(No Model.)

C. LENG.

IMPLEMENT FOR FINISHING THE NECKS OF BOTTLES.

No. 480,774. Patented Aug. 16, 1892.

FIG. 1.

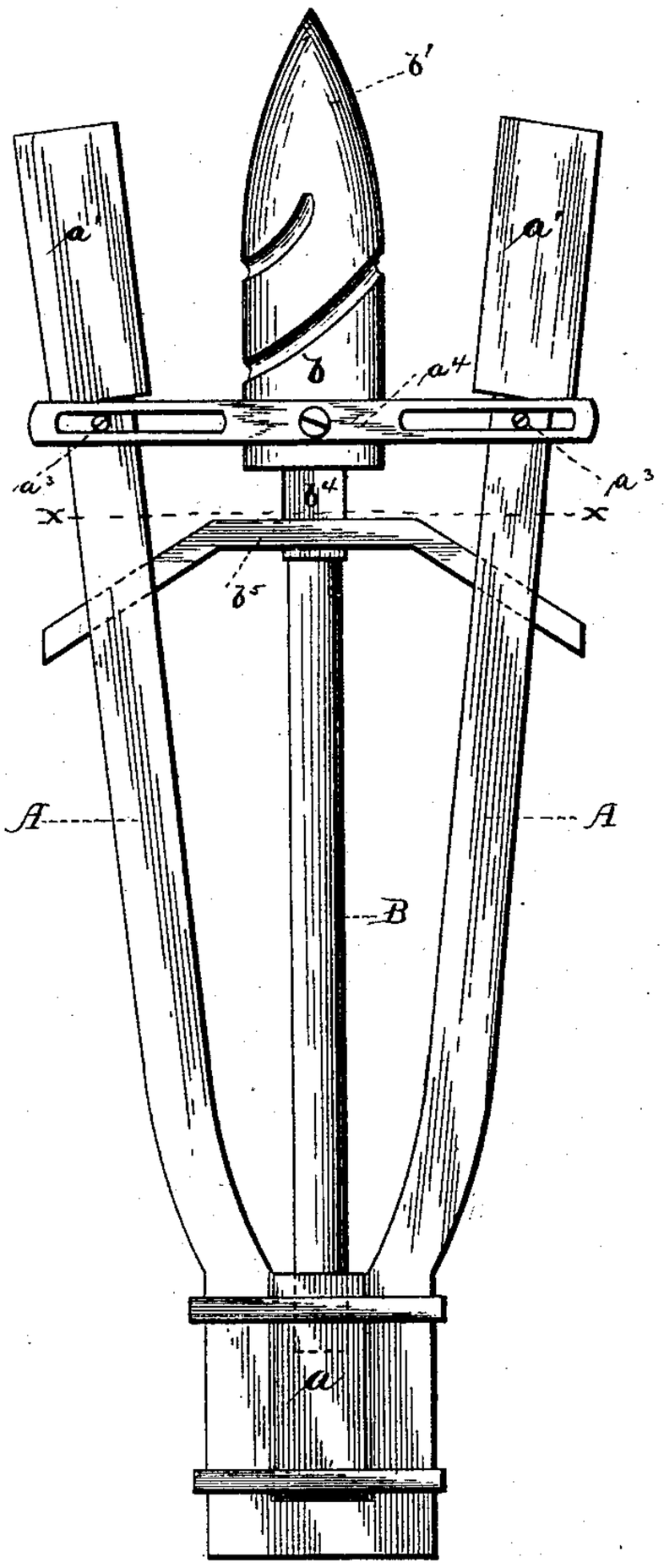


FIG. 2.

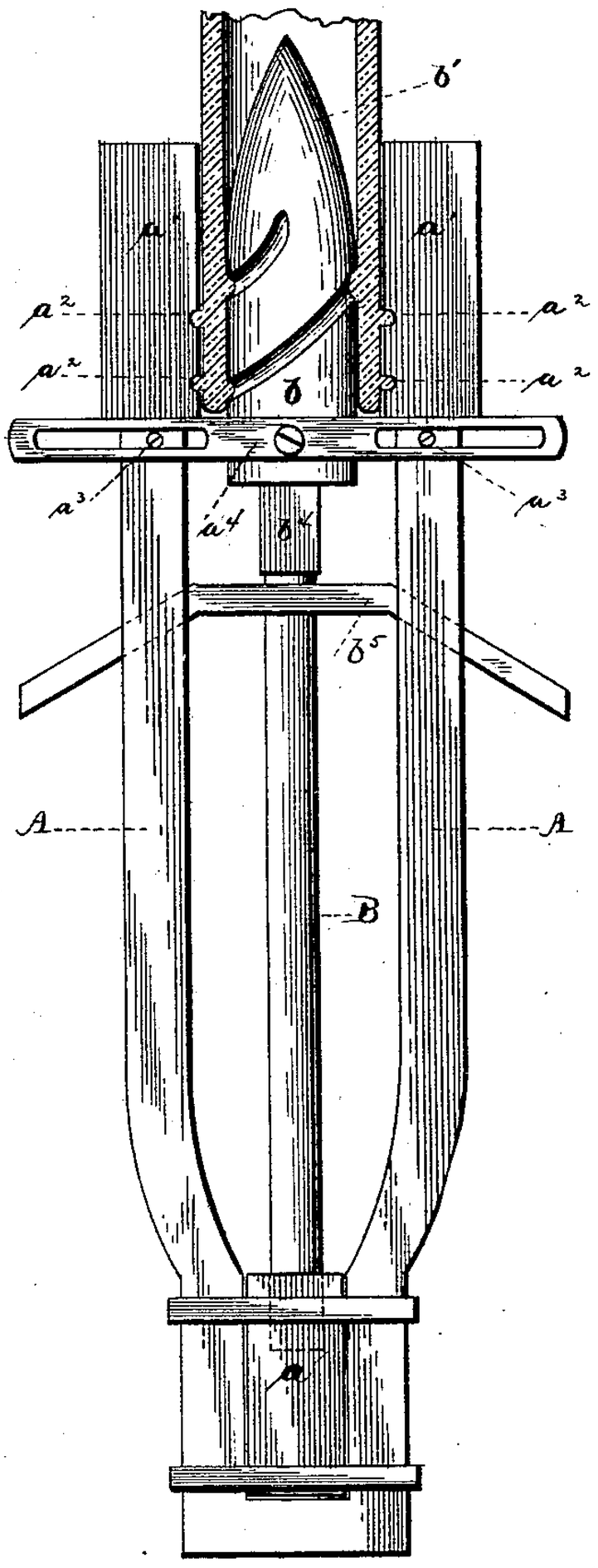
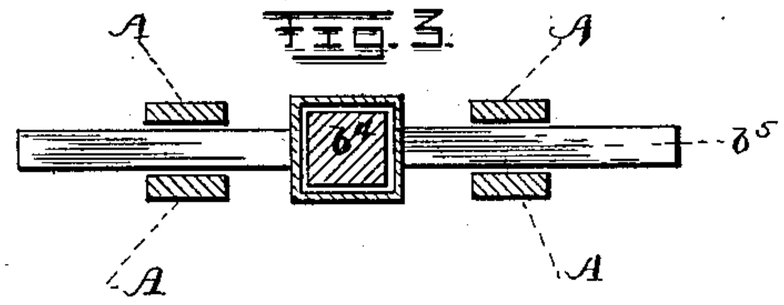


FIG. 3.



Witnesses;
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UNITED STATES PATENT OFFICE.

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IMPLEMENT FOR FINISHING THE NECKS OF BOTTLES.

SPECIFICATION forming part of Letters Patent No. 480,774, dated August 16, 1892.

Application filed September 6, 1890. Serial No. 364,196. (No model.)

To all whom it may concern:

Be it known that I, CHARLES LENG, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Implements for Finishing the Interior of the Necks of Bottles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to the manufacture of glass bottles, and particularly to the finishing of the necks of the same, adapting them for the reception of a glass or other stopper.

The object of the present invention is to produce a tool whereby the necks of bottles may in a rapid, convenient, and effective manner be formed to receive a stopper having retaining lugs or projections thereon and at the same operation the outer face of the neck be finished.

The invention consists in a finishing-tool for bottles, comprising clamping-jaws designed to inclose the interior of the neck of a bottle, a spindle designed to enter the neck of the bottle and having a portion of its length square in cross-section, a sliding bar having a square opening receiving the spindle and provided with bent ends, and openings in the jaws receiving the bent ends.

I have illustrated the invention in the accompanying drawings, in which—

Figure 1 is a side elevation of my tool, the clamping-jaws being shown open and the tool ready for application to the neck of a bottle. Fig. 2 is a side elevation, the jaws being shown in a closed position and a bottle-neck being shown with the tool applied thereto; and Fig. 3 is a section on line $x\ x$ of Fig. 1.

In the drawings, A A represent the clamping-jaws of the machine, preferably made in one piece and bent over a block a in order to exert a pressure to separate the jaws. The upper portions a' of the jaws are provided with indentations or projections a^2, as may be desired, designed when clamped against the outer surface of the neck of a bottle to impart the desired form thereto. The jaws are provided with pins a^3, which enter and are allowed a limited movement in slots in a plate a^4, by which means the jaws are held in proper relation to each other.

Arranged between the jaws A A is the spindle B, the lower portion of which projects into the block a and is provided with a block b, which is attached to the plates a^4 by a screw, and thus retained in proper position relative to the clamping-jaws. The upper portion b' of the spindle is tapering and is provided above the block b with two spiral indentations arranged opposite to each other and of such shape as to form two inclines on the interior face of the neck of the bottle when the glass in a plastic state is pressed around it.

In the use of the tool the neck of the bottle is heated to a degree to render it plastic and is then introduced between the jaws a' with the tapering portion of the spindle in the interior of the neck. When in this position, the jaws are clamped together and the body of the bottle placed on a flat surface and rolled, the tool being firmly held in the hand of the operator. The clamping together of the jaws presses the plastic glass of the neck against the tapering portion of the spindle and forms inclines thereon, which are to be engaged by lugs or projections from a stopper to be inserted into the neck and to serve to bind the stopper to close the opening in the bottle.

In order that the spindle may be free to turn while the bottle is being rolled in the operation of finishing and be held against turning independently of the tool when it is desired to turn the same to remove the spindle, I provide the spindle B with a square portion b^4, and I also provide a cross-piece b^5 with a square opening. This cross-piece is provided with downward-bent ends, which enter and slide in openings in the jaws A A, the construction being such that as the jaws are closed the cross-piece is drawn down from the square portion, and thus the spindle is free to turn independently of the other parts of the tool, as is necessary during the turning of the bottle to finish the exterior. When the jaws are allowed to open, the cross-piece is moved up to inclose the spindle at the square portion, and thus the drill is held firmly to the

other parts of the tool and can be turned to remove it from the neck of the bottle after the manner of a screw.

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

A tool for use in finishing bottles, comprising clamping-jaws designed to inclose the interior of the neck of a bottle, a spindle designed to enter the neck of the bottle and having a portion of its length square in cross-section, a sliding bar having a square opening receiving the spindle and provided with bent ends, and openings in the jaws receiving the bent ends, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHAS. LENG.

Witnesses:
WM. HENNING,
HERMAN SOOG.