

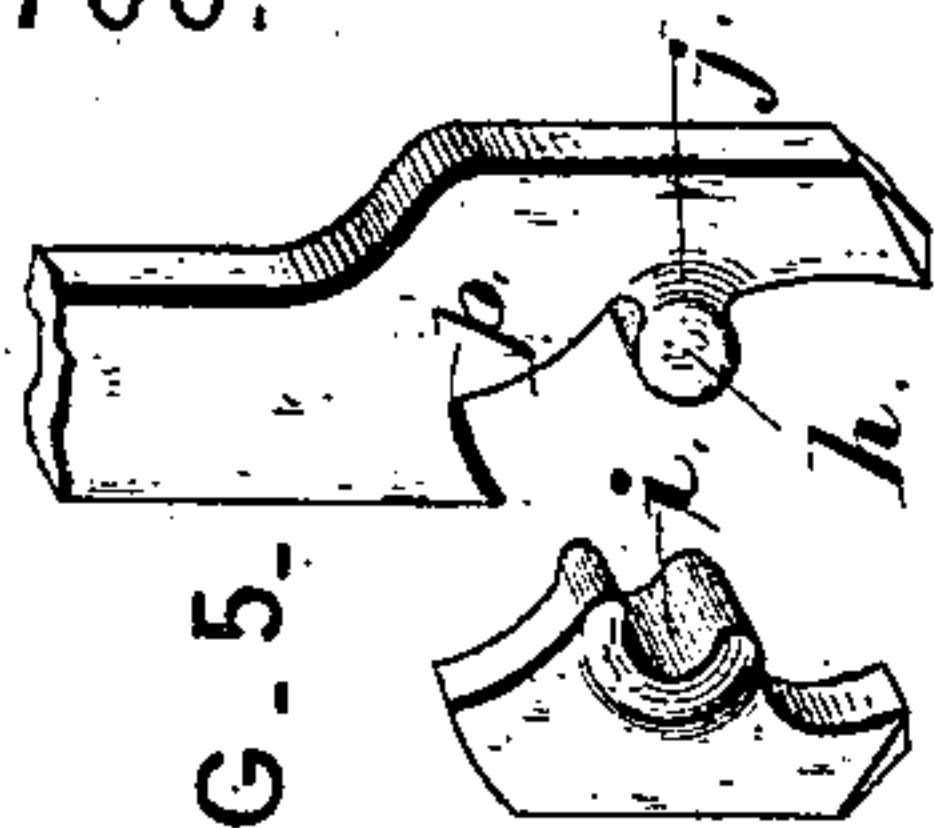
(No Model.)

M. D. CONVERSE.

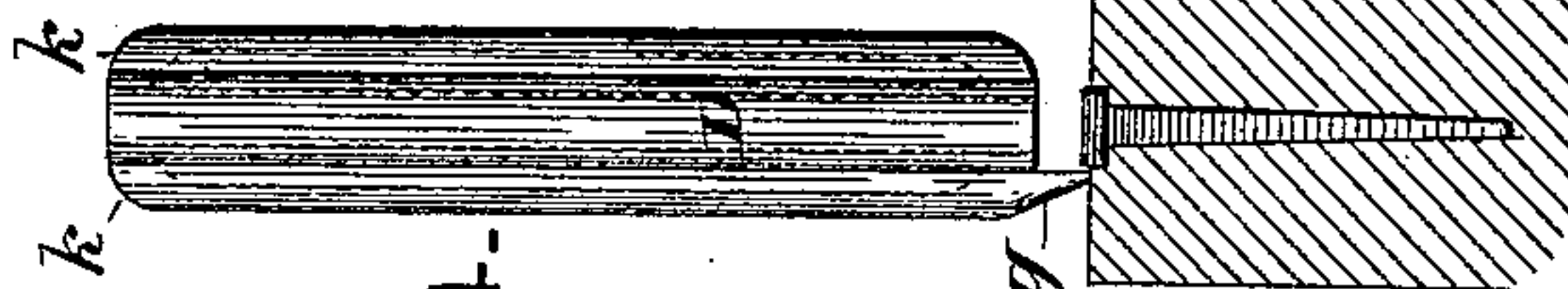
## NAIL EXTRACTOR.

No. 300,766.

Patented June 24, 1884.



**FIG. 5.**



**FIG-4-**

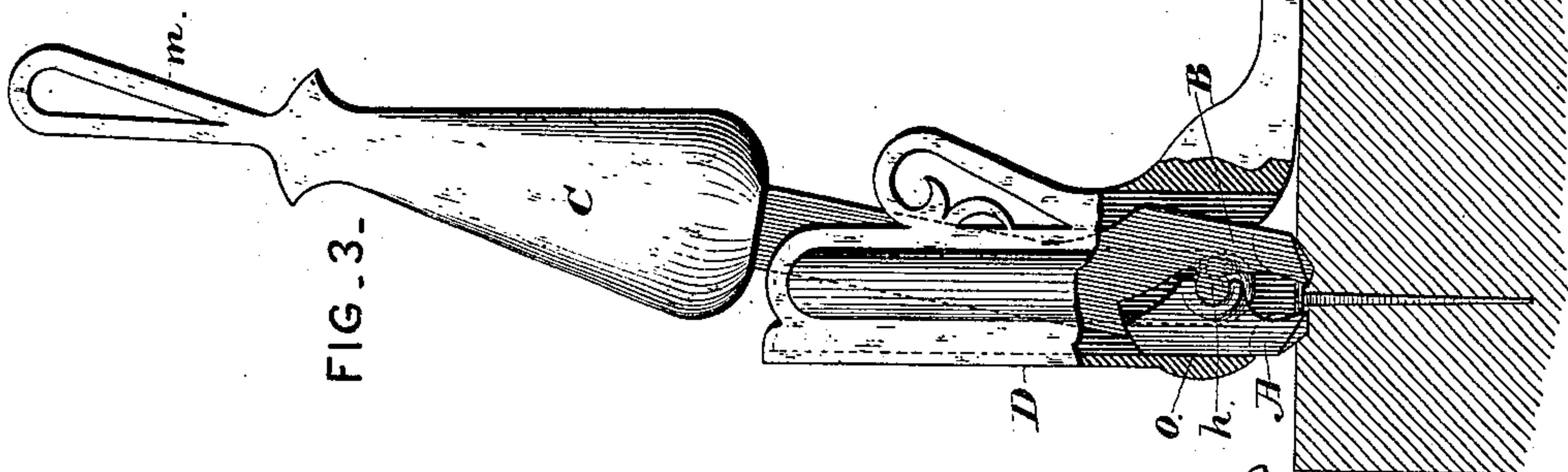
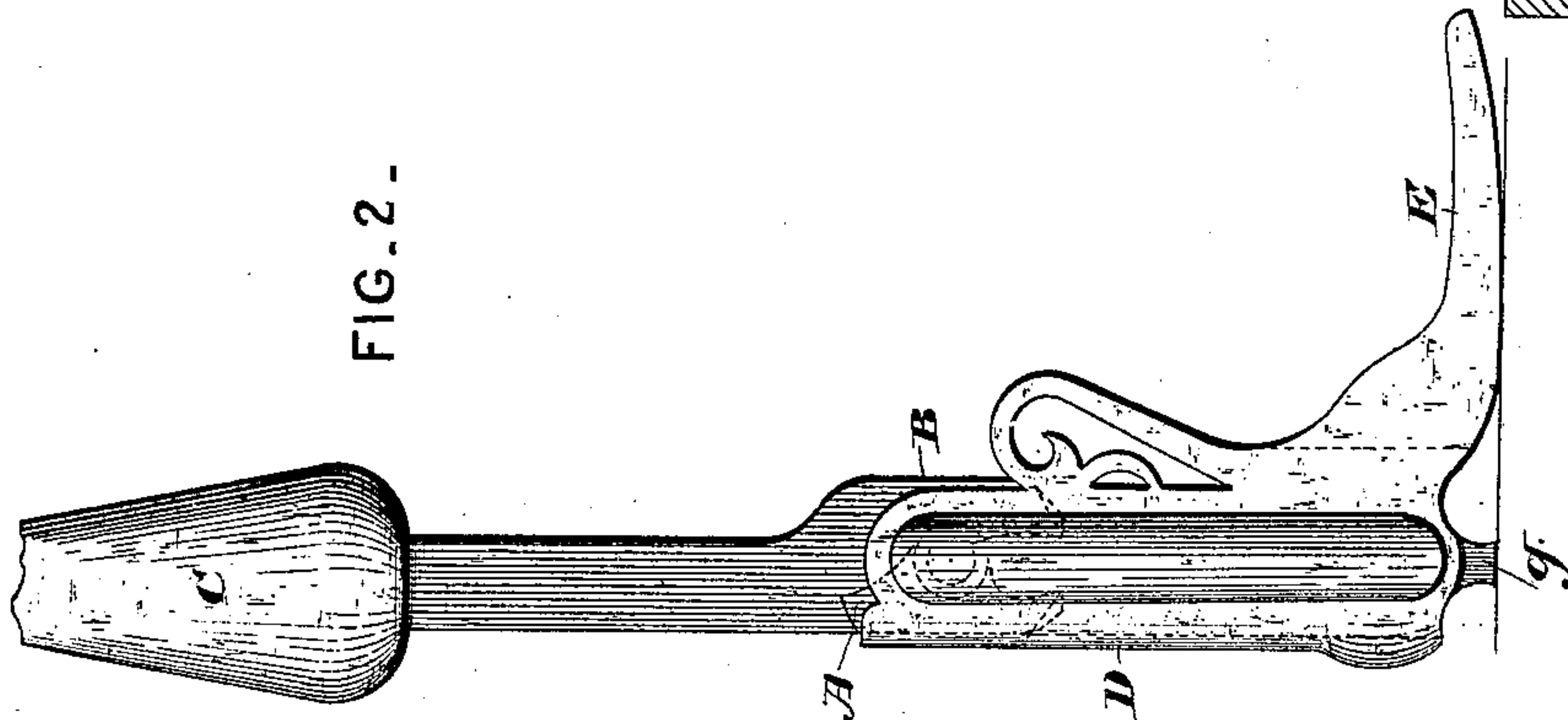
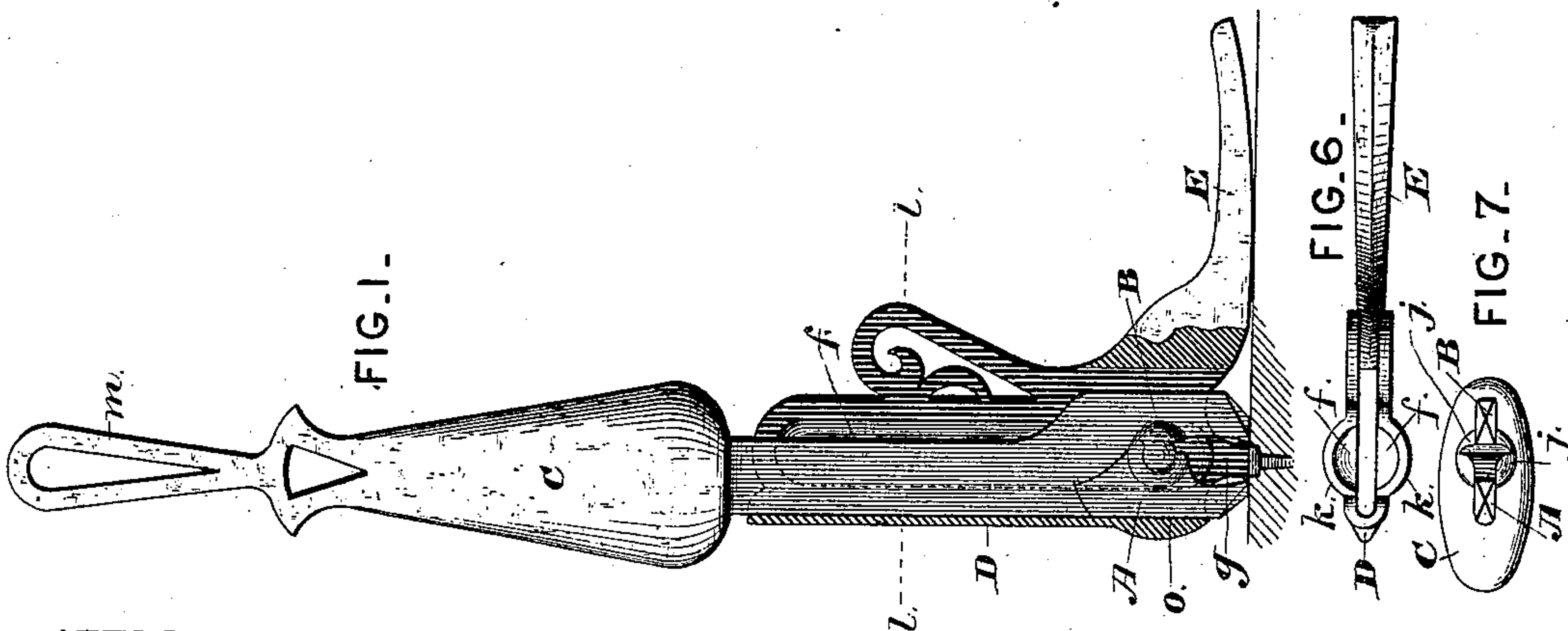


Fig. 3.



**FIG. 2.**



**Fig. 1.**

**FIG. 6.**

**FIG. 7**

ATTEST.

Geo. T. Smallwood,  
J. Henry Kaiser

INVENTOR.

Washie D. Cowens



# UNITED STATES PATENT OFFICE.

MASCHIL D. CONVERSE, OF NEW YORK, N. Y.

## NAIL-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 300,766, dated June 24, 1884.

Application filed October 18, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, MASCHIL D. CONVERSE, a citizen of the United States, residing in the city, county, and State of New York, have invented a new and useful Nail-Extractor, of which the following is a specification.

In the use of nail-extractors heretofore constructed of a class to which my invention belongs more or less annoyance and inconvenience have been experienced; in some from the noise consequent upon the striking of one metallic part against another in the operation of driving the jaws into the wood; in others from illy-adapted construction, necessitating the operator to grasp the instrument with the lower hand so near to the upper one and so far above the point of the instrument's contact with the wood, in order to allow sufficient space for vertical play of the fulcrum and jaws between the nail-head and the lower hand, that the guide-point and the gripping-edges of the jaws are allowed too much lateral play, and too much time is lost in efforts to adjust them properly over the nail and to keep them from twisting out of position after adjustment, and from the liability in nearly all of their more delicate parts—such as bolts, springs, rivets, washers, and the like—to get out of order, and the instrument thereby becoming inefficient or useless.

The objects of my invention are to overcome these difficulties and to construct a nail-extractor which shall be composed of few and simple parts, and which may be more cheaply manufactured, and at the same time insure greater durability. I attain these objects, first, by dispensing entirely with the fulcrum as a fixed part of either of the jaws, though the latter are pivoted together, and attaching it rigidly to an independent guide-piece instead, but in such a manner that although the jaws are susceptible of vertical reciprocating motion, whereby they can be simultaneously lifted and thrust into the wood astride the head of the nail, they will instantly and automatically interlock, by the agency of friction, with the fulcrum when gripping and extracting the nail, thus making little or no great noise in its operation by obviating the use of any auxiliary or percussive device, and thus also enabling

the operator to grasp the instrument with one hand at the most advantageous point, just above the contact-edge of the guide-piece to which the fulcrum is attached, and instantly adjust it on the wood beside the nail without interference from the fulcrum, or from the simultaneous reciprocation of the jaws with the other hand; second, by widening the lower end of the guide-piece and forming a chisel-edge thereon to engage the wood for a considerable length of space, so that the instrument may not be easily twisted out of position after adjustment over the nail; and, third, by constructing the instrument entire, without springs, bolts, rivets, or washers.

My invention will be more clearly understood by reference to the accompanying drawings, forming part of this specification, in which—

Figures 1 and 3 are sectional views, and Fig. 2 a side elevation, of the instrument, respectively, showing its parts in different positions; Fig. 4, an edge view of the back of the guide-piece and its chisel-edge formed on its lower end; Fig. 5, an enlarged view of the jaws; Fig. 6, a top view of the fulcrum and guide-piece with the jaws and lever removed; Fig. 7, a bottom end view of the jaws and lever removed from the guide-piece and fulcrum.

Like letters of reference indicate corresponding parts in the several figures.

A and B are the jaws, and C the lever joined to the latter one, with handle *m* formed at its top.

D is the guide-piece, made hollow, of malleable metal, with two perpendicular parallel half-round grooves, *ff*, opposite to each other, in its walls, which latter are scrolled at one side to form a guard for the hand in operating, and having a chisel-edge, *g*, formed on the lower end of one wall.

E is the fulcrum rigidly attached to the said guide-piece.

In Fig. 5, *h* is a segmental-shaped pin formed upon the jaw B at right angles to its inner edge, made to engage the segmental-shaped recess *i* in the jaw A, and serving as the pivot of the jaws. *p* in the same figure is a shoulder formed in the jaw B, into which the upper end of the jaw A fits snugly. Around the



pivot of these jaws for a given radius the jaws are provided on either side with hemispherical enlargements *j j*, (shown clearly in Fig. 7,) to give strength to the pivot, and also that the jaws may be confined thereby in position by their engagement with the half-round grooves *f f* of the guide-piece D and for interlocking the jaws with the fulcrum, as will hereinafter appear.

10 In Figs. 4 and 6, *k k* are the upper edges of the walls of the grooves *f f*, which, after the introduction of the jaws A and B into the hollow of the guide-piece D, are bent inwardly sufficiently to keep the jaws from being withdrawn therefrom. The said grooves do not extend entirely through the bottom of said guide-piece.

The operation of my nail-extractor is as follows: The operator grasps the guide-piece D with one hand (usually the left) below the point indicated by the dotted line *l l*, and with the other by the handle *m* at the upper end of the lever C, placing the jaws in the position shown in Fig. 1, astride the head of the nail and the chisel-edge of the guide-piece upon the wood at the farther side of the nail. With the upper hand the jaws are lifted up to the top of the guide-piece, while the latter is held with the fulcrum in undisturbed contact with the wood, as shown in Fig. 2, and then violently thrust downward against the wood, which operation embeds their points into the same on opposite sides of the nail-head, when the top of the lever is inclined forcibly in the direction of the fulcrum, and the gripping-edge of the jaw B is thereby swung toward that of the jaw A, which remains stationary, and by continued inclination of the lever the

nail is extracted, the enlargements *j j* engaging the walls of the grooves *f f*, and the farther edge or back of the jaw A engaging the wall of the guide-piece at the point *o* automatically, and held rigidly in position with the fulcrum E, by the friction thereof, during the impingement of the jaws on the nail, respectively shown in Fig. 3. 40 45

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

1. In a nail-extractor, a leverless fulcrum and guide-piece provided with a sharp point for engaging the wood, in combination with an independent lever having fulcrumless jaws attached to its lower end, which interlock with said leverless fulcrum and guide-piece when said lever is inclined in the act of gripping and extracting a nail, but are each independent thereof during their vertical play, substantially as and for the purposes shown and described. 50 55 60

2. In a nail-extractor having pivoted vertical reciprocating jaws, the combination of a chisel-edged guide-piece, with a fulcrum rigidly attached thereto.

3. In a nail-extractor, the herein-described clamping device, consisting of a segmental-shaped recess formed in one clamping-jaw, at right angles to its inner edge, to embrace a correspondingly-shaped pin formed upon the other jaw at the same relative angle and place, operating together as set forth. 65 70

MASCHIL D. CONVERSE.

Witnesses:

OCTAVIUS KNIGHT,  
L. M. HOPKINS.