specified.

28,910.—O. M. Stillman, of Stonington, Conn., for an Improvement in Air Engines:

I claim, first, Compressing and working the air in the single cylinder, A, by the single piston, B, in combination with the valves, an air passage, R r′ E F F and M, or their equivalents arranged and operating substantially in the manner specified.

Second, The combination of the induction valve, R, with the stuffing box, R′, piston rod, B′, and head, A′, of the cylinder, A, so that the friction of the stuffing box upon the piston rod aids and controls the motion of the valve, substantially as shown and described.

Third, Causing a circulation of air through an annular space between the plunger, O, and the interior of the piston or piston rod, for the purpose of cooling the latter, substantially as set forth.

Fourth, Cooling the exterior of the cylinder, A, by alternately inducting and expelling air through an annular space, X, substantially in the manner described.

28,911.—O. M. Stillman, of Stonington, Conn , for an Improvement in Air Engines:

I claim, first, Using a portion of the power of an engine to cool the air used in the same by blowing currents of air over the moistened surfaces of the refrigerating vessels, substantially in the manner set forth.

Second, The arrangement of the refrigerating reservoir, G, and blowing vessel, O, relatively to the cylinder, A, and piston, B, substantially as set forth.

28,912.—John Sweeney, of Chicago, Ill., for an Improved Tobacco Press:

I claim the combination of the worm wheel and screw, E F, chains, J, cross-head, L, guides, B B, follower, C, one or more, and base or box, A, with the ratchet and lever, H′ I′, or their equivalents arranged for mutual action as and for the purpose set forth.

[This invention consists in the use of a worm wheel and screw combined with chains, stirrups, a cross head and guides, whereby a very simple, compact and powerful press is obtained, and one that may be manipulated by any one of ordinary ability—the invention being designed for manual operation.]

28,913.—W. A. Suddith and J. F. Suddith, of Charlestown, Va., for an Improvement in Cotton-seed Planters:

We claim the arrangement of the rocking beam, C, arm, o, piston, D and Y, spring, R, shaft, G, with spiral spring and cavity, B, constructed and operated as described for the purpose specified.

28,914.—Joseph Sutter, of New York City, for an Improvement in Seeding Machines:

I claim the arrangements of the arms, L, the moldboards, M, the seed-spouts, F, the cylinder, D, as constructed, and the cylinder, G, provided with harrows, d, when the same are connected together and to the frame, C, in the manner and for the purpose specified.

28,915.—A. B. Taylor, of Newark, N. J., for a Printing Press:

I claim the combination of the endless rack of the type carriage with the cog wheel that imparts motion to it, by means of two pinions and a solid pinion sh ft having boxes or bearings that adapt themselves to the different positions which the pinion shaft assumes in the operation of the printing press.

I also claim the combination of the griper shaft, an arm and stop (for rocking it) and a cam and pin (which control its rocking) substantially as set forth.

28,916—C. A. Taylor, of Chicago, Ill., for an Improved Bonnet Box:

I claim the arrangement of the sliding s and, D, form, E, and movable spring pad, F, in combination with the box, A, constructed and operated substantially in the manner and for the purpose set forth.

[This invention consists in arranging in the bonnet box an adjustable stand with a suitable form to receive the crown of the bonnet, in combination with a spring pad in such a manner that bonnets of different sizes can be secured between said form and spring pad and sent from place o place without getting injured, even if the box be roughly treated and knocked about without regard to its contents.]

28,917.—Richard Taylor and Rensellaer Sprague, of Prairie City, Ill., for an Improvement in Corn Planters:

We claim the attathching of the seed boxes, F. and the furrow and covering shares, I H, to sliding frames, E, placed on inclined surfaces, b c c, and having the seed slides, G, of the boxes, F, arranged in relation with the staples or tappets, I i, on the axle, c, substantially as and for the purpose set forth.

We further claim, in connection with the sliding frames, E, having the seed boxes and shares attached, the lever, K, provided with the notch, o, and arranged relatively with the pin, p, for the purpose when necessary of stopping the rotation of the axle, C, as set forth.

[This invention relates to a novel and improved arrangement of seed boxes and shares, whereby the seed-distributing device may, when necessary, be rendered inoperative with the greatest facility, and the shares, at the same time elevated, above the surface of the ground—both results b ing obtained by the same movement or manipulation of the driver.]

28,918.—James Thierry, of Detroit, Mich., for an Improvement for Regulating the Exhaust of Steam Fngines:

I claim, first, The combination of the exhaust nozzle or nozzles of locomotives or other steam-blast employing engines with a steam-balanced exhaust valve controlled by the variable pressure of the steam in the boiler, through the medium of an elastic siphon-shaped steam tube or its equivalent, said combination producing a governor to regulate the generating of steam for said engines substantially as described.

Second, The cambination of said nozzle or nozzles with said balanced exhaust valve controlled by the eng ne man through the medium of convenient hand gear, in substance and for the purpose as described.

28,919.—J. P. Thompson, of Jackson, Tenn., for an Improvement in Plows:

I claim the frame, c, with its plow point, j, and wings or mold boards, D, when the whole is constructed, arranged and united as set forth and described.

28,920.—Fr. Toggenburger, of Chicago, Ill., for an Improvement in Sewing Machines:

I claim the arrangement of a tubular projection, v, on the cap, P, in combination with a loop, w, or its equivalent, on the shield, Q, constructed and operating substantially as and for the purpose described.

[By this improvement a correct action of the needle and the loopers in relation to each other, is insured, and a dropping of any of the loops is prevented.]

28,921.—Albert Tracy, of the United States Army, for Improved Folding Furniture:

I claim, first, In the construction of articles of furniture, the combination of the swinging straps or arms, C, constructed as described, with either pair of legs, or their equivalents, substantially as set forth.

Second, I claim the fixed strap or arm, C, constructed as described, and connected and operating with the legs, substantially as set forth.

28,922.—Gregor Trinks, of Jersey City, N. J., for an Improved Window Curtain Slide:

I claim, in connection with the slide of a sliding cord pulley of a window curtain fastening, the improved construction and arrangement of the spring latch and double rack, substantially as described, and substantially for the purposes set forth.

28,923.—H. C. Yelie, of Poughkeepsie, N. Y., for an Improvement in Mills:

I claim casting the arm, J, on the case of the mill to support the journal of the shaft, and allow room for the hopper around the shaft between said arm and the case of the mill, substantially as described.

28,924.—George Walker, of Philadelphia, Pa., for an Improvement in Vapor Lamps:

I claim, first, The combination of the external shell or tube, G, with the wick or packing tube, F, and heater tube, I, provided with the heater, J, and plates, c c, for the purpose set forth.

Second, The connecting of the described vapor-burning apparatus to the body of a lamp by means of a tube, D, in the manner substantially as and for the purpose set forth.

[This invention relates to a lamp for burning volatile hydrocarbons by first vaporizing or gasifying the same, the illuminating flame being fed by the vapor, and the invention being capable of being applied to the ordinary fluid lamps. The invention consists in a novel arrangement of a burner, heater, wick or packing tube, an external shell, and heater tube, so constructed, arranged and applied to the fountain or body of the lamp, whereby the hydro-carbon within the lamp may be quickly vaporized or gasified, the distance between the flame and the heater regulated as desired, according to the amount or intensity of light required.]

28,925.—Alonzo Warren and E. Damon, Jr., of Boston, Mass., for an Improvement in Dynanometers:

We claim combining the index, g, with the two pulleys, C D, by means of a spring pawl, f, slide, I, arc-formed ratchet bar, H, spring, l, and a socket, j, or other suitable projection from an arm, E, the whole applied and operating substantially as specified.

[This improved dynanometer is of that class which is used for measuring the power transmitted by shafting to machinery. It consists of two pulleys—one fast and the other loose—upon the same shaft, and the two combined by means of one or more arms and spiral springs working on one or more concentric arc-formed guides in such a manner that, by applying a belt to run on one of them from a pulley on the driving shaft and a belt to run from the other one to a pulley on the shaft to be driven, the power may be transmitted through the said spring or springs, and by such transmission, will produce a greater or less compression thereof, and the amount of this compression indicated upon a scale attached for the purpose to one of the pulleys of a dynanometer, will, if the velocity of the revolution of the pulley is ascertained, enable the power transmitted to be calculated. A part of the invention also consists in the manner of applying the index so that it may indicate the minimum of power transmitted.]

28,926.—David Warren, of Gettysburgh, Pa., for an Improvement in Seed Planters:

I claim the arrangement of the turning bar, F, the arms, H and a, the slide, d, rod, c, and stirrer, e, substantially in the manner and for the purpose fully set forth.

28,927.—Geo. Wheeler, of New York City, for an Improved Boot-jack:

I claim the new article of manufacture described, consisting of the forked base piece, a, and the detachable inclined standards, b b, with the swelled pins, 3 3, arranged in the manner and so as to combine the advantages set forth.

28,928.—Wm. Wickersham, of Boston, Mass., for an Improved Nail-cutting Machine:

I claim the described mechanism in nail-cutting machines for shifting or moving laterally the sheet of metal or material to be cut into nails the distance of the length of two nails, or more if desired, for each series of nails cut from said sheet, substantially as described.

Second, I claim feeding the material to be cut into nails far enough towards the cutters for the width of a nail while it is moving laterally, substantially as described.

28,929.—J. M. Williams, of Greenville, Ga., for an Improvement in Cultivators:

I claim the arrangement of the beam, A, the two collateral beams, B B, the graduated bars, a a, the handles, M M, the supports, F F, and the bar, D, when said bar is secured to the main beam and rests upon the collateral beams, and when the several beams are provided with vertical and horizontal mortises for receiving the bars and shanks, as is fully set forth, and for the purpose specified.

28,930.—R. S. Williams, of Bairdstown, Ga., for an Improvement in Plows:

I claim the casting of the foot, D, with a socket, E, and pockets, d, substantially as shown, to receive the beam, A, and the lower ends of the handles, C C, substantially as described.

I further claim, in connection with the sockets, E, and packets, d d, the base or cross-piece, B, and taper beam, A, the former being attached to the beam and handles, as described.

[This invention relates to an improvement in that class of plows which are generally known as shovel plows, and are used in the cultivation of crops which are grown in hills or drills. The object of the invention is to obtain a simple, economical and durable plow of light draught, and one that may be managed or manipulated with the greatest facility.]

28,931.—Thomas Wilson, of Winterset, Iowa, for an Improvement in Seeding Machines:

I claim the arrangement of frame, C, set forth, in combination with the lever, G, toggle levers, k k, and clutching devices, e e g g, as set forth, whereby the dropping of the seed may be stopped and the plows raised from the ground at the same time.

[This invention consists in a novel arrangement of cranks, connecting rods and gearing placed in a carriage frame for operating the seed-distributor; in connection with a means for raising the front of this frame, and at the same time throwing the parts out of gear, for the purpose of moving the machine about from place to place without dropping the seed, the parts being so arranged that they may be thrown into gear by the driver at any moment.]

28,932.—E. M. Woodward and J. E. Woodward, of Philadelphia, Pa., for an Improvement in Railroad Station Indicators:

We claim the application of the hand, A, to an ordinary clock, used in combination with a dial having the various points along the route marked upon it; the whole be so arranged as to show whether the car is in advance of or behind time at any point, substantially as described.

28,933.—L. B. Woolfolk, of Nashville, Tenn., for an an Improvement in Steam Plows:

I claim, first, The arrangement of the cylinder, S, rovided with bevel wheel, R, having the shaft, C, passed through it eccentrically, shaft, I, springs, g g, bevel wheels, f f, sleeves, i, pinion, G, rim, F, wheels, F, and plows, W, the whole being constructed in the manner and for the purpose described.

Second, I also claim, in combination with the above, the cylinders, S S2, sleeve, u, bevel wheel, R, and shaft, C, as described.

28,934.—Wm. Workman, of Ripon, Wis., for an Improvement in Seeding Machines:

I claim the combination of the principal seed box, C, and supplemental seed boxes, F, the latter being provided with inclined planes, h h, and wheels, H, and fitted in the trough, D, having the inclined bottom or scattering board, E, as and for the purpose set forth.

[This invention relates to an improvement in that class of seeding machines which are designed for sowing seed broadcast. The object of the invention is to effect an even distribution of the seed by a very simple arrangement of means, and to this end there are used, in connection with a seed-box or hopper, a scattering board and a number of supplemental hoppers, communicating with the main or principal one, and provided with seed-distributing wheels and inclined boards.]

28,935.—G. C. Wright, of Le Roy, Ohio, for an Improvement in Cutting and Coring Apples:

I claim the arrangement of the slide, E, cross-head, E, treadle, K, spring, L, and the cutting and coring knives, a b, the several parts being constructed and combined for operation in the manner described, for the purpose specified.

28,936.—Elijah Young, of Fayetteville, Mo., for an Improvement in Seed Planters:

I claim the use of the plows, B, in combination with tubes, D and C C′, and the boxes, E F, and the wheels, I and H, for the purpose specified.

28,937.—H. M. Zimmerman, of Washington, D. C., for an Improved Hinge:

I claim, as a new and improved article of manufacture, a butt hinge, constructed as specified, for the purposes set forth.

28,938.—D. C. Colby, of Newport, N. H., assignor to himself and J. P. Upham, of Claremont, N. H., for an Improvement in Harrows:

I claim, first, The arrangement of the toothed rollers, B B (and more than two if need be) at a greater or less angle with the line of draught, so that the teeth of the rollers shall cut the soil diagonally to the lines made by the stationary teeth, a a, &c., in the frame of the harrow.

Second, The frame of the harrow, composed of the side pieces, A A and A′ A′, the cross braces, C and D, and the connecting bar, E, arranged as described, so that the angle of the rollers, B B, with the line of draught and the width of the harrow may be raised when desired, thereby throwing the lines described by the two or ear permanent teeth, a a, in the side pieces, A′ A′, outside or inside (as the case may be) of the lines described by the two permanent teeth, a a, in the side pieces, A A.

28,939.—Solomon Godfrey, Loren Barnes, Henry Blish and S. S. Smith, of Fairfield, Ohio, for an Improvement in Stills:

We claim, first, The combination of three or more chambers of a still with bent tubes, I G, radiating perforated tubes, O, and straight tubes, K L, when arranged in relation to each other, substantially in the manner and for the purposes set forth.

Second, The combination of the above with the heater and doubler, in the manner and for the purpose set forth.

28,940.—Joseph Ottner (assignor to P. and F. Corbin), of New Britain, Conn., for Improved Lifting Handles:

I claim the raised socket, e, having parallel slits, f, starting from the underside or edge of the sockets, and extending upward to the center (or nearly so) thereof, so as to hold the handle in a proper lifting position, with the double pivoted shanks, h, made to correspond to the chamber of the sockets so as to hold it (the handle) in place, as and for the purpose described.

28,941.—S. S. Sherwood (assignor to himself and Alexander Douglas), of New York City, for an Improvement in Skeleton Skirts:

I claim the combination of the device described for securing the braids or tapes from slipping laterally upon the hoops, by sewing the braid or tape through the covering of the hoop with the device described for securing the hoops from slipping upon the tapes or braids which form a vertical support by returning the braid or tape over the hoop and sewing it through itself, substantially as set forth.

28,942.—T. C Simonton (assignor to De Grasse B. Fowler), of Paterson, N. J., for an Improvement in Filters:

I claim the placing of the tube, D, and the plates, B B, containing the filtering mediums, C, secured as described in the case, A, as shown, in connection with the pipes, E F G J, provided with the cocks, H I K, communicating with the case, and arranged relatively with the plates or the compartments formed thereby, to operate as and for the purpose set forth.

28,943.—J. L. Smith (assignor to himself and J Q. Sloan), of Neoga, Ill., for an Improvement in Corn Planters:

I claim the arrangement of the seed boxes, 8 9, slide, 10, crank, 11, lever, 12 13, operating as described for the purposes specified.

28,944.—A. W. Sweeny (assignor to himself and C. N. Tyler), of Washington, D. C., for an Improvement in Hinges.

I claim the described hinge as a new article of manufacture, the cam, latch and catch being constructed and arranged substantially in the manner and for the purposes set forth.

28,945.—Josiah Turner and T. P. Smith, of Sunapee, N. H., assignors to themselves and Edward Burke, of Newport, N. H., for an Improvement in Cultivator Teeth:

We claim, first, The coulter, A, with the indentation or recess, E, constructed substantially as described.

Second, The coulter, A, in combination with the concave wing, C, with the curved point, G, constructed and operated substantially as described.

28,946.—Joshua Turner, of Cambridgeport, Mass., assignor to himself and Francis Guild, of Dedham, Mass., for an Improvement in Plane-iron Sharpeners:

I claim the combination and arrangement of the separate cutter-carrier and its carriage with the whetstone supporter, with parallel ways or equivalent means of guiding the carriage, the whole being to operate together substantially as and for the purpose specified.

I also claim the arrangement of ball bearings on opposite sides of the cutter-carrier, and to operate with a socket of the carriage, as specified.

I also claim making the socket or step adjustable vertically for the purpose explained.

I also claim the combination and arrangement of an an adjustable stop, with the table, the cutter-carrier and its carriage applied to the table and with reference to the whetstone or its supporter, as specified.

28,947.—M. D. Whipple, of Charleston, Mass., assignor to the Whipple File Company, for an Improvement in the Manufacture of Files:

I claim, as new article article of manufacture, a file having its teeth sheared off smooth and of an uniform hight, substantially as specified.

28,948.—J. A. Smith, of Fond du Lac, and Isaac Orvis, of Oakfield, Wis., administrator of the estate of L. M. Orvis, deceased, for an Improved Printing Press:

I claim, first, The arrangement of the form beds, I J, and stationary platen, K, substantially as shown, so that the impression may be given simultaneously and by the same application of power, and the under side of the upper form be made to serve as a platen for the lower one.

Second, The arrangement of the form beds, I J, and platen, K, with the roll of paper, O, substantially as shown, and operated respectly and intermittingly, so that the paper may be printed from a continuous sheet and at both sides during a single passage through the press.

Third, The endless wet blanket, N, arranged to pass underneath the platen, K, and to be moved simultaneously with the paper, O, for the purpose of moistening the same during the pressure which causes the paper to receive the impression from the forms.

Fourth, The ink rollers, k k k' k', operated through the medium of the bars, h i, arms, g, rock shaft, G, the slotted curved bar, F, and wrist pin, e, on wheel, d, when said rollers are used in connection with the form beds, I J, and platen, K, as set forth.

Fifth, The combination of the form beds, I J, platen, K, endless blanket, N, ink rollers, k k k' k', paper roll, O, rotary knife, R, and stationary bar, S, all arranged for joint operation as and for the purpose set fo th.

RE-ISSUES.

Seligman Kakeles, of New York City, for an Improvement in Fluid Lenses. Patented April 24, 1860:

I claim, first, The application and use of a magnet, or its equivalent, in the bottom a glass globe filled with a colored fluid, for the purpose as set forth.

Second, I claim the arrangement and combination in a lantern of a light and glass globe filled with a colored liquid, when said globe is surrounded by two reflectors facing opposite directions, and when said light is placed either before or behind the glass globe, so as to produce and reflect, by the use of only one light, a colored light in one direction and a white or colorless light in the opposite direction, in the manner substantially as described.

Thomas Mitchell, of Lansingburgh, N. Y., for an Improved Machine for Finishing Hair Brush Handles. Patented June 28, 1859:

I claim, first, The employment, in combination with the brush clamp, G, or pattern, H, or their equivalents, of a wheel, D, which is provided with V, or gouge-shaped cutters, b, or their equivalents, and which act upon the wood, substantially as and for the purposes shown and described.

Second, The combination with the pattern, H (of the brush clamp), of a supporting ledge or projection, a*, or its equivalent, as and for the purpose shown and described.

Third, The combination of the guide, F, with the pattern, H, and cutter, D, as and for the purpose shown and described,

Fourth, Centering the unfinished brushes in the clamp, G, by means of the bristles, i, in connection with the strip or plate, J, and the inner curved edge, H, on its extension, H', substantially as described.

Cæsar Newmann, of New York City, for an Improvement in Skeleton Hoop Skirts. Patented Nov. 1, 1859:

I claim a skeleton skirt constructed as described.

ADDITIONAL IMPROVEMENTS.

B. B. Briggs, of Sharon, Ohio, for an Improvement in Apparatuses for Laying Drain Tile. Patented Oct. 4, 1859:

I claim the described ball, B, the double-acting clutches or fingers, F F, with its notched slide, g, and lock attachment, H, the mole attachments as in Fig. 2, when used in combination with the rope, R, or its equivalent.

Daniel Jones, of Boston, Mass., for an Improved Steering Apparatus. Patented Feb. 21, 1860:

I claim the arrangement and combination of parts described, the same consisting in placing the athwartship screw, H, directly above the rudder post, and operating it by means of a bevel wheel fixed at its middle and gearing into a similar wheel on the after end of the shaft of the steering wheel, all substantially as set forth and shown.

J. H. Shrote, of Baltimore, Md., for an Improvement in Cutting and Panning Cakes. Patented Oct. 11, 1859:

I claim the scrap clearer, B, the annular jumble cutters, C, and the bottoms, A and A', substantially as and for the purposes specified.

E. M. Smith, of Indianapolis, Ind., assignor to himself and E. G. Mayhew, of Shelbyville, Ind., for an Improvement in Molding Machines. Patented Feb. 21, 1860:

I claim the circular guide or rest, O, and the spring, Z, when constructed as and used for the purposes substantially as set forth.

Notes & Queries.

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 hand writing, often causes interesting contributions to be regretfully consigned to our waste-paper basket.

L. C., of Conn.—A rectangular knee, of the same bore, put on a vertical pipe, under any head, will involve but little if any loss of flow, and will be proportioned under all heads. With regard to horizontal pipes with elbows, there are various opinions as to the loss, but the amount is considerable. It is so easy to construct pipes differently, that it is foolish to lose any of the flow by such an arrangement.

S. R. M., of Del.—We do not know where you can obtain a work on the masonry of chimneys.

A. W. C., of Mass.—The best method of removing the stains on jewelry, caused by soldering, is by polishing with "crocus," in the usual manner.

W. S. T., of Pa.—To make black japan, take ground burnt umber, ¼ a pound, and asphaltum, 4 ounces; dissolve them in boiling linseed oil, so that it will be about the thickness of molasses, when finished. It is now cooled and thinned with turpentine, so that it may be put on with a brush. If 2 ounces of the sulphate of zinc are added cautiously, it will dry more rapidly.

B. & C., of Md.—Fire-brick or soapstone is the best material you can employ as non-conductors above your fire-place stove. If you can make plaster-of-paris adhere, it will perhaps answer as good a purpose.

G. J., of Del.—There is no reliable rule for determining the pressure of gas in main pipes, by the pressure at the station. The best way to ascertain the pressure at any part is by the gage. You will find some useful information on this subject in another column.

J. W. R., of Ohio.—Iron can be coated with brass, by first cleaning it, then giving it a coat of tin, upon the top of which the brass will adhere. We do not know of any other good method than this for brassing iron.

H. K., of N. H.—You can dye a good brown color on wool with camwood, logwood and fustic. On cotton, a good brown is colored with catechu, sulphate of copper and bichromate of potash.

W. H. W., of Mass.—We prefer the plate to the cylindrical electrical machine, for experimenting.

G. W. F., of Ind.—The best method of polishing brass, is to scour it first with fine brickdust and very dilute sulphuric acid. Afterwards wash it with warm soft water, then rub down with fine emery and finish with tripoli or whiting.

E. G. W. R., of Ind.—Particles of steel which fly from tools and remain a long time in the flesh without rusting, are protected from the action of oxygen.

P. K., of Mich.—A globe filled with compressed air, at a pressure of 30 pounds on the square inch, is heavier than one filled with air at atmospheric pressure, and will be less buoyant in water, unless the heat of the water exceed that of the atmosphere.

E. B., of N. Y.—Any good work on hydraulics will furnish you with rules to calculate the amount of water under different heads, for different horse-powers. Under a 9-foot head the actual velocity will be 15.3 feet per second, or 918 feet per minute. A horse-power is equal to 550 pounds lifted one foot in a second. On a fall of 9 feet, 36 pounds of water falling per second is equal to a horse-power.

T. McK., of Va.—The gloss put upon shirt collars made in fac ories is done by pressure and friction upon curved surfaces of hard pasteboard. The linen must be pressed upon a hard, smooth surface or no gloss will be produced. Those who make it a business to dress linen have all the necessary appliances to glaze it. All kinds of cotton and linen cloth can be glazed by pressure and friction between smooth rollers; this is the way calico is calendered and glazed.

C. J. F., of N. J.—No definite speed, as a fixed standard, can be given to a circular saw. The speed at which one of any size should be driven depends on the hardness of the wood to be cut, the mode in which the saw is hung and the form and sharpness of the teeth. It is only by practice that the most suitable speed for any saw can be determined.

MONEY RECEIVED

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, June 30, 1860:—

N. & McN., of N. Y., $45; E. D., of Mass., $30; W. A. T., of Miss., $30; L. W. N., of N. Y., $30; J. H. S., of La., $12; E. G., of Mo., $25; P. B., of N. Y., $35; J. B. T., of N. Y., $30; G. B. P., of N. Y., $150; G. H. G., of Miss., $25; D. B., of Mich., $10; J. F. W., of La., $25; E. B. & T. S. P., of N. Y., $25; G. L. T., of N. Y., $32; G. W. H., of Ill., $25; R. & W., of Iowa, $10; J. F. F., of S. C., $30; T. C. H., of Ga., $25; S. D. McC., of Ky., $30; W. & W., of Ill., $30; C. H. L., of R. I., $30; J. D., of Mass., $25; R. G. H., of N. Y., $30; F. H., of S. C., $25; W. W. M., of Mo., $25; O. D., of Md., $32; F. & G., of Iowa, $30; W. R. C., of Ill., $30; M. E. P., of N. Y., $30; J. M. H., of Miss., $25; S. C. A., of Ark., $30; V. R., of Mass., $30; J. E. W., of Pa., $25; W. C. of Ohio, $30; S. A., of N. Y., $25; L. W. T., of Minn., $30; J. W., of Ill., $35; E. B., of Ga., $30; J. W. C., of N. Y., $30; P. D., of R. I., $55; W. T., of N. Y. $30; J. S. D., of Ohio, $25; J. G. W., of N. Y., $50; H. Y. W., of Pa., $25; D. W. W., of Ohio, $35; L. W., of Mass., $30; C. P. B., of Ohio, $30; L. H. F., of Pa., $10; I. W., of Vt., $25; L. P., of Mass., $30; A. S., of N. Y., $30; R. W. P., of Mass., $25; J. K., of N. J., $30; M. L. C., of N. Y., $30; W. H. O., of N. Y., $30; D. S., of Cal., $200; J. O., of Conn., $30; N. J., of N. Y., $30; W. R., Jr., of Pa., $50; S. L. of Vt., $30; W. & K., of Iowa, $25; W. H., Jr., of N. Y., $30; H. C. D., of Mass., $30; S. H., of Mich., $30; S. P. G., of Wis., $25; P. & R., of Tenn., $25; S. A., of Mo., $30; J. S., of N. Y., $45; K. D. & Co., of N. Y., $25; S. F. Van C., of Cal., $12; G. W. L., of N. Y., $55; M. D., of Minn., $30; P. K., of R. I., $25; W. S. L., of Ohio, $10; R. T., of Iowa, $25; A. H., of Iowa, $25; H. & G., of Ill., $55; R. G. H., of N. Y., $30; A. W., of N. Y., $25; J. F. K., of N. Y., $25; H. E., of N. Y., $25; M. C., of Mass., $55; J. F. P., of Mo., $30; W. H. B., of Conn., $30; C. W., of Va., $30; W. M. G., of Ohio, $25; T. A. G., of Ill., $25; E. W. G., of Mass., $30; J. H. B., of Mo., $30; J. H., of N. J., $25; S. & G., of Vt., $35; J. H. B., of N. Y., $30; J. C., of N. Y., $25; S. A. La F. & Co., $250; G. W. L., of N. Y., $55; D. S. H., of N. Y., $30.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, June 30, 1860:—

J. T., of La.; A. W., of N. Y.; E. G., of Mo.; J. H. S., of La.; R. J. H., of Ohio; W. F., of Mass.; E. B. & T. S. P., of N. Y.; W. W. M., of Mo.; J. W. C., of N. Y.; G. L. T., of N. Y.; S. A., of N. Y.; S. S., of Mass.; W. M. G., of Ohio; R. T., of Iowa; T. A. G., of Ill.; J. D., of Mass.; J. H., of N. J.; J. E. W., of Pa.; W. T. Z., of Tenn.; J. M. H., of Miss.; I. W., of Vt.; P. B., of N. Y.; H. Y. W., of Pa.; K. & W., of Iowa; H. E., of N. Y.; W. B. Q., of Ill.; D. W. W., of Ohio; P. & R., of Tenn.; A. H., of Iowa; R. S., of Ill.' J. S. D., of Ohio; S. A., of Mo.; J. S., of N. Y. (2 cases); J. G. M., of N. Y.; J. F. K., of N. Y.; G. H. G., Sr., of Miss.; R. W. P., of Mass.; F. H., of S. C.; W. R., Jr., of Pa.; K. D. & Co., of N. Y.; W. D. M., of Va.; A. H. B., of N. Y.; S. F. Van C., of Cal.; S. P. G., of Wis.; C. W., of Va.; S. & G., of Vt.; J. C., of N. Y.