(No Model.)

G. W. LANE.

NAIL EXTRACTOR.

No. 377,565. Patented Feb. 7, 1888.

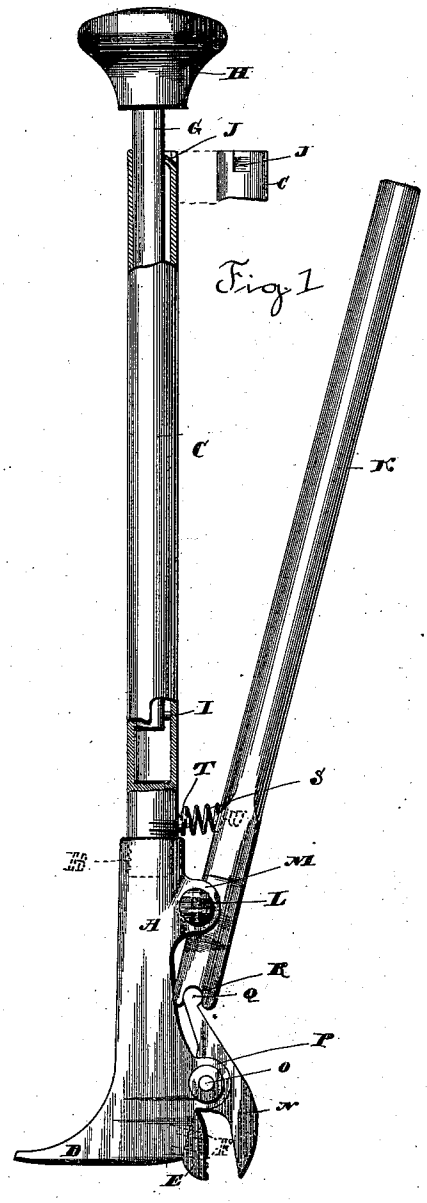
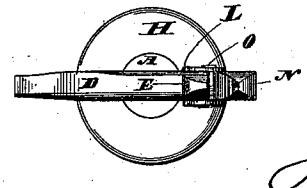


Fig. 1

Fig. 2



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE W. LANE, OF BRISTOL, CONNECTICUT, ASSIGNOR TO CHARLES A. LANE, OF SAME PLACE, AND EMMA A. POWELL, OF PLAINVILLE, CONNECTICUT.

NAIL-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 377,565, dated February 7, 1888.

Application filed October 24, 1887. Serial No. 253,219. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. LANE, residing at Bristol, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Nail-Extractors; and I do declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improvement in nail-extractors, the object being to produce a device combining simplicity and cheapness of construction with durability and efficiency in use and adapted for pulling nails from rounded as well as flat surfaces and for placing the grip of the tool on the nails directly under the control of the hand of the operator.

With these ends in view my invention consists in a nail-extractor having a stock provided with a jaw pivoted to the stock and co-operating with the jaw thereof, and a hand-lever, also pivoted to such stock, co-operating with the handle thereof and connected with the pivotal jaw, which is thereby placed directly under the control of the hand of the operator.

My invention further consists in certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view, partly in side elevation and partly in section, of a nail-extractor embodying my invention; and Fig. 2 is a reverse plan view thereof.

As herein shown, the stock of the tool consists of a frame-piece, A, having its upper end provided with a threaded chamber, B, and a tubular handle, C, having its lower end threaded and screwed into the chambered end of the frame-piece, as shown. A long shoe, D, having a flat face and securing the purchase for operating the tool, is formed at the lower end of the frame-piece. A stationary steel jaw, E, projecting beyond the face of the said shoe, is secured by rivets F F to what may be termed the "heel" thereof, the projecting end of the jaw being pointed or tapered to adapt it to be readily sunk into the wood under the blows of the rammer. This consists of a spindle, G, and a heavy hand-piece, H, secured to the outer end thereof. The spindle plays freely in the handle, in which it is retained by a pin, I, located in its lower end, and by a lip, J, turned in from the outer edge of the handle and engaged by the pin when the spindle is retracted.

A hand-lever, K, fulcrumed near its lower end upon a pin, L, located in lugs M M of the frame-piece, extends upward to or nearly to the upper end of the handle, which forms a point of purchase for operating it, both the handle and lever being clasped at the same time by the fingers of the hand.

A movable jaw, N, rocking upon a pin, O, mounted in lugs P P of the frame-piece, co-operates with the jaw E aforesaid, and is thereto pointed to readily enter the wood. The upper end of this jaw is provided with a knuckle, Q, entering a suitable groove, R, formed in the lower end of the lever which operates the jaw.

A spiral spring, S, interposed between the handle and lever and held in place by a stud, T, and a recess, U, is employed for automatically throwing the hand-lever away from the handle and so maintaining it and the movable jaw in normal positions of readiness for operation.

In using my improved device the jaws are first sunk into the wood, so as to include the nail to be extracted between them, by the aid of the rammer, which is lifted and then brought down sharply upon the upper end of the handle. The hand-lever is then closed up against the handle, whereby the movable jaw is closed onto the nail, which will now be firmly held, although the whole tool may have to be rocked some distance before the shoe is rested upon the surface to be pulled against. This adaptability of the tool to be rocked after the nail is seized without losing its grip thereupon enables it to be employed for the extraction of nails from curved surfaces—such as barrels—when the tool must be rocked to get a purchase for pulling against after the nail has been gripped, while the extractors heretofore made cannot be so used, as when the tool is rocked to get a support for the shoe the jaws lose their grip upon the nail. It will thus be seen that

by providing the pivotal jaw with a hand-lever adapted to be used co-operatively with the handle of the tool the grip on the nail is placed directly under the control of the hand of the operator and may be maintained wholly independent of any position that may be given to the tool in its entirety.

I would have it understood that I do not limit myself to the exact construction herein shown and described, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. A nail-extractor having a stock provided with a jaw, a jaw pivoted to the stock and co-operating with the jaw thereof, and a hand-piece, also pivoted to the stock and located adjacent to the handle thereof, so as to be clasped therewith and connected to the pivotal jaw, which it places directly under the control of the operator, whereby the grip of such jaw upon a nail may be maintained independent of the position of the tool, substantially as set forth.

2. A nail-extractor having a stock provided with a jaw and a rigid shoe, a jaw pivoted to the stock and co-operating with the jaw thereof, and a hand-piece, also pivoted to the stock, co-operating with the handle thereof, and connected with the pivotal jaw, which it places directly under the control of the hand of the operator, substantially as set forth.

3. A nail-extractor having a frame-piece provided with a jaw and a rigid shoe, a hollow handle connected with the frame-piece, a rammer connected with such handle, a jaw pivoted to the frame-piece and co-operating with the jaw thereof, and a hand-piece pivoted to the frame-piece, co-operating with the said hollow handle, and connected with the pivotal jaw, which it places directly under the control of the hand of the operator, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

GEORGE W. LANE.

Witnesses:
CHARLES B. SHUMWAY,
CHAS. S. SWAN, Jr.