

S. F. Woodworth,
Making Sheet-Metal Snouts.
N^o 53,515. Patented Mar 27, 1866.

Fig. 1.

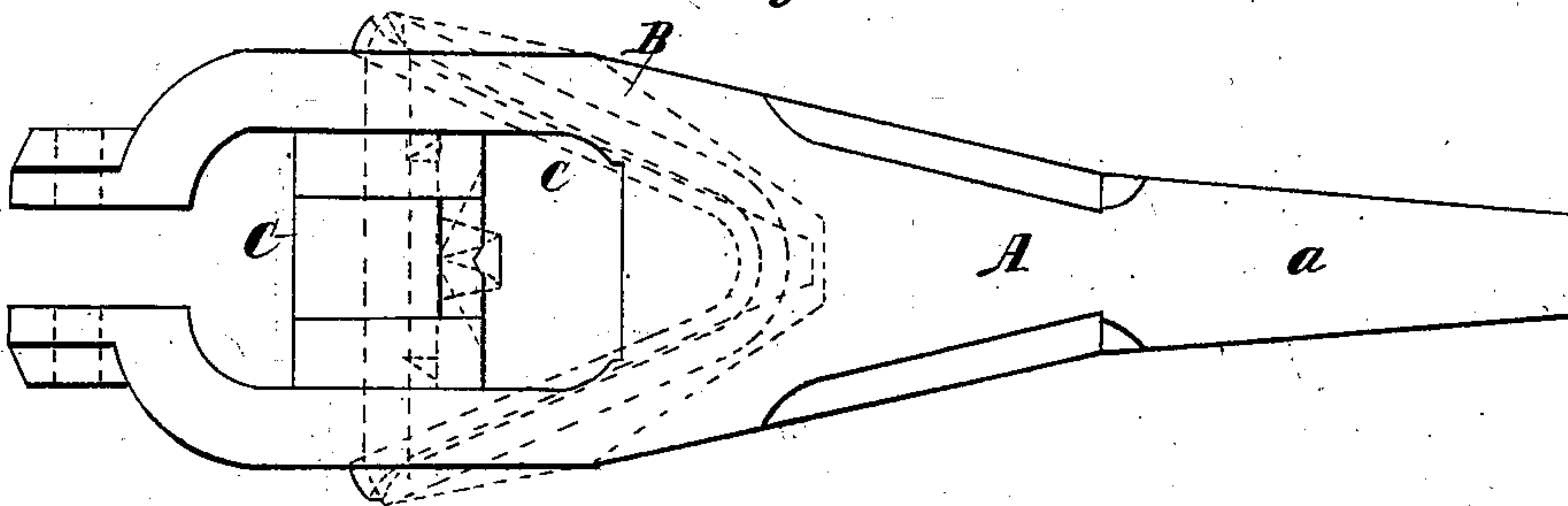


Fig. 2.

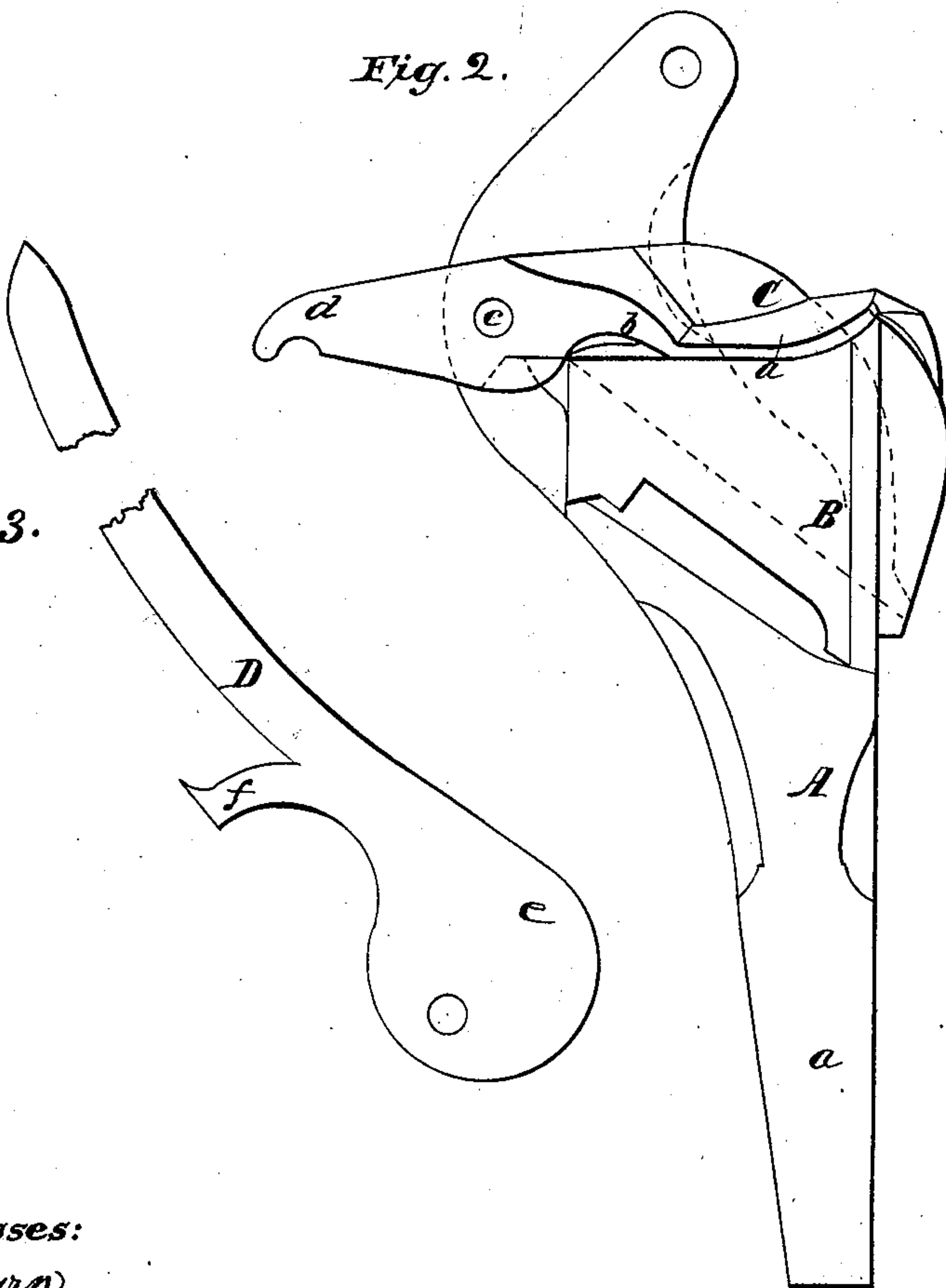
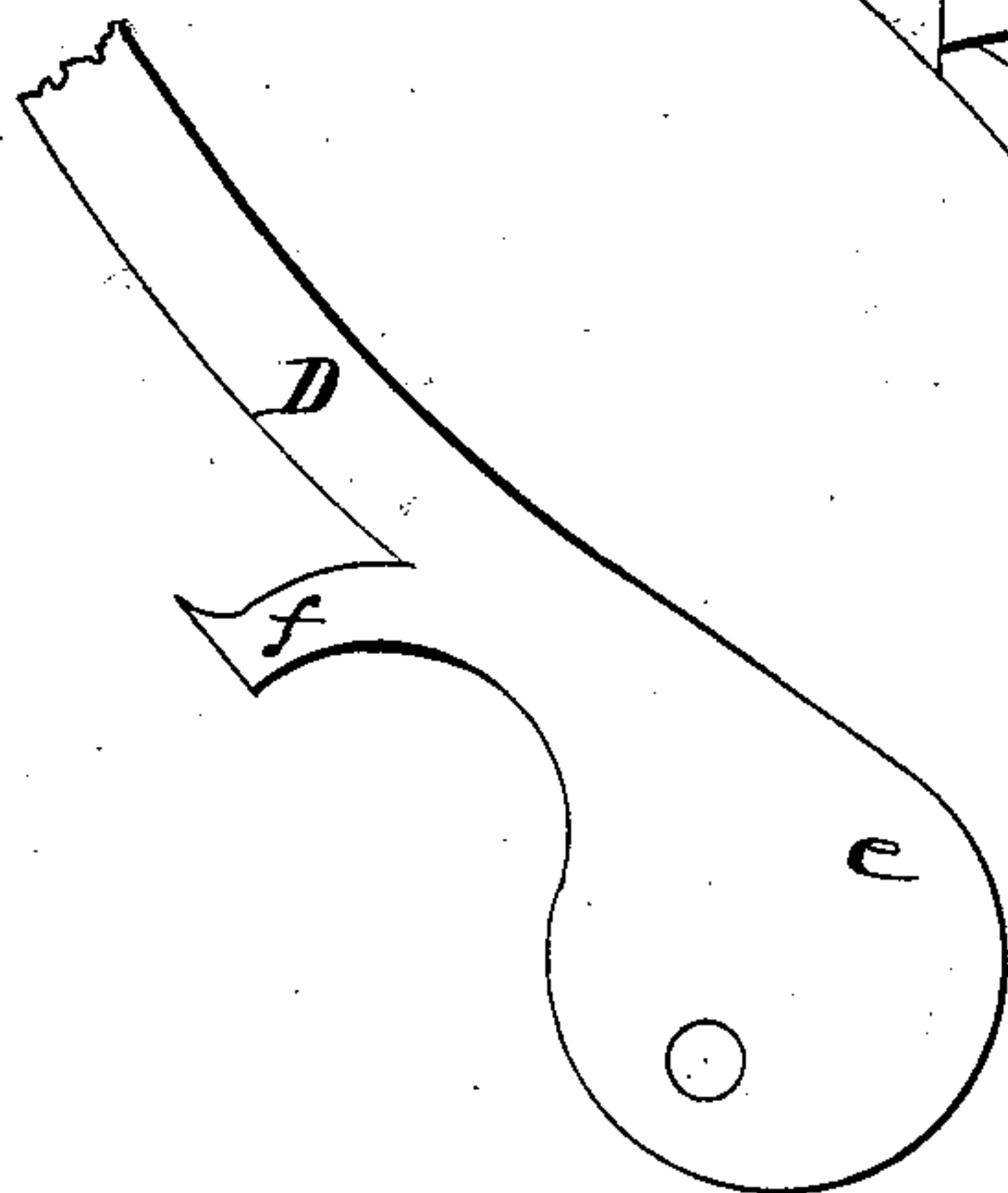


Fig. 3.



witnesses:
H. C. Brown
Geo. T. Lusk.

Inventor:
S. F. Woodworth
per J. M. H. Attorney

UNITED STATES PATENT OFFICE.

S. F. WOODWORTH, OF IOWA FALLS, IOWA.

MACHINE FOR SWAGING SHEET-METAL SPOUTS.

Specification forming part of Letters Patent No. 53,515, dated March 27, 1866; antedated March 19, 1866.

To all whom it may concern:

Be it known that I, S. F. WOODWORTH, of Iowa Falls, in the county of Hardin and State of Iowa, have invented a new and useful Machine for Pressing and Swaging Sheet-Metal Spouts; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a rear view of my invention with the lever removed; Fig. 2, a side sectional view of the same, taken in the line *x x*, Fig. 1; and Fig. 3, a detached view of the lever pertaining to the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new and useful machine for pressing or swaging sheet-metal spouts for cylindrical vessels; and it consists in the employment or use of a fixed and a movable die arranged in a suitable standard, with a lever having an eccentric attached or formed on it, all being arranged in such a manner that the spouts may be expeditiously manufactured, and in a more perfect and uniform manner than by the present exclusively manual process.

A represents a standard, the lower part, *a*, of which is of taper quadrilateral form to fit into a hole of a work-bench.

B is a die, which is secured in the standard A. This die may be termed the "external" one, and it may be made or cast separately from the standard and secured in it by screws or bolts, or it may be cast with the standard all in one piece. Where dies of different sizes are required the former plan is, of course, adopted; but a cheap machine with one die only could be most economically manufactured by the latter plan.

The die B is made to correspond with the exterior of the spout to be pressed or swaged, and its upper edge, *a*^{*}, is inclined, so as to admit of the blank (the piece of metal which is to be pressed into the form of the spout) slipping readily back in contact with gages or stops *b* to insure a proper relative position of said blank with the die.

C is the other die, made or cast of such a

form that it will fit or work into the die B. This die C works on a rod or shaft, *c*, in the standard A, and it has a shank or stem, *d*, at its rear, which projects beyond the standard, as shown clearly in Fig. 2.

D is a lever, the fulcrum-pin of which is in the upper part of the standard. This lever is provided with an eccentric projection, *e*, and also with an arm, *f*, as shown clearly in Fig. 3. The upper die, C, is operated by this lever D both to perform the pressing operation and to raise the die to remove the spout.

The blanks are cut out of the proper form, and the die C raised by pressing down the long arm of the lever, so that the arm *f* will strike against the stem or shank *d* and cause the die C to rise and be above the die B. The blank is then placed on die B and adjusted in contact with the gages or stops *b*, which insures the blank having a proper relative position with the dies, so that the flange of the spout will be of an equal width all around. The operator then reverses the lever, so that the eccentric *e* will bear on the top of die C, and forces down said die, so as to swage the blank into the desired spout form.

The device is extremely simple and efficient, and will perform its work rapidly and well and insure the spouts being made in a uniform manner throughout, so that they may be fitted to the vessels with the greatest facility.

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

1. The arrangement of said dies B C in a standard, A, so constructed as to fit the square holes usually found in a tinsmith's work-bench.
2. The dies B C, in connection with the lever D, provided with the arm *f* and eccentric projection *e*, substantially as set forth.
3. The gages *b*, in connection with the dies B C and lever D, for the purpose specified.
4. Having the upper surface of the die B in an inclined position to facilitate the adjustment of the blanks thereon, as set forth.

S. F. WOODWORTH.

Witnesses:

JOSHUA SAYER,
H. W. GRAVES.