(No Model.)

C. MALONEY.

AX.

No. 374,483. Patented Dec. 6, 1887.

Fig. 1.

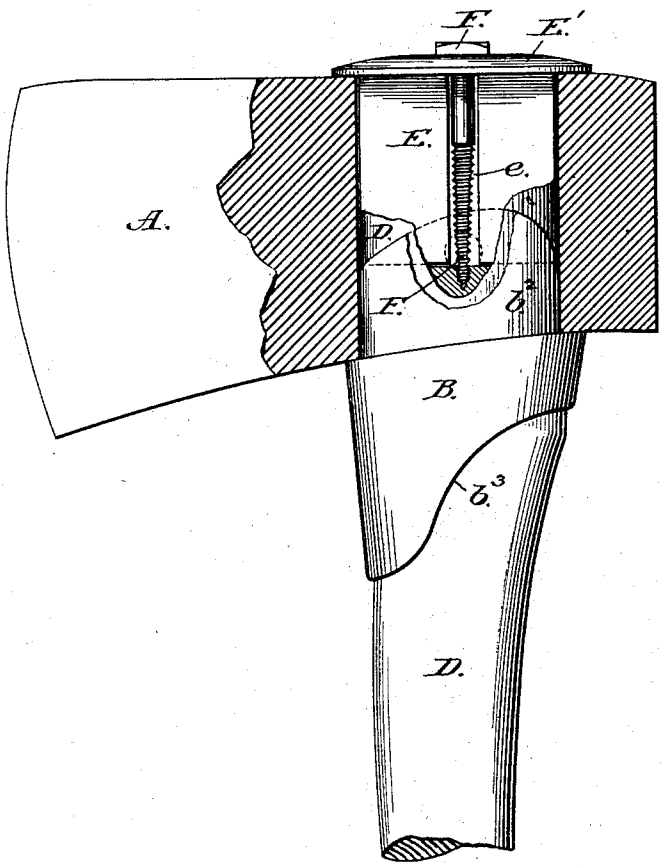


Fig. 2.

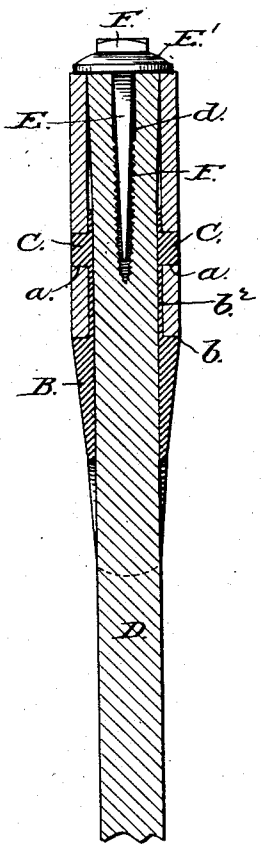
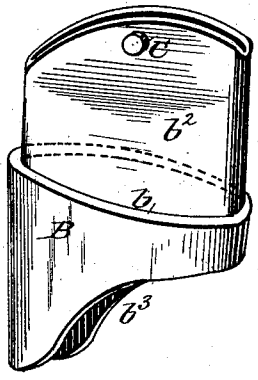


Fig. 3.



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UNITED STATES PATENT OFFICE.

CALVIN MALONEY, OF LOWER LAKE, CALIFORNIA.

AX.

SPECIFICATION forming part of Letters Patent No. 374,483, dated December 6, 1887.

Application filed April 29, 1887. Serial No. 236,566. (No model.)

To all whom it may concern:

Be it known that I, CALVIN MALONEY, of Lower Lake, in the county of Lake and State of California, have invented new and Improved Axes, of which the following is a full, clear, and exact description.

My invention relates to an improvement in axes, and has for its object to provide a means whereby the handle will be strengthened and readily detached and reinserted.

The invention consists in the construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both figures.

Figure 1 is a side elevation of the ax and helve partly in section, the helve being broken away; and Fig. 2 is a central transverse vertical section through the same. Fig. 3 is a perspective view of the socket having the sides of its reduced portion compressed or pressed inward ready for insertion in the eye of the ax.

The ax A is provided with two aligning apertures, *a*, produced in the side, penetrating the eye below the center, as shown in Fig. 2. A socket, B, is made of malleable iron or similar soft metal, having a shoulder, *b*, an upper reduced portion, b^2, and the lower edge of the body cut away to curve inward and downward, as shown at b^3, Fig. 1. The reduced portion b^2 of the socket is of a contour and size to adapt itself to the inner contour of the eye, and the inner surface of the socket is made smooth throughout.

The socket B is compressed or pressed inward by any suitable means at its reduced portion and passed up into the eye with the long end of the body toward the blade of the ax until the under edge of the ax is brought in contact with the shoulder *b*. The said inserted reduced portion of socket is then bent outward in the eye, and lugs C, made integral with the outer surface of the socket at each side, are thereby made to enter and project through the apertures *a*, when their outer ends are finished off flush with the outer faces of the ax.

The helve D is inserted in the eye in the ordinary manner, the body or outer portion of the socket B encircling the same immediately below the ax at the weakest point, greatly adding to the strength and duration of said helve.

A vertical wedge-shaped slot, *d*, is cut in the helve at the top, and a centrally-divided wedge, E, having an integral head, E′, substantially the shape and slightly larger than the eye, is driven in the aforesaid slot *d*. The wedge is also provided with a central aperture in alignment with the division *e* therein, into which aperture a screw, F, is entered, passing down the said division and in contact with the solid portion of the helve, as shown in Fig. 2, whereupon it is screwed into the same until the head of the wedge is in contact with the top of the ax, and its point projects below the two arms of the wedge.

It will be observed that the helve may be quickly and readily attached to and detached from the ax, and that the entire ax is greatly strengthened without materially adding to the cost of manufacture.

The sockets may be sold separately from the ax, in order that they may be applied by the purchaser in place of a broken socket.

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

1. The combination, with the ax, of the socket B, having the reduced portion b^2, projecting into the eye of the ax, the shoulder *b*, resting against the under side of the ax and around the eye, the helve, and the wedge, substantially as set forth.

2. The combination, with the ax having openings *a* in its opposite sides communicating with the eye, of the socket B, having opposite side lugs, C, engaging said openings, substantially as set forth.

3. The combination, with the ax having openings *a* in its opposite sides communicating with its eye, of the socket B, having a reduced upper end passed within said eye and provided with opposite lugs C, extending into said openings, and the shoulder *b*, resting against the under side of the ax around the eye, the lower edge of the socket being curved inward and downward, the ax-helve D, having a slot or kerf, *d*, the bifurcated wedge E,

entering said slot and provided with an apertured head, E′, and the screw F, extending down through said aperture between and below the two arms of the wedge into the helve, substantially as set forth.

4. The helve-socket B, formed with the lower curved edge, b^3, reduced upper portion, b^2, and intermediate shoulder, b, substantially as set forth.

5. The helve-socket B, formed with lower curved edge, b^3, reduced upper portion, b^2, intermediate shoulder, b, and opposite lugs C on the outer surface of the reduced portion, substantially as set forth.

CALVIN MALONEY.

Witnesses:
T. E. STOCKFORD,
CHAS. E. STOCKFORD.