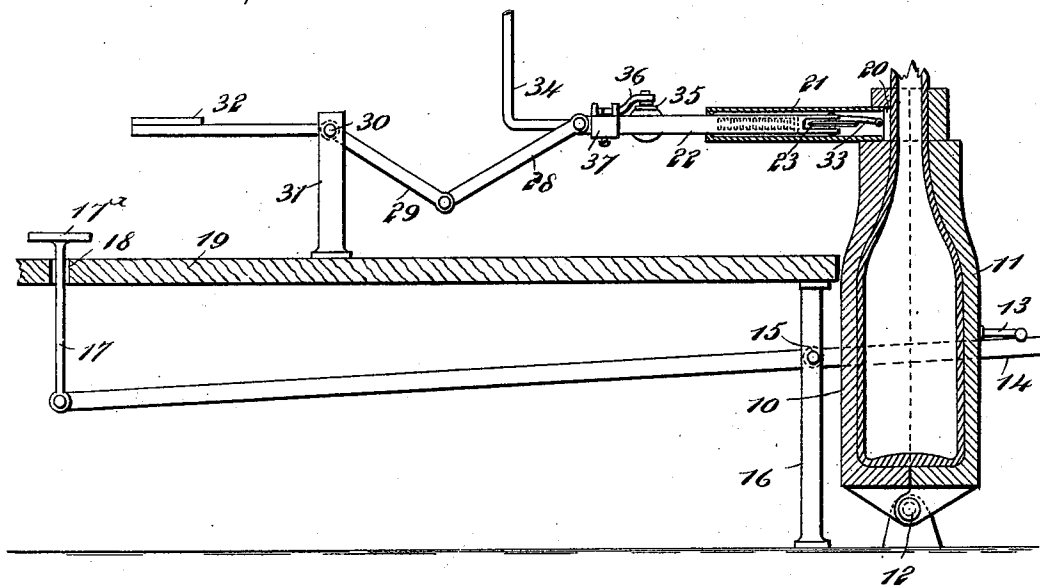


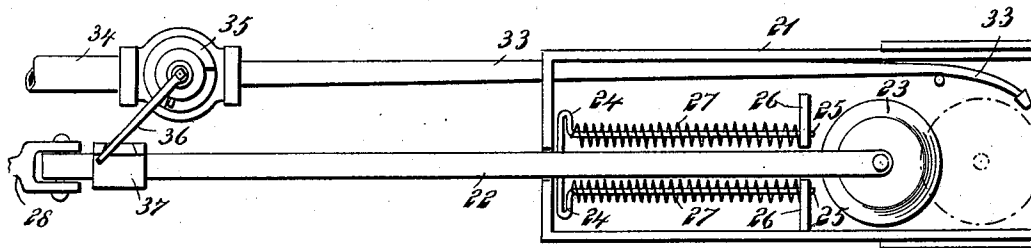
A. BENSON.
BOTTLE CUTTING APPARATUS.

Patented Sept. 3, 1895.

Fig 1



1192



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UNITED STATES PATENT OFFICE.

AUGUST BENSON, OF STREATOR, ILLINOIS, ASSIGNOR OF ONE-HALF TO
GUSTAV SAMUELSON, OF SAME PLACE.

BOTTLE-CUTTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 545,767, dated September 3, 1895.

Application filed January 29, 1895. Serial No. 536,603. (No model.)

To all whom it may concern:

Be it known that I, AUGUST BENSON, of Streator, in the county of La Salle and State of Illinois, have invented a new and Improved Bottle-Cutting Apparatus, of which the following is a full, clear, and exact description.

My invention relates to improvements in cutting devices for severing blown bottles from the blow-pipe; and the object of my invention is to produce a very simple and inexpensive apparatus which is adapted to be used in connection with bottles blown in turn-molds, and by which a bottle-neck may be easily cut off by mechanism controlled by the foot of the blower, thus leaving his hands free to do other work.

Another object of my invention is to produce a cutter which not only works rapidly, but cuts the neck smoothly, so as to leave the bottle in good condition for finishing in the glory-hole.

To these ends my invention consists of certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in both the views.

Figure 1 is a sectional elevation of my improved apparatus as applied to a bottle, and Fig. 2 is a broken enlarged detail plan view of the cutting mechanism.

I have shown my apparatus in connection with an ordinary mold formed of two parts, 10 and 11, the former being rigid and the latter pivoted, as shown at 12, and the mold being of the usual form is adapted to contain the ordinary bottle-pattern, so that the bottle may be blown and turned in the usual manner.

The movable side 11 of the mold connects by a link 13 with the free end of a lever 14, which is fulcrumed, as shown at 15, and which when tilted opens or closes the mold. The longer end of the lever has a foot-rod 17 pivoted to it, which rod extends upward through a hole 18 in the platform 19, on which the blower stands while at work, and the top of the rod 17 terminates in a treadle 17^a, on

which the heel of the operator is placed while the bottle is being formed. The above construction is old and forms no part of my invention.

The part of the mold 10 has, near the top and opposite the part corresponding to the bottle-neck, a hole 20, which receives the end of the case 21, which carries the cutter 23, which is circular and is journaled in the end of a sliding-shaft 22, which extends through the outer end of the case 21, and which is provided with a slide-frame 24, having arms 25, sliding in guides 26, and on the arms are springs 27, which normally press the shaft 22 outward so as to hold the cutter 23 out of contact with the neck of the bottle. Any other suitable spring device may be used for accomplishing the same result.

To the outer end of the shaft 22 is pivoted a rod 28, which connects with a lever 29, which is fulcrumed near the center, as shown at 30, on a post 31, which is provided with a foot-piece 32, adapted to receive the toe of the blower's foot while his heel rests on the treadle 17^a. It will thus be seen that with his foot he can hold the treadle down so as to keep the mold closed and at the same time depress the foot-piece 32 so as to throw in the rod 28 and shaft 22 and bring the cutter 23 into contact with the bottle-neck.

In the case 21 is held a nozzle 33, which is adapted to deliver water through the hole 20 against the bottle-neck while the cutter is also against the neck, being in a position shown by dotted lines in Fig. 2, and this nozzle is connected with a suitable supply-pipe 34 and is controlled by a valve 35, the stem or handle 36 of which connects with a catch 37 on the shaft 22, and thus when the shaft 22 is moved inward to cut the bottle-neck it causes the handle 36 to be turned and the valve 35 opened, so that water is at the same time forced against the bottle-neck, thus making the neck brittle and causing the cutter to work to the best advantage.

The bottle is blown in the usual way, being turned constantly in the mold, and when the bottle is completely blown the blower brings the shaft 22 forward in the manner described, so as to force the cutter 23 against the bottle-neck, and the water is turned on,

as already described, and the turning of the bottle brings the cutter into contact with the several sides of the neck and the latter is quickly and nicely cut off.

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

1. The combination with the mold, of the cutter movable in and out at the neck of the
10 mold, a water supply pipe delivering into the mold near the cutter, a mechanism for moving the cutter, and a valve controlled by the movement of the cutter to regulate the water supply, substantially as described.

15 2. The combination, with the mold, of the spring-pressed revoluble cutter arranged to move transversely opposite the neck of the mold and adapted to enter it, and a lever mechanism for moving the cutter inward,
20 substantially as described.

3. The combination, with the mold having

a transversely disposed neck opening, of the spring-pressed cutter moving in and out in the said neck opening, substantially as described.

4. The combination, with the mold having
25 a neck opening, of the cutter moving in and out in the said opening, and a water pipe delivering into the said opening, substantially as described.

5. The combination, with the mold having
30 a neck opening, of the sliding shaft opposite the said opening, a cutter journaled on the shaft, a water supply pipe delivering into the said opening, a valve controlling the supply
35 pipe, and means for opening and closing the valve by the movement of the shaft, substantially as described.

AUGUST BENSON.

Witnesses:

O. D. HOLLAND,
U. S. PAINTER.