

G. A. ORTWEIN.
 AUTOMATIC SHINGLE STAMP.
 APPLICATION FILED APR. 30, 1909.

947,345.

Patented Jan. 25, 1910.

Fig. 1.

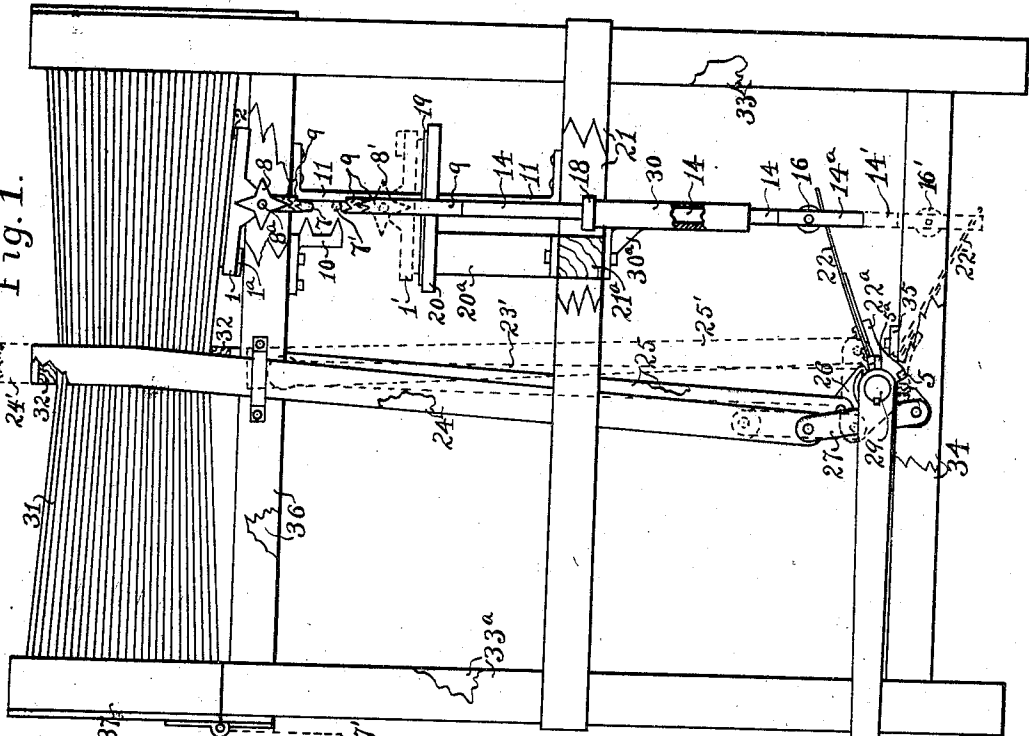


Fig. 2.

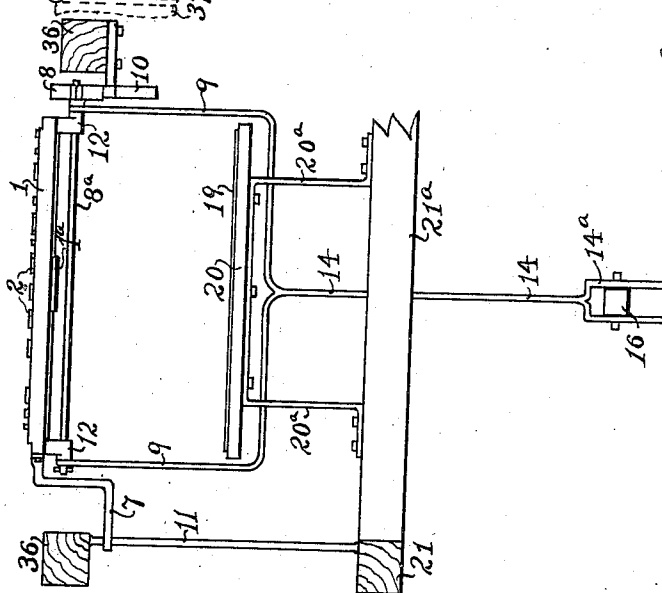


Fig. 3.



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AUTOMATIC SHINGLE-STAMP.

947,345.

Specification of Letters Patent.

Patented Jan. 25, 1910.

Application filed April 30, 1909. Serial No. 493,220.

To all whom it may concern:

Be it known that I, GEORGE A. ORTWEIN, a citizen of the United States, and a resident of Maple Falls, in the county of Whatcom and State of Washington, have invented certain new and useful Improvements in Automatic Shingle-Stamps, of which the following is a specification.

My invention relates to an improvement in means for marking shingles and consists in a stamp and mechanism for operating the same, which being attached to an ordinary shingle-packer's press, will be caused to properly mark the bunches of shingles by the operations ordinarily used to work said press.

It is now customary to mark the finished bunches of shingles with a brush and stencil. This requires the time of an operative.

With my improvement attached to a shingle-packer's press, the shingles are properly stamped by the movements of the press mechanism required to bind the bunch of shingles, no additional movements or thought of the operator being required in order that my stamping device may be properly operated.

Although it is now customary to stencil shingles, I have a machine in operation which accomplishes the objects of this invention as above related and for which I have applied for Letters Patent in the United States, filed March 1, 1909, Serial No. 480,715. This machine works very well. Yet because of the use of a number of long spiral springs, some difficulty has been found in keeping these springs at the proper related tension.

The object of this invention is to improve the stamp mechanism illustrated and described in my application above referred to and is illustrated in the accompanying sheet of drawings in which similar characters refer to similar parts throughout and in which—

Figure 1 is an end elevation of a shingle-packer's press, of well known construction, showing my stamping device attached, Fig. 2 is a front elevation of the major portion of my device with parts of the press frame to which it is attached, and Fig. 3 is an end elevation of certain parts of my device not shown clearly in Fig. 1.

More specifically: the shingle-packer's press, illustrated in Fig. 1 has a frame principally composed of posts 33 and 33^a and

cross pieces 34, 21, and 36. A horizontal shaft 29 finds bearings in pillow blocks 35, only one of which is partly shown in Fig. 1, attached to lower cross pieces 34. Rigidly attached to this shaft is lever 26, one end of which is pivoted to the lower end of compression bar 25 and the other end is pivoted to the lower end of link 27, the upper end of which is pivoted to the lower end of tension bar 24. Another similar set of bars, link and lever is situated on the other side of the press. Shaft 29 is operated by hand lever 23, rigidly attached thereto. A bunch of shingles 31 occupies the crib of the machine, and the shingle ties 32 are shown in place thereon and pressed between lugs on the upper end of tension bars 24 and the upper ends of compression bars 25, in order that the bands, not shown, may be secured in place. By raising lever 23 to the dotted position at 23' the bars 24 and 25 are caused to occupy the dotted positions at 24' and 25' respectively. Then when the end gate 37 is turned down the completed bunch can be removed. The passing of the lever 23 to and from its two illustrated positions, produces the principal mechanical movements of the press. And on these movements the operation of my stamp depends, as I will now explain.

The dog 5^a is rigidly attached to shaft 29 near its middle part, Fig. 3. Next to this dog, loose on shaft 29, is retained the piece 22^a provided with two lugs or stops 5, 5. Piece 22^a is free to revolve back and forth through an arc about shaft 29 until one of the lugs 5 comes in contact with the tail of dog 5^a. Consequently dog 5^a controls the revolution of piece 22^a except for the lost motion in the arc referred to. One end of flat spring 22 is rigidly attached to piece 22^a. On the right-hand end of spring 22 rests the roller 16 which is journaled in stirrup 14^a of vertical compression bar 14. Bar 14 is preferably flat and of rectangular cross section and is free to move up and down in guide 30 which is rigidly attached to cross beam 21^a. Cross beam 21^a is attached to cross beams 21 of the press frame. The upper end of compression bar 14 terminates in the wide fork 9, 9. The upper ends of fork 9, 9 furnish bearings for horizontal shaft 8^a. On shaft 8^a are rigidly attached ears 12, 12 of stamp box 1, said box bearing marking characters of type 2, Fig. 2. The right-hand end of shaft 8^a, as shown in

Fig. 2, has rigidly attached thereto the pinion gear 8, having 4 teeth. Rigidly attached to a bracket on the rear cross beam 36 is rack 10 having two teeth. This rack is so located that it may engage pinion 8 through a portion of the upward and downward movement of said pinion. On a crank arm attached to the distant end of stamp box 1 is horizontal slide 7. A vertical guide bar 11 is rigidly attached between far cross-beams 21 and 36. Guide 11 and slide 7 are so located that when stamp box 1 is in the position illustrated in full lines in Fig. 1 the stamp is slightly inclined from a horizontal position to lie against the lower surface of the right hand end of the bunch of shingles 31. But when stamp box 1 is inverted as shown in dotted outline at 1', Fig. 1, it lies in a horizontal plane. Ink box 20 containing ink pad 19 is supported horizontally on bracket 20^a, rigidly attached to cross beam 21^a, Fig. 2, in such a place that when type box 1 is in its dotted position at 1', said type box may lie squarely thereon. The type box 1 is centrally hung on shaft 8^a and to insure that slide 7 may have positive tendency to lie against guide 11, said type box is over-balanced by counterweight 1^a. A washer of spring rubber 18 is placed on top of guide 30 so that fork 9 may lie on the same when type 2 makes suitable contact with ink pad 19.

The upper operative positions of my stamping apparatus are illustrated in full lines in Fig. 1, while the lower operative positions are shown in dotted outlines and designated by the primes of the same numerals used in the full line positions.

To operate my stamp: assume that a bunch of shingles has been finished and marked, when the several parts of the press and stamp will be found in the positions illustrated in full lines in Fig. 1. Then it is desired to remove this bunch from the press in order to pack another bunch. The end 37 is turned down to dotted position at 23' when, pressure being removed from the bunch of shingles, it can be taken from the press. This movement of the hand lever, in addition to removing the pressure from the bunch of shingles, carries spring 22 to its dotted position at 22'. The downward movement of spring 22 either permits or forces the downward movement of compression bar 14 and fork 9. This also carries shaft 8^a with pinion 8 and type box 1 downward. Pinion 8 moves downward a sufficient distance to permit type box 1 to be revolved under the bunch of shingles, when one of its teeth comes in contact with the upper tooth on rack 10 thereby causing type box 1 to revolve about shaft 8^a in a clock-wise direction, and carrying slide 7 out and away from guide 11. This revolution continues until the

type box has attained a horizontal position beneath shaft 8^a when the second tooth of rack 10 has been passed by pinion 8 and slide 7 again comes in contact with guide 11 preventing any further revolution of said type box. These parts continue to fall until the horizontal part of fork 9, 9 comes to rest on top of rubber cushion 18 at which time the type 2 are sufficiently embedded in ink pad 19 to be covered with ink. Again, when another bunch of shingles occupies the crib of the press and it is desired to compress the same preparatory to affixing the bands thereto, hand lever 23 must be carried from position 23' to position 23. Because of the space between the tail of dog 5^a and upper lug 5, when the several parts are in their dotted positions, there is some downward movement of lever 23 before said dog comes in contact with said lug. This permits of some pressure to be brought on the loose bunch of shingles before the compression rod 14 begins its upward movement. When this movement begins, fork 9, 9 also moves upward and carries with it the several connected parts. There is sufficient space between the lower position of the pinions at 8' and the lower tooth of rack 10 so that the type box 1' may be carried upward sufficiently far above ink pad 19 to permit the said box to revolve above said pad. When the pinion 8 strikes the rack 10 from below the type box 1 is caused to revolve in a counter-clockwise direction and the slide 7 is carried away from guide 11. By the time the type box has turned through an angle of a little more than 180° to a position parallel with the lower side of the bunch of shingles under which it is located, the pinion 8 has passed the upper tooth of rack 10 and the slide 7 has come in contact with guide 11, so that further revolution ceases. The upward movement of said type box, due primarily to the downward movement of hand lever 23, continues until, when the bunch of shingles 31 is brought fully under the compression of the press, the type 2, freshly inked, is brought squarely and firmly in contact with said bunch of shingles by upward pressure from spring 22.

This invention relates only to the construction of the stamping mechanism and is not concerned with the more general combination of said mechanism and the mechanism of the press which I have more particularly referred to in my earlier application cited above.

Having thus described my invention, I claim,

1. In a shingle stamping apparatus, the combination of the frame of a shingle packer's press, the operating shaft of said press, means for revolving said shaft forward and backward through an arc, a resilient lever attached to said shaft and adapted to re-

5 involve therewith, a compression element adapted to be moved upward in a vertical guide by pressure from said resilient lever, a vertical guide attached to the frame of
 10 said press and adapted to direct the movements of said compression element, a terminal attached to the upper end of said compression element adapted to furnish bearings for a horizontal shaft, a horizontal shaft
 15 journaled in said terminal, a type box or head rigidly attached to said shaft, type or designating characters adapted to print on the surface of a bunch of shingles and also adapted to be retained in said head, a pinion
 20 gear rigidly attached to said shaft and adapted to engage with a rack, a slide rigidly attached to said head and being adapted to move on a guide, a toothed rack rigidly attached to the frame of said press and being adapted to engage with said pinion during a portion of the upward and downward travel of said type head, a second guide attached to the frame of said press and adapted to direct a portion of the movements of said slide, said type-head being counterbalanced to tend to cause said slide to lie against said
 25 second guide, an inking pad or similar device adapted to receive said type when said type head is in its lowest position, and a resilient cushion adapted to support the weight of said type head when in its lowest position.
 30 2. In a shingle stamping apparatus, the combination of the frame of a shingle-packer's press, the operating shaft of said press, means for revolving said shaft forward and backward through an arc, a resilient lever connected to said shaft, said connection being adapted to cause said lever to revolve with said shaft except for a small arc of lost motion operative at the beginning of said revolution, a compression element
 40 adapted to be moved upward in a vertical guide by pressure from said resilient lever, a roller journaled on the lower end of said compression element suited to receive said resilient lever, a vertical guide attached to the frame of said press and adapted to direct the movements of said compression element, a terminal attached to the upper end of said compression element adapted to furnish bearings for a horizontal shaft, a horizontal
 50 shaft journaled in said terminal, a type box or head rigidly attached to said shaft, type or designating characters adapted to be retained in said head, a pinion gear rigidly

attached to said shaft and adapted to engage with a rack, a slide rigidly attached
 55 to said head and being adapted to move on a guide, a toothed rack rigidly attached to the frame of said press and being adapted to engage with said pinion during a portion of the upward and downward travel of said
 60 type head, a second guide attached to the frame of said press and adapted to direct a portion of the movements of said slide, said type-head being counterbalanced to tend to cause said slide to lie against said
 65 second guide, an inking pad or similar device adapted to receive said type when said type head is in its lowest position, and a resilient cushion adapted to support the weight of said type head when in its lowest
 70 position.

3. In combination with the jaw actuating means of a machine for packing shingles, a carrier connected for operation thereby, means supporting said carrier for sliding
 75 movement, a branding head rotatably supported on said carrier, and means for imparting rotary movement to said head during sliding movement of said carrier.

4. In combination with the jaw actuating
 80 means of a machine for packing shingles, a carrier supported for sliding toward and from the shingles being packed, an axle journaled on said carrier, a gear fixed to said axle, a branding head fixed to said axle, and
 85 a rack arranged to be engaged by said gear during movement of said carrier.

5. In combination with a shingle packing machine, a branding attachment arranged below the box thereof comprising vertical
 90 guides, a carrier slidably supported on said guides, a head for branding the shingles rotatably supported on said carrier, an inking pad arranged below said head for engagement therewith, means connecting said carrier for operation by the mechanism of said
 95 packing machine, and means imparting rotary movement to said head during vertical movement of said carrier.

Signed at Bellingham in the county of 100
 Whatcom and State of Washington this 15th
 day of April A. D. 1909.

GEORGE A. ORTWEIN.

Witnesses:

R. S. SIMPSON,
 SADIE E. HAGLER.