(No Model.)

A. L. STRAUS.

IMPLEMENT FOR SHAPING BOTTLES.

No. 512,409. Patented Jan. 9, 1894.

Fig. 1.

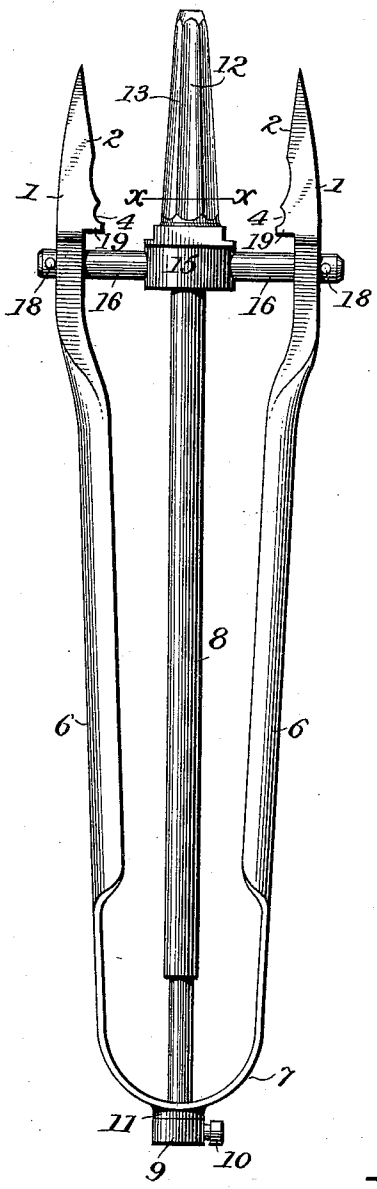


Fig. 2.

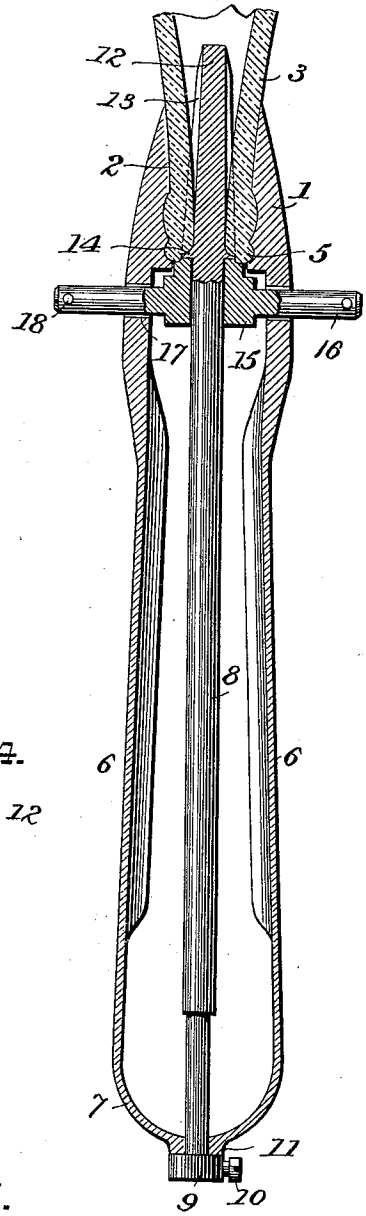


Fig. 4.

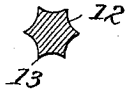
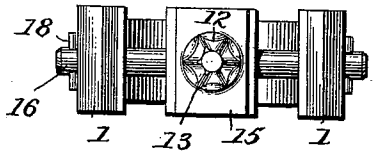


Fig. 3.



Witnesses
Jno. G. Hinkel
Will E. Neff

Inventor
Alex L. Straus
By J. Attaboy
Attorney

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ALEXANDER LEVI STRAUS, OF BALTIMORE, MARYLAND.

IMPLEMENT FOR SHAPING BOTTLES.

SPECIFICATION forming part of Letters Patent No. 512,409, dated January 9, 1894.

Application filed April 17, 1893. Serial No. 470,710. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER LEVI STRAUS, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Implements for Shaping Bottles, of which the following is a specification.

My invention relates to implements for shaping and finishing the necks of bottles.

It consists more particularly in a tool for giving to the interior of the neck of a bottle near the mouth a sectional outline which is fluted or other than circular, while at the same time the outer portion of the neck is formed to receive a cap or seal for closing the bottle.

In the drawings, Figure 1 is a side elevation of my improved tool. Fig. 2 is a side elevation, chiefly in section, showing the jaws of the tool closed upon the neck of a bottle. Fig. 3 is an end view, and Fig. 4 is a section on the line *x*—*x* of Fig. 1.

It is common to seal or close bottles with caps which fit over the mouths of the bottles and are retained thereon by flanges which encircle the necks of the bottles and are connected thereto in some suitable manner. In this class of bottles corks or other internal stoppers are unnecessary and it is sometimes desirable to prevent their use.

My invention therefore relates to a tool for fluting or otherwise shaping the interior of the necks of bottles so that they cannot be closed by corks or other circular stoppers.

In the drawings 1, 1, indicate a pair of jaws which are suitably shaped on their internal faces 2 to conform to the exterior of the neck of a bottle 3, said jaws being particularly formed with grooves 4, 4, to form a lip 5 upon the end of the bottle. These jaws are upon the ends of the handles or shanks 6 which are united by a plate spring 7, the whole forming a U-shaped construction which is preferably made in one piece. A spindle 8 is centrally located between the shanks 6 and has one end projecting through the middle of the spring 7. Upon the outer end of the spindle is a collar 9 retained by a set screw 10. A boss 11 is preferably formed upon the spring to strengthen it and provide a bearing for the collar 9. Upon the inner end of the spindle, as shown in the drawings, is a tapered and fluted head, having longitudinal grooves 12 and intermediate ridges 13. This is the preferred form of my invention as it gives a symmetrical shape to the interior of the bottle while at the same time the ridges 13 form sharp angular grooves in the interior of the neck of the bottle which cannot possibly be closed by ordinary corks or stoppers. The head is preferably made integral with the spindle 8. At the junction of the head and spindle is a shoulder 14 which bears on a block 15 through which the spindle passes. The spindle revolves freely in its bearings in the block 15 and boss 11. Upon opposite sides of the block 15 are arms 16 which pass through perforations 17 at the base of the jaws. Near the outer ends of the arms are projecting pins or keys 18 which limit the outward movement of the jaws and center the spindle between them. As shown in Fig. 2 the grooves 12 upon the spindle head terminate at the shoulder 14 nearly opposite the grooves 4 which form the lip on the ends of the bottle. The ridges of the interior of the bottle are thus caused to extend almost or quite to the end or mouth of the bottle.

As shown the spindle 8 and the grooved head revolve freely in the bearings. It is essential that the grooved head should at all times revolve freely and this might be accomplished by making the head in a separate piece and mounting it upon the spindle so that it might revolve independently. It is preferable however to make the head and spindle integral as shown. The bottles are finished by inserting the spindle head into the neck of the bottle while it is in a plastic condition and then closing the jaws upon the outer portion of the neck. The thickness of the neck of the bottle is limited by shoulders 19 upon the jaws which abut against portions of the block 15. The tool is held in the hand in proper relation to the bottle and the latter is rolled upon a suitable support. The jaws thus finish the exterior of the neck while the spindle imparts the desired shape to the interior.

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

1. In a tool for finishing bottles the combination with the jaws having grooves 4 to form a lip upon the end of a bottle, said jaws being provided with shanks and a spring for forcing them apart, of a block 15 having a perforation and arms 16, and a spindle provided with a tapered head having longitudinal grooves extending from its outer end inwardly and terminating near the lip forming grooves, said head being arranged to revolve freely between the jaws, substantially as described.

2. In a tool for finishing bottles the combination with the jaws, having shoulders 19, and grooves 4 to form a lip upon the end of a bottle, of the block 15 having a central perforation and arms 16 provided with pins 18, and the spindle and head arranged to revolve freely in the perforation of the block 15, said head having longitudinal grooves extending from its outer end inwardly and terminating near the grooves 4, and a shoulder 14, the said shoulders 14 and 19 being arranged to bear upon block 15 when the tool is in use, substantially as described.

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

ALEXANDER LEVI STRAUS.

Witnesses:

THEODORE L. STRAUS,

SYDNEY S. FRANK.