

A. BEAUDRY.
Tool-Handle.

No. 164,070.

Patented June 8, 1875.

Fig. 1.

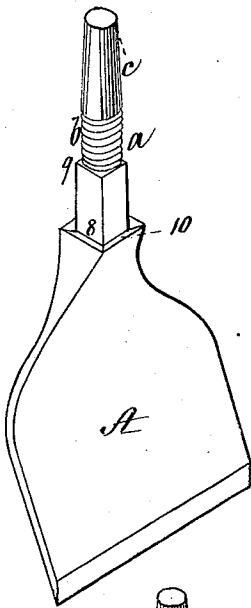


Fig. 2.

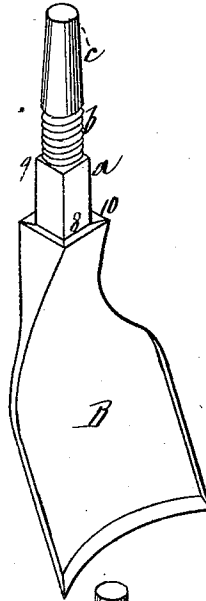


Fig. 3.

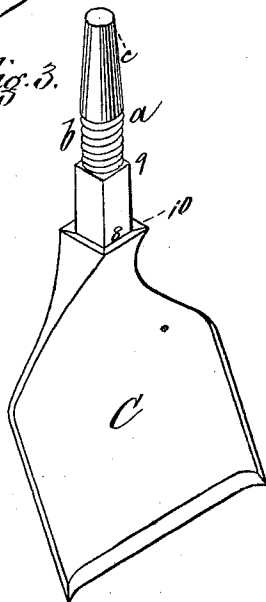
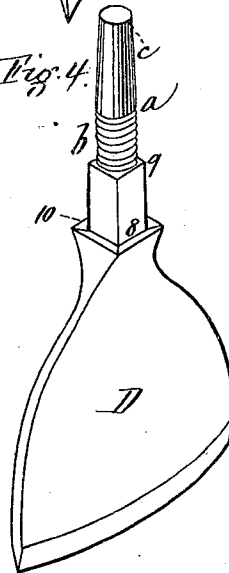


Fig. 4.



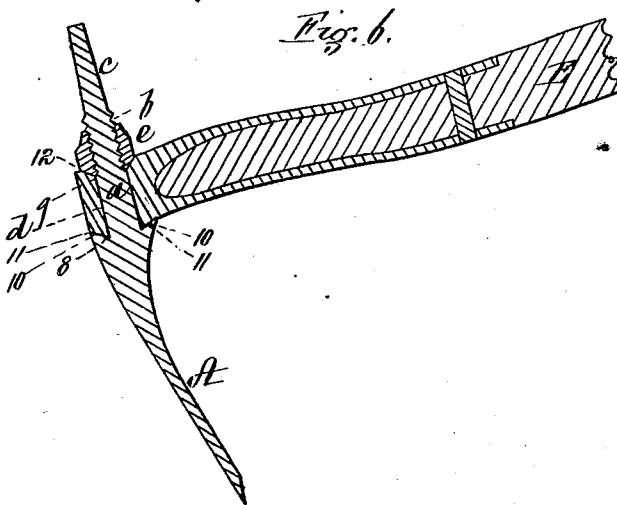
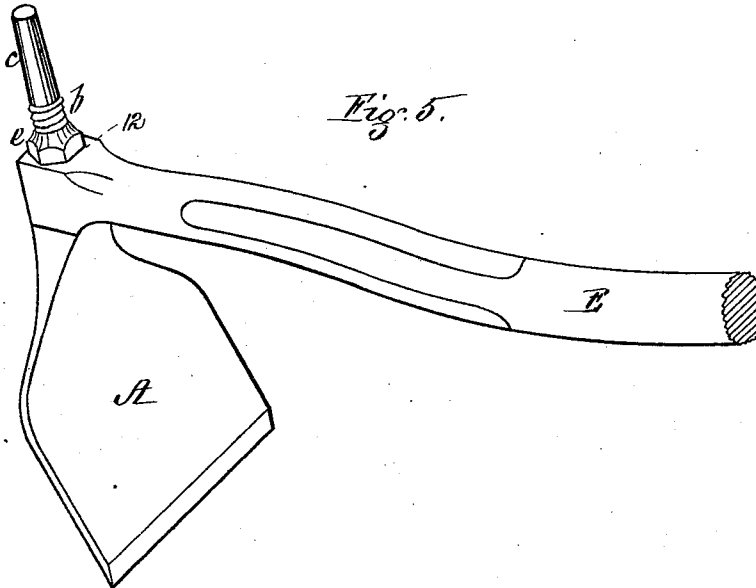
Witnesses,
W. J. Cambridge
E. W. Goodkind

Inventor,
Alexander Beaudry,
Per Teschemacher & Stearns,
Attorneys.

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G. S. T. Linnard

Inventor,
Alexander Beaudry,
Per Teschemacher & Stearns
Attorneys

UNITED STATES PATENT OFFICE.

ALEXANDER BEAUDRY, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN TOOL-HANDLES.

Specification forming part of Letters Patent No. **164,070**, dated June 8, 1875; application filed April 30, 1875.

To all whom it may concern:

Be it known that I, ALEXANDER BEAUDRY, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Tool-Handles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings making part of this specification, in which—

Figures 1, 2, and 3 are perspective views of adzes constructed in accordance with my invention; Fig. 4, a perspective view of an ax with my improvements applied thereto. Fig. 5 is a perspective view of one of the adzes provided with my improved handle. Fig. 6 is a longitudinal section through the center of the same.

Carpenters' adzes and axes, of the ordinary construction, are provided with tapering eyes for the reception of their respective wooden handles, each adz or ax having a separate and independent handle belonging thereto, which construction is objectionable for the following reasons: The jar of the blow soon causes the handle to work loose in the eye of the tool, and when it becomes worn down by grinding it is impossible to apply it to the grindstone without also grinding down the "eye-box," which weakens the material at this point to such an extent that the play of the handle is liable to be still further increased. The handle must also be removed in order to grind the tool, and is frequently split in its removal, and the labor and expense of providing a new handle are consequently incurred. Furthermore, considerable space is required to stow a number of adzes or axes, each provided with a separate handle.

To overcome the above-mentioned objections is the purpose of my invention, which consists in an adz or ax whose head is provided with a shank adapted to fit into the socket of a handle, which is readily removed therefrom, so as to apply it to any other description of adz or ax, one handle only being required for an indefinite number of them, the shank of each adz or ax being provided with a screw-thread for a nut to turn on, to securely hold the tool in place when fitted to the common handle, the under side of the socket of which is beveled, so as to snugly bear

on a beveled seat formed in the head of the tool, whereby should any wear take place it is uniform, and the play between the surfaces is readily taken up by tightening the nut, which is of convex form to fit into a concave seat at the outer end of the socket, by which construction a given number of adzes and axes, with their single common handle, may be stowed much more compactly than the same number provided with separate and independent handles, as heretofore.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A B C represent, respectively, a "straight-bit," "gouge," and "turned-lip" adz, and D an ax, tools ordinarily used by carpenters, joiners, &c. From the center of the head of each of these tools, and in line therewith, projects a shank, *a*, of the form seen, its lower portion being a frustum of a pyramid—i. e., square in cross-section, and larger at its base 8 than at its top 9, from which point the shank is circular, and provided with a screw-thread, *b*, extending nearly half-way to the upper end *c* of the shank. The head of the tool is broader than the base of its tapering shank, and is provided with beveled surfaces 10, inclined down toward its center, which form a seat for the beveled edges 11 of the under side of the head of the handle E to bear on, the handle being provided with a metal socket, *d*, for the reception of the shank *a* of the tool, the beveled surfaces 10 of the head of the tool and the beveled edges 11 of the socket snugly and exactly fitting each other, so that when the handle is applied to the tool and kept in place by a screw-nut, *e*, all wear of the parts is prevented. The upper or outer side of the head of the handle is provided with a countersink, 12, and the under side of the nut is convex and of corresponding size to fit snugly therein, the nut serving as a wedge for keeping the beveled surfaces constantly in contact with each other, and should any looseness or play occur it can be instantly taken up by tightening the nut. I prefer to make both the socket of the handle and the lower portion of the shank, which fits therein, tapering, as they may be more readily

fitted to each other than if they were of the same size in cross-section throughout.

If desired, a right-hand ax may be instantly converted into a left-hand ax, or vice versa, by simply removing the nut *e* and turning the shank of the ax a half-revolution in the metal socket of its handle.

By providing but one common handle with a metallic eye or socket for a number of adzes and axes having their shanks of corresponding form to fit therein, as above described, I am enabled to readily remove one tool therefrom and apply another thereto whenever a change is required, thereby avoiding the expense of separate handles for as many separate tools, while at the same time much of the labor of removing and replacing the handles to grind the tools, and the liability of splitting the handles incident to the ordinary construction of such tools, and to the old method of attaching their handles thereto, is entirely avoided. Furthermore, I am enabled to furnish a given number of tools of the description referred to with a single handle adapted for all of them at a much less cost than the same number of such tools, each provided

with a separate and independent handle; and I am also enabled to stow my improved tools much more compactly than is possible with those of the old construction.

I am aware that axes and other instruments have been provided with shanks adapted to fit into sockets, as shown in the patent to S. F. Streeter, December 2, 1873; but in instruments heretofore constructed the tool is liable to turn from the jar of the blow, and to overcome this difficulty is the object of my present invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

An adz or ax, with its beveled seat 10 and square shank *a* provided with a screw-thread, *b*, in combination with the nut *e* and a handle, *B*, having a square socket, *d*, provided with beveled edges 11 and a countersink, 12, substantially as and for the purpose set forth.

Witness my hand this 26th day of April, 1875.

ALEXANDER BEAUDRY.

In presence of—

N. W. STEARNS,
W. J. CAMBRIDGE.