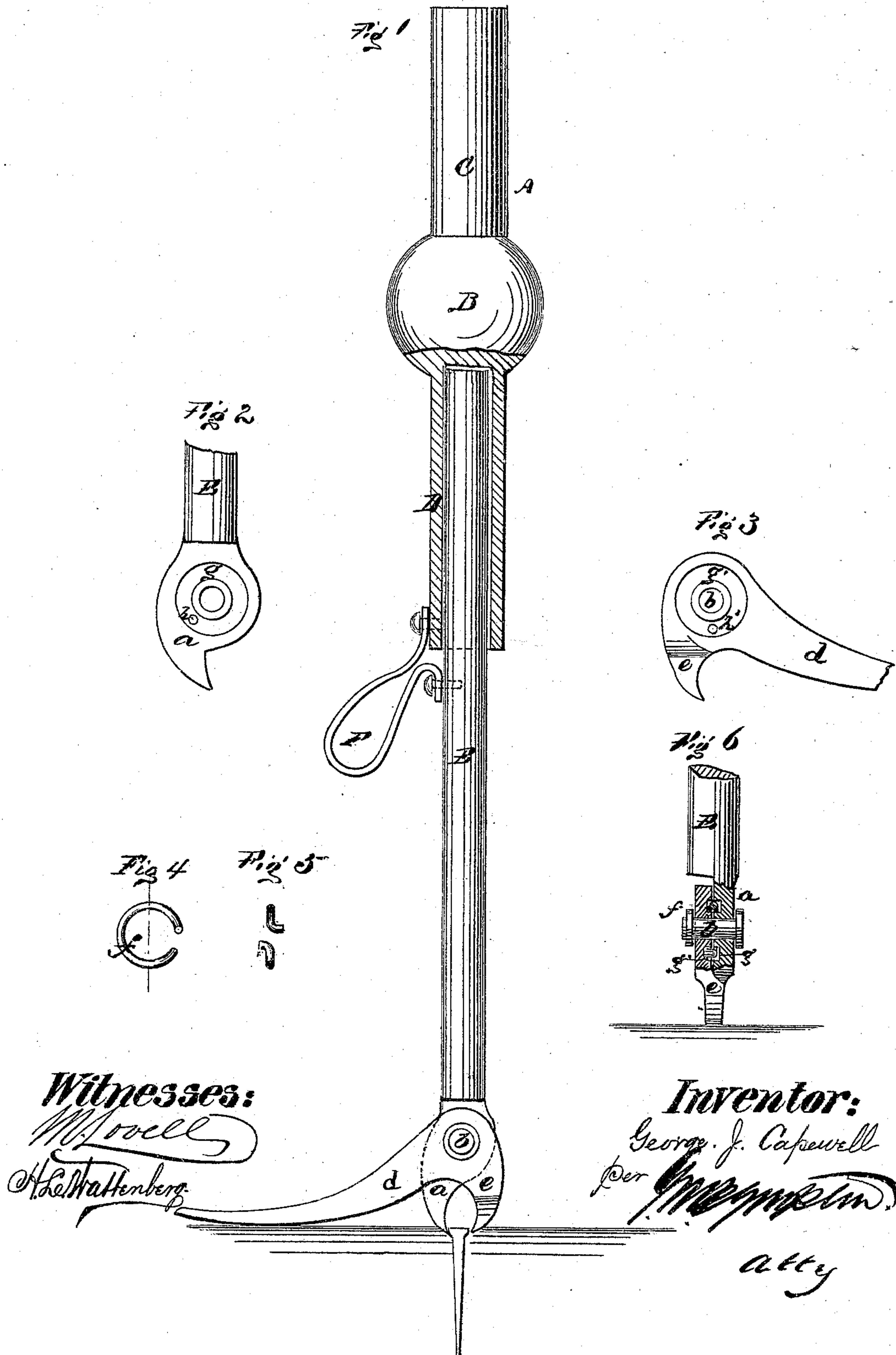


G. J. CAPEWELL.
Nail-Extractors.

No. 143,496.

Patented Oct. 7, 1873.



Witnesses:
M. Lovell
H. Hattenberg

Inventor:
George J. Capewell
Per [Signature]
att'y

UNITED STATES PATENT OFFICE.

GEORGE J. CAPEWELL, OF CHESHIRE, ASSIGNOR TO ELI CURTISS, OF WATERTOWN, AND DOUGLASS F. MALTBY AND LEWIS J. ATWOOD, OF WATERBURY, CONNECTICUT.

IMPROVEMENT IN NAIL-EXTRACTORS.

Specification forming part of Letters Patent No. 143,496, dated October 7, 1873; application filed April 11, 1873.

To all whom it may concern:

Be it known that I, GEORGE J. CAPEWELL, of Cheshire, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Nail-Extractors; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon, making a part of this specification.

This invention is in the nature of an improvement in nail-extractors operated by percussive force; and the invention consists in a nail-extractor of such kind, constructed so as to be more simple, durable, and effective than nail-extractors heretofore made.

The invention more particularly relates to nail-extractors constructed substantially in accordance with Letters Patent granted to me on the 16th day of July, 1872; but in the nail-extractor described and shown in said patent the whole of the percussive force was received on a plug screwed into the lower end of a hollow cylindrical stem; and since, in the course of time and with continued "ramming," this plug might become detached and the instrument rendered useless, the object of this present invention is to obviate any liability to such an accident, and also to so affix the spring by which the movable jaw is actuated in such position that its accidental disarrangement is rendered impossible. The spring for like purposes in my said Letters Patent having been exposed, it was peculiarly liable to accident; and my present invention is in respect to this spring an improvement upon the nail-extractor described in said Letters Patent.

In the accompanying sheet of drawings, Figure 1 represents a side elevation of my nail-extractor, partly in section; Fig. 2, a side elevation of fixed jaw; Fig. 3, a side elevation of movable jaw with fulcrum; Figs. 4 and 5, detailed views of spring; and Fig. 6, an edge view of extractor, showing the position of the spring in section.

Similar letters of reference indicate like parts in the several figures.

A represents the rammer proper of my ex-

tractor, the ball B and upper projection C of which are of solid metal. The lower projection D is a hollow cylinder or of tubular construction. E is a solid cylindrical stem made from steel or other similar material, and of a diameter that will admit of its freely entering into the cylindrical projection D. The lower end of the stem E has formed upon it a fixed claw, *a*, and has pivoted to it, by a pivotal bolt, *b*, a movable jaw, *e*, one side of said jaw being curved and extended and forming a fulcrum, *d*. Between these two jaws, and around the pivotal bolt *b*, is placed a circular spring, *f*, made from spring-wire. This spring fits into recesses *g* and *g'* formed in the inner faces of each of said claws, and is held in position between said claws by bending the ends of said spring in opposite directions, as shown in Fig. 5, the bent ends forming projections, which are received into small recesses *h* *h'* formed in said claws for that purpose, the object of this spring being to restore the movable claw to its normal or open position after the extractor has been used.

My nail-extractor being constructed substantially as above described, its operation is as follows: The claws are placed immediately over a nail-head, so that the nail-head will come between said claws. The rammer A is then raised to its full extent, which extent is regulated by a check-strap, F, one end of which is secured to the stem E, and the other to the tube D, and the rammer is then brought down with a quick ramming motion, bringing the upper end of the stem E in contact with the solid ball B, this motion forcing the claws slightly into the wood surrounding the nail-head, so that when the extractor is bent over in the direction of the fulcrum *d* the claws will grasp the nail, and enable it to be extracted in precisely the same manner as is described in my said Letters Patent of July 16, 1872.

It will be seen from the foregoing that the spring *f* actuating the movable jaw is entirely concealed, and out of the way of accidental displacement, and that no amount of ramming can disarrange any part of the stem E or its jaws.

I hereby disclaim the reissued Letters Patent granted GEO. J. CAPEWELL for improved nail-extractor, bearing date, originally, the 16th day of July, 1872, and numbered 129,210.

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

A nail-extractor having its stem provided with a stationary and movable jaw, the inner

faces of which are recessed to receive a circular spring for holding the jaws apart, in combination with a tubular weighted rammer secured to the stem, substantially as described.

GEORGE J. CAPEWELL.

Witnesses:

H. L. WATTENBERG,
G. M. PLYMPTON.