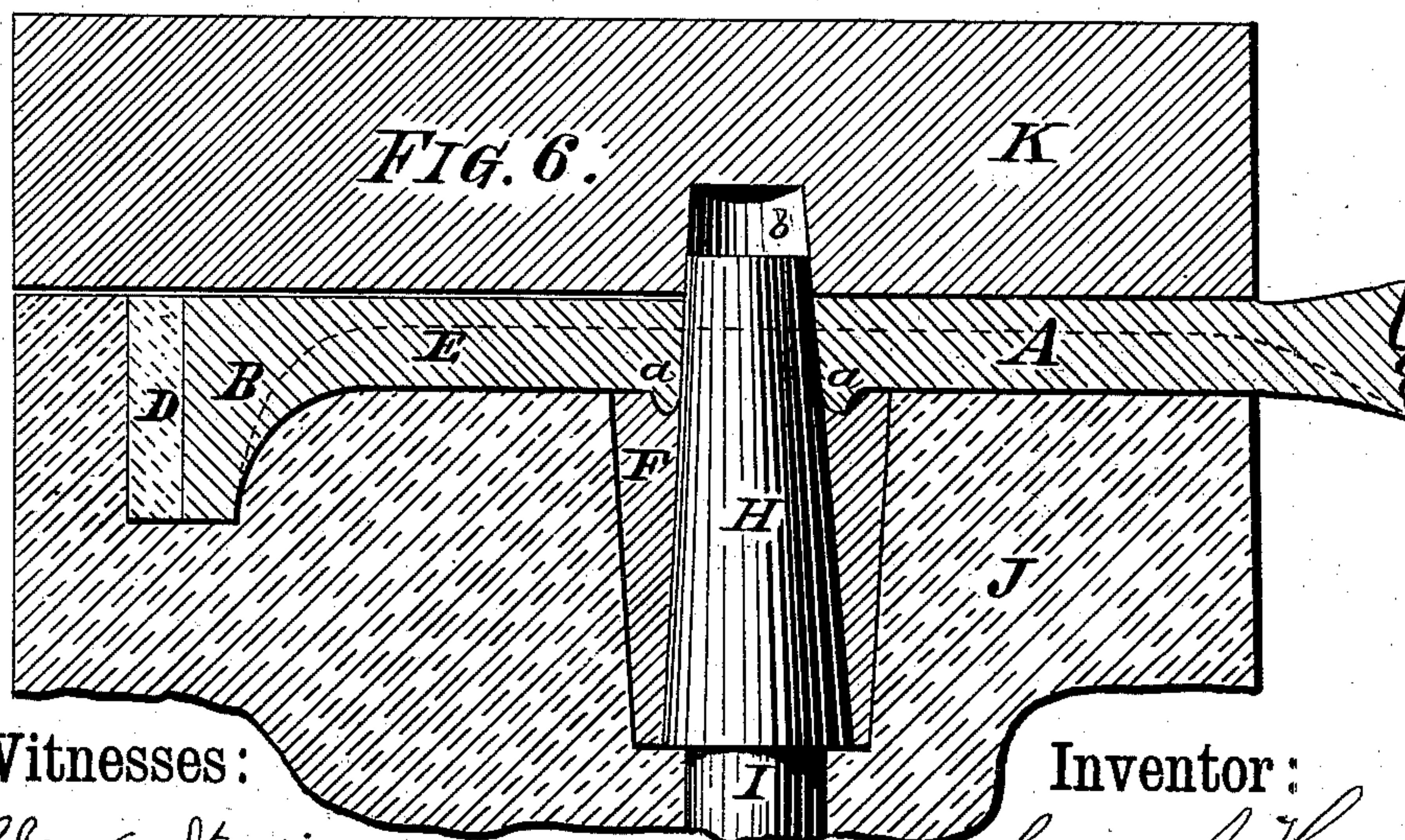
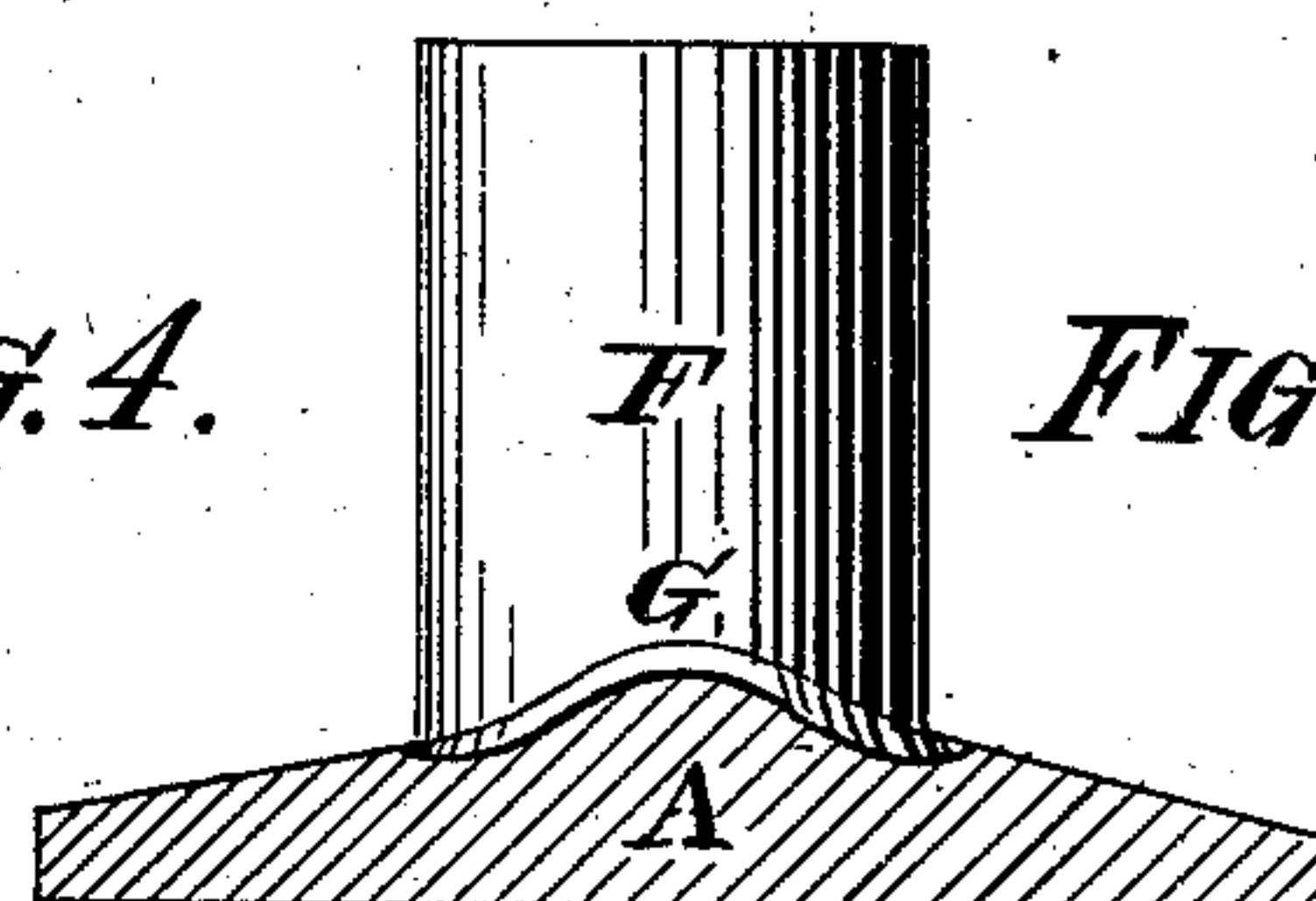
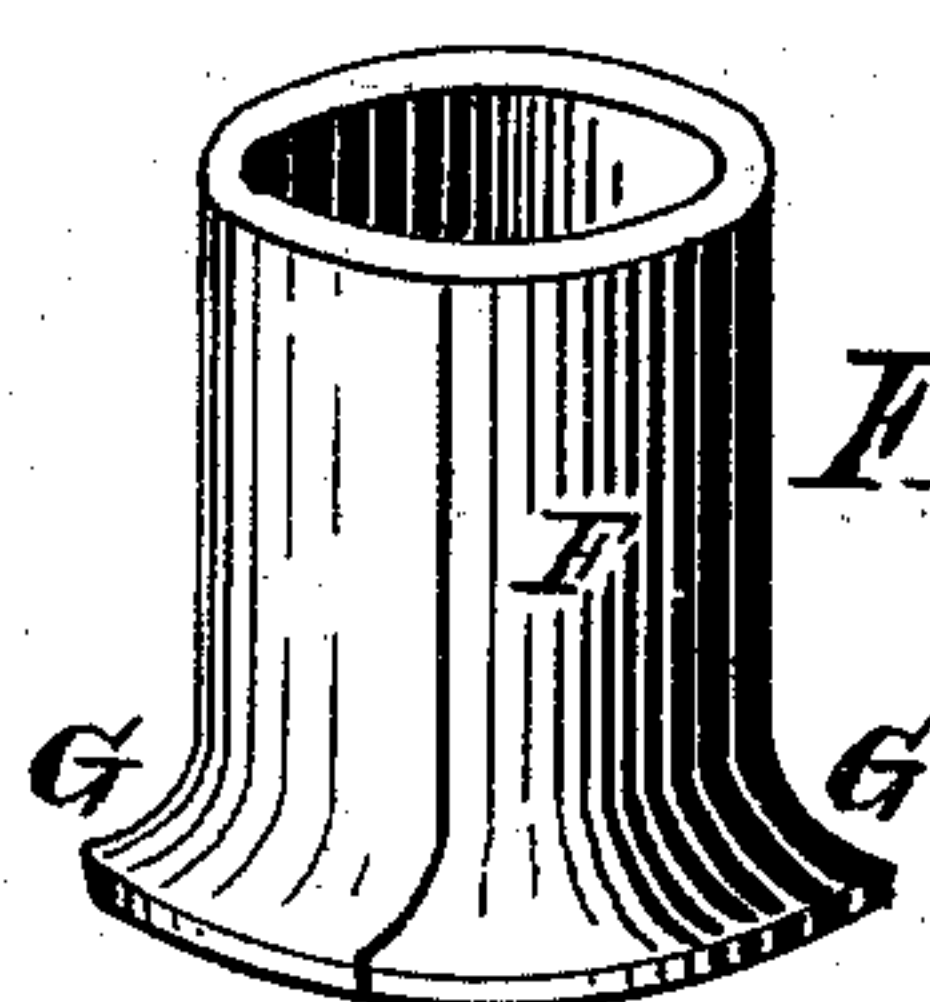
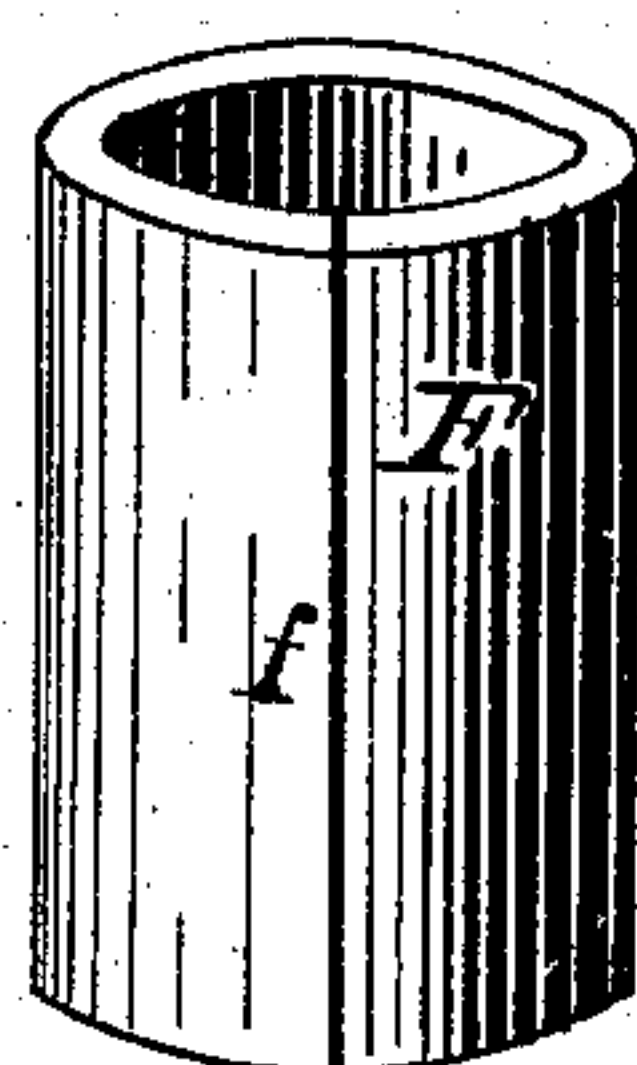
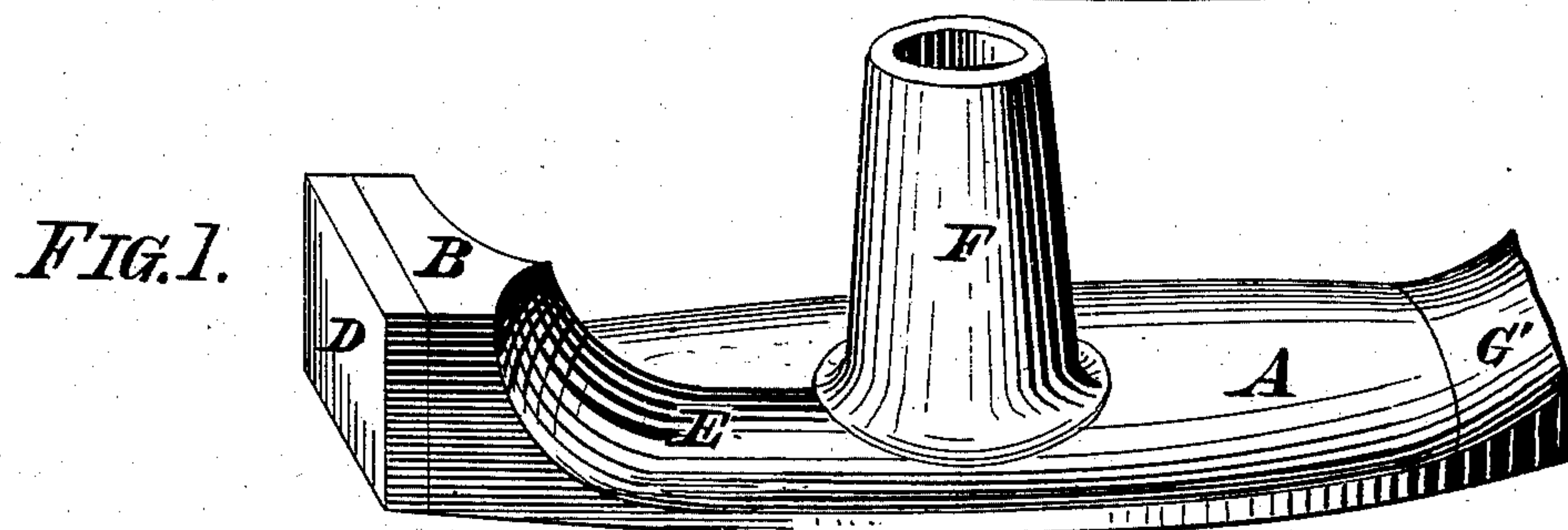
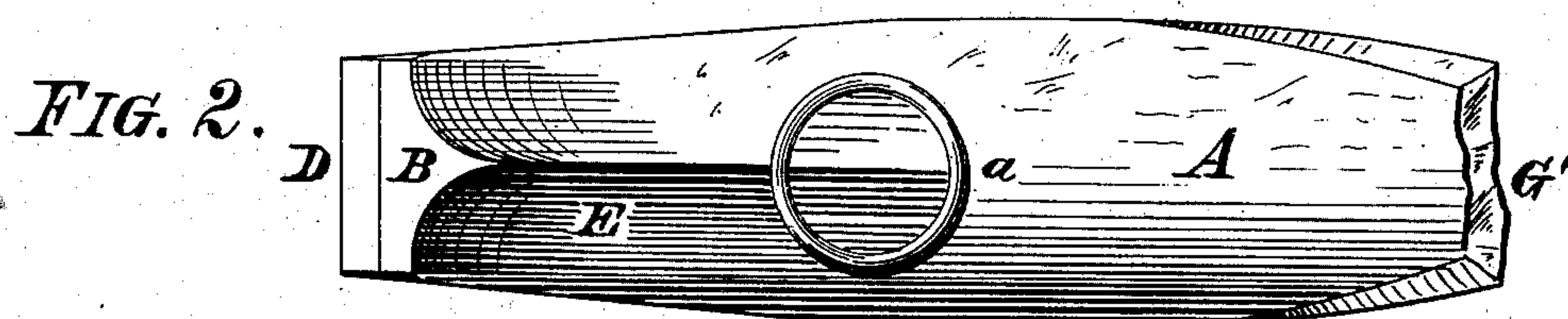


(No Model.)

S. A. HEWITT.
Method of Forming Adzes.

No. 239,778.

Patented April 5, 1881.



Witnesses:

Willie O. Stark.
Al. Stark

Inventor :

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UNITED STATES PATENT OFFICE.

SAMUEL A. HEWITT, OF BUFFALO, NEW YORK, ASSIGNOR TO LEONARD WHITE, OF SAME PLACE.

METHOD OF FORMING ADZES.

SPECIFICATION forming part of Letters Patent No. 239,778, dated April 5, 1881.

Application filed December 29, 1880. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL A. HEWITT, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements on a Method of Forming Adzes; and I do hereby declare that the following description of my said invention, taken in connection with the accompanying sheet of drawings, forms a full, clear, and exact specification, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has general reference to improvements in the method of manufacturing carpenters', coopers', and other adzes; and it consists in the peculiar manipulations and steps in the said manufacture, as hereinafter first fully set forth and described, and then pointed out in the claim.

In the drawings already referred to, which serve to illustrate my said invention more fully, and form a part of this specification, Figure 1 is a perspective view of a forged blank of an adz. Fig. 2 is a plan of the same, showing its condition previous to welding the socket. Figs. 3, 4, and 5 are elevations of the socket in its various conditions. Fig. 6 is a longitudinal sectional elevation of the dies employed for finishing and welding.

Like parts are designated by corresponding letters of reference in all the figures.

A in these drawings represents the body of a carpenter's, cooper's, or other adz having the usual head B faced with a steel plate, D. This body, as heretofore made, is forged out of a square rod, after which the steel and then the socket F is welded on, it being quite a laborious piece of work to produce an adz, and from six to eight of them are considered a good day's work by very competent workmen.

To reduce the time of manufacture, which is the object of my present invention, and at the same time to produce an article of superior quality, I proceed as follows:

Having roughly drawn out the reduced portion of the body A, I place the same in a die of any suitable construction, and shape the same so as to produce thereon an annular bead or rise, *a*. I now roll a strip of metal into a tube, F, and then flange the same on

one end, so as to cause the lower edge of said tube to fit the triangular portion E, as well as the curved part A. This being done, I tack—that is to say, slightly weld—the steel D and tube F to the body A, and then put a welding heat onto the same, after which I place the piece into the female die J, and give it one or more blows with the male die K in a drop-press, to complete in one operation the welding and final shaping operations. In these dies the lower or female die is formed with a cavity corresponding to the contour of the adz, &c., to be produced, and with another cylindrical cavity adapted to receive the shank I of a tapering mandrel, H, loosely inserted into the said die J. The die K is generally a flat plate having a recess, (or aperture if desired,) *b*, serving as a female die for the mandrel H, as hereinafter to be referred to.

It will now be observed that the body A, previous to receiving its final shape in the drop-dies, is not punctured for the eye or aperture for the handle. This I prefer to do at the moment when the article receives its final shaping in said drop-dies, where the mandrel H forms the punch and the recess *b* the die, so that when the body A is driven into the lower die the mandrel H will penetrate said body, and thereby accomplish the desired result.

It will be further observed that by providing the body A with the annular bead or rise *a*, I obtain several results. First, it forms a guide by means of which the tube may be placed in proper position for welding, and then it fills the rounded corners of the tube caused by the flanging, and thus makes a perfectly smooth socket for the handle, which latter is quite an advantage and improvement.

By welding the tube F to the body A, as described, a more perfect union of the parts is attained than by simply butt-welding said tube, (or "jumping," as it is frequently called,) as heretofore practiced.

After the article has been produced as heretofore described, the stub end G' is drawn out to form the blade, and the steel for the cutting part welded on in any desired manner.

By proceeding in the manner described I have succeeded in tripling the quantity of adzes produced in a day, and greatly enhanced

their quality and finish, which latter result, owing to the smaller amount of labor consumed in grinding and finishing, is quite an item in the class of edge-tools to which my
5 invention appertains.

It is perfectly obvious that by the method described I am enabled to produce, in addition to adzes, many other tools having a steel-faced head and a long socket for the reception
10 of the handle.

In describing this invention I have stated that I prefer to puncture the body A at the final operation in the dies J K. I do, however, not wish to confine myself to this operation,
15 since I may puncture the eye previous to the welding on of the socket. If the former method is proceeded with, the die K should be provided with an outlet for the burr resulting from the puncturing of the body A, which
20 will not be necessary if the latter method is preferred.

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

The improved method of forming adzes and
25 other similar tools having a deep socket at right angles to the plane of such tools, said method consisting, essentially, in first drawing out the body A, then drop-forging the same, so as to produce thereon an annular bead
30 or rise, *a*, then forming an open tube, then flanging the latter, as described, and finally welding and finishing the same under pressure in dies, all as hereinbefore set forth and described.

In testimony that I claim the foregoing as my invention I have hereto set my hand in the presence of two subscribing witnesses.
35

S. A. HEWITT.

Attest:

MICHAEL J. STARK,
J. W. BEST.