J. O. ROLLINS.

AXES.

No. 184,799. Patented Nov. 28, 1876.

Fig: 1.

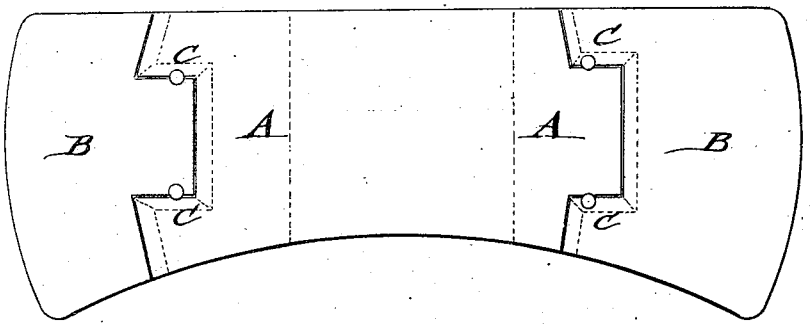


Fig: 2.

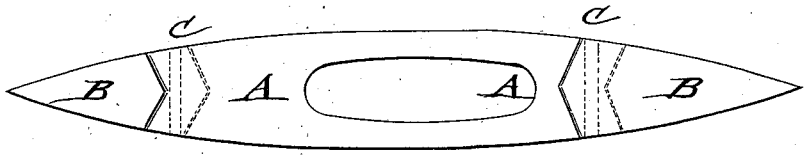
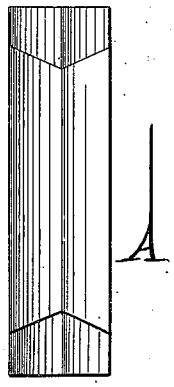


Fig: 3.



WITNESSES:

Chas. Nichols
John Goodbody.

INVENTOR:

J. O. Rollins.

BY

Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN O. ROLLINS, OF TRUCKEE, CALIFORNIA.

IMPROVEMENT IN AXES.

Specification forming part of Letters Patent No. **184,799**, dated November 28, 1876; application filed May 9, 1876.

To all whom it may concern:

Be it known that I, JOHN O. ROLLINS, of Truckee, in the county of Nevada and State of California, have invented an Improvement in Axes, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a side view, Fig. 2 a top view, and Fig. 3 an end view, of my improved ax with bit detached.

Similar letters of reference indicate corresponding parts.

My invention relates to an ax having detachable bits that may be readily interchanged and securely attached, so as to admit the use of one ax with thick or thin bits, for different purposes, and the replacing of dull bits by sharp ones.

The invention will first be described in connection with drawing, and then pointed out in the claim.

In the drawing, A represents the body of the ax, and B the detachable bits. The body A may be made of cast-iron, if desired, which admits the cheaper manufacture of the axes. The ends of the body A are provided with tapering or concave grooves, or with beveled or convex edges, to which the corresponding beveled or recessed bits are fitted, both methods being shown in Fig. 1. The middle part of the ax-body is centrally recessed back of or extended beyond the slightly-inclined side parts, the bits being in the same manner made with a central extension or recess, so as to be connected to the ax, and thereby protected against lateral displacement, as indicated in Fig. 1. When the bits are placed in position they are locked against displacement in the longitudinal direction of the ax by rivets C of soft metal, that are driven in tightly to retain the bits securely on the ax. The rivets may be easily removed by a steel punch for the purpose of replacing dull or broken bits, or inserting bits of different size for different work, as required.

The rigid fastening of the ax and bits by the joint action of the concavo-convex edges of the interlocking middle parts and of the rivets secures a superior connection of the bits, together with the facility of interchanging the same.

I am aware that axes have been heretofore made with an edge held by mortise, tenon, and dowel-pins, the mortise being in the bit and the tenon in the body of the ax.

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

The method of attaching a bit to an ax-body by driving convexed edges of the former into grooves of the latter, as shown and described.

JOHN O. ROLLINS.

Witnesses:

D. J. CROWLEY,

C. C. DARLING.