

(No Model.)

M. D. CONVERSE.
NAIL EXTRACTOR.

No. 541,071.

Patented June 18, 1895.

FIG. 1.

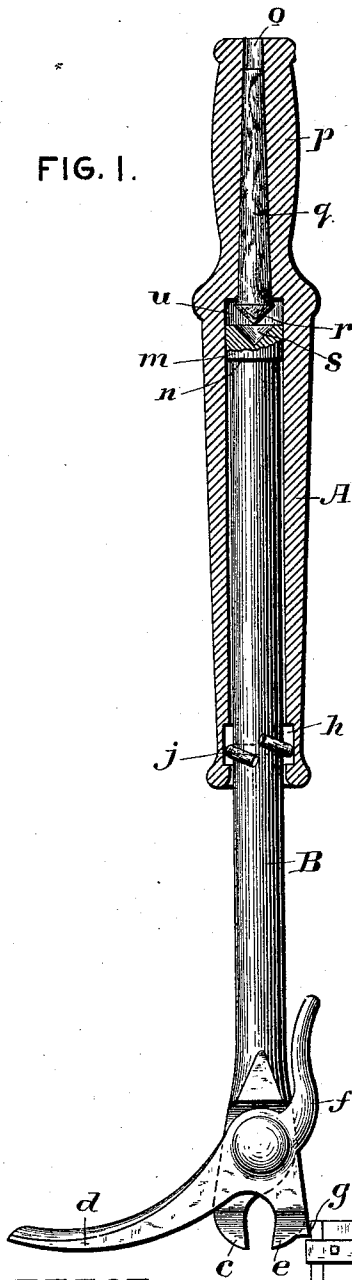


FIG. 2.

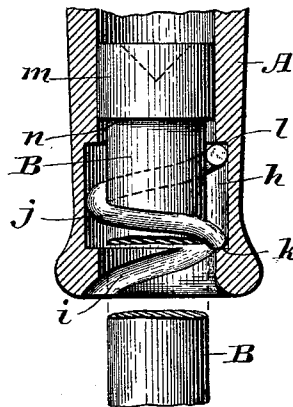
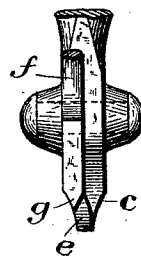


FIG. 3.



ATTEST.

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NAIL-EXTRACTOR.

SPECIFICATION forming part of Letters Patent No. 541,071, dated June 18, 1895.

Application filed May 21, 1890. Serial No. 352,580. (No model.)

To all whom it may concern:

Be it known that I, MASCHIL D. CONVERSE, of the city, county, and State of New York, have invented Improvements in Nail-Extractors, of which the following is a specification.

My present invention has more particular reference to that type of nail extractors described in Letters Patent issued to me dated July 15, 1890, No. 432,019, and consists in an improved device for securing the weighted ram to the stem; in an improved construction of the former; in improved devices for overcoming the concussion of parts and noisiness of such tools when in operation, and rapid wear in the same, and in other useful features, all of which are fully set forth and claimed herein.

In the drawings, Figure 1 is a vertical side elevation, partly sectional, of my improved nail-extractor. Fig. 2 is an enlarged vertical sectional view of parts of the same, and Fig. 3 is a rear edge view of the lower end of Fig. 1 from the right hand.

Like parts are indicated by similar letters throughout the several figures.

A is a tubular weighted ram having a handle, P, at its upper end through the longitudinal center of which a tapering hole, o, is made from the chamber, u, to the outside, into which is securely driven from below a tapering plug, q, of hard wood or other suitable non-resonant substance. The lower end of the latter, at r, is of conical form. Said ram is also provided with an internal annular groove, h, near its lower extremity, and a spiral groove, i (shown in Fig. 2), connecting with it from the extreme lower end, through which to insert from outside at said end upward the coil of wire, j, to its place in the internal groove, h, as will further appear hereinafter.

B is a stem having compound pivoted jaws, c e, with fulcrum, d, and jaw opening lever, f, at its lower end, one of said jaws, e, being provided with an independent hardened cutting edge, g, for cutting metal straps, bands, &c., when opening packing cases, specially referred to hereinafter. The stem, B, terminates at the upper end in a head, m, with an offset, n, and cone-shaped recess, s, centrally in its top or end.

C, in Fig. 1, represents a packing case or box, and t, a metal strap to be cut.

The hole, o, through the handle, P, serves the triple purpose of a socket for the plug, q, means for supporting the sand core and for the escape of gases when being cast, and to strengthen the handle at the narrowest diameter by equalizing the thickness of the metal walls which combined with the free escape of gases referred to insure uniform density of metal at all points. Strength to resist careless handling is secured by this device without increasing the weight.

The cone-shaped recess, s, in the upper end or head of the stem, B, operates to gather in from all directions the fiber of the end, r, of the plug, q, and keep it from being split and worn off rapidly.

The wire coil, j, not only serves to connect the arm, A, and stem, B, to each other, but also as a spring cushion to relieve the concussion of said parts, as will further appear hereinafter.

The method of inserting the coil, j, in the annular groove, h, is as follows: The head, m, of the stem, B, is entered into the tubular ram, A, and then the coil, j, is sprung round the latter, having been made with its ends sufficiently open to admit of this, when it is screwed upward through the spiral groove, i, till its lower end comes to the point, k. Shown in Fig. 2. The stem, B, is now violently pulled downward, while the ram, A, is held stationary, which causes the offset, n, to strike the upper end of the coil, j, at l, and thus bend or crush the coil down between offset, n, and the bottom, k, of annular groove, h, to a form or position similar to that represented in Fig. 1 so flat that it can now no longer return and come out through the spiral groove, i.

The operation of my invention is as follows: When it is desired to cut a box band or strap, the operator places the tool with the independent cutting edge, g, in the position shown in Fig. 1, relative to the strap, t, then, after lifting the ram, A, upward, thrusts it down violently, which drives the stem, B, and jaw, e, downward, forcing the said independent cutting edge, g, through the strap, t, severing it. In this operation, and in the operation of extracting nails, as the ram is lifted, the coil, j, resting in the annular groove, h, is carried up till the offset, n, of the head, m, strikes it, when further movement is arrested,

the elasticity of the coil, *j*, preventing concussion at the same time. On return or downward thrust of the ram, A, the conical recess, *s*, comes into contact with and embraces the
5 conical end, *r*, of the plug, *q*, which latter, being of suitable non-resonant substance, deadens the sound of concussion, and said recess, *s*, by its form gathers in the fiber of the
10 plug and prevents its splitting or being rapidly worn away.

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

1. In a nail extractor, the conical ended plug, *q*, seated in the handle end of the ram,
15 A, in combination with the stem, B, having a

conical recess, *s*, in its upper end adapted to receive and embrace the conical end of said plug when the ram A is forced downward substantially as and for the purposes shown and described.

2. In a nail extractor, the spirally coiled wire, *j*, spiral groove, *i*, internal annular groove, *h*, and ram, A, in combination with stem, B, head, *m*, and offset, *n*, substantially
20 as and for the purposes shown and described. 25

MASCHIL D. CONVERSE.

Witnesses:

JOHN T. ARMS,
SAML. A. DRURY.