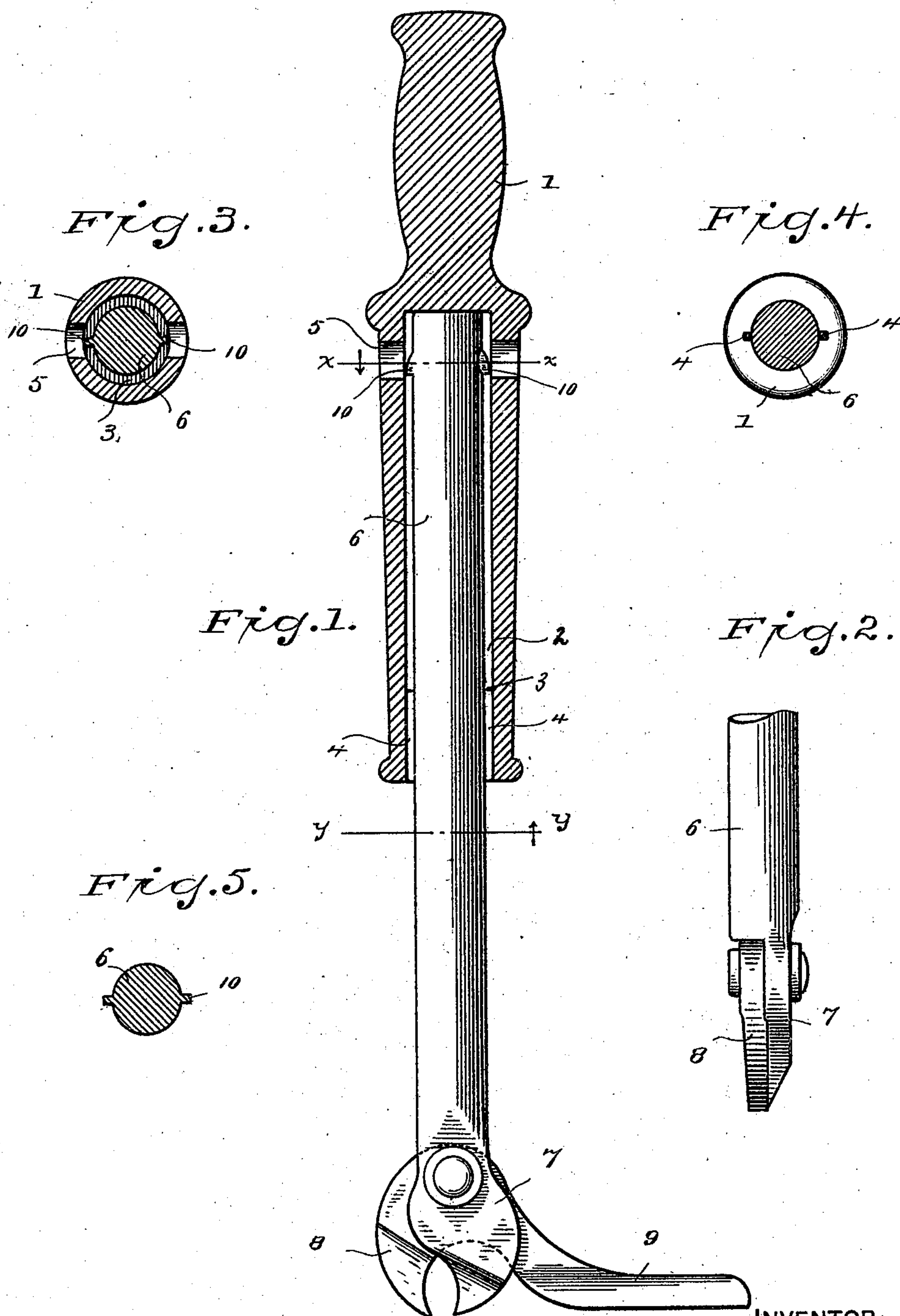


(No Model.)

G. H. SCRANTON, Jr.
NAIL EXTRACTOR.

No. 502,914.

Patented Aug. 8, 1893.



WITNESSES

H. A. Lamb
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INVENTOR

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UNITED STATES PATENT OFFICE.

GEORGE H. SCRANTON, JR., OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO
THE BELDEN MACHINE COMPANY, OF SAME PLACE.

NAIL-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 502,914, dated August 8, 1893.

Application filed April 20, 1893. Serial No. 471,198. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. SCRANTON, Jr., a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, 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 relates to the class of nail extractors in which the operative parts consist of a fixed jaw at the lower end of the shank, a movable jaw pivoted thereto and provided with a bearing lever by which the movable jaw is caused to grip the nail head between itself and the fixed jaw, and a sliding handle or rammer provided with a socket to receive the upper end of the shank; and my invention has for its object to so improve the construction that heading or upsetting of the upper end of the shank in making the article shall be wholly unnecessary, and heading or upsetting to any appreciable extent in use shall be wholly avoided thereby rendering it impossible for the upper end of the shank to stick in the socket, while at the same time the cost of construction is reduced to the minimum.

With these ends in view I have devised the novel construction which I will now describe referring by numbers to the accompanying drawings forming part of this specification in which—

Figure 1 is a longitudinal section of the socket, the shank and jaws being in elevation; Fig. 2 an edge view of the lower end of the shank and the jaws; Fig. 3 a section on the line $x x$ in Fig. 1 looking down; Fig. 4 a section on the line $y y$ in Fig. 1 looking up, and Fig. 5 is a section of the shank on the line $x x$ before the lugs are turned as in Fig. 3.

It is of course well understood by those familiar with metal working that the simplest, cheapest and best way of raising projections of metal is to strike them out by means of a drop hammer, all drilling of metal and attachment of additional parts being thereby avoided. In the manufacture of this class of nail

extractors the attachment of the handle to the shank is quite an important step in the process of manufacture. This has been accomplished in various ways as for example by drilling the shank and driving a pin through, and also by heading or upsetting the upper end of the shank. As a matter of fact in use the constant blows of the rammer upon the upper end of the shank tend to upset or head the upper end thereof to a greater or less extent. For this reason it is desirable not to head or upset the upper end of the shank in the manufacture as the original heading or flange quickly becomes enlarged so that there is danger of the shank sticking in the socket. I therefore leave the upper end of the shank plain and provide means for retaining the shank in the socket below the end of the shank which can be produced at a single operation and without drilling or the use of additional pieces.

In the drawings 1 denotes the handle or rammer which is provided with a socket 2, the diameter of the lower end of said socket being reduced leaving a shoulder 3 and the reduced portion being provided with slots 4 through it. Near the upper end of the socket is cast a transverse hole 5. 6 denotes the shank, at the lower end of which is a fixed jaw 7 to which a movable jaw 8 is pivoted, said movable jaw being provided with a bearing lever 9. These parts may all be of any ordinary or preferred construction and are not of the essence of my invention.

In order to provide simple and inexpensive means for retaining the end of the shank in the socket without drilling and without upsetting or heading the upper end of the shank, I place the upper end of the shank in a suitable die, and by means of a drop hammer strike out lugs or projections 10 the lower sides of which are preferably formed at right angles to the shank so that they will engage shoulder 3 firmly. These lugs are made narrow enough so that in assembling they will pass through slots 4 the lugs being at this moment in the shape shown in Fig. 5. The assembler, then having passed the shank into the upper end of the socket, inserts a tool from opposite sides into the hole 5 and gives

the lugs a twist sidewise as clearly shown in Fig. 3. This renders it impossible for the lugs to pass through slots 4 again and prevents the shank from slipping out of the socket.

5 Having thus described my invention, I claim—

10 In a nail extractor a handle or rammer having the usual socket provided with a transverse hole 5, and having at its lower end an internal shoulder with slots 4 through it, in combination with fixed and movable jaws the latter having a bearing lever, and a shank by which the jaws are carried, the upper end of

said shank having lugs 10 formed upon the metal thereof at a distance below the upper 15 end of the shank, said lugs being adapted to pass through slots 4 and when twisted sidewise acting to retain the shank within the socket.

In testimony whereof I affix my signature in 20 presence of two witnesses.

GEORGE H. SCRANTON, JR.

Witnesses:

A. M. WOOSTER,
PEARL REYNOLDS.