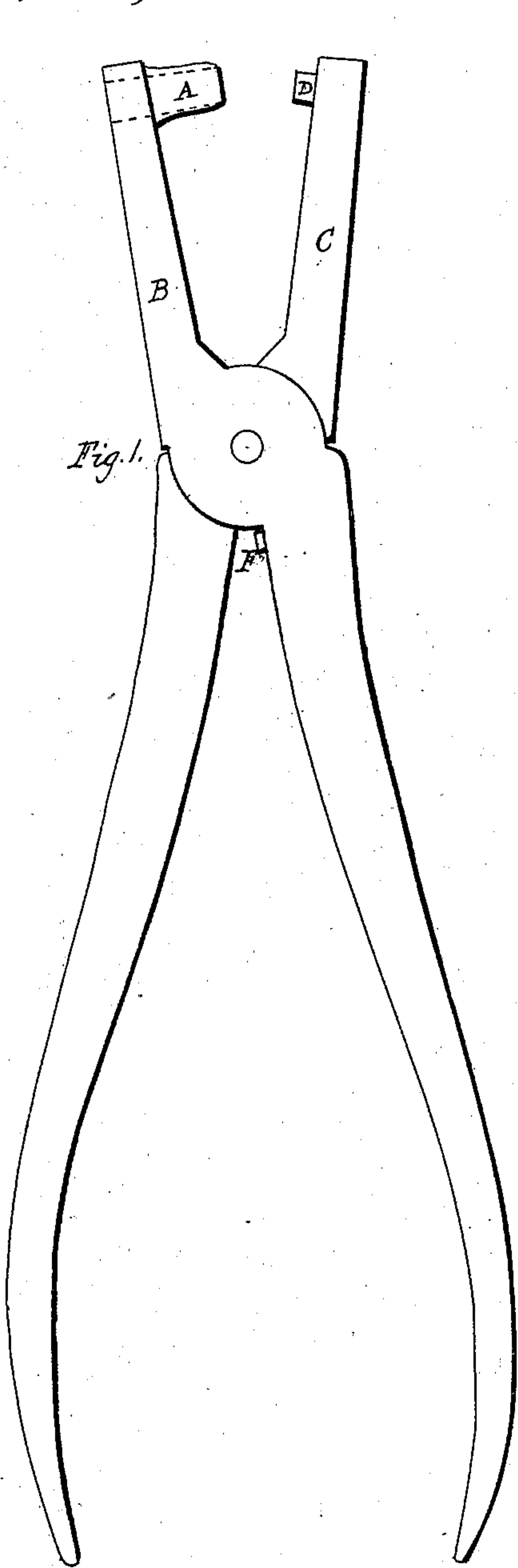
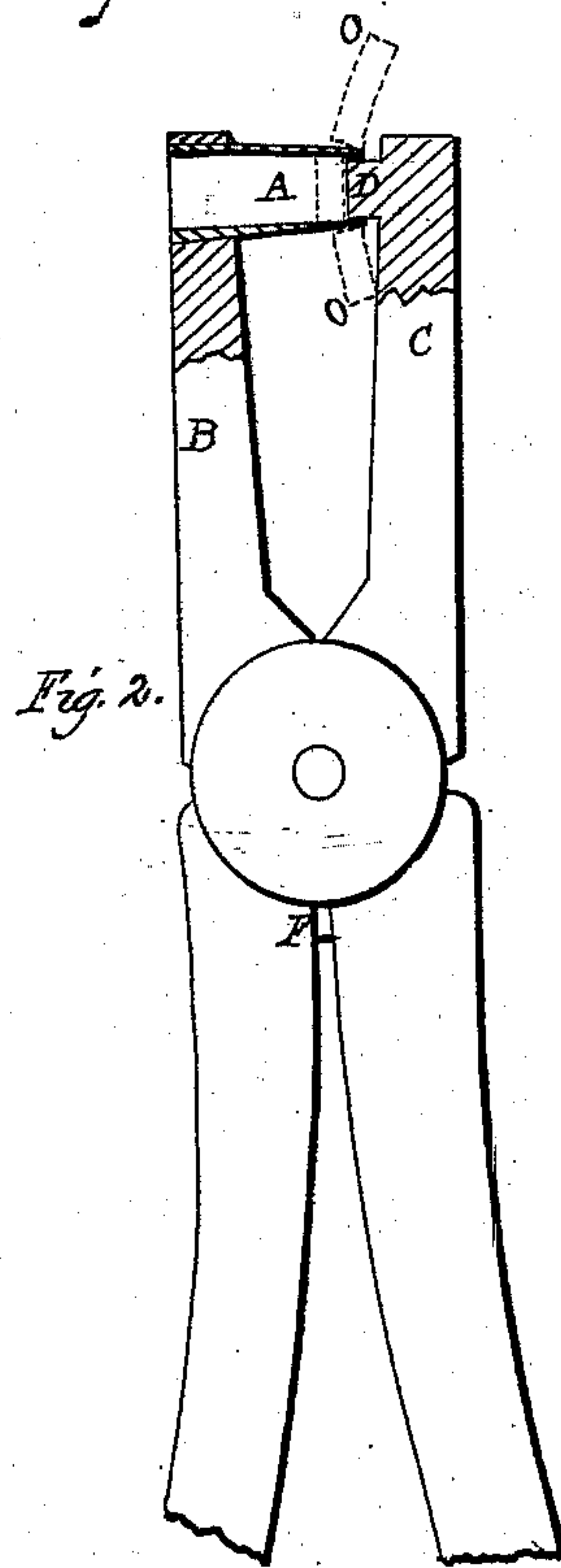


A. Simpson,
Belt Punch,
No 15,795, Patented Sept. 23, 1856.



Witnesses;



Inventor:

UNITED STATES PATENT OFFICE.

A. SIMPSON, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO S. H. F. BINGHAM, OF WESTON, MASSACHUSETTS.

BELT-PUNCH.

Specification of Letters Patent No. 15,795, dated September 23, 1856.

To all whom it may concern:

Be it known that I, AUGUSTUS SIMPSON, of the city and county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in the Construction of Punches for Belts and Similar Purposes, commonly called a "Belt-Punch;" 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 drawings herewith presented by the letters of reference marked thereon and hereinafter referred to, in which drawings—

Figure 1 shows the whole complete, Fig. 2 shows a section of the punch and follower and the position taken of the material punched, the same letters referring to the same parts in each.

Belt punches as heretofore made, have been so constructed as to cut on a solid body on which the material to be punched is laid on a flat surface or base and by pressing or forcing the cutter into the material, or the material and the cutter, without varying its position from a plane, and the edge of the cutter striking the base (on the other side of the material cut or punched) gradually dulls itself or indents the base, in either case soon rendering the tool useless without sharpening the cutter or renewing the base, and not unfrequently both, whereas by my improvements the action of the base and cutter is such as to give a conical shape to the material when cutting, thereby giving a shearing cut, and the opening of the cut or gap leaving the cutter free, whereby much harder material can be punched, or cut, than can be done by the old form, and the perfect freedom of the edge of the cutter, from striking any thing but the material cut, keeping it in perfect order.

To construct my improvements make the tubular cutter A and attach it to the jaw B, on the opposite jaw C place a teat D in size a little smaller than the bore of the cutter and so placed that the cutter A shall freely

plug into it when the jaws are closed, and a stop F is so placed as to prevent the cutter striking the jaw C, the rest of the parts not described may be of most any of the usual forms and on that account are not deemed necessary to describe minutely.

The operation is to apply the punch to the article to be punched in the usual way and forcing the jaws together the teat D pressing a part into the cutter A which bearing outside of the teat causes the material to take the conical form shown by the dotted lines O O in Fig. 2 which as the cutter enters throws open the cut leaving the cutter free to act on the adjoining part which is strained by being bent and thus is in the best state to cut, and closing the jaws the teat D forcing the cut part into the cutter A causes it to cut through, without the necessity of the edge meeting any solid, and the piece cut being pressed some way into the cutter leaves its edge free to enter easily in commencing again.

I am aware that punches and dies for various purposes have been used wherein the one enters the other, but mine differs from all those heretofore used in causing the cut to open as the cutter passes through as shown in Fig. 2 making an entirely different principle of cutting from those, which is the principle of action that I claim, or, in other words,

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

I claim the combination and arrangement of the teat D and the cutter A when constructed and operating as above described, whereby the conical form is given to the article punched the cutting facilitated and performed with the edge of the cutter free as above set forth and described.

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

AUGUSTUS SIMPSON.

Witnesses:

SAML. H. F. BINGHAM,
JAS. G. ARNOLD.