

RECENT AMERICAN PATENTS.

The following are some of the most important improvements for which Letters Patent were issued from the United States Patent Office last week. The claims may be found in the official list.

Shipper Lever for Looms.—The lever commonly used in power looms for shipping the belt from the fast to the loose pulley, and *vice versa*, and otherwise stopping and starting the loom, has its lower portion made to constitute a spring, and this spring is very liable to be broken by the violent concussion to which the lever is subject in the movement effected by the said spring for stopping the loom, and when it is broken, the stoppage of the loom until the lever and spring have been taken off, carried to the smith for repair and put on again, results in serious loss to the manufacturer. Another difficulty is, that the spring cannot be adjusted to give it more or less tension while it remains attached to the loom. The object of this invention is to obviate both of these difficulties; and to this end it consists in the combination, with each other and with the loom, of a rigid lever, an independent spiral or conical volute spring and an adjustable fulcrum. George W. Hathaway, of Hinsdale, Mass., is the inventor of this device.

Sewing Machine.—In the application of reversible feed mechanism to a shuttle or other "lock stitch" sewing machine, the two threads are simply interlaced when the feeding movement is in one direction but are crossed and form a kind of half knot when the said movement is in the reverse direction, and the consequence is, that the degree of tension of the upper thread that is requisite to bring it tight on the upper surface of the cloth, and make it draw the under thread tight up into the cloth when the feeding movement is in the first-mentioned direction, is not sufficient to produce the same effect when it is reversed, but leaves the upper thread loose on the upper surface of the cloth and the under thread straight on the under surface, the reason being that in the latter case the friction of the threads is so much greater; or, if the tension should be sufficient to draw the upper thread tight and the under one far enough into the cloth when the feed movement is in the last-mentioned direction, it would draw the under thread through the cloth when the movement was in the first-mentioned direction. Hence, in order to make good work in sewing back and forth, the tension of the needle thread requires to be varied every time the direction of the feed movement is changed. This invention consists in so combining the device which produces the tension with the device by means of which the feed movement is reversed, that by the act of changing the direction of the feed movement the tension is varied in such a manner as is rendered necessary by such change of direction. N. Jones, of La Porte, Ind., is the inventor of this improvement.

Drum.—This invention relates to a new and useful improvement in military side (or small) drums, and consists in constructing the drum in such a manner that its head and reverse may be braced separately or independently of each other, thereby preventing the reverse, which is the head not beaten upon and which is generally formed of inferior material, from being unduly strained, a contingency which is liable to occur in drums of ordinary construction, in bracing the head proper, in consequence of one bracing cord being connected to both bracing hoops, thereby causing both the head and the reverse to be braced simultaneously, and the latter to be unduly strained or stretched before the forward is brought to a proper degree of tension to insure a good or perfect tone. The invention further consists in a novel manner of applying the cords to the bracing hoops, whereby the former are kept free from contact with the heads and the latter thereby, as well as the cords, prevented from being injured by abrasion. The inventor of this improvement is John Dermond, of Louisville, Ky.

Back Numbers and Volumes of the Scientific American
VOLUMES I., II., III., IV., V. AND VII. (NEW SERIES) complete (bound or unbound) may be had at this office and from periodical dealers. Price, bound, \$2.25 per volume, by mail, \$3—which include postage. Price, in sheets, \$1.50. Every mechanic, inventor or artisan in the United States should have a complete set of this publication for reference. Subscribers should not fail to preserve their numbers for binding. Nearly all the numbers of VOL. VI. are out of print and cannot be supplied.



ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING FEBRUARY 4, 1863.

Reported Officially for the Scientific American.

* * Pamphlets giving full particulars of the mode of applying for patents, under the new law which went into force March 2, 1861, specifying size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

37,559.—Manufacture of Felt.—S. M. Allen, Boston, Mass.:

I claim combining ordinary felting materials like fur, wool, &c., with a short fiber made or reduced in such a manner from long staple fibrous materials, like fax, hemp, jute, silk, china grass, and similar substances, as to have the peculiarities hereinabove described, whereby, when so combined, they can be felted together by any suitable felting process.

37,560.—Bedstead-fastener.—Dwight Babcock, Seneca Falls, N. Y.:

I claim, as a new article of manufacture, the coupling hook, C, provided with the double points, d d', for use on the opposite sides of the bedstead, substantially as described.

37,561.—Bank-note.—J. M. Batchelder, Cambridge, Mass.:

I claim the fixed scale or column of figures, as 1 2 3 4 5 10, occupying the middle area, substantially as and for the purposes set forth, a border or embossed space, in combination with a series of lines, marks or rays radiating from that figure of the scale that represents the denomination or value of the bill.

I also claim the combination of a single colored figure of the scale, with the denomination figure of the bill made of the same color, substantially as herein described.

37,562.—Machine for Framing Lucifer-match Splints for Dipping.—Anson and E. B. Beecher, New Haven, Conn.:

We claim, first, The employment of a flexible binding tape or band, in combination with a drum adapted to be rotated by a mandrel and removed therefrom, substantially as described, as a means of forming a spiral frame of match splints for dipping, substantially as hereinbefore set forth.

Second, In combination with a frame-drum moved by friction, the endless band and pressure roller, or equivalent feeding mechanism, for the purpose of holding and paying out the flexible binding tape to the frame, substantially as described.

Third, In combination with the frame-drum, binder, setting and feeding mechanism, the friction drag, or its equivalent, for the purpose of stopping the frame when the feeding and setting mechanism is reversed, substantially as described.

Fourth, The receiving cylinder grooved across its periphery with grooves suitable to take in and hold only a single match splint, each substantially as described.

Fifth, The wire brush, or its equivalent, in combination with the receiving cylinder, substantially as described.

Sixth, In combination with the setting wheels and receiving cylinder, the comb wheel, substantially as described.

Seventh, The setting wheels, in combination with the frame-drum and binding tape, substantially as described and substantially for the purpose of setting the splints in the coils of the binding tape, as set forth.

Eighth, In combination with the feeding and setting mechanism, the clutch and levers, or their equivalents, whereby the frame is stopped when splints are not supplied at the proper time, and set in action again by the splint itself, substantially as described.

37,563.—Telegraphic Apparatus.—Giovanni Caselli, Florence, Italy:

I claim the combination of the spring, u, and the micrometric screw, v, with the pendulum of the regulator, P', substantially in the manner herein shown and described.

The employment of the marking device, consisting of the oscillating lever, y, screws, b b', slides, d' d', styles, v v', and tablets, t t, or their equivalent parts, combined and operating together, substantially as herein shown and described, with the pendulum, A B, as set forth.

The employment of the copying device, consisting of the segment rack, s, bar, l l, levers, h' h', styles, v v', and intermittent drum, A B, or their equivalent parts, combined and operating together substantially as herein shown and described, and the pendulum, A B, as set forth.

37,564.—Corn Planter.—H. Cassidy, Putnam, Ohio:

I claim the combination of the chambered hoppers, L, spring slides, J, wheels, E, shafts, G H, and side beams, A, with each other and with the central beam, C, all in the manner and for the purpose herein shown and described.

37,565.—Explosive Projectile.—J. M. Connel, Newark, Ohio:

I claim, first, Expanding the packing, l, by a combination of the force of the expanding gas and of the resisting action of separated ribs, in the manner shown and described, for the purposes set forth.

Second, The inclined beads or ribs having flutes between them, in combination with a loosely-fitted expansible seat, substantially as and for the purpose set forth.

37,566.—Percussion-exploder for Shells.—J. M. Connel, Newark, Ohio:

I claim, first, Suspending a plunger upon a projecting stem, b, of the screw-plug, A, in the manner and for the purpose set forth.

Second, So applying a shell-exploder to a shell, that when the latter strikes obliquely, or sidewise, the said "exploder" shall be ignited by a leverage impact against the rear of the screw-plug, in the manner substantially as described.

37,567.—Door Latch.—J. H. Cooper, Philadelphia, Pa.:

I claim the latch, L, in combination with the knobs, k' and k'', and shank, A, when the latch turns on an axis parallel to that of the door, and when the latch is opened by pushing or pulling the knobs in the manner described.

37,568.—Car Brake.—D. S. Cross, Cincinnati, Ohio:

I claim, first, The arrangement of driving axle, G, sliding and revolving windlass, F, ratchet and pawl, H K, clutch, I J, armed shaft, L M N, and self-releasing attachment, N n n', in the described combination with the brake chain, E, the whole being combined and operating as set forth for the purposes set forth.

Second, In the described combination with the above, I claim the cam-headed lever, O, connected to the pawl, and operating substantially as set forth.

Third, The provision of toggle, P Q, and rollers, T T', or their equivalents, in the described combination with the consecutive cars, and with the main brake chain, E, for the equalization of tension of the said chain, in the manner set forth.

37,569.—Weighing Apparatus.—A. B. Davis, Philadelphia, Pa.:

I claim, firstly, A graduated beam, E, connected to the platform of a scale, in combination with any desired number of supplementary graduated beams, so arranged that, by the appliances herein described, or any equivalent to the same, any one or all of the said supplementary beams can be connected to or disconnected from the main graduated beam, for the purpose specified.

Secondly, Arranging the graduated beam, E, and its supplementary graduated beams within a box or casing, furnished with doors and locks, substantially as described, and having such openings that, while the attendant can observe the movements of any of the supplementary beams from the outside of the casing, he cannot gain access to the beams themselves or gain a knowledge of the weights determined by the beams.

Thirdly, The stirrup, J', suspended from the graduated beam, E, and provided with knife-edged bearings, k, for the reception of the supplementary beams, substantially as and for the purpose herein set forth.

Fourthly, The levers, M, arranged in respect to the supplementary graduated beams and stirrups, J', substantially as and for the purpose herein specified.

37,570.—Military Drum.—John Dermond, Louisville, Ky.:

I claim the hoop, B, attached centrally to the cylinder, A, in combination with the two bracing cords, F E, and the two bracing hoops, E E, all arranged substantially as shown, to form an improved military or side drum.

I further claim making or boring the cord holes, c, in the bracing hoops, E E, in a direction parallel or nearly so with the axis of the cylinder, A, and about at the centers of the bracing hoops, as and for the purpose set forth.

37,571.—Sails of Vessels.—Daniel Fitzgerald, New York City:

I claim, first, The self-adjusting sails, A, constructed and arranged substantially as above described.

Second, The collapsing jib, B, constructed and arranged substantially as above described.

Third, The collapsing circular sail, C and D, made to fold like a fan, constructed and arranged substantially as above described.

Fourth, The mid-jib, between the two bowsprits, as constructed and described.

Fifth, Suspending a circular sail, D, between the mast and bowsprit or on a jib-hook, constructed and arranged substantially as above described.

37,572.—Paddle Wheel.—W. C. Ford, Brooklyn, N. Y.:

I claim, first, The arrangement of the prismatic buckets, e f and g, in the manner and for the purposes specified.

Second, I claim the construction of the prismatic sheet metal buckets, with the flanges, 3 3, and arm-hole, 4, for the purposes and as specified.

37,573.—Paper Bag Machine.—J. J. Greenough, New York City:

I claim, first, Forming a paper bag or other envelope by cutting the form or blank therefor from a strip or roll, by circular knives, as herein described, and then folding the same between a series of rollers, without stopping the paper to perform either of the functions, the whole being combined and arranged substantially as and for the purposes set forth.

Second, I also claim cutting the edges of the paper in an irregular line to shape the form or blank by the cylindrical cutters, in combination with folding machinery for making bags, &c., by a continuous operation, as above specified.

Third, I also claim the combination of the "waste" rollers, W, or their equivalent, for insuring the separation of the parts, and removing the waste from the machine, with the cutters, substantially as described.

Fourth, I also claim printing or embossing the paper while it is stretched and held tight on both sides of the printing apparatus, while being printed, as herein described, when the same is connected with machinery for making bags and envelopes for the purposes specified.

Fifth, I also claim conveying the form or blank for a bag or envelope through the preliminary operations of forming the envelope, and before serving the same from the strip of paper from which it is cut, substantially as and for the purposes set forth, when the bag is formed by passing the material through a series of rollers, substantially such as is herein set forth.

Sixth, I also claim embossing the line of the seams of bags, or other envelopes, where they are joined by adhesive material, for the purpose of cementing the seams more perfectly, and concealing the joints, as set forth.

Seventh, I also claim turning the side fold of the blank, cut as herein described, before the bottom fold, so as to bring the side fold on the inside of the bag or envelope, and securing the same to the cut lap or side, by which a neater joint is made.

37,574.—Grubbing Machine.—Joseph Frey, Battle Creek, Mich.:

I claim the adjustable and movable cast-iron shackle for pulling trees with the roots, in combination with the reversible wrought-iron clevis, or its equivalent, the clevis being guttered, and I also claim the adjustable and movable cast-iron shackle for pulling stumps or cap-grubs, in combination with the hook on the reversible wrought-iron clevis.

37,575.—Vulcanizing Lamp.—B. W. Franklin, New York City:

I claim the construction of a lamp with two or more adjustable compartments, connected with gauze-wire wicks, that shall, when graduated, evolve the proper degree of heat to vulcanize india-rubber and other vulcanizable gums, without the use of thermometers, steam gages, or other tests, constructed substantially as above described and for the purposes set forth.

37,576.—Beehive.—H. A. Hannum, Cazenovia, N. Y.:

I claim the board or cover, B, the parallel bars, m, and strips or cleats, n, arranged and combined as shown, so that the board or cover may be detached from the bars, m, when necessary, and also used in connection with them when desired, as herein specified.

The object of this invention is to obtain a beehive which will admit of the bees being very readily hived in it, and also admit of being thoroughly ventilated and the filth allowed to escape freely from it. The invention also has for its object facilities for thoroughly examining the combs and manipulating or handling the same, as circumstances may require.]

37,577.—Shipper Lever for Looms.—G. W. Hathaway, Hinsdale, Mass.:

I claim the combination with each other and with a loom, of the rigid lever, B, the spiral or volute spring, D, and the adjustable fulcrum, a, substantially as and for the purpose herein specified.

37,578.—Extract of Malt, &c., for making Beer, Ale and Porter.—Thomas Hawks, Rochester, N. Y.:

I claim a concentrated portable preparation of wort, mixed with and shielded by the sirup of cane sugar, either with or without the addition of gelatine, for increasing its security against the influence of atmospheric changes, substantially as and for the purposes above specified.

37,579.—Grinding and Pressing Grapes, Apples, &c.—C. B. Hutchinson, Auburn, N. Y.:

I claim the construction and arrangement of a grinding mill and press together, combined and operating substantially as herein specified.

I also claim the open discharge depression, F, across the face of the case, opposite to the grinding wheel, in combination with said grinding wheel, arranged and operating substantially as and for the purpose herein specified.

In combination with said depression, F, I also claim the peculiar construction and arrangement of the teeth, h and h', and spiral, wedge-shaped hopper, as herein set forth.

I also claim the guide stem, N, projecting vertically from the removable follower, K, and sliding in a lock, p, or its equivalent, for the purposes specified.

I also claim the combination of the curb, I, having openings or slots in the lower portion only, with the concave follower, K, and guide stem, N, substantially as specified.

37,580.—Sewing Machine.—N. Jones, La Porte, Ind.:

I claim so combining the device which produces the tension with the device by means of which the direction of the feed movement is changed, that by the act of changing the direction of the feed movement the tension is varied in such manner as is rendered necessary by such change of direction, substantially as herein specified.

37,581.—Lamp.—S. J. Kelly, Pemberton, N. J.:

I claim the combination of the doubly-perforated and flat topped cone or deflector, F, the two parallel flat-wick tubes, E E', shafts, G G', milled head, H, disconnected elevating wheels, g g', and connected cog wheels, h h', the latter having no contact with the wicks, when the said parts are constructed and arranged as herein shown and described, and operate in the manner and for the purposes specified.

[This lamp is provided with two parallel flat wicks which are so arranged as to be raised or lowered simultaneously by means of a single thumb wheel, and produce two distinct flames of any size required.]

37,582.—Motive Power.—Frederic Kettler, Milwaukee, Wis.:

I claim the arrangement and combination of a wind wheel with hammers, 13, weights, 12, levers and toothed wheels, arranged and