(No Model.)

J. CHANTRELL.

NAIL EXTRACTOR.

No. 346,426. Patented July 27, 1886.

Fig. 1.

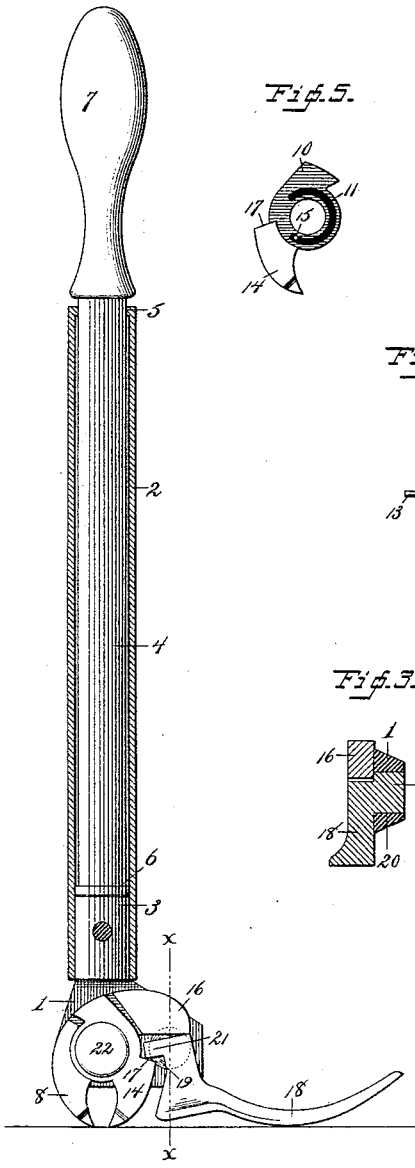

Fig. 5.

Fig. 4.

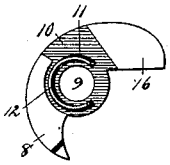

Fig. 6.

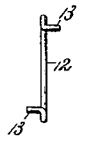

Fig. 3.

Fig. 2.

Witnesses,
C. C. Perkins.
C. E. Ruggles.

Inventor,
John Chantrell
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UNITED STATES PATENT OFFICE.

JOHN CHANTRELL, OF READING, PENNSYLVANIA, ASSIGNOR TO THE READING HARDWARE COMPANY, OF SAME PLACE.

NAIL-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 346,426, dated July 27, 1886.

Application filed March 24, 1886. Serial No. 196,335. (No model.)

To all whom it may concern:

Be it known that I, JOHN CHANTRELL, a citizen of the United States, residing at Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Nail-Extractors; and I 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.

My invention has for its object to simplify and improve the construction of this class of devices. With this end in view I have devised the novel construction of which the following description, in connection with the accompanying drawings, is a specification, numbers being used to indicate the several parts of the device.

Figure 1 is a longitudinal section of the shell, the rammer and operative parts of the device being in elevation, the position being that in which the jaws are about to seize a nail; Fig. 2, an elevation of the device complete, the position of the parts being as in drawing a nail; Fig. 3, a detail sectional view on the line *x x* in Fig. 1; Fig. 4, a detail view of the left jaw, as in Fig. 1, showing the position of the spring; Fig. 5, a detail view of the right jaw reversed; and Fig. 6 is an enlarged detail view of the spring detached.

Similar numbers denote the same parts in all the figures.

1 is a head, to which the shell 2 is riveted or otherwise secured; and 3, a block made integral with the head, and preferably projecting up into the shell and serving as an anvil to receive the blows of the rammer 4. The shell is made of any suitable length, and is provided at its upper end with a flange, 5. The body of the rammer is slightly smaller than the shell, as is clearly shown in Fig. 1, and is provided at its lower end with a shoulder, 6, which is adapted to engage flange 5, to prevent the rammer from being drawn entirely out of the shell. The rammer passes up through the shell, and is provided at its upper end with a handle, 7, for convenience in operation.

8 indicates one of the jaws, which, for convenience in description, I will term the "left jaw." This jaw is provided with an opening, 9, extending through it, a cut-away portion, 10, in which the other jaw lies, and with a circular recess, 11, to receive the spring 12. This spring is provided at its opposite ends with outwardly-turned projections 13.

14 indicates the other jaw, which, for convenience, I will term the "right jaw." This jaw also is provided with an opening, 9, a cut-away portion, 10, and a circular recess, 11. At one end of each of the circular recesses is a hole, 15, which is adapted to receive one of the projections 13 at the ends of the spring, whereby the latter is held in operative position.

At the rear end of jaw 8 is an extension, 16, and at the back of jaw 14 is a shoulder, 17, the operative positions of said extension and shoulder being clearly shown in Figs. 1 and 2.

18 is a lever adapted to bear upon the box, floor, or other article from which nails are to be drawn, which is provided with a trunnion, 19, adapted to turn freely in an opening, 20, in the head, and with a lug, 21, which rests between extension 16 and the shoulder at the back of jaw 14, as is clearly shown, the action being to throw said extension and shoulder away from each other, thus causing the edges of the jaws to grasp the nail firmly.

In assembling, the lever is first placed in position with the trunnion in opening 20. The jaws are then laid together, the spring lying in the curved recesses in the jaws, which of course register. In laying the springs together care is of course taken to engage the projections at the respective ends of the spring with the holes in the jaws adapted to receive them, the hole in jaw 14 being clearly shown in Fig. 5. The jaws in this position are then secured to the head by stud 22, which passes through both jaws and is screwed or riveted to the head, the opening through the jaws being of course large enough to permit them to turn freely on the stud. The action of the spring is simply to throw the jaws to their opened position.

It will be observed in Figs. 1, 2, and 3 that the surface of the trunnion is flush with the surface of the head, and that lug 21 projects outward therefrom, being made the same thickness as the jaws. This construction enables me to hold the lever in operative position without other means than the extension of jaw 8, which rests over the trunnion, as is

clearly shown in Figs. 1, 2, and 3, the construction being such that in no position which the extension can be caused to assume will the trunnion be released.

I do not desire to limit myself to the exact details of construction shown and described, as they may be considerably varied without departing from the spirit of my invention.

I claim—

1. The head and the jaws pivoted thereto, in combination with lever 18, having a trunnion which turns in the head, and a lug engaging both jaws, whereby they may be caused to engage a nail by the action of said lever.

2. The head and the jaws pivoted thereto, one of which is provided with an extension, 16, and the other with a shoulder, 17, in combination with a lever which turns freely in said head, and is provided with a lug which engages said shoulder and extension, whereby the jaws may be caused to grasp a nail.

3. The head and the jaws, both of which are provided with cut-away portions to adapt them to register with each other, and with curved recesses registering with each other, which receive a spring, in combination with an independent lever pivoted to said head, which engages both jaws, whereby they are caused to grasp a nail.

4. The combination, with the head, a pair of jaws pivoted thereto, and an independent lever, also pivoted to the head, which throws said jaws toward each other, of a shell secured to said head, and a rammer within said shell, whereby the jaws may be driven under the head of a nail.

5. The head and block 3, having a pair of jaws and an independent operating-lever pivoted thereto, in combination with the shell secured to said block and provided with a flange, 5, and a rammer which strikes said block, and provided with a shoulder, 6, which is adapted to engage said flange, as and for the purpose set forth.

6. The head, jaw 8, having extension 16, and jaw 14, having shoulder 17, in combination with an operating-lever having a lug to engage said extension and shoulder, and a trunnion which turns in said head, and lying flush with the surface thereof, said lever being held in operative position by said extension, which rests over the end of the trunnion.

7. The head having an opening, 20, and a lever having a lug, 21, and a trunnion engaging said opening and lying flush with the surface of the head, in combination with the jaws pivoted to the head, one of which is provided with a shoulder, 17, the other with an extension, 16, which rests over said trunnion.

8. The jaws, each of which is provided with an opening, 9, a cut-away portion, 10, and a curved recess, 11, and a spring lying in said recesses and acting to throw the jaws apart, in combination with a head to which said jaws are pivoted, and an independent lever having a lug which engages both jaws, whereby they are thrown toward each other.

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

JOHN CHANTRELL.

Witnesses:
ISAAC R. FISHER,
DAVID MILLER.