(No Model.)

W. ANDREWS.

AX.

No. 255,711. Patented Mar. 28, 1882.

Fig. 1.

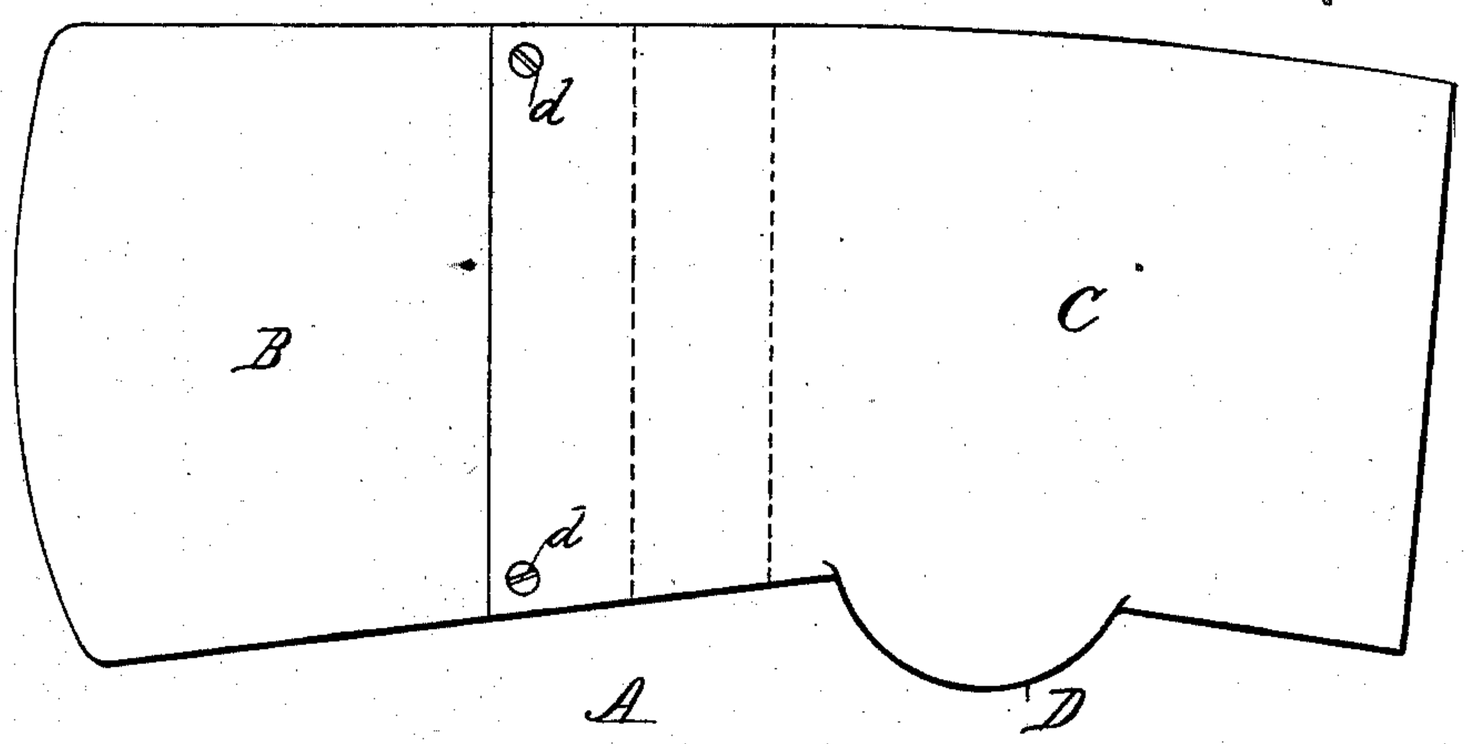
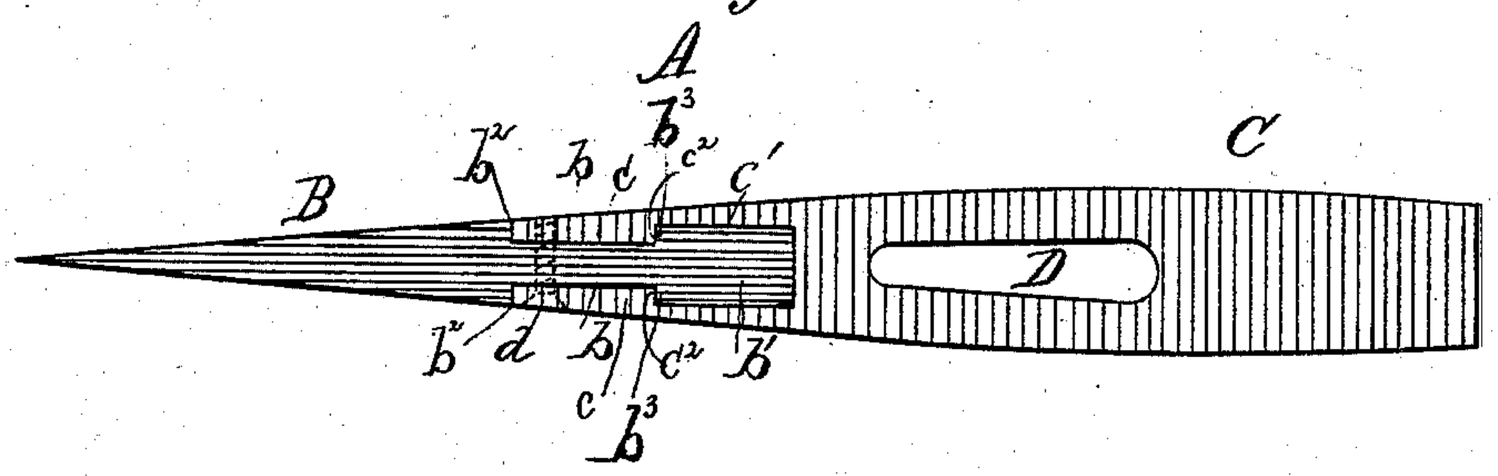


Fig. 2.



WITNESSES=

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UNITED STATES PATENT OFFICE.

WILLIAM ANDREWS, OF MADDEN, ASSIGNOR OF ONE-HALF TO ZACHARIAH H. WILLIAMS, OF BEACH SPRINGS, MISSISSIPPI.

AX.

SPECIFICATION forming part of Letters Patent No. 255,711, dated March 28, 1882.

Application filed November 15, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM ANDREWS, a citizen of the United States of America, residing at Madden, in the county of Leake and State of Mississippi, have invented certain new and useful Improvements in Axes; and I do hereby 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 letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to axes; and it consists of an ax having a detachable bit, which can easily be replaced, when dull, by a new one, thus saving the time usually consumed in sharpening axes of ordinary make during working hours.

In the drawings, Figure 1 is a side, and Fig. 2 an end view, of my ax.

A represents an ax, of which B is the bit, C is the head, and D is the eye.

In the upper portion of the bit grooves *b b*, having square shoulders b^2 b^2 at their lower ends, are formed upon both its sides, and its upper portion terminates in a rectangular head, *b'*, having square shoulders b^3 upon its lower end, as shown.

The head or poll of the ax C is formed of a solid piece of metal, and is pierced by the eye D. Its lower portion is pierced by a rectangular slot, *c'*, which has projecting into its lower portion the projections *c c*, having square shoulders c^2 c^2, as shown. In connecting the bit to the head of the ax the rectangular head *b'* passes into the slot *c'*, and the projections *c c* into the grooves *b b*. A square dovetail joint is thus formed between the projections *c c*, the grooved portion of the bit, and the head *b'*.

By the construction of the bit B with a rectangular head, *b'*, having square shoulders b^3 b^3, and of the projections *c c*, with corresponding square shoulders, c^2 c^2, forming a square dovetail union between the parts, the connection of the bit with the head is capable of resisting greater strain without springing the parts than was the head made in separate parts.

It will be seen that when striking at an angle the tendency of the bit will be to wrench apart the jaws of the head between which it is secured. I meet and overcome this tendency by making the head of the ax solid and placing screws *d* through the lower portion of the head and the bit, which imparts greater strength to the union than if the head were constructed with joined halves and a beveled dovetail union, as shown in the patent to Quast, No. 96,837.

Extending through each corner of the lower end of the head are screws *d d*, which act to hold the bit in its place within the head.

What I claim is—

An ax constructed with a solid head or poll, C, and a detachable bit, B, said poll having formed through its lower portion the rectangular slot *c'*, which has projecting into it the projections *c c*, provided with square shoulders c^2 c^2, and the detachable bit B, having in its upper portion the grooves *b b*, and terminating in a rectangular head, *b'*, having square shoulders b^3 b^3, said shoulders b^3 forming square dovetail joints with the shoulders c^2 c^2 when the bit is placed in the ax, and the whole secured together by the screws *d*, placed through the lower portion of the head and the bit, substantially as shown and described.

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

WILLIAM ANDREWS.

Witnesses:

T. A. HENRY,

I. M. MATTAWAY.