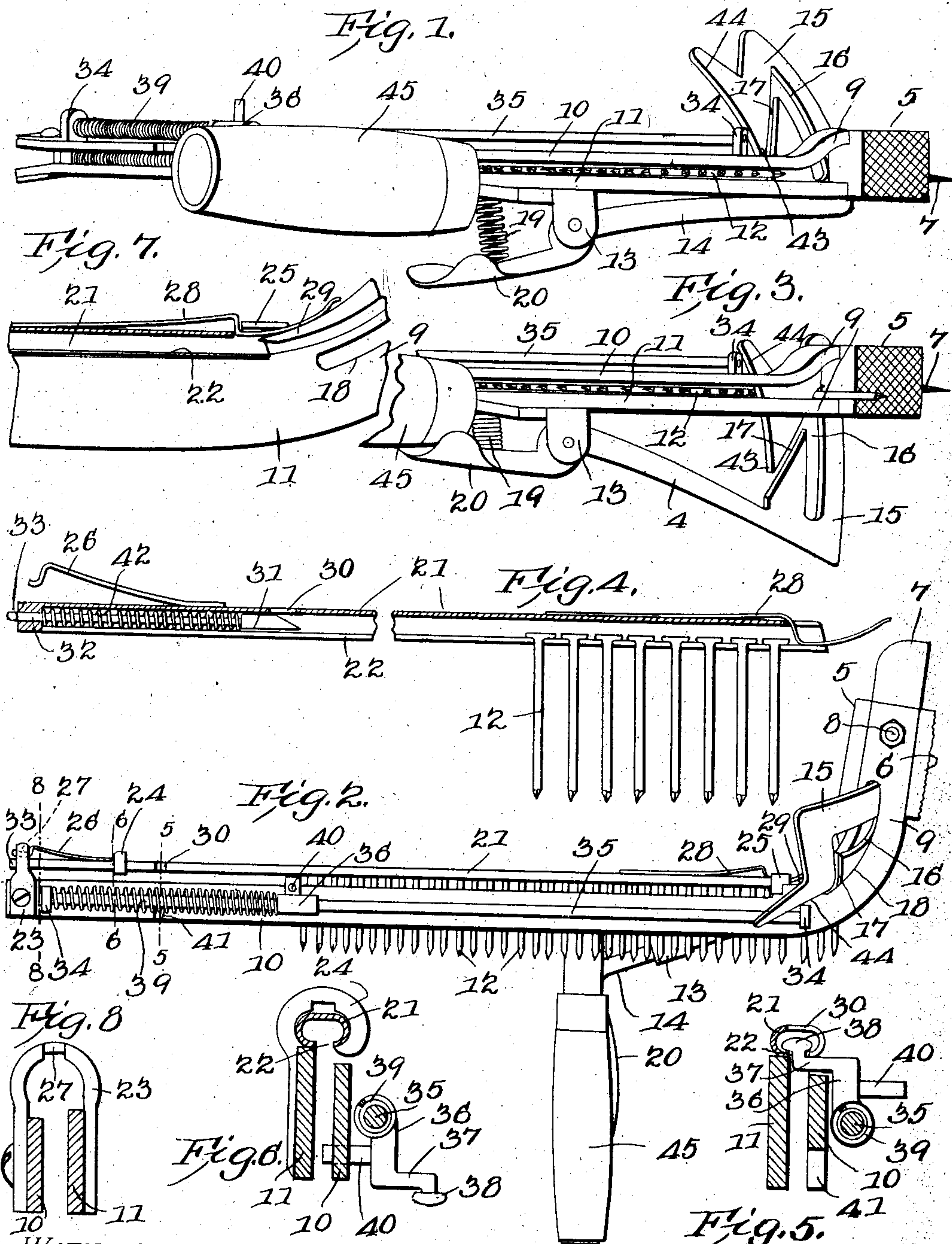


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PATENTED OCT. 23, 1906.

J. MALMGREN.  
NAILING IMPLEMENT.  
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WITNESSES:

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## NAILING IMPLEMENT.

No. 834,214.

Specification of Letters Patent.

Patented Oct. 23, 1906.

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*To all whom it may concern:*

Be it known that I, JOHN MALMGREN, a citizen of the United States, residing at Ceresco, in the county of Saunders and State of Nebraska, have invented a new and useful Nailing Implement, of which the following is a specification.

This invention relates to magazine hatchets, hammers, and similar tools, and has for its object to provide an inexpensive and efficient tool of this character in which the nails or tacks are automatically fed from the magazine to the driving-head of the tool, so that the nails may be successively positioned and driven without necessity of handling the same.

A further object of the invention is to provide a nailing implement having a magazine detachably secured thereto and formed with a recess or opening normally closed by a spring-pressed plunger, said plunger being movable longitudinally to expose the opening when the magazine is placed in position on the implement.

A further object is to provide a sliding block or follower for feeding the nails to the driving-head, said follower being movable laterally to inoperative position through the opening in the magazine when it is desired to refill or reload the magazine.

A still further object of the invention is to generally improve this class of devices, so as to add to their utility and durability as well as to reduce the cost of manufacture.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, and illustrated in the accompanying drawings, it being understood that various changes in form, proportions, and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is a bottom plan view of a nailing implement constructed in accordance with my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a bottom plan view of a portion of the implement, showing the feed-plate or selecting device engaging one of the nails. Fig. 4 is a longitudinal sectional view of the magazine detached. Fig. 5 is a transverse sectional view taken on the line 5 5 of Fig. 2.

Fig. 6 is a transverse sectional view taken on the line 6 6 of Fig. 2, showing the spring-follower locked in inoperative position. Fig. 7 is a detail sectional view showing the cam for elevating the cut-off spring. Fig. 8 is a transverse sectional view taken on the line 8 8 of Fig. 2 with the spring and magazine omitted.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

In its preferred embodiment the nailing implement forming the subject-matter of the present application comprises a driving-head 5, having a serrated driving-face 6 and a splitting-knife 7, secured thereto by a bolt 8. Seated in grooves or recesses formed in the opposite sides of the driving-head 5 and retained in position by the bolt 8 are the curved or deflected ends 9 of a pair of spaced parallel bars 10 11, which form a guide for the nails 12 in their passage to the driving-head. Extended laterally from the bar 11 is a bracket 13, on which is pivotally mounted a hand-operated lever 14, one end of which is provided with a nail-selecting device preferably in the form of a curved plate 15, having a slot or recess 16 formed therein and provided with a slot 17, opening through one side of the plate and communicating with the recess 16, as shown. The plate 15 is mounted for lateral movement in aligned slots 18, formed in the curved ends of the bars 10 and 11, and is normally held in the position shown in Fig. 1 of the drawings by means of a coiled spring 19, interposed between the bar 11 and the terminal thumb-piece 20 of the lever 14.

Detachably secured to the nail-guide is a magazine 21, preferably tubular in form, as shown, and provided with a longitudinally-disposed slot 22, through which the points of the nails project in the nail-guide. The magazine is slidably mounted in curved guides or yokes (indicated at 23, 24, and 25, respectively) and is provided at one end thereof with a spring 26, the free end of which is adapted to engage a recess 27, formed in the yoke 23 for locking the magazine in position on the implement. Secured to the opposite end of the magazine 21 is a similar spring 28, which engages a cam-face 29 at the curved or deflected end of the nail-guide when the magazine is in place and serves to elevate the free end of the spring 28 so as to permit the



nails to be successively fed to the driving-head.

Formed in one wall of the magazine 21 is a recess or opening 30, and slidably mounted in the adjacent end of the magazine is a spring-pressed plunger 31, adapted to normally close said opening and prevent the escape of nails when the magazine is detached, the opposite end of the magazine being normally closed by the spring 28, as best shown in Fig. 4 of the drawings. By having the magazine formed in the manner described the latter may be filled with nails and conveniently transported from place to place without danger of the nails falling out at either end of the magazine.

Secured to the plunger 31 is a rod 32, the free end of which is extended laterally to form an enlarged head 33, adapted to engage the yoke 23 when the magazine is positioned on the implement so as to expose the opening 30 for the purpose hereinafter described.

Secured to the bar 10 are spaced brackets 34, connected by a rod or bar 35, upon which is slidably mounted a spring-pressed follower or block 36. The block 36 is provided with an angular extension 37, having a terminal head 38, adapted to enter the magazine 21 and bear against the nails 12 for feeding the latter to the driving-head, there being a coiled spring 39 interposed between one of the brackets and the follower 36 for yieldably supporting the block when in contact with the nails. The block 36 is also provided with a laterally-extending pin 40, adapted to engage a recess 41, formed in the bar 10, for locking the follower in inoperative position, the follower being pivotally mounted on the rod 35 to permit the plunger to be swung laterally to inoperative position, as best shown in Fig. 6 of the drawings.

The magazine is filled or loaded by elevating the free end of the spring 28 and introducing the nails in the adjacent end of the magazine, the plunger serving to prevent the escape of the nails through the opposite end of the magazine or through the opening 30. The magazine is then placed in position on the implement by threading the magazine through the yokes 24 25 and moving the magazine longitudinally until the free end of the spring 28 engages the cam-face 29, which elevates the spring and permits the nails to be delivered to the driving-head. As the magazine is moved longitudinally of the nail-guide the terminal head 32 of the plunger engages the yoke 23 and withdraws the plunger 31 against the tension of the spring 42 from beneath the opening 30 and at the same time causes the spring 26 to engage the recess 27 in said yoke, and thus lock the magazine in position on the implement. The follower-block is then tilted laterally on the rod 35 and the head 38 of said block introduced through the opening 30 into the magazine,

the spring 39 exerting a yieldable pressure on the follower-block and serving to automatically feed the nails to the driving-head, as will be readily understood. When the nails reach the lower end of the feed-guide, they are stopped by the feed-plate until the lever 14 is depressed, when the point 43 of the blade passes between the first and second nail, which causes the first nail to follow the recess of the slot 17, the remaining nails being held by the edge 44 of the plate. As the feed-plate is moved transversely the nail is forced downwardly in the slot 17 until it is engaged and held within the slot 16 and between the feed-plate and the side bar 10, as shown in Fig. 3. The nail is then partially driven, and when the latter is set the thumb-piece 20 is released, which releases the head of the nail, thus permitting the driving operation to be completed by striking the head of the nail with the driving-face 6.

In order to release the magazine 21, it is merely necessary to move the follower longitudinally within the magazine until the head registers with the opening 30, when the block may be swung downwardly, thus causing the pin or finger-piece 40 to enter the recess 41 and lock the follower in operative position, the magazine being subsequently removed by depressing the spring 26 and withdrawing the magazine from the guiding loops or yokes.

Attention is called to the fact that the pin 40 not only serves as a means for locking the follower in inoperative position, but also serves as a finger-piece by means of which the follower may be conveniently manipulated during the releasing and locking operations.

It will also be observed that by having the nails retained within the magazine in the manner described the implement may be held at any angle or inclination during the driving operation, said implement being provided with a depending handle 45 for convenience in manipulating the same.

The magazine may be loaded either by hand or connected in any suitable manner with a suitable loading or filling device of any approved construction, and any number of magazines may be employed, so that when one of the magazines is emptied a full magazine may be quickly placed in position on the implement.

Having thus described the invention, what is claimed is—

1. In a nailing implement, a driving-head, a nail-guide, a magazine detachably secured to the nail-guide and having an opening formed in one wall thereof, a follower operating within the magazine, and means for successively presenting the nails to the driving-head, said follower being moved laterally to inoperative position through the opening in the magazine.



2. In a nailing implement, a driving-head, a nail-guide having a recess formed therein, a magazine detachably secured to the nail-guide, a follower operated within the magazine, and means for successively presenting the nails to the driving-head, said follower being movable laterally into engagement with the recess in the nail-guide for locking the follower in inoperative position.

3. In a nailing implement, a driving-head, a nail-guide, a rod secured to and spaced from the nail-guide, a magazine detachably secured to said nail-guide, a plunger slidably mounted on the rod and operated within the nail-guide, means for moving the follower to inoperative position, and means for successively presenting the nails to the driving-head.

4. In a nailing implement, a driving-head, a nail-guide, a magazine having a longitudinal slot formed therein and registering with the nail-guide, a follower operating within the magazine, means for locking the magazine on the nail-guide, and means for successively presenting the nails to the driving-head.

5. In a nailing implement, a driving-head, a nail-guide, a magazine detachably secured to the nail-guide and having an opening formed therein, a spring-pressed plunger slidably mounted in one end of the magazine and adapted to close the opening in the magazine when the latter is detached, and a spring-pressed follower slidably mounted in the magazine and movable laterally through the opening to inoperative position.

6. In a nailing implement, a driving-head, a nail-guide provided with spaced guiding-yokes, a magazine adapted to engage the

guide-yokes and having an opening formed in the walls thereof, a spring-pressed plunger slidably mounted in the magazine and adapted to close the opening when the magazine is detached, said plunger being withdrawn from the opening by engagement with one of the guide-yokes when the magazine is in position on the implement, and a follower operating within the magazine and movable laterally through the opening in the latter to inoperative position.

7. In a nailing implement, a driving-head, a nail-guide, a magazine detachably secured to the nail-guide and having an opening formed therein, a rod carried by the nail-guide, a follower slidably mounted on the rod and provided with a head operating within the magazine, a pin extending laterally from the follower for moving the follower laterally through the opening to inoperative position, said pin being adapted to engage a recess in the nail-guide for locking the follower in inoperative position.

8. In a nailing implement, a driving-head, a nail-guide, a magazine detachably secured to the nail-guide and having an opening formed in the walls thereof, a spring-pressed follower operating within the magazine and movable to inoperative position through said opening, and means for closing said opening when the magazine is detached.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN MALMGREN.

Witnesses:

AUG. DAHLSTROM,  
HERMAN NYQUIST.