H. G. THOMPSON & B. F. BERGH.

Tacking-Machines for Boots and Shoes.

No. 153,183. Patented July 21, 1874.

Fig. 2.

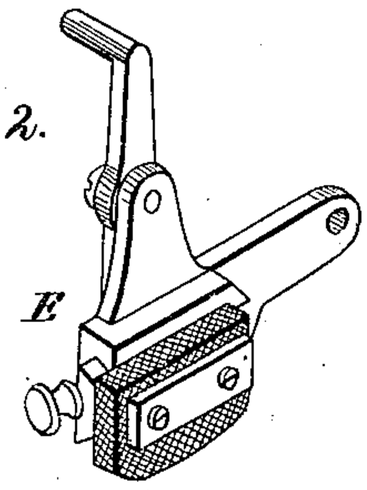


Fig. 1.

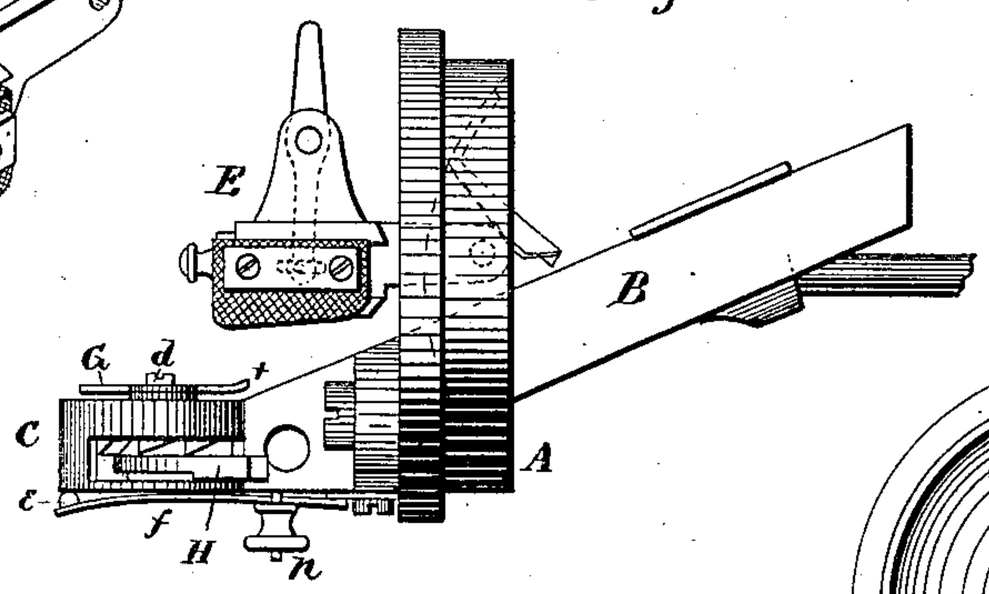


Fig. 7.

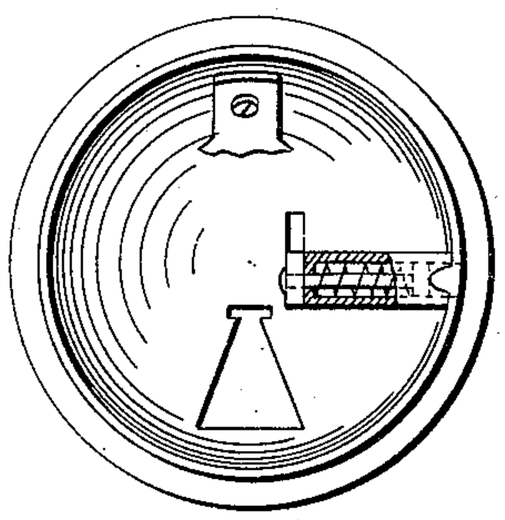


Fig. 3.

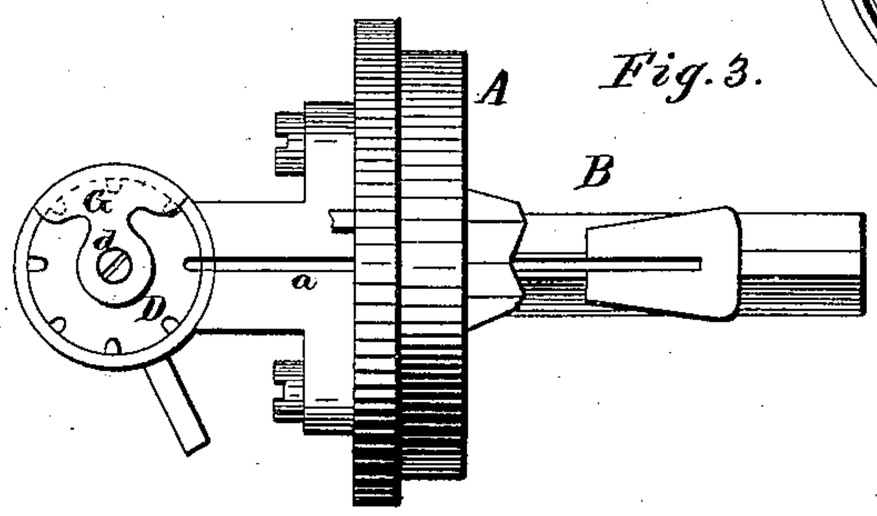


Fig. 4.

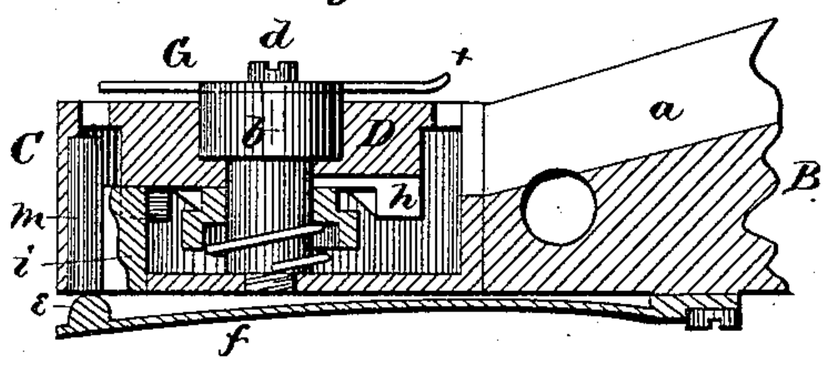
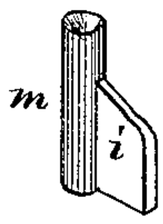


Fig. 5.



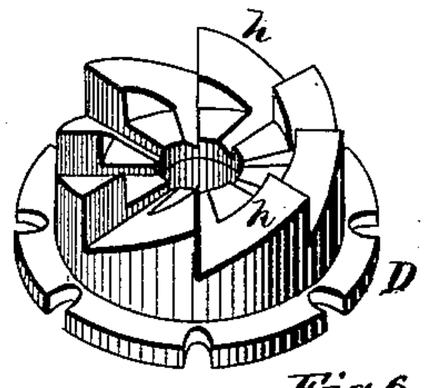
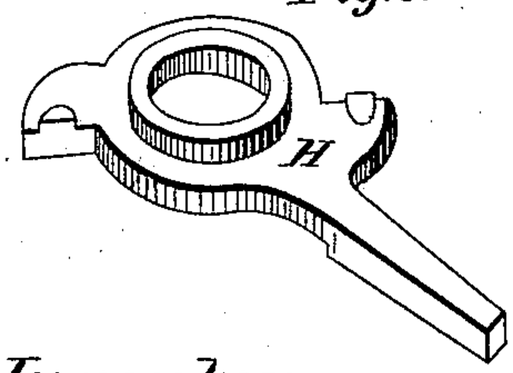


Fig. 6.



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UNITED STATES PATENT OFFICE.

HENRY G. THOMPSON AND BROR F. BERGH, OF MILFORD, CONNECTICUT;
SAID BERGH ASSIGNOR TO SAID THOMPSON.

IMPROVEMENT IN TACKING-MACHINES FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. **153,183**, dated July 21, 1874; application filed April 18, 1874.

To all whom it may concern:

Be it known that we, HENRY G. THOMPSON and BROR F. BERGH, of Milford, county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Tacking-Machine for Boots and Shoes, of which the following is a specification:

Our invention relates to that class of tack-driving machines in which is employed a revolving feed-cylinder provided with a stationary front head, and said head having an inclined bar attached thereto, with a tack-channel and a revolving distributing-cylinder arranged at the front end of said inclined bar, and the entire mechanism moved alternately to and from the tacking-hammer.

The nature of our invention consists in a guard arranged over the heads of the tacks in the distributing index-wheel, for the purpose of preventing the displacement of the tacks consequent upon the vibration caused by the blow from the hammer; and also in a spring-lifter operating upon the point or small end of the tack, for presenting the tack to the hammer, all of which will be hereinafter more fully set forth.

In the accompanying drawing, forming part of this specification, we have only deemed it necessary to show so much of a tack-driving machine as will illustrate our invention.

Figure 1 is a side elevation of the front stationary head of the revolving feed-cylinder with its attachments embodying our invention. Fig. 2 shows the feeding device. Fig. 3 is a plan view of Fig. 1, with the feeding device removed. Fig. 4 is an enlarged vertical section of the distributing-cylinder. Fig. 5 is a view of the spring-lifter. Fig. 6 shows the ratchet detached, and Fig. 7 is an inside view of the stationary head.

A represents the stationary front head of the revolving feed-cylinder. B is the inclined bar, provided with the tack-channel *a*, and is passed through and secured to the head A. C is the distributing-cylinder, attached to the front end of the inclined bar B, and containing the notched revolving index-wheel D. These parts are all constructed substantially in the same manner as described in a separate application for patent on tack-driving machine made by us; and so is also the four-motion feeding device E, which conveys the tacks from the channels *a* into the notches in the index D. *b* is the bolt which holds the index-wheel D, and around which it revolves. To the head of this bolt is, by a screw, *d*, fastened a segmental guard, G, extending over the edge of the index-wheel D from near the end of the channel *a* to a point nearly opposite, or a short distance from, the point where the tack is to be presented to the hammer. The inner end of this guard is slightly turned up, as shown at *x*, to insure the passage of the head of the tack under the same, the object of said guard being to prevent the displacement of the tacks during their passage in the index-wheel by the jarring caused by the blows of the hammer. In the present device the ratchet-wheel *h* is formed on the under side of the index-wheel D, and the ratchet-lever H around the bolt *b* is placed within the cylinder C, and extends through an elongated slot in the side thereof. On the under side of the inclined bar B is secured a spring, *f*, which extends forward under the bottom of the cylinder C, and is provided at its front end, on the upper side, with a lug or projection, *e*. This lug comes directly under the lower end of a movable pin, *m*, placed in a vertical position in a suitable guide at the front part within the cylinder C. This pin is concave on its upper end, and provided from the lower end upward with a wing, *i*, both pin and wing passing through a correspondingly-shaped aperture in the bottom of the cylinder C.

As the entire mechanism moves backward the ratchet-lever moves backward around the ratchet-wheel, and as the mechanism moves forward to the hammer the index-wheel D is revolved by the ratchet, so that, when said forward movement is completed, a new notch is presented to the end of the channel *a* for the reception of a tack, and a notch with a tack therein is brought to the front of the cylinder for presentation to the hammer. Dur-

ing the revolution of the index D the pin *m* is depressed by one of the ratchet-teeth *h* operating on the wing *i*, and the various parts are so arranged and timed that, when the movement of the index-wheel is completed, the point of the tack will be directly above the upper end of the pin *m*, and the ratchet-tooth which depressed said pin will just have passed over the wing *i*, and hence, at the very moment when the movement of the index-wheel is completed, the spring *f* (which has been pressed down by the depression of the pin *m*) flies up again, raising the pin *m*, and this then lifts the tack up, presenting it to the hammer. The force of this upward stroke of the pin *m* is easily controlled by regulating the tension of the spring *f* by means of a set-screw, *n*.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a tack-driving machine, a guard, G, arranged over the notches in the distributing index-wheel, for the purposes herein set forth.

2. In a tack-driving machine, a spring-lifter operating upon the point or small end of the tack, for presenting the same to the hammer, substantially as herein set forth.

3. The vertical pin *m*, provided with the wing *i*, in combination with the ratchet-teeth *h* and spring *f*, substantially as and for the purposes herein set forth.

In testimony that we claim the foregoing as our invention we hereunto affix our signatures this 9th day of April, 1874.

HENRY G. THOMPSON.
B. F. BERGH.

Witnesses:
FRANK L. ALLIS,
P. S. BRISTOL.