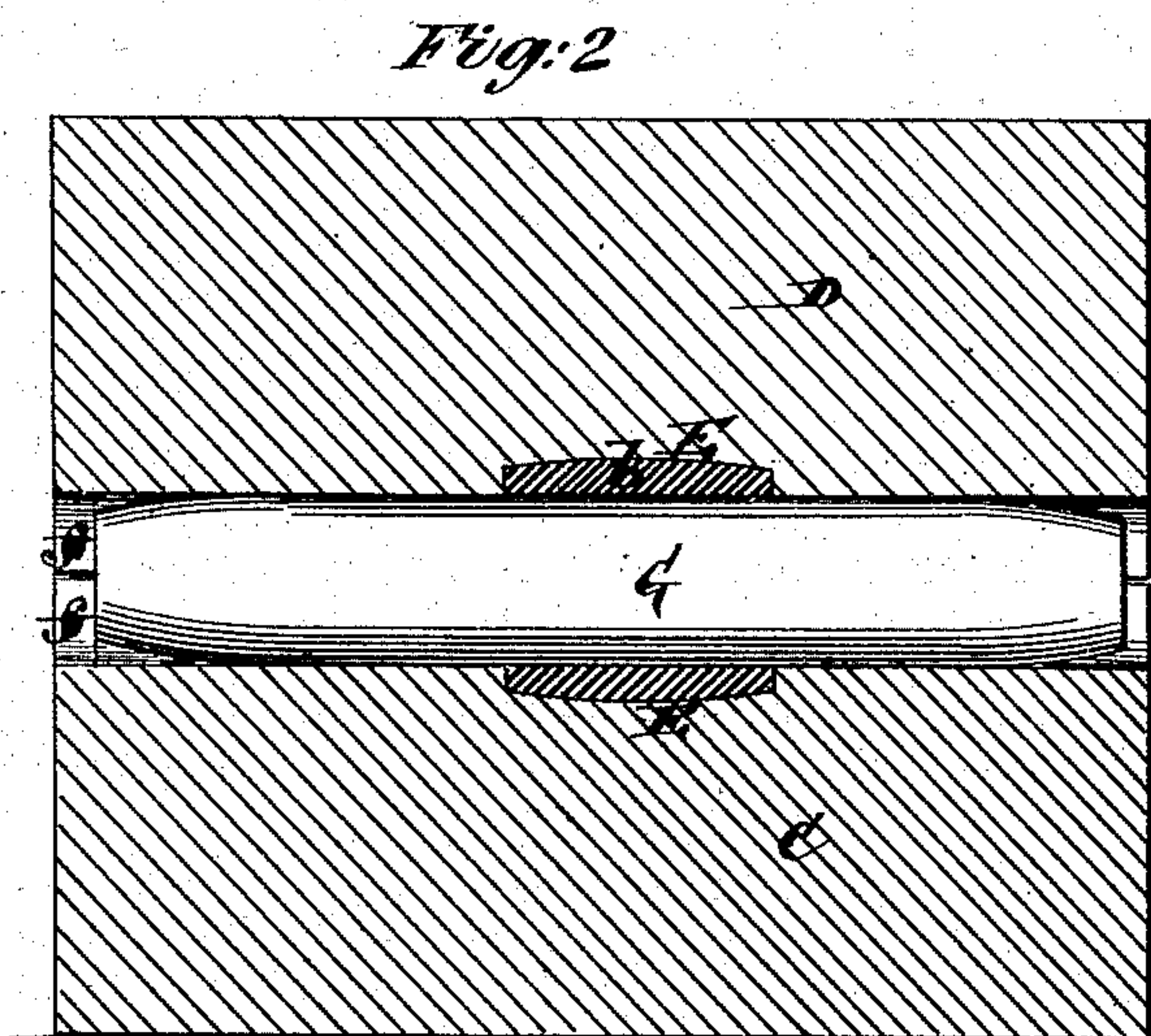
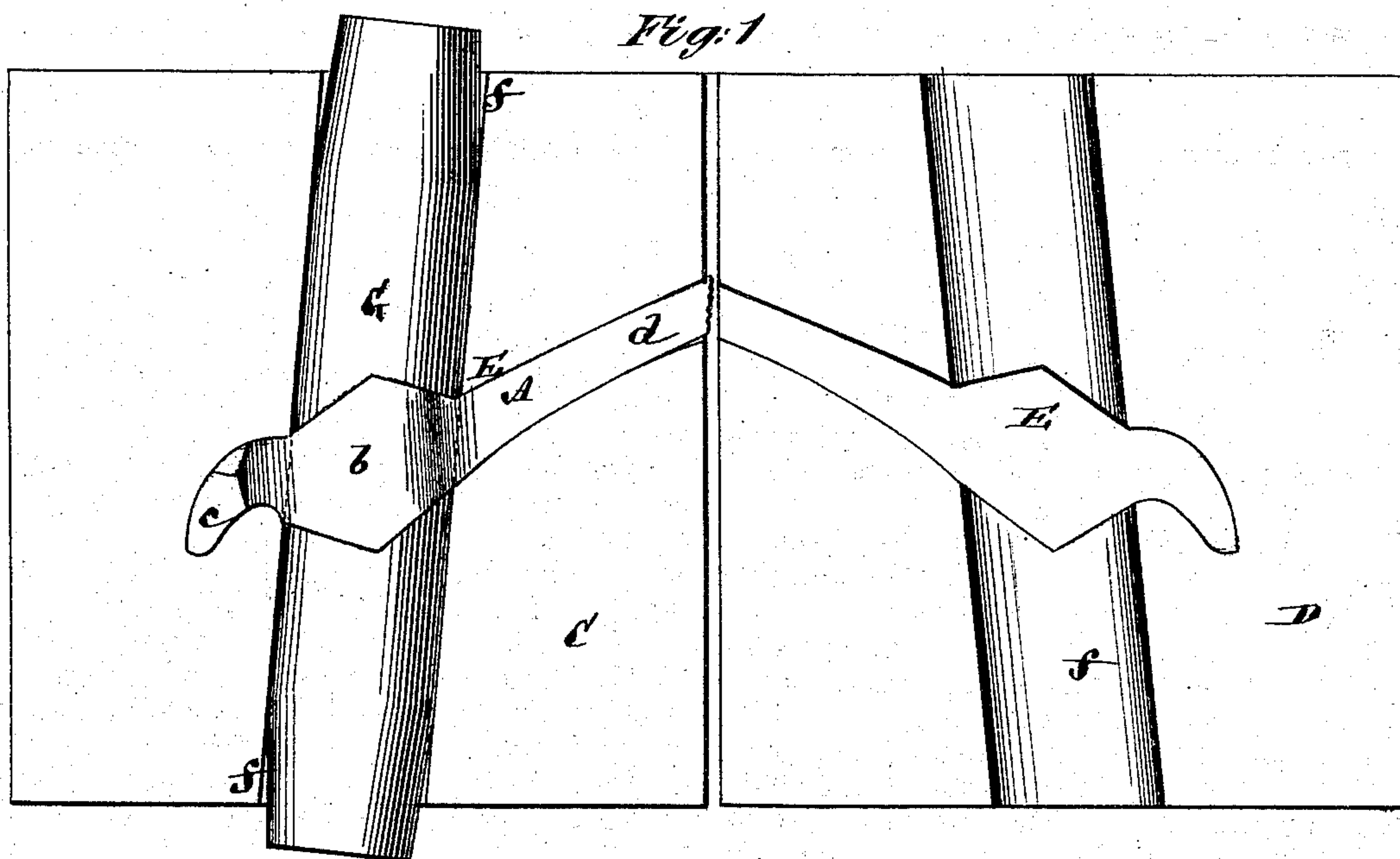


W. E. SNEDIKER.

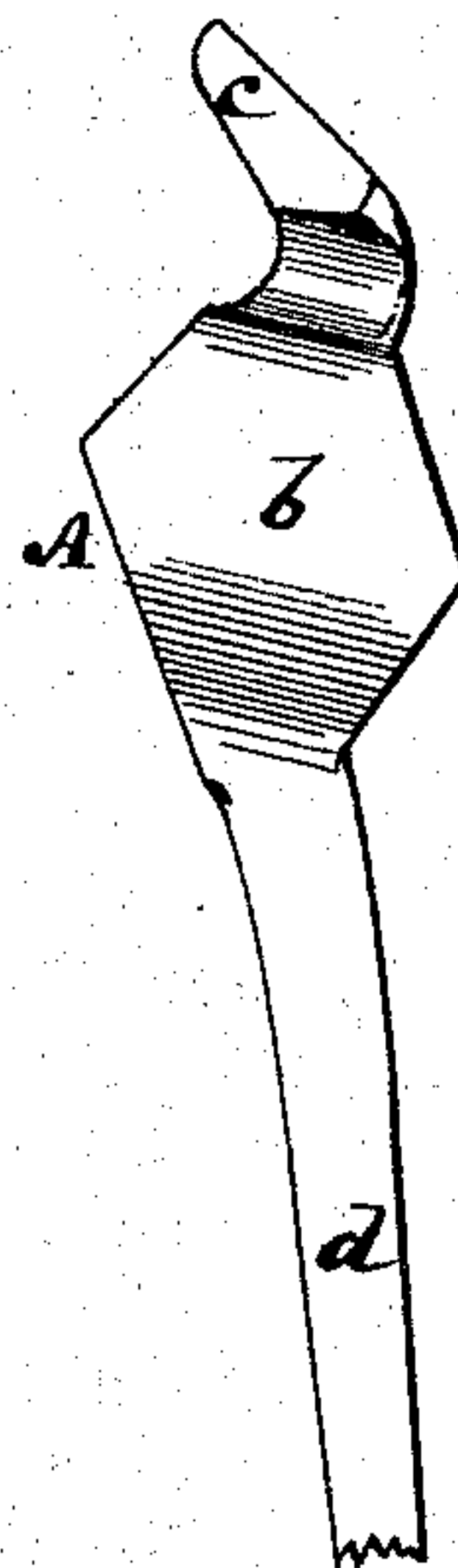
Dies for Finishing the Joints of Nippers.

No. 156,824.

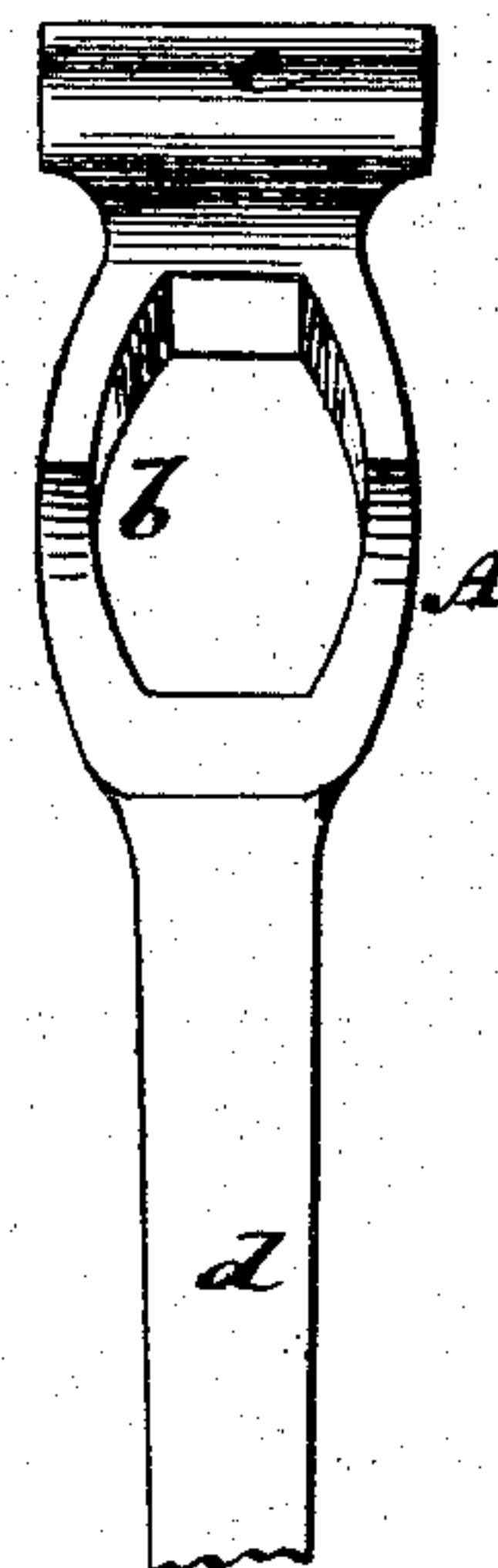
Patented Nov. 10, 1874.



*Fig. 3*



*Fig. 4*



Witnesses:

Michael Ryan  
Fred. Wayne

Wm E. Snediker  
by his Attorney  
Bromwell



# UNITED STATES PATENT OFFICE.

WILLIAM E. SNEDIKER, OF CHARLOTTEBURG, NEW JERSEY.

## IMPROVEMENT IN DIES FOR FINISHING THE JOINTS OF NIPPERS.

Specification forming part of Letters Patent No. 156,824, dated November 10, 1874; application filed May 12, 1874.

*To all whom it may concern:*

Be it known that I, WILLIAM E. SNEDIKER, of Charlotteburg, in the county of Passaic and State of New Jersey, have invented an Improvement in Dies for the Manufacture of Pinchers and Nippers, of which the following is a specification:

This invention relates to dies for forming the female portion or limb of pinchers, nippers, and other tongs-like tools, or rather for forming the box-joint of said limb, whereby stock and labor are economized, and a truer and smoother joint is produced.

As in the case of my previous improvement, described in Letters Patent No. 142,955, issued September 16, 1873, the box-joint of the female limb of the tool is produced by dies designed to be used in a power-press—that is, the one die in the bed and the other in the plunger—but differently constructed to my former dies as regards their reception of the forward portion of the limb, and dispensing with reversely-angular punches, a mandrel lying within recesses in the dies operating to establish the opening through the joint, whereby I avoid all irregularity, taper, and central fin in said opening, giving a straight finish and broad bearing for the male portion of the joint, likewise avoiding outside fin, and whereby the female joint is not spread or male joint roughened when closing the limbs by the action of the dies.

In the accompanying drawing, Figure 1 is a face view of a pair of dies suitable for making the forward or box joint of the female limb of a pair of nippers, the one of said dies having said limb within it, and the mandrel as fitted within or through it. Fig. 2 is a central vertical section of said dies, female limb, and mandrel, after the dies have been brought together in forming the female limb or box-joint thereof. Fig. 3 is a side view, and Fig. 4 is a face view, of the female portion of the nippers, or forward portion thereof, made in accordance with my invention.

A is the female limb, in part, of a pair of nippers, having a box-joint, *b*, within which the joint of the male limb works on a pivot or rivet connecting the two. C is the lower and D the upper die used in producing the female limb of the pinchers.

Said dies may be constructed on opposite margins of their faces, with breaking-down

portions for the sides and edges of the bar of which the limb is to be made, for the purpose of preparing the limb for the joint-forging portion of the dies, which is the only part it is necessary here to refer to in particular.

Such dies are formed facially, with recesses E in them, corresponding with the box-joint *b* of the female limb, the mouth or lips *c* thereof, and the shank or handle portion *d* of the same, half of the limb being formed in the one die C, and the other half in the other die D. In these dies the limb A is received laterally within the dies, instead of edgewise, as in my former patent; and, prior to inserting it within the bottom die C, it is slightly opened at its box-joint *b* to receive a mandrel, G, through it, which mandrel may be made tapering at either end, to facilitate the opening of the joint, without, however, punching out metal, as is ordinarily done, or at least without punching out more than sufficient metal to introduce the mandrel G. This mandrel, which is of uniform or straight construction in its middle, after being driven to its place within the eye or joint of the limb, lies in recesses *f f* made in the upper and under dies, so that when the latter are brought together the sides of the female limb are left smooth on their exterior, without outside fin; also, the interior formed straight, without inside fin or reverse taper, and with a smooth and broad bearing-surface for the joint of the male limb to work in; also, whereby, when, in closing the joints one upon or within the other, the two dies are brought together, the upper one coming down flat upon the lower one, and so that the joint *b* of the female limb is not spread beyond its due limits, nor the joint of the male limb roughened. The dies, too, are very inexpensive as regards construction.

What I claim as new, and desire to secure by Letters Patent, is—

The dies C D, constructed to receive the female portion of the box-joint *b* of the limb A within them, in combination with the mandrel G and recesses *f f*, the whole being arranged substantially as and for the purposes herein set forth.

W. E. SNEDIKER.

Witnesses:

C. VREELAND,  
JOHN R. CARR.