

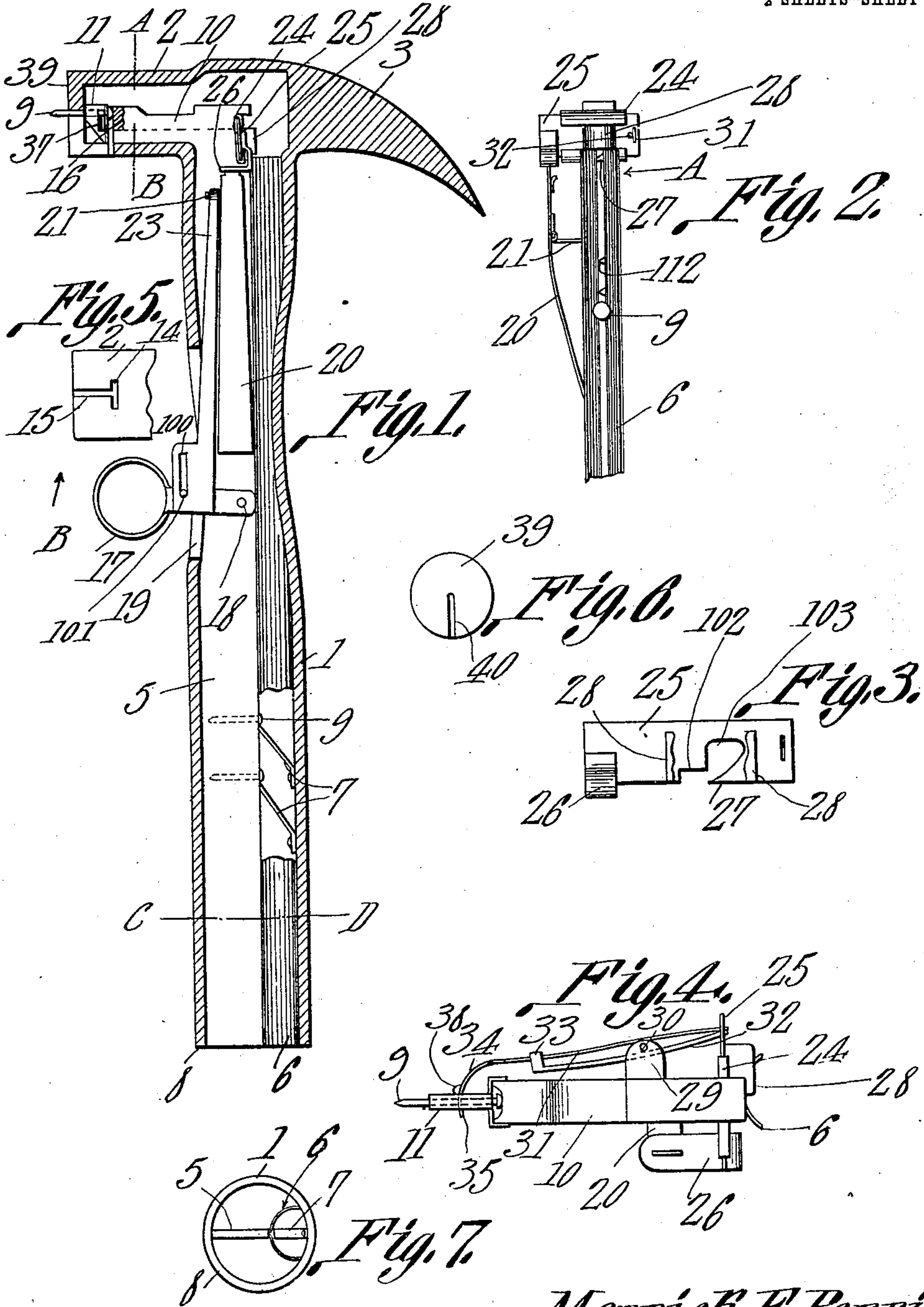
M. E. PERRING.
HAMMER.

APPLICATION FILED JUNE 2, 1910.

991,536.

Patented May 9, 1911.

2 SHEETS—SHEET 1.



Witnesses

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Merrick E. Perring,
Inventor

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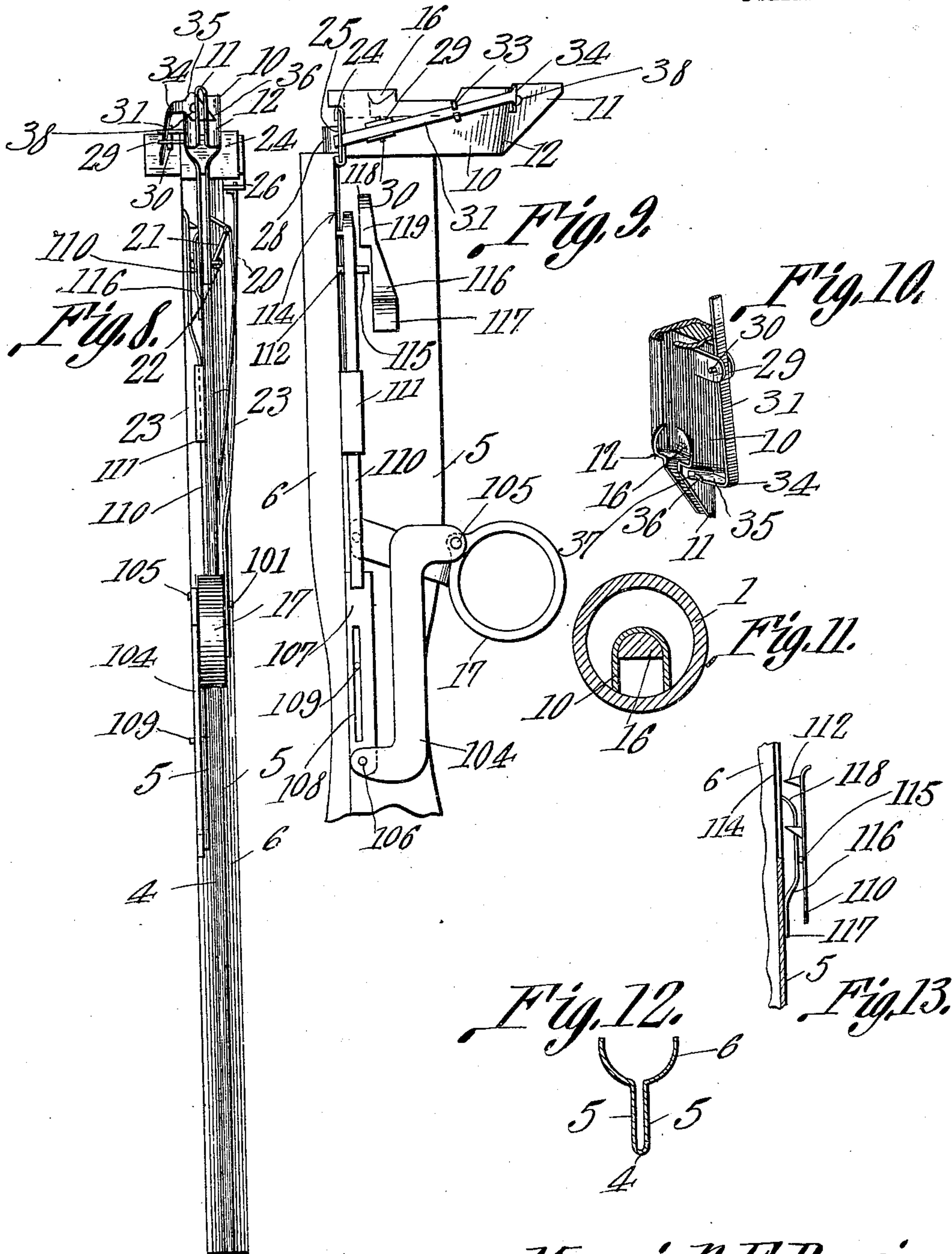
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UNITED STATES PATENT OFFICE.

MERRICK E. PERRING, OF MARCELLUS, MICHIGAN.

HAMMER.

991,536.

Specification of Letters Patent.

Patented May 9, 1911.

Application filed June 2, 1910. Serial No. 564,613.

To all whom it may concern:

Be it known that I, MERRICK E. PERRING, a citizen of the United States, residing at Marcellus, in the county of Cass and State of Michigan, have invented a new and useful Hammer, of which the following is a specification.

It is the object of this invention to provide a hammer so constructed that it may receive a plurality of nails, means being provided for segregating a nail and for advancing it into a position in which it may be set for driving.

Another object of the invention is to provide a novel means for segregating a nail from the receiver.

Another object of the invention is to provide a novel means for advancing a nail in front of the anvil portion of the device, and for holding the nail in front of the anvil, to receive an initial blow whereby the nail may be mounted in the structure in which it is to be driven.

Another object of the invention is to provide a novel means for connecting the segregating mechanism with the mechanism for holding the nail in place in front of the anvil, and to provide a manually operable device of novel and improved construction, whereby both the segregating means and the means for holding the nail in position, may be manipulated.

The drawings show typical embodiments merely, and it is to be understood that changes, properly falling within the scope of what is claimed, may be made without departing from the spirit of the invention.

In the accompanying drawings,—Figure 1 shows the invention in longitudinal section, parts being in elevation; Fig. 2 is a fragmental rear elevation of the receiver, showing the upper end thereof; Fig. 3 is a rear elevation of the slide; Fig. 4 is a top plan of the receiver extension, and of the mechanism which is carried thereby; Fig. 5 is a bottom plan of the striking end of the hammer head; Fig. 6 is an elevation of the end, or striking face of the hammer; Fig. 7 is an end elevation of the hammer handle; Fig. 8 is a front elevation of the receiver, the receiver extension, and the operating mechanism which is connected therewith; parts being removed; Fig. 9 is a fragmental side elevation of the receiver and the receiver extension, together with the mechanism thereby carried, the view illus-

trating the opposite side of the receiver from that shown in Fig. 1; Fig. 10 is a detail perspective of the end of the receiver extension; Fig. 11 is a transverse section upon the line A—B of Fig. 1; Fig. 12 is a transverse section of the receiver, taken along the line C—D of Fig. 1; and Fig. 13 is a fragmental longitudinal section of the receiver extension, designed to show the manner in which certain parts of the device cooperate to advance the nails in the receiver, toward the receiver extension.

The invention includes a tubular handle 1, to which the head of the hammer is secured, the striking end 2 of the hammer head being tubular, and open in its interior, while the claw end 3 of the head is preferably, although not necessarily, of a solid construction; it being understood that the hammer handle and the head may be of one-piece construction, as shown, or the head and the handle may be assembled with each other in a manner not inconsistent with the operation of certain mechanisms to be described hereinafter.

The receiver in which the nails are held previous to driving, is preferably fashioned from a single piece of material, bent sharply upon itself along its longitudinal center, as denoted by the numeral 4 in Fig. 12, to form parallel side walls 5, the free edges of the walls 5 being concaved outwardly, to form a trough-shaped portion 6. The receiver, as thus constructed, is mounted in the tubular handle 1. As seen to best advantage in Fig. 1, a plurality of light, spring strips 7 are secured at one end to the hammer handle 1, and positioned to project into the trough-shaped portion 6 of the receiver. By referring to Fig. 7, wherein the end of the hammer handle 1 is shown, it will be seen that the nails may be inserted through the end face of the hammer handle, the shanks of the nails sliding between the parallel side walls 5 of the receiver, the heads of the nails being located in the trough-shaped portion 6. The spring strips 7 are adapted to bear against the nails 9, as seen in Fig. 1, to prevent them from sliding downwardly out of the end of the hammer handle 1.

Projecting at right angles from the receiver, and located in the striking end 2 of the hammer, is a receiver extension 10. The bottom of the receiver extension 10 is open, and when a nail located in the handle of the hammer, as seen in Fig. 1, is slid along the

receiver, the nail will, when certain mechanisms to be described hereinafter, are manipulated, be free to pass into the receiver extension 10. Adjacent its ends, the receiver
 5 extension 10 is flattened as denoted by the numeral 11, thus defining a transverse shoulder 12 in the extension. The body portion of the nail is adapted to rest in the flattened
 10 portion 11 of the extension, while the head of the nail will be engaged by the shoulder, to prevent the nail from sliding out of the striking end 2 of the hammer. This construction is most clearly discernible in Fig. 10 of the drawings. The end face of the por-
 15 tion 2 of the hammer is denoted by the numeral 39, and by referring to Fig. 6 it will be seen that there is a slot 40 extended inwardly into the end face 39, the slot being alined with the flattened end 11 of the exten-
 20 sion 10. By referring to Fig. 5 of the drawings, wherein the lower face of the end 2 of the hammer is shown, it will be seen that there is in the said lower face of the striking end of the hammer, a T shaped opening, the
 25 head 14 of which is alined with the shoulder 12, the rectangularly disposed portion 15 of the T shaped slot being alined with the flattened end 11 of the extension, and likewise alined with the slot 40 in the end face 39 of
 30 the hammer. Broadly speaking, the receiver-extension is a trough-shaped structure, and in the upper portion thereof is located an anvil 16. This anvil 16 terminates adjacent the shoulder 12 in the extension 10.
 35 At this point I will describe the path followed by a nail in passing from the end of the hammer handle 1 into the protruding position in which the nail is shown in solid lines in the upper portion of Fig. 1 of the draw-
 40 ings; and subsequently I will describe the mechanism whereby this nail is advanced and held in the position shown.

When the nail is inserted into the receiver at the lower end of the hammer handle 1,
 45 the shank of the nail will be disposed between the parallel side walls 5 of the receiver, the head of the nail being disposed in the trough-shaped portion 6 thereof. The several spring strips 7 serve to prevent the
 50 nails from sliding out of the receiver, through the end face of the handle 1. Pre-supposing that the hammer is inverted from the position shown in Fig. 1, it will be seen that the nails will slide downwardly in
 55 the receiver, ultimately passing into the receiver extension 10, and resting upon one face of the anvil 16. The nail is then free to slide longitudinally and it may be slid outwardly, toward the end face 39 of the
 60 hammer. As the nail thus moves toward the end face 39 of the hammer, the head of the nail will ultimately engage the shoulder 12, the shank of the nail dropping into the flattened portion 11 of the receiver extension,
 65 the nail thus being positioned as shown in

solid lines in the upper portion of Fig. 1 of the drawings.

Passing now to a detailed description of the means whereby a single nail may be seg-
 70 regated from the receiver and deposited in the receiver extension, it will be seen that a finger lever 17, protruding through an opening 19 in the handle 1, is pivoted at 18 to the side walls 5 of the receiver. Secured
 75 at one end to the side wall 5 of the receiver, is a spring strip 20, the free end of which is disposed adjacent the transverse head of the hammer. Fulcrumed upon the portion 5 of the receiver, and located beneath the free
 80 end of the spring strip 20, is an angularly formed lever 21, the pivotal mounting of which is denoted by the numeral 22. A connecting member 23, preferably a spring
 85 plate, unites the finger lever 17 with one arm of the lever 21. The specific connection between the spring plate 23 and the lever 17 is seen most clearly in Fig. 1. It will
 90 there be seen that in a lateral extension of the spring plate 23, there is an elongated slot 100, in which a pin 101, projecting from the finger lever 17, is adapted to move.
 95 The free end of the spring strip 20 is slidable in a finger 26 projecting from a slide 25, the slide 25 being held for movement transversely of the receiver and adjacent
 100 the receiver extension 10, in a suitable guide 24. This slide, which is adapted to segregate one nail at a time from the receiver and to deposit the same in the receiver extension, is seen most clearly in Fig. 3 of the draw-
 105 ings. As there shown, the lower edge of the slide 25 is notched to form a tongue 27. This notching of the slide results in the formation of a straight edge 102, and in the formation of a relatively large opening 103
 110 in the slide, the edge of the opening 103 serving to determine the tongue 27. The opening 103 is bridged over by a covering 28.

Projecting laterally from the receiver extension 10, are spaced bearings 29, in which
 110 is mounted a pivot pin 30. Upon this pivot pin is fulcrumed, intermediate its ends, a lever, the same including a spring arm 31 disposed upon one side of the pin 30, and a
 115 spring strip 32, disposed upon the other side of the said pin, the spring strip 32 being secured at one end to the spring 31, while both of the elements 31 and 32, at one end, are held for pivotal movement in the
 120 slide, or segregating member 25. The free end of the element 32 may be secured about the member 31 by means of a collar 33 or the like. Adjacent its end, the spring arm 31
 125 is bent, as denoted by the numeral 34, to form a head 35, disposed substantially at right angles to flattened portion 11 of the receiver extension 10. The upper edge of this head 35 is beveled as denoted by the
 130 numeral 36, and in the side walls of the flattened portion 11 of the extension, there

are openings 37 in which the head 35 is adapted to reciprocate, transversely of said extension. If desired, a stop 38 may be mounted upon the head 35, the stop being adapted to engage the portion 11 of the receiver extension, to prevent the head from moving too far into the opening 37.

Referring now to Fig. 9, wherein an opposite side of the device is shown, from that depicted in Fig. 1, it will be seen that a plate 104 is pivoted at 105 to the finger lever 17, the opposite end of the plate 104 being pivoted at 106 to a plate 107 adapted to slide upon the portion 5 of the receiver. In this sliding plate 107 there is an elongated slot 108 whereby the sliding plate 107 is adapted to move longitudinally upon a pin 109, protruding from the receiver extension into the slot 108. Secured to the end of the sliding plate 107 is a spring arm 110, adapted to reciprocate in a guide 111 secured to the portions 5 and 6 of the receiver. Adjacent its free end, the spring arm 110 is provided, as seen most clearly in Fig. 13, with spaced teeth 112; these teeth are adapted to protrude through a slot 114 in the receiver, as seen in Fig. 2. Outstanding laterally from the spring arm 110 is a stud 115. A spring plate 116 is secured at 117 to the portion 5 of the receiver, the end 118 of the spring plate being bent downwardly into contact with the portion 5 of the receiver. The spring plate 116 is notched to form a laterally projecting portion denoted by the numeral 119 in Fig. 9. When the spring arm 110 is moved longitudinally, the stud 115 will pass beneath the laterally projecting portion 119 of the spring plate 116, engage the curved end 118 of the spring plate, ride over the upper face of the spring plate, and drop from the laterally projecting portion 119, into the position shown in Fig. 9 of the drawings.

The operation of the device is as follows. Presupposing that the hammer is inverted from the position shown in Fig. 1, it will be seen that the nail 9 will slide downwardly in the receiver, between the side walls 5 thereof, until the line of nails rest against one of the teeth 112. If the free end of the finger lever 17 be then moved in the direction of the arrow B in Fig. 1, the pin 101 in the lever 17 will move in the slot 100, without actuating the member 23. Referring to Fig. 9 of the drawings, it will be seen that when the lever 17 is thus moved in the direction of the arrow B, the plate 104, engaging the sliding plate 107, will advance the same, together with the spring arm 110, toward the head of the hammer. The stud 115 will pass beneath the laterally projecting portion 119 of the spring plate 116, and be engaged by the curvilinear end 118 of the spring plate 116. If the finger lever 17 be then moved in a direction contrary to that

indicated by the arrow B in Fig. 1, the head 115 will ride up, upon the spring plate 116, as shown in Figs. 8 and 13, withdrawing the teeth 112 from the slot 114. The stud 115 will ultimately drop from the laterally projecting portion 119, the teeth 112 entering again the slot 114, between the nails and the end face 8 of the hammer handle. This operation will be clearly understood by reference to Figs. 9 and 8, wherein the stud 115 is shown in successive positions, and by referring to Fig. 2, wherein the teeth 112 are shown in the relation to the nail 9 which they will assume before the operation hereinbefore described, has taken place.

The foregoing operation will suffice to show that when the finger lever 17 is moved in the direction of the arrow B, and then moved in a contrary direction, certain nails, which, by the inversion of the hammer, have been disposed in contact with the teeth 112, may be advanced toward the receiver-extension 10.

I will now describe the operation whereby one nail is segregated from the receiver, and deposited in the receiver-extension.

The nails, by the operation hereinbefore described, will rest against the edge 102 of the slide 25, this edge 102 being disposed across the opening between the walls 5 of the receiver. Presupposing that the relations between the finger lever 17 and the member 23 are those delineated in Fig. 5, it will be seen that when the finger lever 17 is moved in a direction opposite to that indicated by the arrow B in Fig. 1, the member 23 will cause the lever 21 to tilt, moving the free end of the spring strip 20 away from the receiver, and causing the slide 25 to move in the direction of the arrow A in Fig. 2. As the slide thus moves, the tongue 27 will pass beneath a single nail and segregate the same from the other nails which are located between the teeth 112 and the slide 25. The head of the nail will then pass through the opening 103, the nail being prevented from sliding toward the claw end 3 of the hammer, by means of the covering 28. Recalling still that the hammer is in an inverted position, the nail will drop upon the anvil 16 and slide, as hereinbefore pointed out, into the position shown in solid line in the upper left hand portion of Fig. 1. After the nail has thus entered the portion 11 of the receiver extension, the finger lever 17 may be tilted into position shown in Fig. 1, the slide 25 being thus disposed in a position to prevent other nails from entering the receiver extension. This movement of the finger lever 17 will advance the head 35 into the opening 37, the beveled edge 36 of the head engaging the nail and thrusting the same against the upper portion of the flat end 11 of the extension, the nail thus being held securely in place to abut against

the end of the anvil 16. It is of course obvious that when the lever 17 is manipulated to move the slide 25 in the direction of the arrow A, the head 35 will be withdrawn 5 from the opening 37, and thus the nail will be permitted to move into the flattened portion 11 of the receiver extension. The nail may now be considered to be held in the position shown in solid line in the upper portion 10 of Fig. 1, in abutment with the end of the anvil 16, the beveled edge 36 of the head 35 thus holding the nail in place. The nail may then be tapped into the structure into which it is to be driven, a single blow 15 obviously effecting this end. When the nail is thus seated, the finger lever 17 may be manipulated, withdrawing the head 35 from the opening 37. The hammer head may then be slid upwardly, whereupon the 20 head of the nail will move out of the transverse portion 14 of the slot in the lower face of the end 2 of the hammer, the body of the nail passing out of the portion 15 of the said slot. The nail will thus be left protruding 25 slightly from the structure into which it is to be driven, whereupon the nail may be driven full length into the material in the usual manner.

When the finger lever 17 is disposed as 30 shown in Fig. 1, it will be seen that the finger lever at its free end may be moved to and fro, to operate the slide 25, and to place nail after nail in the receiver extension. When, however, there are no more 35 nails between the teeth 112 and the receiver extension, the finger lever may be tilted at its free end in the direction indicated by the arrow B, and more nails may be advanced to a position adjacent the slide 25, the slot 40 denoted by the numeral 100 permitting the nails to be advanced by the teeth 112, into a position adjacent the slide 25, without, however, operating the slide 25 itself.

Having thus described the invention, what 45 is claimed is:—

1. In a magazine hammer, the combination with a receiver and a receiver-extension, of a slide operating as a segregating element between the receiver and the extension; a 50 spring secured at one end to the outside of the extension and at the other end movable in the slide; a tiltable member pivoted to the receiver and interposed between the receiver and the spring to flex the spring; a movable 55 operating member; and a connection between the operating member and the tiltable member.

2. In a magazine hammer, a receiver and a communicating receiver extension; means 60 for segregating a nail from the receiver and for depositing the nail in the extension; a finger lever operatively connected with the segregating means and movable in one direction to operate the segregating means, 65 the lever being connected loosely with the

segregating means, whereby, when the lever is moved in a reverse direction, the segregating means will remain inoperative; a spring connected with the lever and operating in the receiver to advance the nails 70 therein toward the segregating means; there being an element upon the receiver engaging the free end of the spring to flex the spring and to position the free end of the spring to advance the successive nails along 75 the receiver; the spring being engageable by said element only upon the reversal of the movement of the lever.

3. The combination with a hammer head and handle, of a receiver located in the han- 80 dle; a receiver extension located in the head and communicating with the receiver; an anvil located in the extension; a slide reciprocating across the receiver adjacent the extension and engaging directly with the nails 85 in the receiver to segregate a nail from the receiver and to deposit the nail in the extension; and pivotally mounted means directly connected at one end with the slide 90 and at the other end operating in the receiver to move the nail transversely and to hold the nail in terminal abutment with the anvil.

4. The combination with a hammer head and handle, of a receiver located in the han- 95 dle; a receiver extension located in the head and communicating with the receiver; an anvil located in the extension; means for segregating a nail from the receiver and for depositing the nail in the extension; and a 100 lever pivotally supported intermediate its ends, and beveled upon its upper edge at one end for reciprocation in the extension transversely of the same and adjacent the end of the anvil, the lever being operable by 105 the segregating means.

5. The combination with a hammer head and handle, of a receiver located in the han- 110 dle; a receiver extension located in the head and communicating with the receiver; an anvil located in the extension; a slide reciprocating across the receiver adjacent the extension and having an element to segregate a nail from the receiver and to deposit 115 the same in the extension; a lever pivotally supported intermediate its ends and beveled upon its upper edge at one end for reciprocation in the extension transversely of the same and adjacent the anvil, the lever, at 120 its other end, being pivotally connected with and operable by the slide.

6. The combination with a hammer head and handle, of a receiver located in the handle and provided with a slot; a receiver 125 extension located in the head and communicating with the receiver; means for segregating a nail from the receiver and for depositing the nail in the extension in a position to be driven; a finger lever for operating said means; a spring arm upon the out- 130

side of the receiver, movable as an entity in the direction of its length only, and operatively connected at one end with the lever, the arm having elements protruding through the slot and operating in the receiver to advance the nails therein toward the receiver extension; and a device engaging and flexing the free end of the spring arm to position the nail-engaging elements thereof to advance successive groups of nails toward the receiver extension.

7. The combination with a hammer head and handle, of a receiver located in the handle; a receiver-extension located in the head and communicating with the receiver; means for segregating the nail from the receiver and for depositing the nail in the extension in a position to be driven; a manually operable device for actuating the seg-

regating means; a spring arm operatively connected at one end with said device, the spring arm having elements operating in the receiver to advance the nails therein toward the receiver-extension, the arm being provided with a laterally projecting stud; and a spring plate bearing at one end against the receiver, and adapted to engage the stud to lift the spring arm, whereby the nail-engaging elements thereof may be positioned to advance successive groups of nails toward the receiver extension.

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

MERRICK E. PERRING.

Witnesses:

ULYSSES E. GOODSPEED,
A. E. MOORLAG.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
