H. E. ASBURY.

BOTTLE CAPPING MACHINE.

APPLICATION FILED AUG. 7, 1919.

1,397,394.

Patented Nov. 15, 1921.

2 SHEETS—SHEET 1.

Fig. 1.

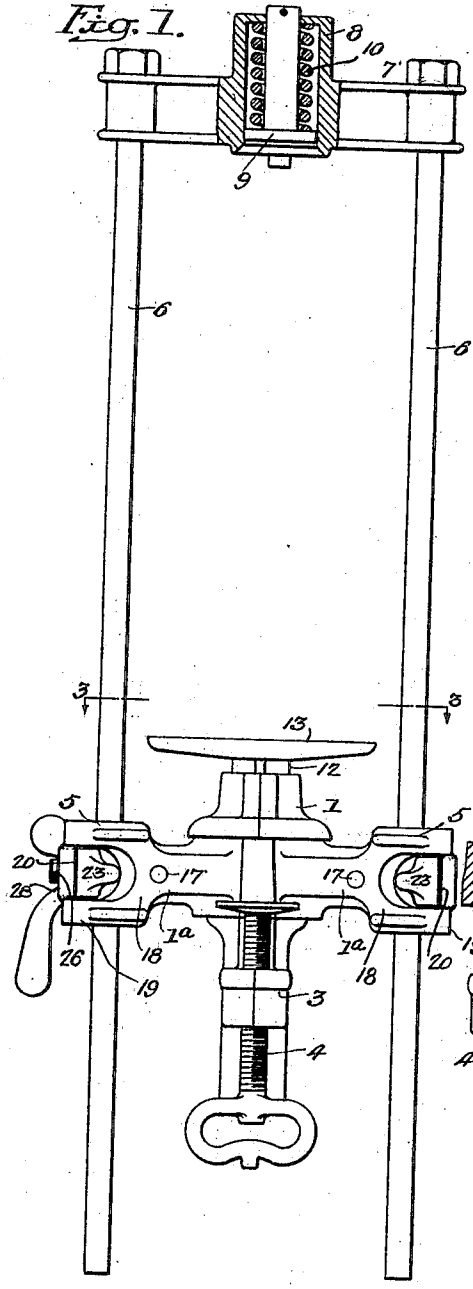
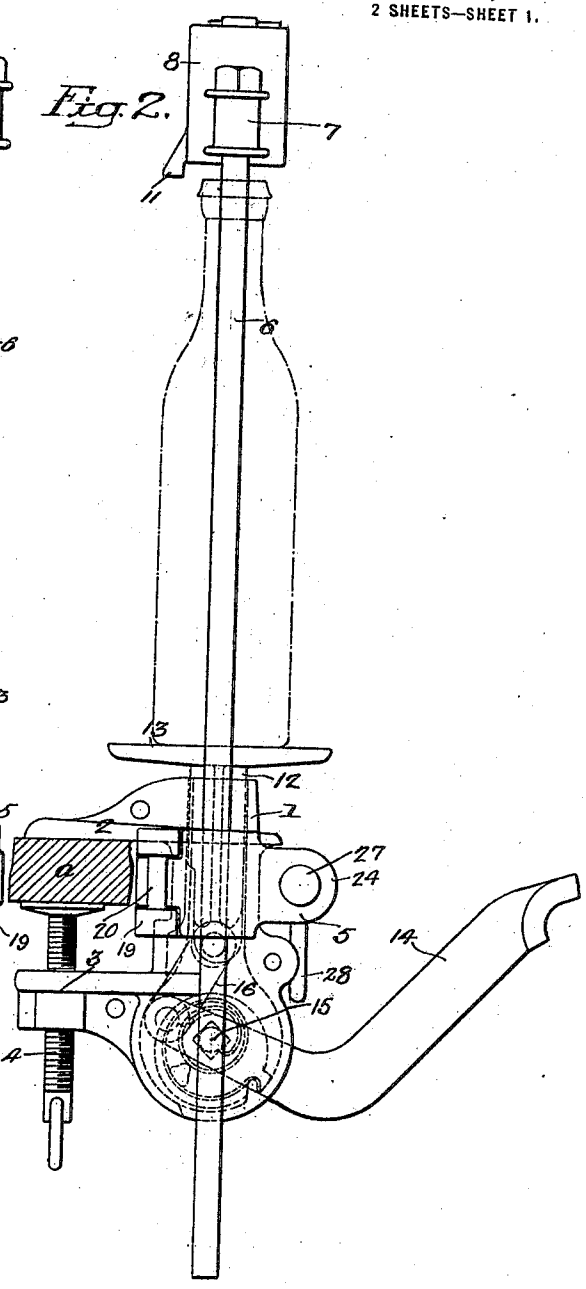


Fig. 2.



Inventor—
Harry E. Asbury.
by his Attorneys—
Howson & Howson

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2 SHEETS—SHEET 2.

Fig. 3.

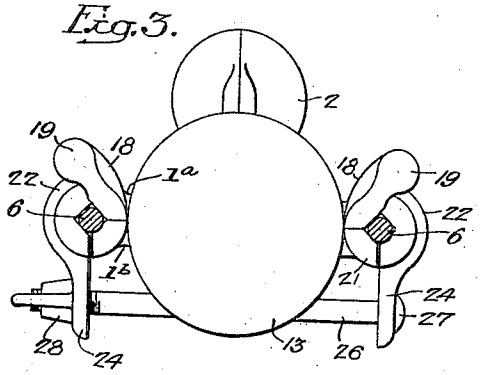


Fig. 4.

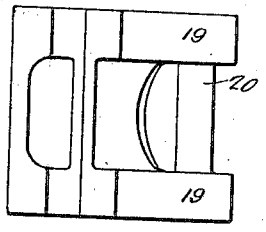


Fig. 5

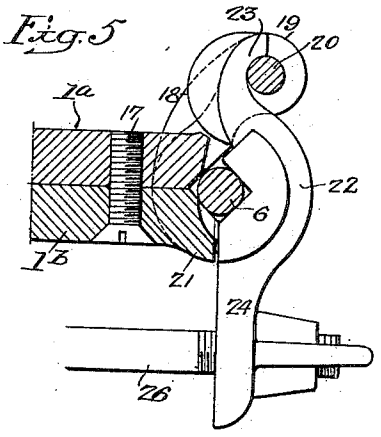


Fig. 6.

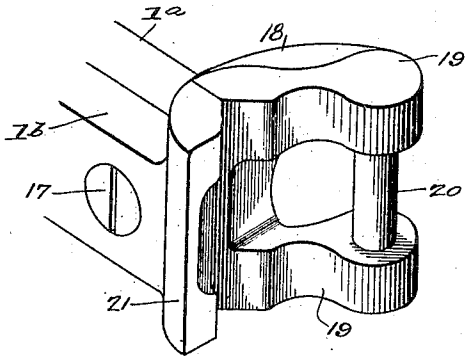


Fig. 7.

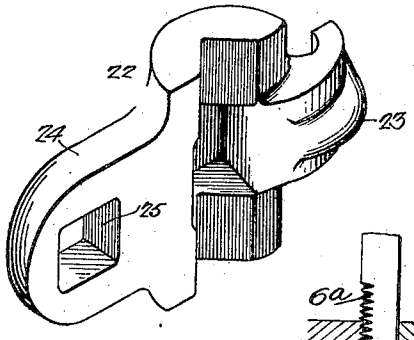


Fig. 8.

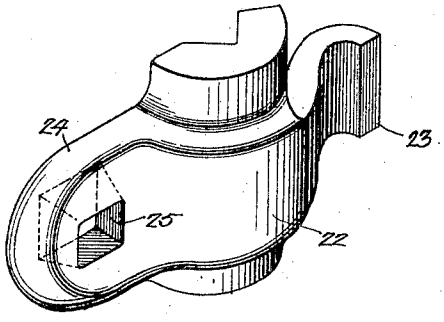
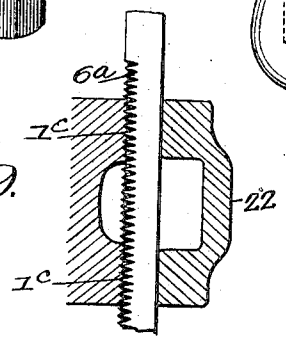


Fig. 9.



Inventor—
Harry E. Asbury.
by his Attorneys
Howson & Howson

UNITED STATES PATENT OFFICE.

HARRY E. ASBURY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE ENTERPRISE MANUFACTURING COMPANY OF PENNSYLVANIA, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

BOTTLE-CAPPING MACHINE.

1,397,394. Specification of Letters Patent. Patented Nov. 15, 1921.

Application filed August 7, 1919. Serial No. 315,855.

To all whom it may concern:

Be it known that I, HARRY E. ASBURY, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Bottle-Capping Machines, of which the following is a specification.

My invention relates to certain improvements in a bottle capping machine for which patent was granted to me on the sixth day of November, 1917, No. 1,245,658.

The object of my present invention is to improve the construction of the clamps for securing the rods to the base of the machine so that when the rods are clamped, after being set in a certain position, they are held rigidly against the pressure of the plunger in order to insure the proper clamping of the cap to the bottle.

This object I attain in the following manner, reference being had to the accompanying drawings, in which:

Figure 1 is a front elevation of a bottle capping machine illustrating my invention;

Fig. 2 is a side view;

Fig. 3 is a sectional plan view on the line 3—3, Fig. 1;

Fig. 4 is an enlarged side view of the clamp;

Fig. 5 is a sectional plan view of the clamp;

Fig. 6 is a perspective view showing one of the clamps of the frame;

Figs. 7 and 8 are perspective views of one of the hook clamps; and

Fig. 9 is a view showing the rods serrated to engage teeth on the clamps.

My improved bottle capping machine is adapted to secure crown caps to bottles. The cap is placed on a bottle and the bottle is located in the machine. When the lever is pressed down, the plunger lifts the bottle against the crosshead. The shape of the recess in the crosshead is such as to crimp the cap firmly onto the bottle. This is fully set forth and described in the above mentioned patent.

Referring to the drawings, 1 is a base, which has a foot 2 resting on a table *a*, or other support, and projecting under the table is a bracket 3 having a clamp screw 4 by which the base is held firmly to the table. On each side of the base are clamps 5 through which pass the rods 6 carrying at their upper ends the crosshead 7 having a centrally located cylinder 8 in which is a plunger 9. Between the head of the plunger and the end of the cylinder is a spring 10. The cylinder is flared at its lower edge and projecting at one side of the cylinder is a lug 11 which forms a gage when setting the crosshead in respect to the bottle.

In the base 1 is a plunger 12 carrying a table 13 on which the bottle is mounted. 14 is a lever for raising the plunger. The lever is pivoted at 15 and is connected by a link 16 to the plunger. A spring returns the plunger to its normal position when the lever is released. This construction is similar to that described in the patent hereinbefore mentioned.

I have found that the ordinary hinged clamp is objectionable in that it does not accommodate itself to any inequalities in the rod, and, consequently, when the clamps are tightened they do not grasp the rod with sufficient firmness to hold the crosshead rigidly in position while pressure is being applied by the lever and the plunger to crimp the cap onto the bottle. This is essential in this type of machine, as the crosshead must be accurately set in respect to the table and bottles to be capped so as to insure the proper clamping of the cap onto the head of a bottle. Therefore, I have designed my improved clamps, which I will now proceed to describe. These clamps, when applied, firmly hold the rods in position against any pressure exerted by the lever in forcing the bottle against the crosshead in crimping the cap onto the bottle.

Referring particularly to Figs. 3 to 6, inclusive, the base is made in two parts 1^a and 1^b, held together by screws 17, as clearly shown in Fig. 5. On the section 1^a of the base is a fixed jaw 18 having two arms 19, which are spaced apart and between these arms is a bar 20, either made integral with the arms or cast into them. On the other portion 1^b of the base is an extension 21 and both the bracket 18 and the extension are beveled to form a V-shaped recess for the rod 6.

22 is a clamp jaw having a hook 23, which engages the bar 20 and has an arm 24 which

is perforated at 25 for the passage of the bolt 26 having a head 27 at one end and threaded at the opposite end to receive the wing nut 28. The two jaws are located, as shown clearly in Fig. 3, so that when the wing nut is turned in one direction the two jaws are drawn tightly against the rods 6, 6, the jaws having a V-shaped groove, similar to the groove in the base, so as to fit any irregularities in the rod. Both the fixed and movable jaws are cut away at the center so that the bearing surfaces will be at each end of the jaw and the base, insuring a neat fit. The jaws are made extra heavy so that considerable pressure can be applied without straining them, as it will be understood that a machine of this character is especially adapted for household use and the parts must be made so that they can be handled by inexperienced persons without the liability of the parts breaking.

It will be noticed that the hook section fits loosely on the bar 20 so that the jaw will accommodate itself to the rod 6.

In Fig. 9, I have shown the rod having a series of serrations 6^a to engage teeth 1^a on the fixed jaw, or on the movable jaws, so as to lock the rod positively to the base when the clamps are applied.

Where there is a neatly fitting standard hinge, such as in the aforementioned patent, if the pintle be slightly out of center, then the clamp would not bear properly on the rod.

I claim:

The combination in a bottle capping machine, of a base; a plunger in the base; a table carried by the plunger; a lever for raising the plunger; two rods; a crosshead carried by the rods; means for clamping a cap onto a bottle, said means being mounted in the cross head; a fixed jaw at each side of the base through which the rods extend, each fixed jaw having a forked projection; a bar extending between the forks; a movable jaw at each side having a hook engaging the bar and also having a perforated projection; a headed bolt extending through the perforations on both movable jaws, said bolt being threaded; and a nut mounted on the threaded portion of the bolt so that, on turning the nut in one direction, the jaws will clamp the rods, holding them firmly to the base.

HARRY E. ASBURY.