

(No Model.)

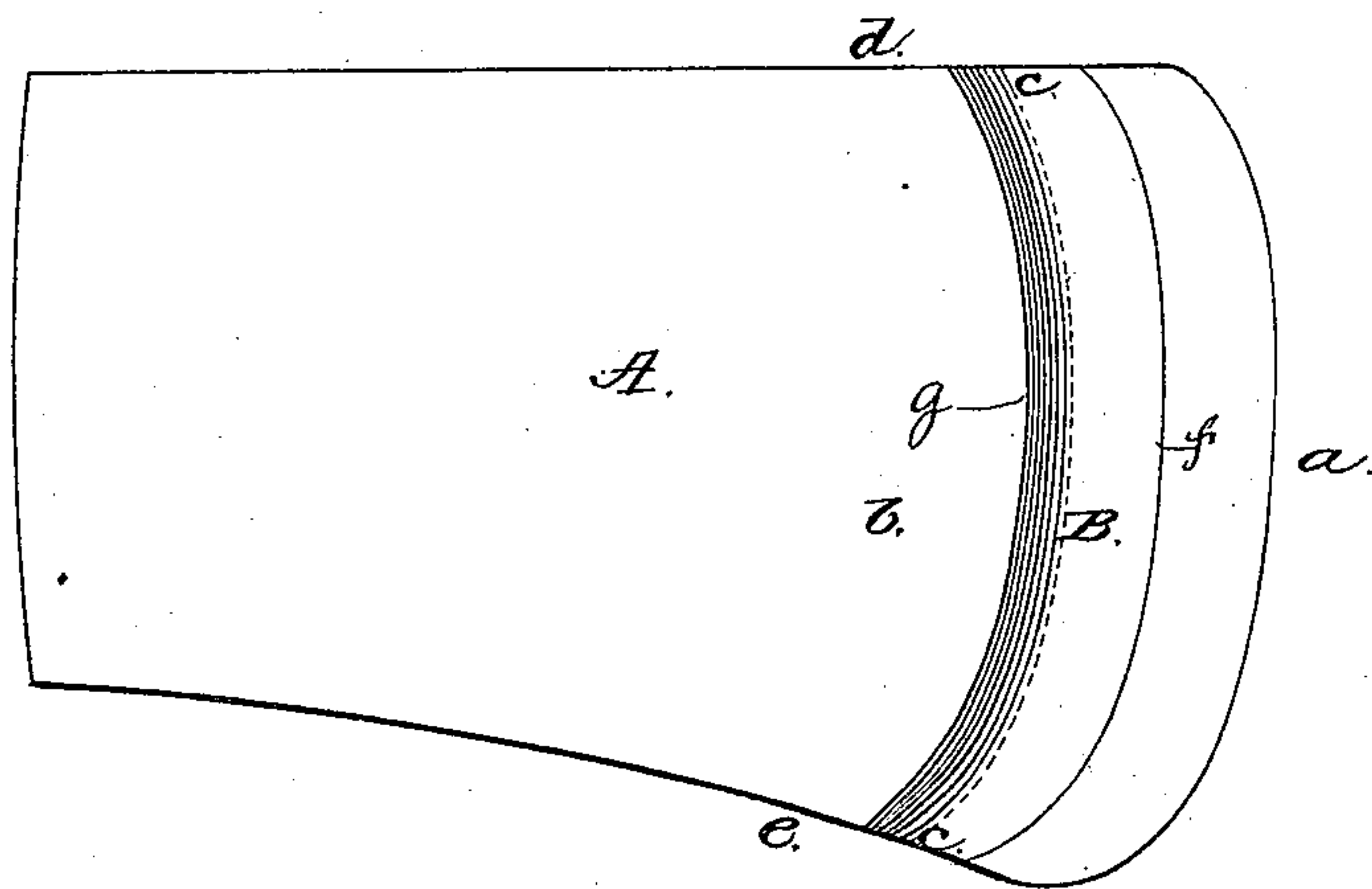
P. R. SMITH.

AX.

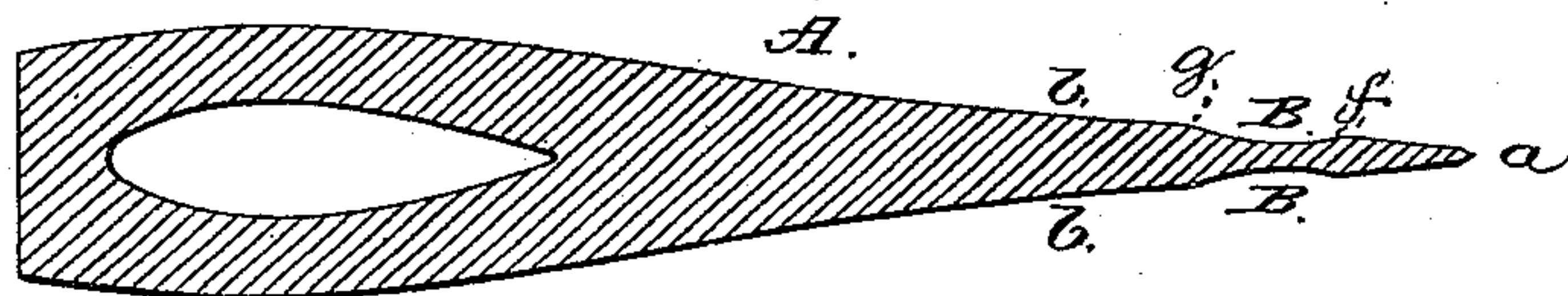
No. 246,566.

Patented Aug. 30, 1881.

*Fig. 1.*



*Fig. 2.*



WITNESSES

*Villette Anderson*  
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INVENTOR

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# UNITED STATES PATENT OFFICE.

PETER R. SMITH, OF PORTLAND, OREGON.

AX.

SPECIFICATION forming part of Letters Patent No. 246,566, dated August 30, 1881.

Application filed January 29, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, PETER R. SMITH, a citizen of the United States, resident at Portland, in the county of Multnomah and State of Oregon, 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.

Figure 1 is a side elevation of an ax embodying my improvements, and Fig. 2 is a horizontal longitudinal sectional view of the same.

This invention relates to axes.

The invention consists in the construction hereinafter described, and particularly pointed out in the claim.

In the drawings hereto annexed, A is an ax, with the cutting-edge *a*. A short distance back of this edge *a*, upon each side *b b* of the ax, is a groove, B, made concentric with said edge, and having its ends *c c* running out at the front, I, and rear, *e*, of the ax, whereby two bits, *f* and *g*, are formed near the cutting-edge *a*.

Before my invention an ax has been made with a groove on each side, but differing materially from mine. This groove runs across the side straight, and is made elliptical, which varies the width of the thickened portion between the cutting-edge of the ax and the lower edge of the groove. By making the groove as shown in the annexed drawings, important advantages accrue.

In releasing an ax from the wood after each stroke the ax is worked backward and forward, which action is materially assisted by making the edges of the grooves concentric with the cutting-edge, and by leaving the ends of the grooves open. The grooves collect gum, sap, dirt, &c., and the open ends allow of their ready and easy removal. The grooves being concentric with the cutting-edge, their top edges are convex—that is, they are parallel with said cutting-edge; and as the grooved portion of the ax follows the cutting-edge into the wood, these convex edges follow and continue easily the wedging action, which would be checked if they were concave.

The sides of an ax have been made with concave surfaces extending from the beveled bit back to the eye of the ax; but protection is asked herein only for the construction shown and described, and hereinafter specifically claimed.

What I claim is—

As an improved article of manufacture, an ax, A, having the concentric grooves B B, provided with open ends *c c* near the cutting-edge *a*, and bits *f g* at the sides of said grooves, as set forth.

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

PETER R. SMITH.

Witnesses:

THOMAS PHILLIPS,  
B. S. HOXSIE.