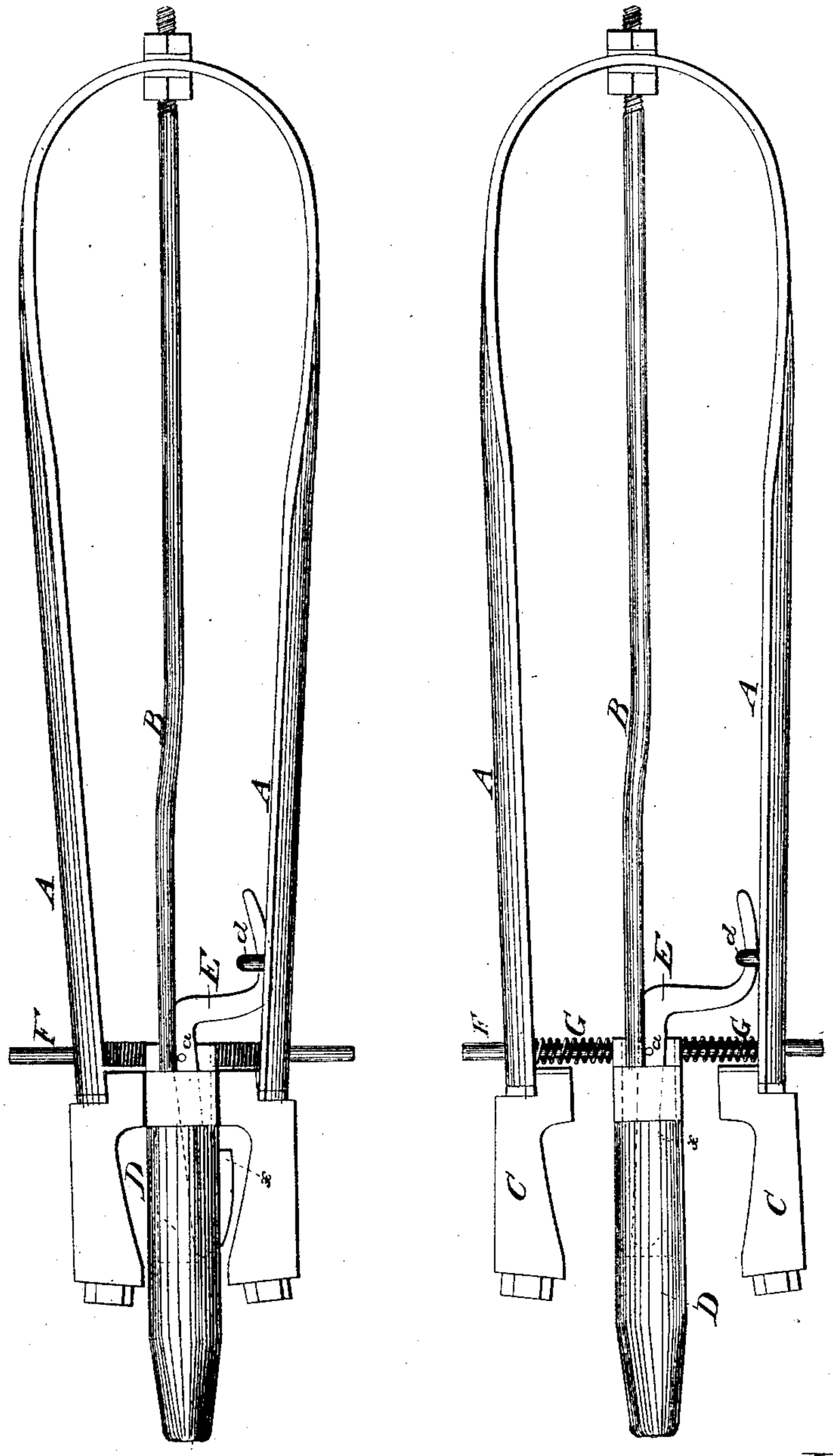
L. F. SMITH.

Tool for Forming the Necks of Bottles.

No. 37,142. Patented Dec. 9, 1862.



Witnesses:
Charles Mayer
John J. Hollingshead.

Inventor:
Leroy F. Smith.

UNITED STATES PATENT OFFICE.

LEVI F. SMITH, OF STONINGTON, CONNECTICUT.

IMPROVEMENT IN TOOLS FOR FORMING THE NECKS OF BOTTLES.

Specification forming part of Letters Patent No. **37,142**, dated December 9, 1862.

To all whom it may concern:

Be it known that I, LEVI F. SMITH, of Stonington, in the State of Connecticut, have invented certain new and useful Improvements in Tools for Forming the Necks of Bottles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

In the annexed drawing, making part of this specification, A represents the body of the tool, which consists of a piece of metal in the shape of a bow, and made sufficiently thin that the two ends of the bow may be readily forced together by the fingers of one hand.

B represents a stem running centrally between the two sides of the body A, as shown in the figures, and provided, as seen at its outer end, with a center piece, D, for forming the inside of the neck of the bottle, as is usual in the manufacture of bottles.

C C represent jaws upon the ends of the bow or body A very similar to those used in the ordinary tool for forming bottle-necks.

F represents a pin secured to the stem B and passing through the sides of the bow A, as seen. Between the ends of the bow and the stem B will be seen small coiled wire springs, which are used for the purpose of assisting in shoving the two ends of the bow apart after they have once been drawn together.

E represents a lever, which is made in the shape represented in the figures, and which is pivoted, as shown at *a*, to the stem B. One end of this lever passes into the end of the center piece, which is provided with a suitable opening for receiving it, while the other end passes through a loop, which is formed upon one of the sides of the bow, as shown at *d*. Upon the end of the lever which enters the center piece there is formed a projecting shoulder, as seen at *x*, which shoulder passes through a slot or opening in one side of the center piece. When the two sides of the bow are pressed together, the shoulder protrudes through the opening in the center piece, and when the two sides are allowed or forced to separate, the shoulder is drawn back into the center piece.

The object of this tool is to form upon the inside of bottle-necks shoulders, against which elastic stoppers may catch to prevent them from drawing out readily.

It will be seen that by inserting the center piece, D, in the neck of the bottle when the glass or other material is in a pliable state and forcing the two sides of the bow together that the shoulder at *x* will protrude and press against the glass on the inside of the neck, and thus form a shoulder or enlargement on the inside of the neck near the mouth of the bottle when the tool is turned around or the bottle revolved. When the two sides of the bow separate, the shoulder at *x* draws in and allows the bottle to be easily drawn from the center piece.

The stopper to be used with the bottle thus formed is made of india-rubber. When it is once inserted, the rubber expands so that it catches under the shoulder in the neck, and is made tighter by pressure from the inside of the bottle.

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

1. The lever E, constructed, used, and operated substantially as and for the purpose specified.

2. The combination of the lever E with the center piece, D, the several parts being arranged as specified, for forming shoulders in bottle-necks, as set forth.

LEVI F. SMITH.

Witnesses:

CHARLES ALEXANDER,

JOHN S. HOLLINGSHEAD.