No. 624,720. Patented May 9, 1899.

A. AHERN & J. A. MARTIN.

HAMMER.

(Application filed June 21, 1897.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

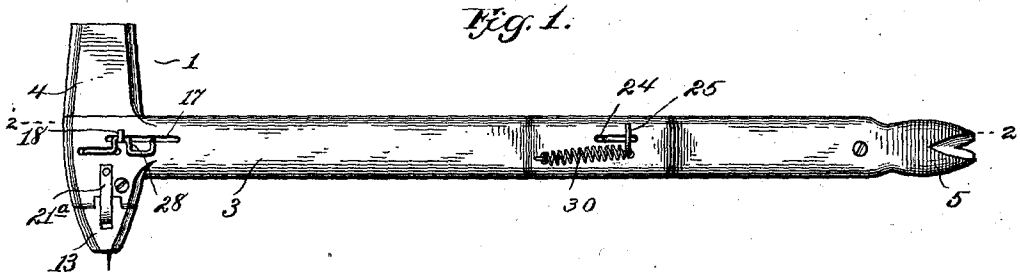


Fig. 2.

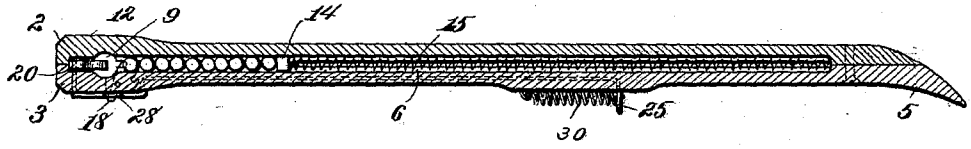


Fig. 3.

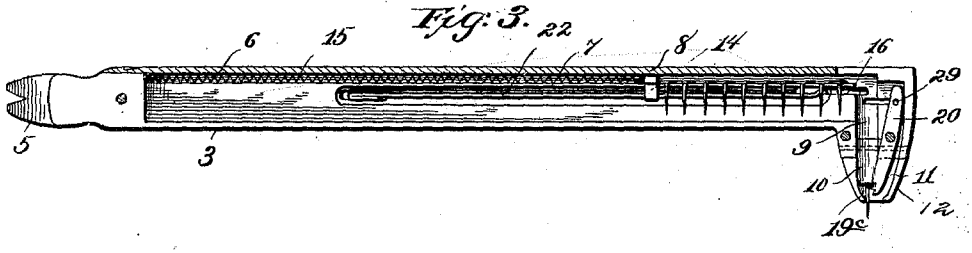
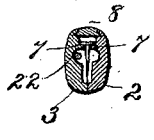


Fig. 7.



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2 Sheets—Sheet 2.

Fig. 4.

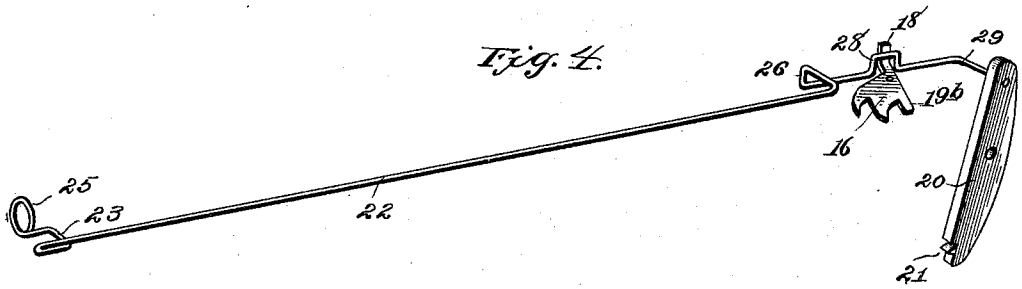


Fig. 5.

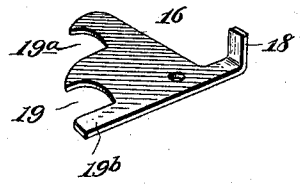
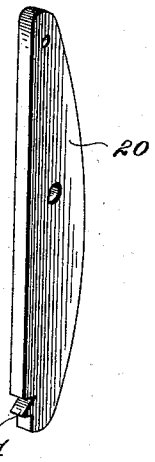


Fig. 6.



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UNITED STATES PATENT OFFICE.

ALEXANDER AHERN AND JOHN A. MARTIN, OF RICE LAKE, WISCONSIN.

HAMMER.

SPECIFICATION forming part of Letters Patent No. 624,720, dated May 9, 1899.

Application filed June 21, 1897. Serial No. 641,674. (No model.)

To all whom it may concern:

Be it known that we, ALEXANDER AHERN and JOHN A. MARTIN, of Rice Lake, in the county of Barron and State of Wisconsin, have invented certain new and useful Improvements in Hammers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in hammers of that class wherein a magazine is provided for holding tacks or nails and mechanism employed for successively feeding the same to an eduction-opening in the hammer-head.

The object of our invention is to provide a simple and inexpensive construction of hammer of this character which is adapted to feed the nails or tacks positively and effectually.

With this and other objects in view the invention consists in the novel details of construction, combinations, and arrangements of parts hereinafter more fully described, and specifically pointed out in the appended claims.

In the accompanying drawings, illustrating the invention, Figure 1 is a view in side elevation of the complete tool. Fig. 2 is a horizontal sectional view taken on the line 2 2 of Fig. 1. Fig. 3 is a vertical longitudinal section looking toward the feeding mechanism. Fig. 4 is a detail perspective view of the complete feeding mechanism removed. Fig. 5 is an enlarged detail perspective view of the notched feed-plate. Fig. 6 is a similar view of the releasing-lever. Fig. 7 is a cross-sectional view.

Referring now more particularly to the drawings, 1 designates the hammer, which is constructed in the present instance of two sections or side pieces 2 3, the former being provided with a hammer-head 4 and the latter with a nail-claw 5 at the rear extremity thereof. The tool is preferably constructed of cast metal suitably hardened, the handle and hammer-head being formed integrally, as shown.

The tool-handle is provided with a longitudinally-extending passage or magazine 6 and above the same with guide-flanges 7, on which the tack or nail heads rest, while the shanks thereof project down into the magazine below. To afford access to the magazine, the handle may be provided with an opening at the top, closed by a sliding cover 8. The magazine-passage is in communication with a vertical feed or discharge passage 9, projecting through the lip extremity 10 of the hammer-head, and adjacent to this passage is a recess 11. The said feed or discharge passage is of such size as to readily permit the passage of the nails or tacks through its major portion, but is contracted at the lower end thereof by beveling the lips 12 13 of the two sections to prevent the tack from dropping out of engagement with the releasing-lever, as hereinafter described.

In order to force the tacks or nails along the longitudinal magazine-passage, a follower 14 is provided, which is acted upon by a spiral spring 15. At the point of intersection of the two passages 6 9 is a feed-plate 16, pivoted in a longitudinal slot 17 in the head of the section 2. The outer end of this plate is provided with an attaching projection 18 and on its face or inner side edge with feed-slots 19 19^a. The end finger 19^b of this feed-plate, formed by the adjacent slot 19, projects out into the magazine-passage 6 and serves as a stop to limit the movement of the tacks or nails. When the notched edge of this plate is moved outward or forward, the first two tacks are engaged and carried forward, the first tack thence being dropped into the feed or discharge passage 9, while the other tack upon the further movement of the feed-plate follows it. The discharge of the tacks or nails is regulated by a pivoted releasing-lever 20, which occupies the recess 11. The inner face of this lever, adjoining the passage 9 and at the lower end thereof, is provided with notches or serrations 21, which are adapted to receive and confine the tack or nail heads. This serrated end of the releasing-lever normally projects a short distance into the passage 9, and the beveled or inclined lower inner faces 19^c of the hammer-lip sections, before described, are adapted to act in conjunction therewith to confine the nail. The nail or tack being thus held can be readily started or penetrated into the object into which it is to be driven, and the releasing-lever is then moved to release the tack-head and permit the tack to be

driven by the hammer-head 4. As soon as one tack is discharged another tack is instantly fed into position at the will of the operator, the mechanism for accomplishing which will now be described.

The lip-section 13 of the hammer may be pivoted, as shown, to give access to the releasing-lever to release another tack which may become stuck. This lip is normally held closed by a plate-spring 21ª. The mechanism for effecting the simultaneous operation of the feed-plate and releasing-lever comprises an operating-rod 22, extending longitudinally in the magazine-passage 6 and provided at its rear end with a lateral terminal projection 23, operating in a longitudinally-extending slot 24 in the handle-section 2 and provided on the exterior with a thumb or finger piece 25 for operating it. This operating-rod is provided with an outwardly-projecting loop-shaped portion 26, operating in a slot 17 and having an offset 28, to which the attaching projection 18 of the notched feed-plate 16 is connected. The forward extremity 29 of this loop-shaped portion of the operating-rod projects inwardly into the recess 11 and is pivotally connected with the upper end of the releasing-lever 20. By this construction it will be seen that when the finger or thumb piece 25 of the operating-rod is forced back or moved rearwardly the notched face or edge of the feed-plate will be projected outward to engage the foremost tacks or nails, and the serrated or notched faces of the releasing-lever will be moved aside to permit the shank of the said tack or nail to project out through the discharge-opening in the lip extremity of the hammer-head. A spring 30 is provided to return the operating-rod to its normal position as soon as the finger or thumb piece thereof is released and to cause the retraction of the notched feed-plate and the outward movement of the serrated or notched faces of the releasing-lever to cause the latter to engage the head of the tack or nail, this operation effecting the positive movement or feed of the tacks or nails and the positive engagement therewith of the releasing-lever. When the operating-rod is moved to effect the further feed, the tack or nail held by the releasing-lever is disengaged and may be then driven into the article into which it has been started by the hammer-head 4. By this construction a simple and effective form of tool is provided which insures the positive feed of the tacks or nails and is not liable to get out of order.

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

1. In magazine-hammers, the combination of a handle having a longitudinal magazine-passage, a hammer-head having a vertical discharge-passage in communication with such magazine, a feed mechanism at the junction of the two passages for regulating the feed of nails to the discharge-passage, consisting of a vibratory notched plate, and a shouldered releasing-lever the shoulder being above the head of the tack when held by the lever in the discharge-passage to regulate the discharge of tacks therefrom, and means for simultaneously operating the feed-plate and release-lever, substantially as described.

2. In a magazine-hammer, the combination of a handle having a longitudinal magazine-passage, a hammer-head having a vertical discharge-passage communicating therewith, said passage having a contracted outlet and a pivoted releasing-lever provided at its lower end with notches or serrations adapted to engage the tack-heads and bear on their upper surfaces, substantially as described.

3. In magazine-hammers, the combination of a handle having a longitudinal magazine-passage extending therefrom, a hammer-head having a vertical discharge-passage in communication with the magazine, a notched vibratory feed-plate at the junction of the passages, a releasing-lever in the discharge-passage provided with serrations or notches adapted to engage the tack-heads and bear on their upper surfaces or tops, and means for simultaneously operating the feed-plate and releasing-lever, substantially as described.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

ALEXANDER AHERN.
JOHN A. MARTIN.

Witnesses to the signature of Alexander Ahern:

FRANK. J. MCPARLAND,
FRANK. W. CONN.

Witnesses to the signature of John A. Martin:

GUY A. MATHEWS,
J. R. MATHEWS.