

ture of candy, together with the process of making the same, substantially as set forth in the specification.

53,914.—Transmitting Power.—Jacob Woolf, Burr Oak, Mich.

I claim the shaft, B, the arms, G G, with the shafts, H H, and weight boxes, K K, arranged substantially as described, and operating either by pulleys, E, F and I, and belts, or by toothed gears, or by any device to accomplish the same end, so as to cause the weight, K, or their equivalents to be thrown out of balance in such a manner, that one shall be constantly further from the axis of the shaft, B, than the other, and thereby aid it in its revolution, as and for the purpose set forth.

53,915.—Rotary Engine.—Henry J. Behrens (assignor to himself, Henry C. Dart, and Edward Dart), New York City.

First, I claim the concentric fixed hubs, recessed substantially as described, in combination with the two-gear shafts, their attached pistons and the cylinder, substantially as herein set forth.

Second, The pistons attached to the facing sides of the two disks, secured to their respective shafts, and so arranged that the piston or pistons of one shaft work against the face of the disk of the other shaft, substantially as herein described.

53,916.—Hame for Horse Collars.—John E. Brown (assignor to himself, Charles A. Mott, and A. A. Peebles), Lansingburgh, N. Y.

First, I claim the adjustable collar, B, arranged with the spring, d, and the spring, f, in combination with the holes, h, in the plate, a, at the outer edge of the hame, substantially as and for the purpose set forth.

Second, The loop, F, bent in right angular form, notched at its rear or outer end, and secured to the hame by the eyes, g, to admit of the eye, j, of the trace strap being adjusted higher or lower in the loop, and retained as adjusted by the pole straps, substantially as shown and described.

53,917.—Baling Press.—J. B. Gridley, Louisville, Ky.

First, I claim in a baling press, the levers, G, G, having their inner ends applied to or near the center of the follower, in combination with hangers, rods or bars, I, I, which afford the fulcrum for said levers, and a rope chain or other draw device, whereby the loose ends of the levers are made to approach each other, substantially as and for the purposes herein specified.

Second, In combination with the levers which are made to act upon the follower, by having their loose ends moved toward each other, and which have their fulcrum upon hangers, rods or bars, I claim a rope chain or any other device which shall impart motion to the follower, before the levers attain their effective acting position, substantially as and for the object set forth.

Third, I claim the means substantially as herein described, for adapting the levers, in assuming the position from which they act, to stand at the definite angle with the hangers or rods, I, from which they may be most speedily made to take the position in which to act, effectively upon the follower, by means consisting either of the widening of the levers at the points where the hangers or rods are attached, or in the application of the metallic blocks, H, or their equivalents.

Fourth, I claim the combination with the levers, G, G, hangers, I, I, and rope, K, of the follower, C, D, ribs, d, and guide slots, a, the latter being adapted to prevent the tilting or canting of the follower, in its movements through the press-box, as explained.

Fifth, I claim the particular manner of constructing the point which connects the levers with the follower, to wit: by means of the three parts, E, F, F, connected by a single plate, c, as herein described.

Sixth, I claim the metallic blocks, H, H, attached to the levers, G, G, and provided with hooks, f, f, and guides, d, to which hooks, f, f, the rods, I, I, are connected, substantially as and for the purpose herein set forth.

53,918.—Metallic Fastening for Plow Beams.—Lewis Gibbs (assignor to Bucher, Gibbs & Co.), Canton, Ohio.

I claim a metallic fastening for uniting a plow beam and handle, made with lugs, flanges and recesses, and united thereon in the manner and for the purpose herein described and represented.

53,919.—Coffer Dam.—Aaron Filmore (assignor to himself, B. H. Austin, Jr., and Adolphus S. Austin), Buffalo, N. Y.

I claim a portable coffer dam, A, (with or without a movable end piece, A2), for the purpose and substantially as described.

53,920.—India Rubber Hat and Cap Band.—William H. Halsey, Hoboken, N. J., assignor to David W. Mapes, Orange, New Jersey.

I claim the combination of the two rollers, with their surfaces prepared as described, one roll having a sunken or depressed, and the other an elevated surface, substantially as, and operating as and for the purposes set forth.

53,921.—New Article of Manufacture from Hard Rubber, to be used in Articles of Dress.—William H. Halsey, Hoboken, N. J., and Maurice Fitzgibbons, New York City, assignors to David W. Mapes, Orange, N. J.

We claim as a new article of manufacture, hard rubber or gutta percha, or similar material, ornamented by being subjected to two or more successive pressures or impressions of figured rolls, substantially as above described.

53,922.—Hard Rubber or Gutta Percha for Articles of Dress and other use.—William H. Halsey, Hoboken, N. J., and Maurice Fitzgibbons, New York City, assignors to David W. Mapes, Orange, N. J.

We claim the process of re-in, substantially as described, which consists of subjecting hard rubber, gutta percha, or other similar material, to two or more successive pressures of figured rolls, substantially as and for the purposes above described.

53,923.—Stencil Brush.—Daniel K. Herr, Locust Valley, Pa., assignor to Theodore W. Herr, Lancaster, Pa.

First, I claim the combination of the brush tube, G, and the external casing, B, constructed and operating substantially in the manner and for the purpose specified.

Second, The brush, J, I, when expressly made or adapted to my brush tube, G, and to be used in combination with the external casing, B, in the manner and for the purpose set forth.

53,924.—Nail Plate Feeder.—C. D. Hunt, Fairhaven, Mass., assignor to the American Nail Machine Company, Boston, Mass.

I claim the combination and arrangement of the double rack bar, K, the pawls, I, I, the lever, G, the spring, M, and the cam, H, as applied to the vibratory arm, A, and the shaft, E, substantially as specified.

53,925.—Stovepipe Damper.—Sumner Marvin (assignor to himself and Alfred W. Boynton), South Royalston, Mass.

I claim the damper apparatus, composed not only of the frustum, A, having the opening, b, b, of the two dampers, C, D, and their connecting rod, E, made in arranged together, and with a flue or pipe, B, substantially as specified.

53,926.—Eyeletting Machine.—Andrew A. Reed, North Bridgewater, Mass., assignor to Elmer Townsend, Boston, Mass.

I claim the combination of the stationary work-supporting surface, the punch, and the setting mechanism, when the latter is arranged to feed the eyelet laterally to, or under the hole punched for its insertion, substantially as described.

I also claim the construction by which the eyelet is removed by the feed pin, directly from the magazine, without the intervention of a chute or roadway, substantially as described.

I also claim the combination of a stationary eyelet magazine, with a rotating ring, provided with pockets, into which the eyelets are thrust, substantially as described, and from which they are removed by the feeding instrument, substantially as set forth.

53,927.—Sewing Machine for Sewing the Sweat Linings to Hats.—Frederick S. Sanford and Dwight Wheeler (assignors to Glover Sanford and Sons, and Dwight Wheeler), Bridgewater, Connecticut.

We claim the work plate, D, guides, E, and F, constructed and arranged substantially in the manner described, in combination with a stitching apparatus, for the purpose specified.

53,928.—Detaching Boats from Davits.—E. H. Sheffield, Stonington, Conn., and E. P. Pahner (assignors to E. H. Weston), New York City.

We claim the jointed hook, c, fitting into sockets, d, on the ends of a boat, A, in combination with the retaining chains, f, and with suitable

mechanism for tightening or releasing said chains, constructed and operating substantially as and for the purpose described.

53,929.—Harvester Rake.—Thomas Taylor (assignor to Samuel C. Ridgeway and John Fox), Baltimore, Maryland.

I claimed the combined action of the crank shaft and curved arm of the rake, moving in the swiveled guide for giving motion to, and operating the rake, as herein recited.

53,930.—Horse Shoe.—Cassius M. Werner (assignor to himself and Edwin A. Bigelow), Rockford, Ill.

First, I claim forming the clasps with open loops, a and for the purpose described.

Second, Casting the clasps in one piece with the flange bar, as described, for the purpose set forth.

Third, The combination of the sole, the ribs, the flange bars and the clasps, substantially as described.

53,931.—Artificial Leg.—James W. Weston and Frederick Buckner, New York City, and Reinhold Boeklen, Brooklyn, N. Y., assignors to James W. Weston, New York City.

First, We claim an ankle joint formed by a spring of rubber or other suitable material, provided with recesses in its top and bottom surfaces, in combination with corresponding projections on the foot and limb, substantially as specified, so that the foot is allowed a limited motion in any direction, but is brought properly back to its place by said spring, as set forth.

Second, We claim forming the ankle joint spring in the manner specified, with the front portion thereof more rigid than the back portion, in order that the foot may conform to the surface stepped upon, as set forth.

Third, We claim a connecting bolt with rounded heads or nuts in combination with the elastic ankle joint, substantially as and for the purposes specified, and in combination therewith we claim the sheet-steel socket for the heads, as set forth.

Fourth, We claim the elastic stop block or blocks applied as shown, to arrest the forward movement of the lower limb, as specified.

Fifth, We claim the hooks, ll, formed of a bent piece of metal passing around the limb to the joint to strengthen the same, in combination with an elastic contractile band or spring applied between said hooks to throw the lower limb forward, as specified.

Sixth, We claim adjusting the limb to the conical shape of the stump by the linking of veneer or other suitable material, rolled up with the edges lapping and attached at the upper end to the artificial limb, in combination with the curved adjustable wedge, or its equivalent, as and for the purposes specified.

Seventh, We claim the cortical filling pieces introduced into the artificial limb, as specified, to adjust the limb to the stump, as set forth.

53,932.—Saddle and Harness.—Achille Angeline, Genoa, Italy.

First, I claim in the manufacture of cushions or pads for riding saddles, pack saddles, and harness of all kinds, of elastic substances, such as vulcanized gutta percha or caoutchouc when of the form and shape, substantially as set forth.

Second, The formation of said elastic substances into tubes, double tubes, dice, knobs, or spheres, substantially as and for the purposes herein set forth.

53,933.—Rocket.—William Hale, London, England.

I claim the application of the principle by which the expansion of the whole volume of the gas as it issues from the vent is made to subserve the purpose of producing rotation in the rocket about its longitudinal axis, substantially as described.

53,934.—Steering Apparatus.—Morris West Ruthven, Middlesex County, England. Patented in England Nov. 10, 1864.

I claim in combination with a tiller operated by gears, pivoted levers and links, substantially as herein described, a weight or spring which receives or stores the power with which the water forces the rudder in one direction, and is applied to aid the helmsman in cutting the rudder over in an opposite direction, substantially as set forth.

53,935.—Peat Machine.—James Hodges, Penny Hill, Bagshot, England.

First, I claim the pulping trough and separator, E F, provided respectively with the spider diaphragms, I, and fixed bars, K, and also provided with the shaft, G, having upon it the vanes, J, and bars, L, all arranged to operate in the manner substantially as and for the purpose set forth.

Second, The pulping and distributing trough, N, provided with diaphragms, c, having a varying number of arms, and also provided with valves, apertures, or slides, Q, at its bottom, and with a shaft, O, having vanes, P, upon it, arranged to operate substantially in the manner as and for the purpose specified.

Third, The combination of the screw excavators, elevator and pulping mechanism applied to a vessel, and arranged for joint operation, substantially as and for the purpose set forth.

Fourth, The preparing of the peat bed with subsoil drains, substantially as described, when used in connection with a vessel provided with an excavator and pulping apparatus, substantially as set forth.

53,936.—Rudder.—Morris West Ruthven, Middlesex Co., England. English Pat. July 11, 1863.

I claim in combination with a rudder composed of a series of hinged sections, the connecting of said sections at their upper ends by means of a slotted crank or lever on one part that receives in its slot a pin or anti-friction roll on the next adjacent part, and so on throughout the series, to cause the parts when moved by the rudder to assume an approximate curve, substantially as described.

53,937.—Sluice for Propelling Vessels.—Morris West Ruthven, Middlesex County, England. Patented in England May 1st, 1865.

I claim the employment in the propelling of vessels of rotating sluices such as are herein described, each in combination with two outlet passages, the sluice in each case being arranged to turn with its axis while the periphery and ends of the sluice are free as may be from contact with the inlet surfaces of the chamber in which the sluice is contained, by which arrangement the sluice may be turned comparatively free from friction, and consequently requires but little power to turn it.

53,938.—Swing.—John F. Hartman, Fond du Lac, Wisconsin.

I claim the combination and arrangement of bar, B, and swing bars, D D, with the levers, E F G and H, and rope, I, substantially as and for the purposes set forth.

53,939.—Pump.—A. Leuchtweiss, Cincinnati, Ohio.

I claim the sharp-edged abutment, c, in combination with the discharge passage, a, screw, C, and cylinder, A, constructed and operating substantially as and for the purpose described.

REISSUES.

2,221.—Gang Plow.—N. E. Burton, of Galesburg, Ill. Patented Oct. 28, 1861.

First, I claim the device for adjusting the beams, A A', by means of plate, f, and clamps, e, e, and bars, g, substantially as and for the purpose of penetration of the plows, M and J, may be changed at pleasure.

Second, The combination of the subsoil plow, I, having a long-winged mold board, with the surface plow, M, arranged as and for the purpose set forth.

Third, The attaching of the axle, D, to the beams, A A', through the medium of the roller, H, in combination with the arm, H, attached to the axle, D, and having its bearing or fulcrum on the rod, L, as herein described, whereby the depth of the penetration of both plows may be regulated at pleasure, and they may also be made to run out of the ground when desired.

2,222.—Lock.—Rudolph Vollschwitz and J. J. Schaeffer, (assignees by mesne assignments of F. Randolph) New York City. Patented July 25, 1865.

First, We claim a lock with a tubular case, B, containing a bolt, D, and one or more tumblers, E, to be operated from either side by a key, K, substantially as and for the purpose set forth.

Second, The latch, F, in combination with the bolt, D, and tubular case, B, constructed and operating substantially as and for the purpose described.

2,223.—Revolving Fire-Arm.—J. J. Greenough, New York City, assignee of James Warner, Springfield, Mass. Patented June 24th, 1866.

First, I claim the employment of a pin or other projection as described in the shield or rear frame for preventing recoil of the breech constructed as herein described, at a point just behind and in rear of a chamber that is on a line with the barrel when in position to be discharged for firing the arm, as and for the purposes above set forth.

Second, I also claim making the pin or projection, E, adjustable, substantially as and for the purposes set forth.

Third, I claim the cavity, i, in the battery plate, c, in such position and of such form as to receive and hold the ball or balls in case of the accidental discharge of any of the chambers not in adjustment with the barrel, as described.

2,224.—Harvester.—Reuben Hoffsheins, Dover, Penn. Patented May 20th, 1862.

First, I claim a sweep rake which is mounted upon the heel of the finger beam proper, or upon the inner front corner of the platform of a harvester which has its cutting apparatus and platform hinged to the draft frame, all in such manner that the rake arm sweeps the platform from front to inner side, and maintains a correct position in relation to the finger beam and platform during the rising or falling movements thereof on the joint or joints by which the finger beam is connected to the draft frame, substantially as set forth.

Second, A rake rotating upon an axis which is perpendicular to the top surface of the platform, or nearly so, and having its arms successively turned up, substantially as and for the purpose described.

Third, The angular rake arm rotated independently of the axis, f, and controlled substantially as described, in combination with a guide way which is perpendicular, or nearly so, to the said axis, f, of the rake head, substantially as and for the purpose described.

Fourth, Elevating and depressing revolving rake and reel arms by means substantially as described, whereby I am enabled to dispense with the incline plane or support, E, as set forth.

Fifth, An inclined standard or support, F, or its equivalent, rigidly mounted upon a loosely-hinged platform or finger beam, and adapted for supporting a sweep rake in an unchanging position in relation to said platform without obstructing the free motion of the platform or finger beam, substantially as described and shown.

Sixth, A standard or support, E, which sustains the sweep rake above the draft frame or driving wheel thereof, said standard being mounted directly and wholly upon a hinged finger beam or the platform thereof, substantially as described and for the purpose set forth.

Seventh, A revolving toothed-head or crown wheel, J, constructed with supports for rake and reel arms, in pairs, said supports being arranged outside and around the axis of said wheel, J, substantially as and for the purpose described.

Eighth, In a harvesting machine which has its cutting apparatus hinged or jointed to the main frame in such manner as to allow it to conform to both ends to the undulations of the ground, and a rake mounted upon the said jointed cutting apparatus, or upon the platform thereof, I claim so constructing and arranging the several parts that the support of the rake can occupy a position outside of the inner drive wheel, B, or a position which is between the joint of suspension, h, and the outer divider, G, and can also be hung, or be suspended below the draft frame, substantially as described.

Ninth, Effecting a combination of a rake and reel located substantially as described, and a finger beam and platform with the main frame, by means of a hinged draw bar, b, a hinged brace, l, a hinged spreader, f, and an extension bracket, z, or their equivalents, substantially as and for the purpose described.

Tenth, The combination of a rake and reel, a yielding draw bar, b, inner shoe of the cutting apparatus and hinge-joint, e, on the draw bar, substantially as and for the purpose described.

Eleventh, Preventing a too sudden or abrupt deflection of a rake and reel mounted upon a hinged cutting apparatus by carrying the point of suspension beyond the rake support, towards the center of the draft frame by means substantially as described.

Twelfth, A continuously revolving rake which is mounted directly and wholly upon the platform or finger beam so as to rise and fall therewith independently of the draft frame, when said rake is located between the center of the draft frame and the outer divider, and passes in at the front of the machine upon the platform and sweeps around to the inner side of the platform, substantially as described.

Thirteenth, The combination with a double hinged joint combined reaping and mowing machine, of a sweep rake which enters at the front of the machine upon the platform, in such manner that the rake and cutting apparatus rise and fall together while reaping; and also in such manner that the platform may be readily removed, and the cutting apparatus at its inner and outer ends, allowed to float upon the ground and to accommodate itself at both ends to the undulations of the ground, substantially in the manner described.

Fourteenth, The combination of a suspended hinge joint cutting apparatus of harvesters and a combined rake and reel, which is mounted directly and wholly upon the suspended platform or hinged finger beam, substantially as and for the purpose described.

Fifteenth, Controlling the rake and reel arms by an upper and lower guide between which an attachment of the respect rake and reel arms passes, substantially as described.

Sixteenth, The combination of a combined rake and reel mounted upon a hinge joint cutting apparatus and a yielding belt tightener, substantially as and for the purpose described.

Seventeenth, The employment of a yielding belt or chain tightener, or its equivalent, in connection with harvesters which are constructed with a hinged joint cutting apparatus, substantially as and for the purpose described.

Eighteenth, The pulley support, Q, with its pulleys, W2 W2, in combination with a band or chain, N, and pulleys, W1 W3, substantially as and for the purpose set forth.

Nineteenth, Providing in a harvester with the rake attached to its hinged finger beam or platform, an extensible means for driving the rake, which will permit the platform and rake to rise and fall together and accommodate themselves, independently of the draft frame, to the undulations of the ground, substantially as described and for the purpose set forth.

2,225.—Knitting Machine.—Joseph Hellen (assignee by mesne assignments to John Nesmith), Blair, Penn. Patented July 16th, 1850—extended 7 years.

First, I claim forming the needles in the manner substantially as described, so that they shall be capable of being separately projected and withdrawn in the operation of knitting, by the application of the mechanism, substantially as described, for producing these movements.

Second, I also claim the above described means of projecting and withdrawing the separate needles, or any other substantial equivalent of a knitting needle when used to perform its functions.

Third, I also claim the arrangement of the needles on a cylinder, in the manner described, in connection with the described means of moving or revolving the cylinder as a needle carrier.

Fourth, I also claim the combination of the jack, the sinkers and depressers, substantially as described.

Fifth, I also claim the throw bar, v, having an extended sideways motion to and fro, at each stitch, by which the thread across the needle at each stitch, and returns with it to be ready for the next stitch.

Sixth, I also claim the spring wire for regulating the supply of thread to the needle, opened by the rod, W, substantially as described.

Seventh, I also claim the particular arrangement and combination of the several parts of the machine by which their various motions are derived from a single crank and screw thread, substantially as described.

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