No. 670,790. Patented Mar. 26, 1901.

E. K. LEFFINGWELL.

CAMPER'S AX OR TOOL.

(Application filed Sept. 25, 1900.)

(No Model.)

Fig. 1.

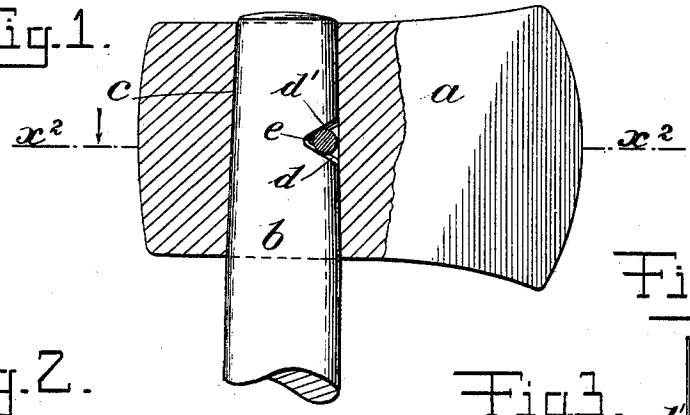


Fig. 4.

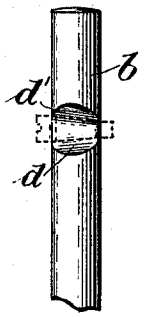


Fig. 2.

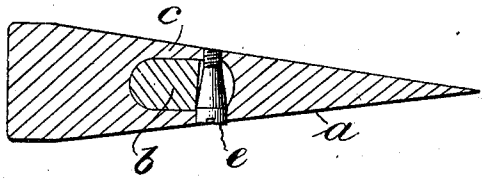


Fig. 3.

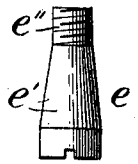


Fig. 5.

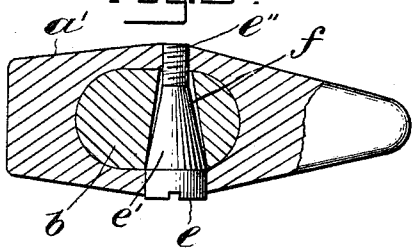


Fig. 6.

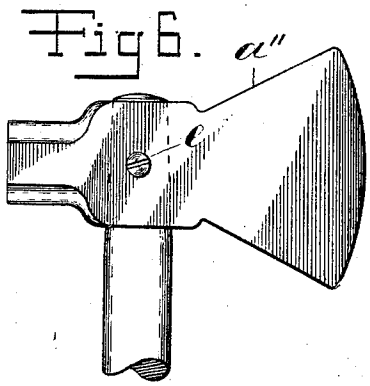
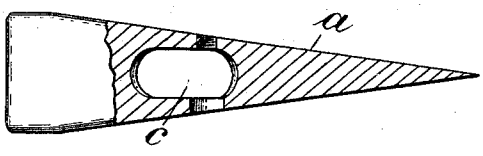


Fig. 7.



WITNESSES:

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CAMPER'S AX OR TOOL.

SPECIFICATION forming part of Letters Patent No. 670,790, dated March 26, 1901.

Application filed September 25, 1900. Serial No. 31,033. (No model.)

To all whom it may concern:

Be it known that I, EVERETT K. LEFFINGWELL, a citizen of the United States, residing at Upper Montclair, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Campers' Axes or Tools, of which the following is a specification.

This invention relates to a tool—such as an ax, hatchet, or hammer—which has an eye and means for securing the handle of the tool removably therein; and the object is in the main to provide a light ax or similar tool suitable for the use of campers or hunters, in which a handle cut in the woods may be fitted and secured removably without the use of special tools.

The invention consists in a tool having an eye to receive the handle, preferably tapered from its inner or entering end to its outer end oppositely to the customary way of tapering such an eye in an ax, and having a screw which crosses said eye transversely and screws into the metal forming the opposite wall of the eye. Preferably this screw will have a tapered body for reasons that will be hereinafter explained.

In the accompanying drawings, which illustrate the invention, Figure 1 is a side elevation of the ax, partly broken away to show the manner of securing the handle in the eye thereof. Fig. 2 is a horizontal section taken at line x^2 in Fig. 1. Fig. 3 shows the securing-screw detached; and Fig. 4 is an edge view of the handle, showing the notch therein. Fig. 5 is a sectional view illustrating the application of the invention to a hammer and showing a hole in the handle to receive the securing-screw. Fig. 6 shows the invention applied to a hatchet. Fig. 7 is a sectional view of the tool seen from the lower or inner side—that is, from the under side in Fig. 1.

Referring first to Figs. 1, 2, 3, and 4, *a* represents a light ax adapted to be carried in the pocket when the handle *b* is removed therefrom. This ax has an eye *c* of somewhat oblong cross-section (see Fig. 2) and tapered from the inner or entering end to the outer end thereof, so that the tapered handle *b* may be made to fit snugly and tightly when drawn into the eye. This handle may be cut in the woods with a pocket-knife and shaped to fit the eye, and when so shaped as to fit the eye a notch *d* is cut in the edge of the handle at the proper point to permit the securing-screw *e* to pass. This screw *e* has a tapered body *e'* and a screw-threaded tip *e''*, which latter screws into a threaded hole in the wall of the eye.

The object in tapering the body of the screw is that it may take under the outer face *d'* of the notch *d* in the handle and draw the latter snugly into the eye and hold it firmly in place.

When it is desired to remove the handle, the screw is drawn and the handle taken out and discarded. The screw may then be driven back into its place in the ax and the latter packed away or carried in the pocket, as the screw does not or need not project from the surface of the ax.

A notch is employed in preference to forming a hole through the handle, as a notch may be cut readily with a pocket-knife and a hole is not so easily made therewith. Where a notch is used, the hole for the screw will be set near one lateral margin of the eye, either at the front, as seen in Figs. 1 and 2, or at the back.

Figs. 5 and 6 show how the handle may have a hole *f* formed in it, the screw passing through said hole. In either case, whether the handle has a notch or hole formed in it, there will be a shoulder formed on it which takes over the outer side of the screw and prevents the handle from being withdrawn or from coming out in use. This shoulder may be beveled, as seen in the edge view of the handle, Fig. 4, so as to fit to the tapered body of the screw and provide an extended bearing-surface for the latter, and the hole *f* (seen in Fig. 5) may also be tapered somewhat. In Fig. 5, *a'* represents a hammer, and in Fig. 6, *a''* represents a hatchet.

The eye *c* (see Fig. 7) need only be tapered at its front and rear margins—that is, it may be as wide at one end as at the other.

The screw-thread on the screw *e* might of course be on either end thereof; but it is preferable to place the thread on the tip of the screw, as shown.

Having thus described my invention, I claim—

1. A tool having an eye to receive the handle, and a handle-securing screw extending across said eye and screwing into one wall of the same, said screw having a cone or tapered portion within the said eye, substantially as and for the purpose set forth.

2. A tool having an eye to receive the handle, a screw-threaded hole in one wall of said eye to receive the handle-securing screw, a larger hole, opposite to said screw-threaded hole and in the opposite wall of the eye, to receive and pass the head of said screw, and the screw *e*, having a head, a tapered body, and a screw-threaded tip, substantially as set forth.

3. A tool having an eye to receive the handle, said eye being tapered from its inner or receiving end to its outer end, and a screw extending across said eye and screwing into one wall thereof, said screw having a tapered body, substantially as set forth.

4. A tool having an eye to receive the handle, said eye being tapered from its inner or receiving end to its outer end, and a screw extending across said eye near one side thereof and screwing into one wall of said eye, said screw having a tapered body, substantially as set forth.

5. The combination with a tool having an eye tapered from its receiving or inner end to its outer end, and a transverse screw-hole situated near one side of said eye, and a screw having a tapered body and adapted to fit in said screw-hole, of a handle tapered to fit into said eye and having a shoulder for said screw to take under, substantially as set forth.

6. The combination with an ax having an eye to receive a handle and a transversely-arranged screw-hole, and a tapered screw which occupies said screw-hole and extends across said eye, of a handle fitting into said eye and having a shoulder which takes over said screw, whereby the screw retains the handle in place, substantially as set forth.

In witness whereof I have hereunto signed my name, this 7th day of June, 1900, in the presence of two subscribing witnesses.

EVERETT K. LEFFINGWELL.

Witnesses:
HENRY CONNETT,
PETER A. ROSS.