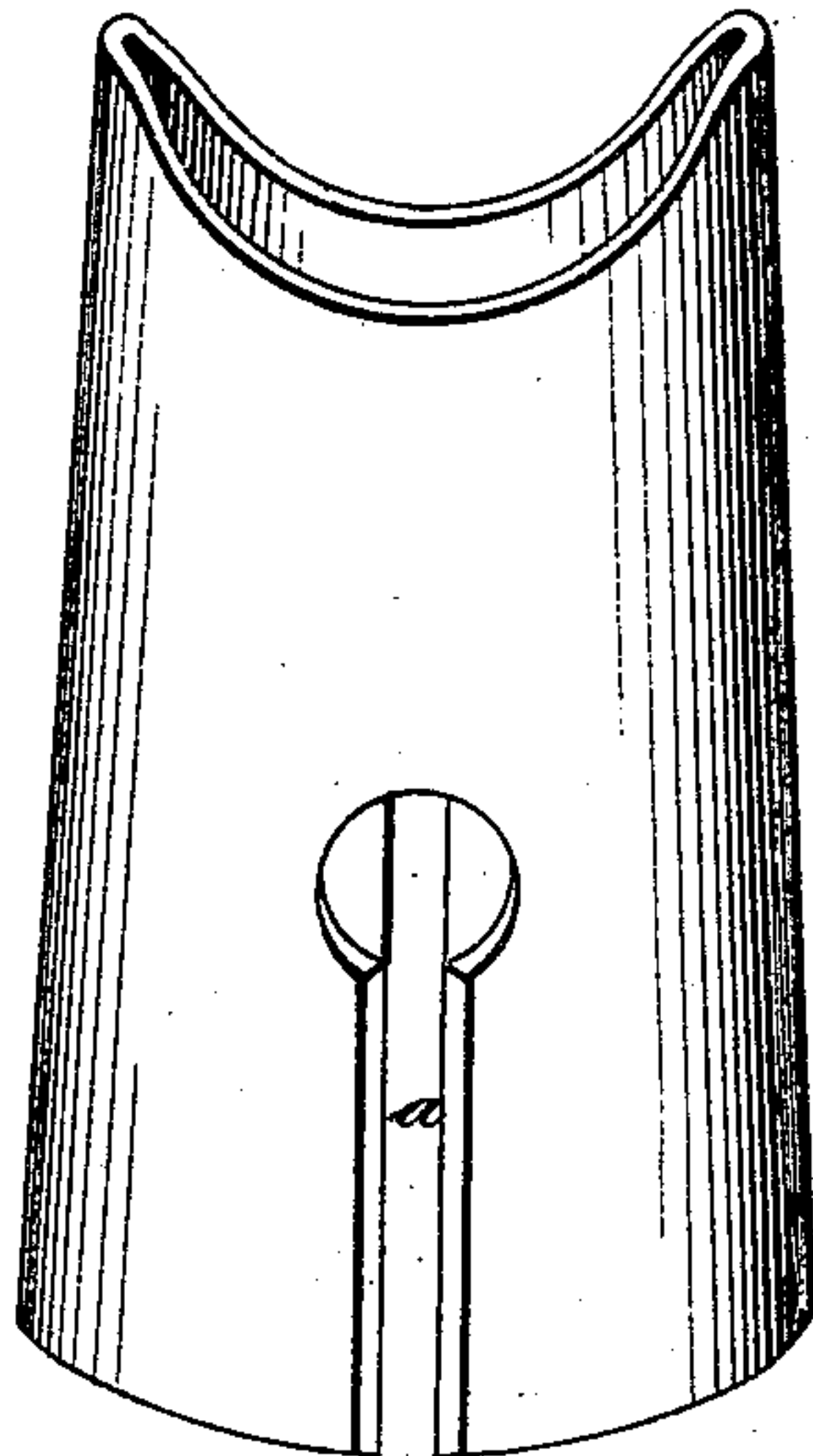


C. A. HARDY.  
SOCKETS FOR TOOL HANDLES.

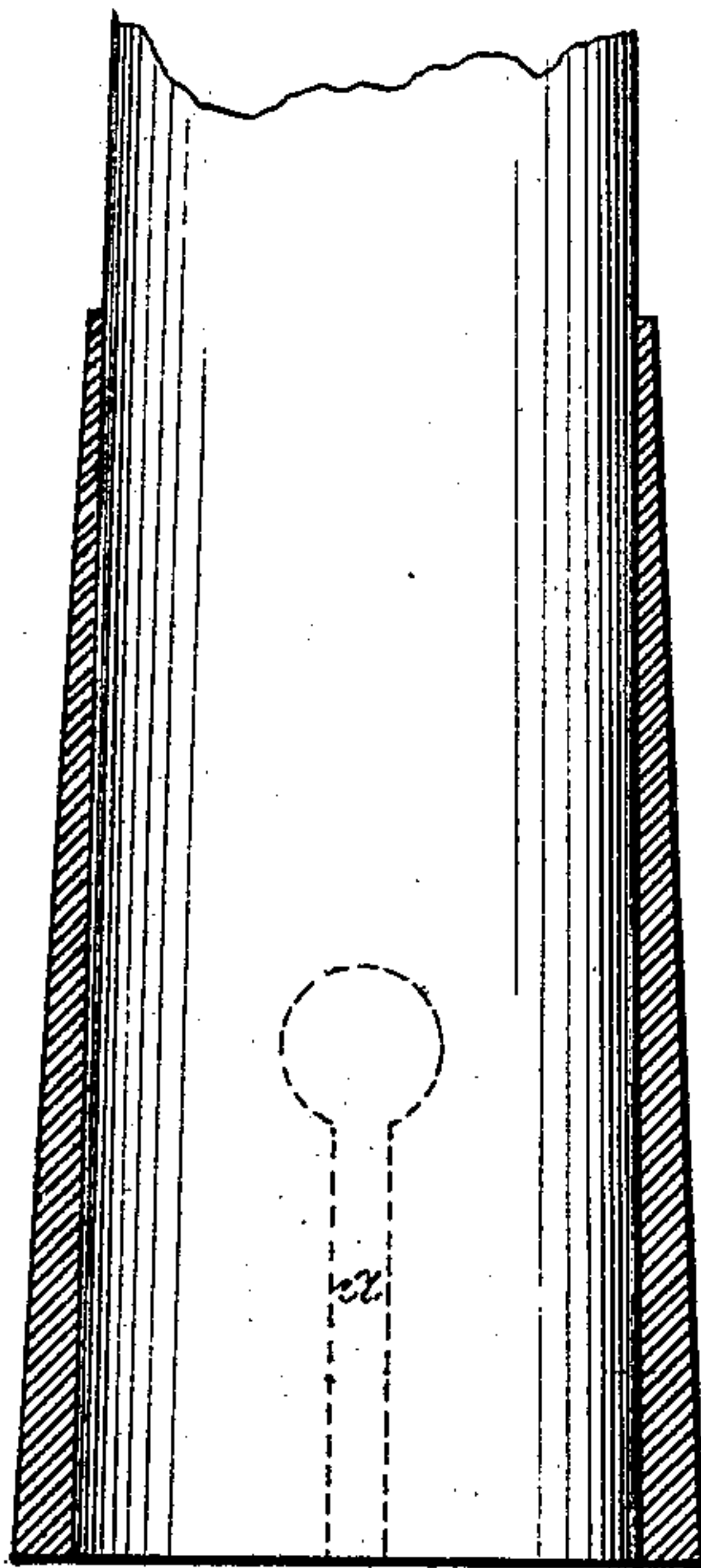
No. 180,126.

Patented July 25, 1876.

*Fig. 1.*



*Fig. 2.*



*Witnesses.*

*E. B. Brown*  
*Wm. J. Moss*

*Inventor.*

*Charles. Steward Hardy*

# UNITED STATES PATENT OFFICE.

CHARLES A. HARDY, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN SOCKETS FOR TOOL-HANDLES.

Specification forming part of Letters Patent No. **180,126**, dated July 25, 1876; application filed June 9, 1876.

*To all whom it may concern:*

Be it known that I, CHARLES ATWOOD HARDY, of Philadelphia, in the State of Pennsylvania, have invented an Improvement in Sockets for Tool-Handles, of which the following is a specification:

The purpose of this invention is to provide for pick-handles a protective socket, which shall be expansive and adjustable to the eye of the pick.

Figure 1 is a view of said socket in perspective. Fig. 2 is a horizontal transverse section.

This socket is of metal, preferably of malleable cast-iron, and may be of such length and breadth as may be preferred for various tool-handles.

The castings as they come from the tumbling-barrel are driven upon the handles, a templet of proper size and form (corresponding to the eye of the pick) encircling the socket at the same time to press it to the exact form and size of the eye of the tool, and to prevent over expansion. Wedges, preferably of wood, are then driven into the end of the handle, to firmly secure it within the socket.

The interior of said socket may be of uniform diameter, or may taper either way or both ways from the center, to add to its firmness when the handle is wedged within it.

The exterior surface of the socket is preferably tapered from end to end, but may be formed with parallel sides, which, by wedg-

ing, can be forced to assume the taper of the pick-eye.

Referring to the drawings, *a* is the split or opening in said socket, which permits of its expansion. Said slit may terminate in a circular enlargement, as shown in the drawing, or in any form preferred, calculated to prevent the continuation of the slit beyond the point desired, and at the same time allow sufficient expansion.

These sockets can be finished at small expense, no filing or grinding being required to make them fit the pick-eye. The greatest nicety of fit requisite may be obtained by simply polishing the socket upon an emery-belt.

To attach for use, the pick or other tool is simply slid upon the handle and driven forcibly upon the socket.

The socket can be further expanded at any future time by an additional wedge.

I do not claim the attachment of picks to their handles by mere friction or gripe between their surfaces, nor do I claim as new a metallic bearing beneath the eye of a pick; but

I claim as my invention—

The expansive and adjustable metallic socket, substantially as and for the purpose described.

CHARLES ATWOOD HARDY.

Witnesses:

E. B. BROWN,  
WM. J. MOSS.