

J. L. MILLER.

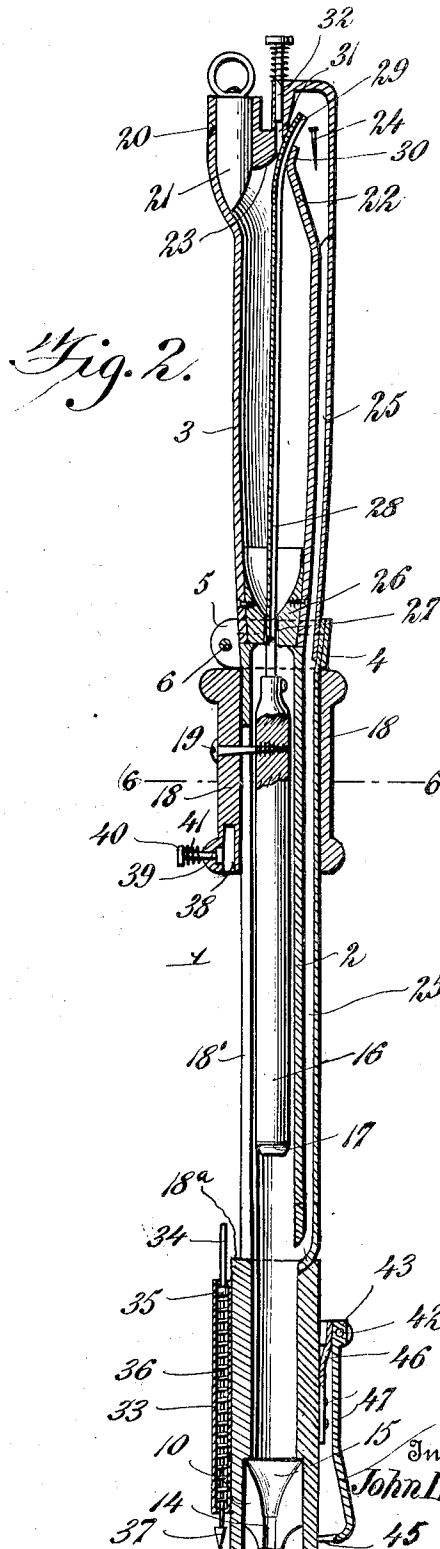
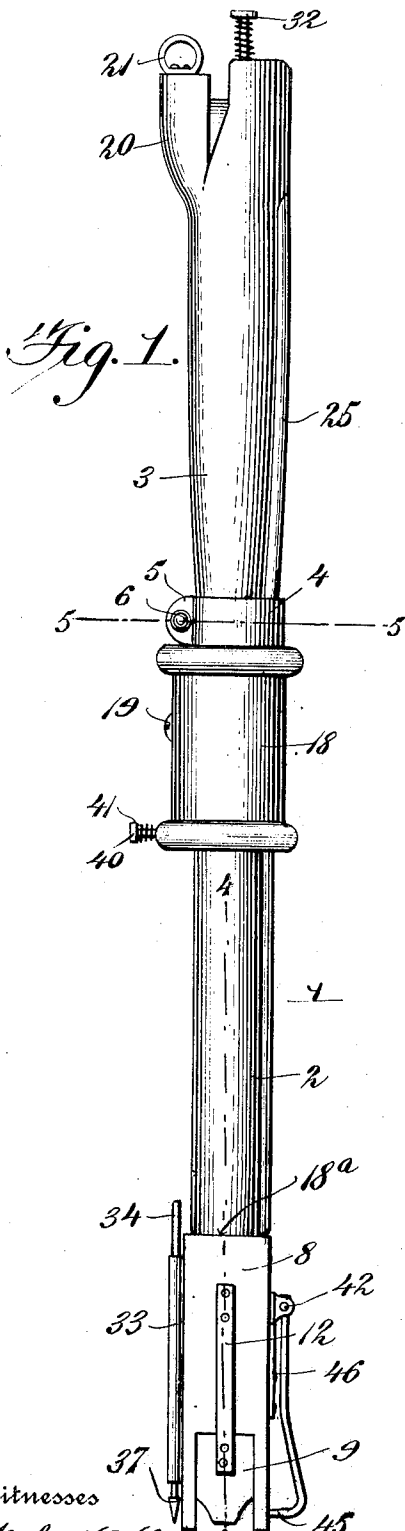
HAMMER.

APPLICATION FILED SEPT. 20, 1912.

Patented Mar. 11, 1913.

2 SHEETS—SHEET 1.

1,055,936.



Witnesses

H. S. McLowell.
Wm. J. North.

Inventor
John L. Miller

By Victor J. Evans

Attorney

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2 SHEETS—SHEET 2.

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Fig. 3.

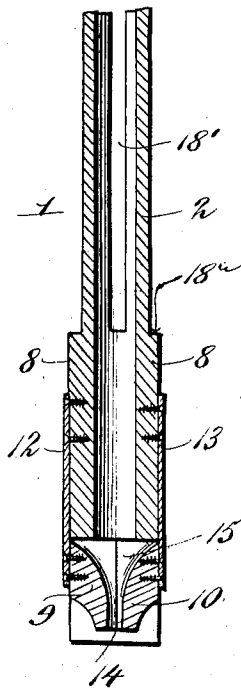


Fig. 4.

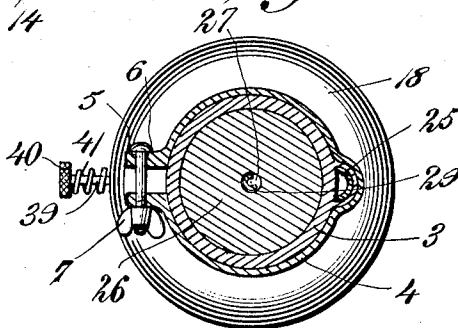


Fig. 5.

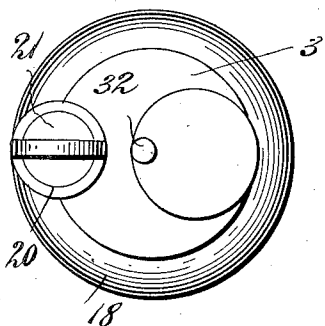
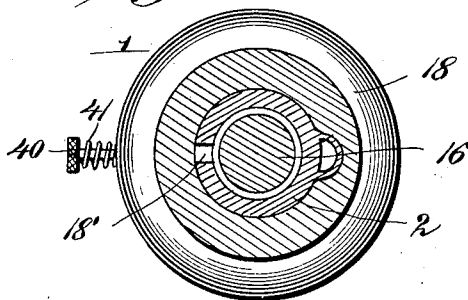


Fig. 6.



Inventor

John L. Miller

By Victor J. Evans

Attorney

Witnesses

N. S. McLowell.
Wm. J. North.

UNITED STATES PATENT OFFICE.

JOHN L. MILLER, OF MONROE, GEORGIA.

HAMMER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN L. MILLER, a citizen of the United States, residing at Monroe, in the county of Walton and State of Georgia, have invented new and useful Improvements in Hammers, of which the following is a specification.

The present invention relates to improvements in hammers.

10 In carrying out my invention it is my purpose to provide a hammer, primarily adapted for use in applying shingles upon a building, but of course applicable for other purposes, which shall provide means
15 whereby the nails will be automatically and consecutively fed between a pair of spring pressed jaws in a proper position to be operated upon by a reciprocatory plunger or what may be termed the hammer proper.

20 I also aim to construct a hammer of this character which shall be provided with a nail magazine chamber, and which shall have a reciprocatory plunger provided with a nail lifting element which is disposed
25 within the nail magazine, and which upon an upward movement of the plunger shall elevate a single nail and deposit the same within a chute to permit of the said nail gravitating within the chute, and being delivered between a pair of spring pressed
30 holding jaws, and in proper position to be operated upon by the plunger when the said plunger is moved toward the jaws.

I also propose to provide the hammer
35 with a simple but effective means for preventing the clogging of the nails at the delivery passage.

A further object of the invention is the provision, with a hammer of this character,
40 of a nail puller and a shingle cutter. Both of these members being normally retained above the nail outlet end of the hammer so as not to interfere with the movement of the plunger operating sleeve, the said sleeve,
45 however, being provided with means whereby the same may be brought into contact with the cutter member to force the end thereof below the hammer to split a shingle.

With the above recited objects in view,
50 and others which will appear as the nature of the invention is more fully understood, the improvement resides in the construction, combination and operative arrangement of parts set forth in the following specification, and alluded to with particularity in the
55 claims.

In the drawings, Figure 1 is a perspective view of a hammer constructed in accordance with the present invention. Fig. 2 is a central vertical transverse sectional view of the same. Fig. 3 is a detail vertical sectional view, taken approximately upon the line 4-4 of Fig. 1. Fig. 4 is a sectional view taken upon the line 5-5 of Fig. 1. Fig. 5 is a top plan view of the hammer. Fig. 6
60 is a sectional view upon the line 6-6 of Fig. 2.

Referring now to the drawings in detail, the numeral 1 designates the hammer in its entirety. The hammer includes a tubular
70 member or barrel 2 which has its upper end connected through the medium of a split collar 4 with a nail magazine chamber 3. The collar 4 has its free ends provided with ears 5 which have suitable openings for the
75 reception of a bolt 6 which co-acts with a thumb nut 7 and thereby effectively but removably connects the barrel 2 with the chamber 3. The lower extremity of the barrel 2 is enlarged, and is provided with oppositely arranged flat faces 8 which are bifurcated at their extremities to provide for
80 the reception of jaw members 9 and 10 respectively. These jaws are of a size sufficient to snugly close the openings provided by the bifurcations, and the said jaws have their inner faces flat and are forced into contact with each other through the medium of flat springs 12 and 13 respectively which
85 are connected to the outer faces of the jaws and to the flattened faces 8 of the barrel 2. The meeting faces of the jaws are each provided with a co-acting substantially semi-circular depression or passage 14, the said passages communicating with enlarged de-
90 pressions 15, the said depressions being disposed directly below the outlet mouth of the barrel 1. These depressions are substantially cone-shaped so as to direct a nail to the passage 14, and to also sustain the head
95 of the nail in a position to be operated upon, in a manner which will be presently set forth.

The numeral 16 designates the plunger or hammer, the same being arranged within the
105 bore of the tube or barrel 2. This plunger has its lower face, or that adjacent the jaws 9 and 10, provided with a substantially frusto-conical head 17.

The numeral 18 designates a sleeve or run-
110 ner which surrounds the tube or barrel 2, and which is provided with a removable pin

19 that passes through an elongated slot 18', provided in the barrel 2, and which connects the runner with the hammer 16. The enlarged end of the tube or barrel provides a shoulder 18* which serves as a stop for limiting the downward movement of the runner and the consequent downward movement of the hammer. The sleeve may serve as a stop for limiting the movement of the runner when the hammer is raised, or the slot 18' may terminate a suitable distance away from this end of the barrel to provide a wall which will be contacted by the pin 19, and thus halt the upward movement of the runner and hammer.

The magazine or nail chamber 3 is preferably cone-shaped, and has its upper and normally closed top provided with a nail inlet opening 20 which is normally closed through the medium of a plug 21. The wall of the chamber opposite the plug 21 has its upper extremity beveled or inclined toward the said opening as at 22, the said wall terminating a suitable distance away from a curved inner portion 23 of the top. The top opposite the passage thus provided is enlarged to provide a nail receiving chamber 24 which communicates with a nail chute 25. The slide or runner 18 is provided with a depression which communicates with its bore, and through which the chute 25 is passed, and whereby the said chute will not interfere with the reciprocatory movement of the member 18, but which, as a matter of fact provides an additional means for sustaining the runner from revolving upon the tube or barrel. The chute 25 communicates with the bore of the barrel directly above the jaws 9 and 10, the communicating passage being downwardly inclined so as to direct the nails to the depressions 15 and from thence to the passage 14 in a proper position to be operated upon by the hammer in its downward movement. The nail magazine 3 at its lower end, or at its end adjacent the barrel 2 is provided with a cup shaped member 26, the same being centrally provided with an opening 27 through which extends to the interior of the magazine chamber 3, a nail lift 28 which is connected to the upper extremity of the hammer 16. This nail lift is substantially U-shaped in cross section and is preferably constructed of resilient material. The lift has its upper extremity curved as at 29, and is of a width or size sufficient to snugly enter the passage arranged between the walls 22 and 23. The extremity of the wall 22 is provided with an offset portion or lip 30, the same being adapted to engage with the pointed end of the nail and to remove the said nail from the nail engaging end 29 of the lift 28 when the said end is partially withdrawn from within the nail receiving chamber 24. It will be noted that when the hammer 16 has

been forced downwardly to drive home a nail from between the jaws 9 and 10, the lift 28 is in a position to receive one of the nails from within the chamber 3 and an upward movement of the hammer will cause the said lift to deliver a nail to the chute 25 and deposit the same between the jaws in a position to be acted upon by the hammer so the first operation of the hammer will be to raise the same to allow the nail to be thus positioned.

From practice it has been found that occasions arise upon which the nails become clogged at the passage between the chamber 3 and the chamber 24, and to overcome this clogging I provide the top of the magazine with an opening 31 which is disposed directly opposite the passage, and which is provided with a spring pressed plunger 32. The curved extremity 29, may be, and preferably is provided with a V-shaped depression which receives the head of the nail and permits the shank thereof engaging between the side walls of the cross-sectional U-shaped lift, but as this is also true of a lift which does not have its end slotted, the said slot is not an absolute requirement.

Arranged upon one of the faces of the enlarged end of the tube or barrel is a cylinder 33 having both its top and bottom provided with reduced openings through which pass a stem 34. The stem 34 is provided with a flange or collar 35 adjacent its upper end, the said flange being arranged within the cylinder, and surrounding the portion of the stem within the cylinder and exerting a tension between the lower wall of the cylinder and the flange 35 is a helical spring 36. The lower end of the stem which projects through the cylinder is provided with a knife head 37 which, through the medium of the spring 36 is disposed above the lower extremity of the end of the barrel. The slide or runner 18 has its lower wall formed with an opening 38, the said opening or depression being arranged in the path of the upwardly extending portion of the stem 34, and which normally receives the said end of the stem without acting upon the same.

The numeral 39 designates an abutment member which is arranged within an opening disposed transversely of and which communicates with the recess or opening 34. This abutment member is provided with a headed stem 40 and is further provided with a helical spring 41 which exerts a tension to sustain the abutment member 39 out of the opening or depression 38. When pressure is exerted upon the headed member 40 to cause the abutment member 39 to be arranged within the opening or depression 38, and when the slide 18 is forced downwardly, the said abutment member will contact with the upper projecting portion of the stem 34 to cause the said stem to be forced down-

wardly to permit of the knife head 37 acting upon a shingle or the like to split or sever the same.

The enlarged end 8 of the barrel 2, diametrically opposite the portion provided with the cylinder 33 has connected thereto a bracket member which includes a pair of spaced ears 42 and pivotally connected as at 43 between the said ears is the upper extremity of a nail extractor 44. The extractor comprises a flat member having its lower extremity offset and provided with a V-shaped depression 45, and the said extractor is normally sustained in proper relation with the hammer through the medium of a flattened spring 46 which is connected as at 47 to the end of the barrel and which has its free end bearing against the inner flat face of the extractor 44. The flat spring 46 is so arranged as to contact with the extractor to sustain the same at a desired angle with relation to the barrel so the same may be swung to a proper position to extract a nail.

From the above description, taken in connection with the accompanying drawings the simplicity, as well as the advantages of the device, will, it is thought be apparent to those skilled in the art to which such inventions appertain without further detailed description.

Having thus described the invention, what I claim is:—

1. In a hammer of the class set forth, a nail magazine, a nail receiving chamber communicating with the magazine and disposed at the top thereof, a delivery chute communicating with the chamber, spring pressed jaws arranged below the outlet port of the chute, a cup shaped member having a central opening secured within the lower end of the magazine, a barrel removably connected with the magazine, a plunger within the barrel, a sleeve surrounding the barrel and connected with the plunger, a flexible nail lift connected with the plunger and passing through the opening of the cup shaped member to within the magazine, the said lift being constructed and arranged to raise a nail from within the magazine to deposit the same within the nail receiving chamber from which it gravitates through the said chute to be received between the said jaws, which jaws are arranged within the path of movement of the plunger.

2. In a hammer, a barrel having a bifurcated end, jaws arranged within the bifurcations, springs for the jaws to force the

same into contact, a plunger within the barrel, a sleeve surrounding the barrel and connected with the plunger, a nail magazine chamber for the barrel, a split sleeve for sustaining the chamber upon the barrel, a flexible nail lift secured to the plunger and arranged within the chamber, said chamber having oppositely inclined walls spaced to provide a passage, through which the lift is adapted to pass to deliver a nail from the chamber, and a nail receiving chute, the said chute communicating with the barrel directly above the jaws.

3. In a hammer, a barrel provided with a longitudinal opening, one of the ends of the barrel being bifurcated, jaws arranged within the bifurcations, the meeting faces of the jaws being each provided with a semi-conical co-acting depression, springs for forcing the jaws together, a plunger having a cone-shaped end arranged within the barrel, a sleeve surrounding the barrel, a pin secured to the sleeve and passing through the opening of the barrel and attached to the plunger, a nail magazine, a split collar for securing the magazine upon the barrel, a nail lift secured to the plunger and arranged within the magazine, said magazine being provided with an offset nail receiving opening, a plug closing the opening, said magazine having its upper end provided with oppositely curved walls spaced to provide a passage for the end of the nail lift, one of said walls being formed with an extending lip, a spring pressed pin passing through an opening arranged adjacent the lift passage, and a nail chute communicating with the nail receiving passage, the said nail chute communicating with the barrel directly above the jaws.

4. In a hammer, a reciprocatory plunger, nail sustaining means arranged within the path of the plunger, a nail magazine, a flexible nail lift connected with the plunger and arranged within the magazine for elevating a single nail and depositing the same out of the magazine when the plunger is moved in one direction, and a chute for receiving the nail, the said chute being constructed and arranged to guide the nail to the nail sustaining means.

In testimony whereof I affix my signature in presence of the witnesses.

JOHN L. MILLER.

Witnesses:

GREENE H. LANGSTON,
JUNIOUS O. LAWRENCE,
J. B. SHELNUTT.