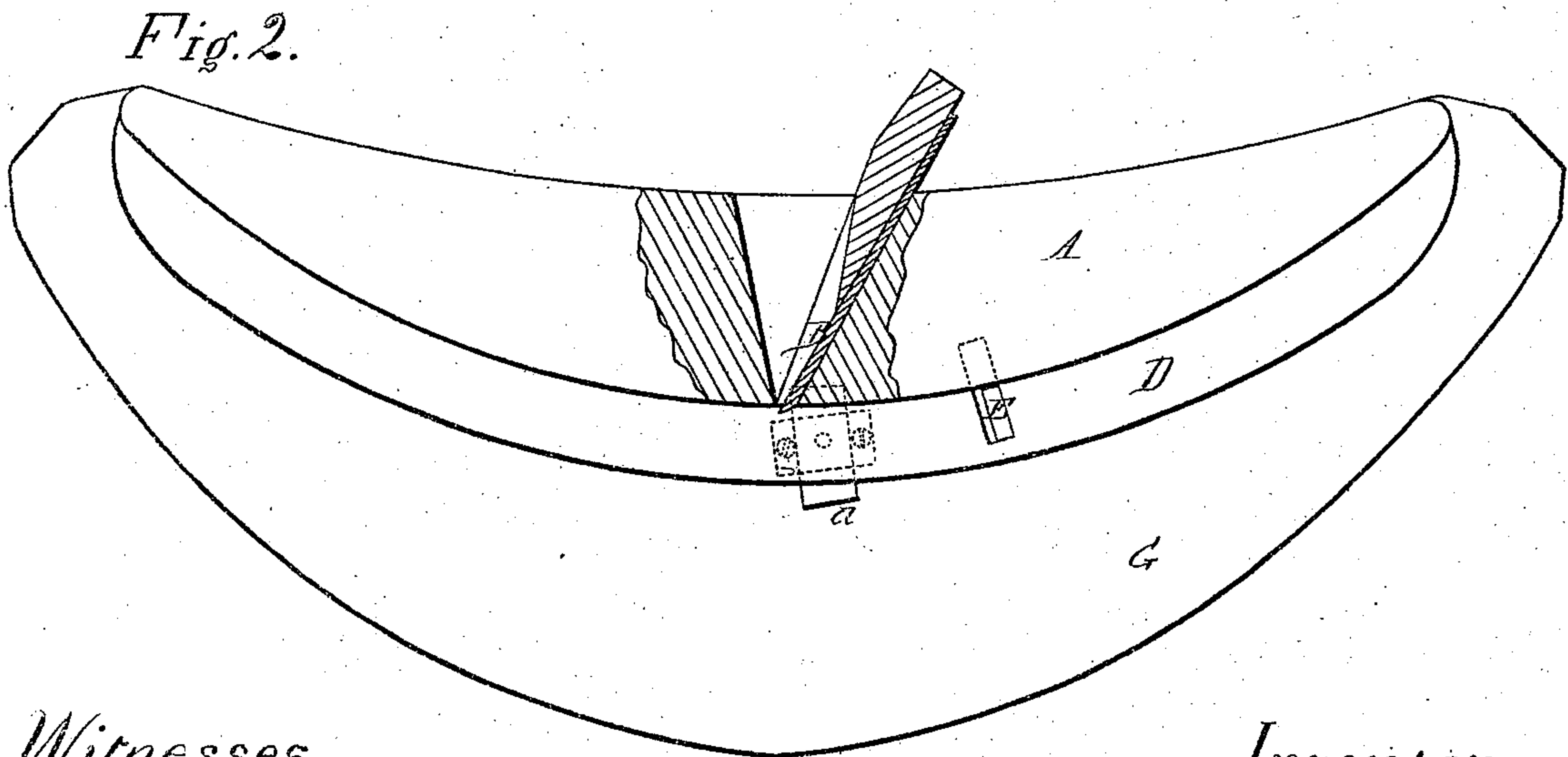
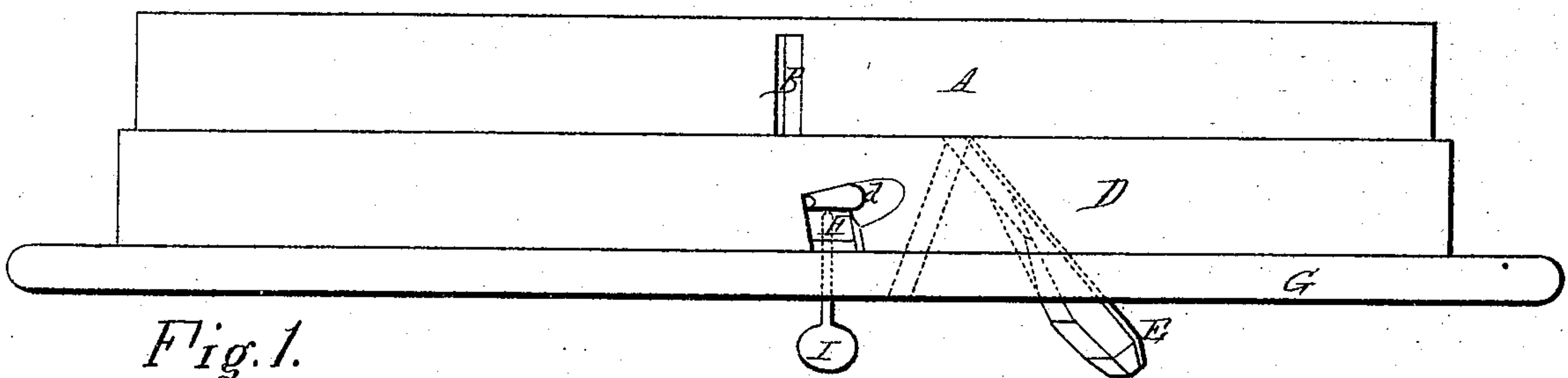


A. BUSENGER.

Improvement in Coopers Croze and Howel.

No. 119,570.

Patented Oct. 3, 1871.



Witnesses.

Villette Anderson.
D. P. Lane

Inventor.

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UNITED STATES PATENT OFFICE

ANTHONY BUSENGER, OF MOUNT SOLON, VIRGINIA.

IMPROVEMENT IN COOPERS' CROZES AND HOWELS.

Specification forming part of Letters Patent No. 119,570, dated October 3, 1871.

To all whom it may concern:

Be it known that I, ANTHONY BUSENGER, of Mount Solon, in the county of Augusta and State of Virginia, have invented a new and valuable Improvement in Coopers' Croze and Howel; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a face view of my invention. Fig. 2 is an under-side view of the same.

This invention has relation to a combination-tool for coopers' use; and it consists in the construction and arrangement of a chamfering-plane, leveling-plane, and crozing-bit, for shaping the rims of barrels, as hereinafter described.

In the accompanying drawing, representing this tool, A indicates the chamfering-stock, constructed with a segmental or convex face of a size and nature to suit the kind or size of barrel the rim of which is to be chamfered. B represents the chamfering-bit, inserted from the back of the stock, its edge projecting beyond the convex face. D designates a second stock, designed to hold the leveling and crozing-bits. It is the same in curvature as the chamfering-stock, their convex faces being segments of the same circle. The convex face of the stock D projects beyond that of the stock A, so that when the latter is be-

ing used the flat planing surface E, lying between the two respective concave surfaces, and having the bit F, shall slide around the edge of the barrel and plane the staves even and smooth. From the convex surface of the stock D the end of a groove or crozing-bit, *d*, projects. It is brought into use after the barrel has been chamfered and leveled, and is guided by means of a ledge or flange, G, projecting from its upper side. This bit cuts the croze inside the barrel to receive the heading. The chamfering and leveling bits are held in mortises by blocks in the usual manner. The crozing-bit may be raised and lowered, to suit the depth below the edge of the barrel which it is desired to croze, by inserting or removing small blocks of wood H from the mortise of the crozing-bit. A clamping-screw, I, is employed to tighten and hold said crozing-bit in place. The leveling-bit is held in a mortise cut through from the upper surface of the flange G, as shown in the drawing.

I claim as my invention—

The coopers' plane, composed of the parts A, D, and G, and the irons *a*, B, and E, substantially as and for the purpose described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

ANTHONY BUSENGER.

Witnesses:

WM. C. REVERCOMB,
JACOB T. SHUE.

(25)