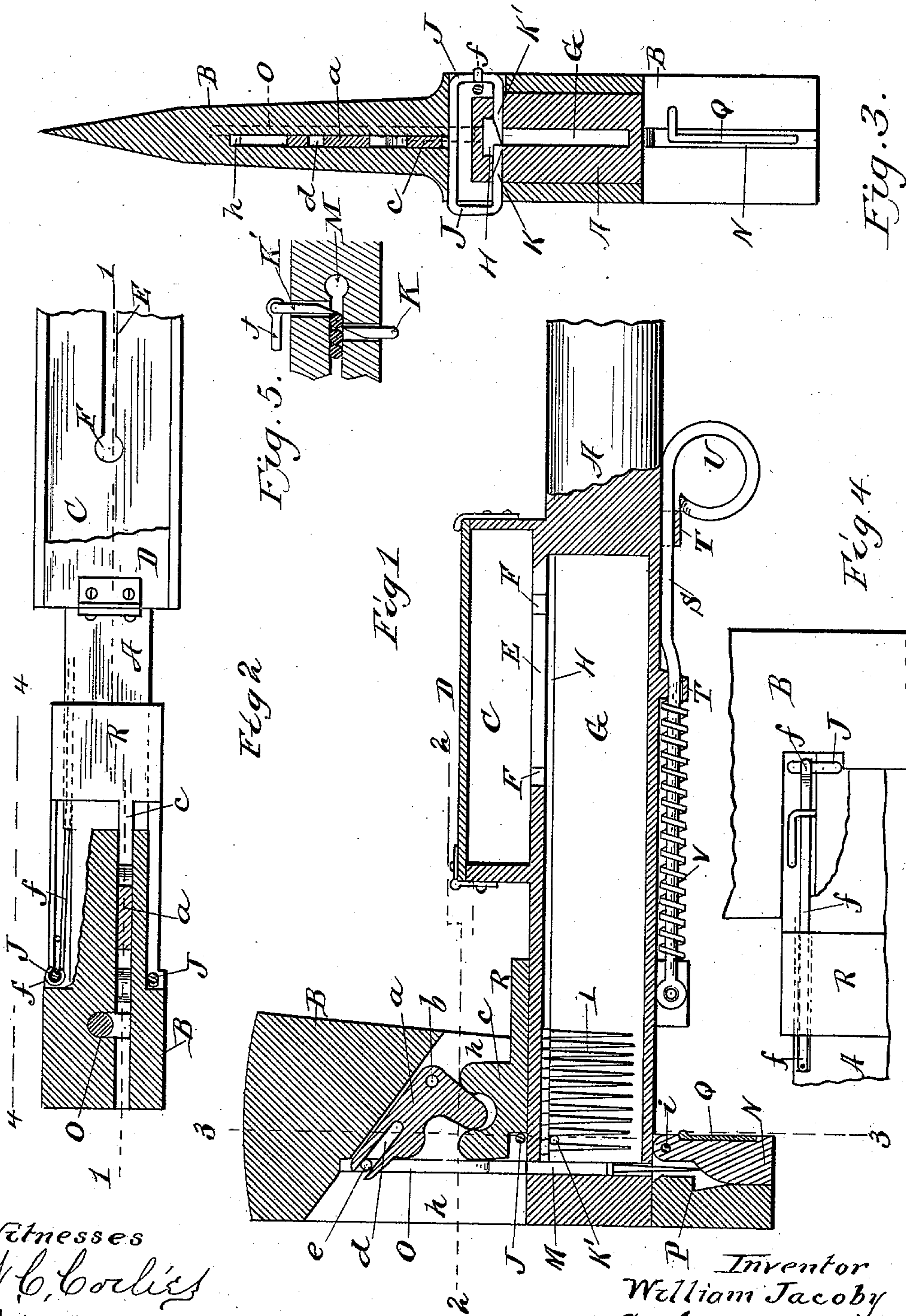


(No Model.)

W. JACOBY.
HAMMER FOR DRIVING.

No. 464,217.

Patented Dec. 1, 1891.



Witnesses
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UNITED STATES PATENT OFFICE.

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HAMMER FOR DRIVING.

SPECIFICATION forming part of Letters Patent No. 464,217, dated December 1, 1891.

Application filed July 2, 1890. Serial No. 357,557. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM JACOBY, a citizen of the United States, residing at Fulda, in the county of Murray and State of Minnesota, have invented a certain new and useful Improvement in Hammers for Driving Nails, which is fully set forth in the following specification, reference being had to the accompanying drawings.

10 The object of my invention is to make a hammer or hatchet in which the nails to be driven are fed automatically from a box connected with the hammer through the hammer-handle and head of hammer into position
15 to be driven. In shingling as well as in lathing it is especially desirable to drive nails rapidly, and at all times to have one hand free to place the shingle or lath in position without it being necessary to place the shingle
20 or lath and then with that hand take a nail and place it and hold it in position where it is to be driven.

In accompanying drawings, Figure 1 represents a vertical sectional view of my improved hammer, taken at the line 1 1, Fig. 2. Fig. 2 represents a plan sectional view taken at the line 2 2, Fig. 1. Fig. 3 represents a vertical sectional view taken at the line 3 3, Fig. 1. Fig. 4 represents a side elevation of
30 a detached portion taken at the line 4 4, Fig. 2. Fig. 5 is a bottom view of the cut-off device J.

I have made application for a patent of even date herewith, Serial No. 357,558, showing a tack or nail box with a slotted bottom; also, a cut-off device for feeding the tacks or
35 nails one by one, substantially the same as shown in this application, and therefore I do not specifically describe or claim the same
40 herein.

In accompanying drawings, A represents the hammer-handle, and B the hammer-head, which may be made in the form of a hatchet or in any of the well-known forms of hammer-heads.
45

C is a box located on or in the hammer-handle A, into which the nails are placed. The lid D of the box may be hinged thereto, or secured to the box in any suitable manner.

50 E is a slot in the bottom of the box wide

enough for the shanks of the nails to fall through, but not wide enough for the heads of the nails to fall through.

F is an opening through the bottom of the box connected with the slot E, and is large
55 enough for the heads of the nails to drop through. There may be one or more of these openings F in the bottom of the box.

G is a deep slot in the hammer-handle wide enough to receive the shanks of the nails, but
60 not wide enough for the heads of the nails. As the shanks of the nails fall through the slot E in the bottom of the box they pass into the slot G in the hammer-handle, and when the heads of the nails pass through the open-
65 ings F they rest upon the upper edges of the slot G in the space H in the position shown by the nails I I, Fig. 1. In this position the nails pass down to the head of the hammer until they strike the point of the cut-off J.
70 (Clearly shown in Fig. 3.) The cut-off J is constructed in the form shown in Fig. 3 and is placed in the hammer-handle in such position that the points K' K of the cut-off extend inwardly across the path of the nail in
75 its passage from the hammer-handle to the head of the hammer. These points are spread so that the lateral space between them is the width of the shank of a nail.

The cut-off J, when in position so that the
80 point K' crosses the path of the nail, as shown in Fig. 3, holds the nails from passing forward into the head of the hammer; but when the cut-off J is moved laterally, as hereinafter described, so as to throw the point K across the
85 path of the nail, it simply passes behind one nail, which passes forward into the head of the hammer, because the point K' is removed from in front of it at the same time that the point K passes between it and the next nail
90 behind it. The nail that has passed the cut-off J falls in the vertical opening M in the hammer-head and passes down against the pivoted block N, where it rests until the plunger O is forced down against its head and
95 forces back the pivoted block N, which admits of the passage of the point of the nail until the head of the nail is pressed under the shoulder P in the hammer-head. The pivoted block N presses against the side of the nail
100

and holds the head of the nail under the shoulder P.

Q is a spring whose tension forces the block N against the side of the nail, as above specified.

R is a slide, which I make, preferably, in the form of a band which surrounds the hammer-handle, and is operated by the rods S, held in bearings T, secured to the hammer-handle. This rod has a loop U, adapted to receive the finger of the operator to move the slide R.

V is a spring which returns the slide R to its normal position when the rod S is released by the operator.

The slide R is pivotally connected to the slotted crank-lever *a* in such manner as to vibrate it upon its pivot *b*. I have shown it connected with the crank-lever *a* by means of a notched piece *c*, as clearly shown in Fig. 1; but any other well-known pivotal connection would operate in the same manner.

The crank-lever *a* has a slot *d*, which receives the pin *e*, that is rigidly attached to the plunger O, so that when the rod S is drawn back, moving the slide R back on the handle A, the crank-lever *a* throws the plunger O down and forces a nail beneath it into position with its head beneath the shoulder P in the hammer-head. The operator then strikes a blow with the hammer and partly drives the nail. He then raises the hammer from the nail, the pivoted block N receding sufficiently far to allow the nail-head to pass out between the block N and the solid portion of the hammer-head. The spring Q immediately restores the block N into the position shown in Fig. 1, when the operator strikes another blow with the hammer and finishes driving the nail. The operator then releases the rod S, when the spring V moves the slide R back, thereby raising the plunger O to the position shown in Fig. 2. The slide R in this back movement at the same time moves the cut-off J to admit of the passage of a nail into the opening M in the hammer-head, when the above operation is repeated. The cut-off J is operated by means of a spring *f*, which is attached to the side of the hammer-handle in such position that in its normal position it holds the cut-off with the point K extended across the slot G, in which the nails pass from the box to the hammer-head. One end of the spring *f* is attached to one side of the cut-off J, as shown in Fig. 2. The slide R, when moved forward against the head of the hammer into the position as shown in Fig. 1, presses the spring *f* against the side of the hammer-handle and throws the cut-off J laterally, moving it horizontally and projecting the point K' into the position shown in Fig. 3. When the slide R is drawn back by the finger of the operator, pulling the rod S so as to overcome the tension of the spring V, the spring-rod *f* is released from the pressure of the slide R, moved outward, and so slides the cut-off J laterally, removing the point K' from across the slot G, and extending the point K

across said slot, which renders free one nail to pass into the vertical opening in the head of the hammer. If the slide R presses the spring-rod *f* inward again the point K retires, and the point K' passes across the path of the nails, when they all move forward the distance of the two points K and K'. As the plunger O is raised by the same operation that nail which had been freed drops into the hole M. By this operation each time that the plunger O is raised into the position shown in Fig. 1 a nail passes into the cut-off and another drops into the opening M in the hammer-head beneath the plunger. When the plunger O is forced down by the operator, he draws the slide R back, thereby vibrating the crank-lever *a*. The cut-off is moved laterally by the spring *f*, and throws the point K of the cut-off in front of the nails, allowing the nail in front to move forward, and when the plunger is restored to its normal position that nail passes into the hammer-head, the opposite point of the cut-off being thrown across the path of the nails. In this manner there is one nail fed into the head of the hammer at each back and forth stroke of the slide R, and at each up and down movement of the plunger O.

I prefer to make the hammer-head solid, with the exception of a slot *h* through it wide enough to receive the crank-lever *a* and the connecting-slide which operates it, and a slot beneath the handle in which the block N is pivoted. The opening in which the plunger O passes I prefer to make in a circular form, and it can be bored into the side of the slot *h* from the slot-opening in which the block N is pivoted. The plunger O can be placed from beneath into its place in the hammer-head. Then the crank-lever *a* can be inserted. The slot *d*, being open at one end, will pass upon the pin *e*, that is secured to the plunger O, and the rivet *b* can then be inserted, which will secure the parts in place. The block N is pivoted in the hammer-head by a pin *i*. By this construction I have a hammer with substantially a solid head and am able to make it cheaply. The spring Q, which holds the block N in position, is made sufficiently strong to press the nail laterally as it is forced downward hard enough to push it beneath the shoulder P.

The blow which partly drives the nail should be hard enough to stick the nail into the board sufficiently to hold it and to force the spring Q back sufficiently to allow the head to pass the block N, when the spring immediately closes the block N again into position, leaving no opening in the face of the hammer when the nail is finally driven. It always takes two or more blows to drive a nail with this hammer. I find, however, that a hammer constructed with this improvement enables me to lay shingles and laths and nail them with great rapidity.

The hammer which I have constructed is adapted to feed and drive shingle and lath

nails. I found it to be entirely practical both in its operation in feeding the nails from the box to the hammer-head and also in its being adapted to drive nails.

5 Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

10 1. A hammer-head provided with an opening M, a plunger O, sliding in said opening, a clamping device N, receiving the nails forced down the opening, and a shoulder P, adapted to bear against the nail-head while clamped in said device, substantially as described.

15 2. In a hammer-handle, means for laterally moving a cut-off J, consisting of a spring f, attached to the same, and a slide R, gliding over the spring and forcing it toward the handle, and means for moving the slide R, substantially as described and shown.

20 3. The plunger O, the crank-lever a, pivoted to the hammer-head and having a positive connection with the plunger O, so as to oper-

ate it vertically, the notched piece c, by which the crank-lever is actuated, and mechanisms for actuating the notched piece c and the cut-off, whereby a nail is fed under the plunger at each upward stroke, as specified.

4. The combination of the box C with a nail-slot E and a nail-opening F, slotted handle A, cut-off J, plunger O, and opening M, whereby nails are fed from the box to the cut-off, delivered by the same into the opening, and forced down by the plunger into position to be driven, substantially as specified and shown.

5. The slotted hammer-head B, provided with the shoulder P, the pivoted block N, plunger O, and cut-off J, whereby nails are forced by the block N under the shoulder P, substantially as shown and described.

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Witnesses:

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