

(No Model.)

N. J. REYNOLDS.
AX.

No. 551,837.

Patented Dec. 24, 1895.

Fig. 1.

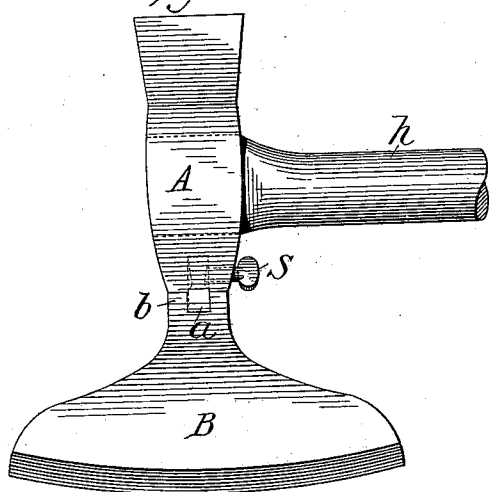


Fig. 2.

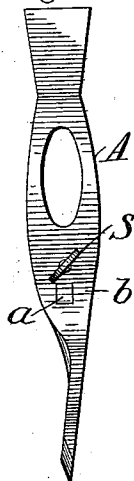


Fig. 3.

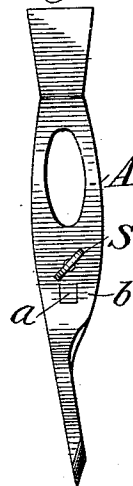


Fig. 4.

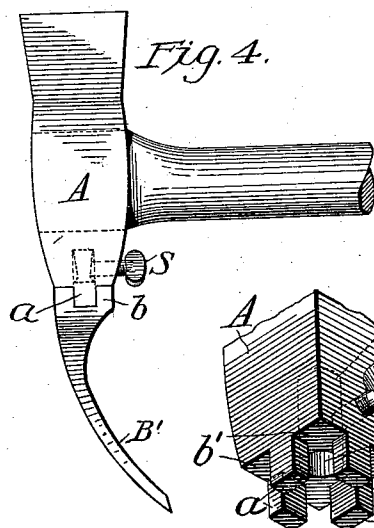


Fig. 5.

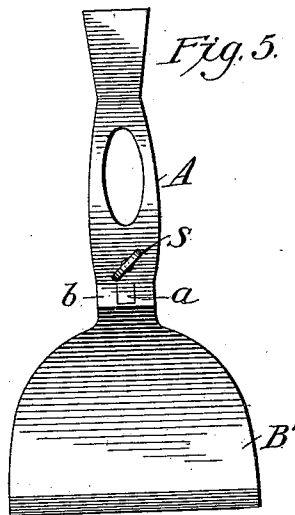
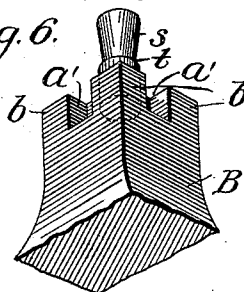


Fig. 6.



Witnesses.
E. F. Merriam
F. J. Gibbs.

Inventor.
Nelson J. Reynolds
per D. S. Repley
att'y

UNITED STATES PATENT OFFICE.

NELSON J. REYNOLDS, OF CLARK'S SUMMIT, PENNSYLVANIA.

AX.

SPECIFICATION forming part of Letters Patent No. 551,837, dated December 24, 1895.

Application filed June 21, 1895. Serial No. 553,627. (No model.)

To all whom it may concern:

Be it known that I, NELSON J. REYNOLDS, a citizen of the United States, residing at Clark's Summit, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Axes; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to that class of axes in which there is a removable and reversible bit, and the object of my invention is to provide a handy and simple reversible and convertible ax for carpenters and other woodworkers.

In the drawings, Figure 1 is a side view of my ax with hand-ax bit attached in the left-hand position. Fig. 2 is an end view of the same. Fig. 3 is an end view of the same with the bit reversed, so as to be in the right-hand position. Fig. 4 is a side view of the main part of my ax with an adz-bit attached, and Fig. 5 is a front view of the same. Fig. 6 is a detail view in perspective of the joint or means of attachment of bits to the ax-head.

Similar letters of reference refer to like parts throughout the several views.

A designates an ax-head and may be of almost any pattern as to the poll and eye, they being no part of my invention. The bit B may also be of any desired pattern—as, for example, it may be substituted by an adz-bit B' (shown in Figs. 4 and 5)—the principal feature of my invention being comprised in the means of attaching the various bits that may be used to the ax-head. The ax-head is provided with a socket *s'* adapted to receive the shank *s*. The socket *s'* is plain and cylindrical in form; but the shank *s* is swaged down or turned off so as to form an inverted frustum of a cone of the outer end of the shank, thus making it thinner at *t*, so that when the set-screw S is screwed down upon it in the socket *s'* the shank will be the more firmly held, it having a thicker part beyond the end of the

set-screw. The bit is held from twisting by means of the projections *a a*, &c., on the ax-head, which teeth or projections *a* are adapted to exactly fit into the recesses *a' a'*, &c., on the shank of the bit B, and the corner pieces *b b*, &c., of the shank of the bit are adapted to exactly fill up the corner recesses *b' b'* of the head-piece A, so that when the parts are put together a neat and perfect joint is presented.

If it is desired to change the ax from a left to a right hand ax, or vice versa, the set-screw S is unloosened until the shank *s* slips out far enough to allow the bit to turn. It is then turned half-way around, slipped back to place, and the set-screw tightened up and the workman has a reversed ax, or, if a different bit is wanted, the set-screw is loosened to let the shank *s* slip clear out of the socket *s'*, and any desired bit is substituted for the one removed. It is readily seen that the arrangement will also permit of a hand-ax bit being used in the fashion of an adz, if the workman finds occasion to do so.

I claim—

In an ax of the kind described, the combination of the head A provided with a cylindrical socket *s'* and the projections *a a a a* and recesses *b' b' b' b'* contiguous and surrounding the opening of the said socket *s'*; the bit B provided with a shank *s* in the form of an inverted frustum of a cone integrally made with the said bit and contiguous and surrounding the base of the said shank the projections *b b b b* and the recesses *a' a' a' a'* reciprocals of the projections and faces in the head A the said shank adapted to be entered into the said socket *s'* and secured therein by means of the set screw S, and holding the bit in any one of the four positions permitted by the construction; and the said shank adapted when the said set screw is loosened, to be partially withdrawn to permit of turning the bit into any of the said positions desired without wholly separating said head and bit.

In testimony whereof I affix my signature in presence of two witnesses.

NELSON J. REYNOLDS.

Witnesses:

CLARENCE BALENTINE,
FRED E. BEERS.