(No Model.)

H. B. ANDERSON.

BOTTLING MACHINE.

No. 262,911. Patented Aug. 22, 1882.

Fig. 1.

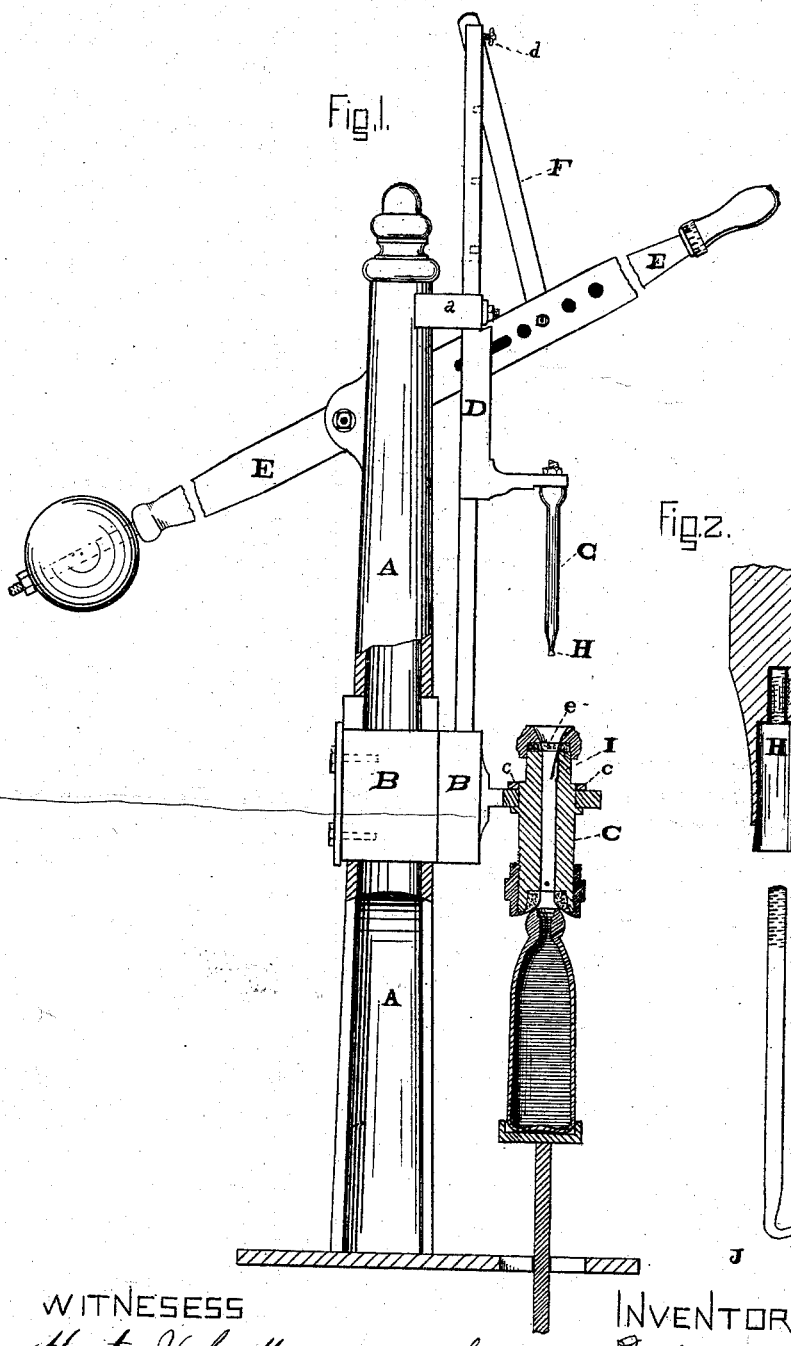
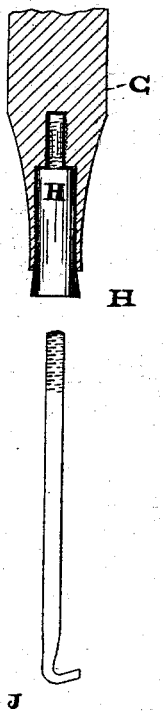


Fig. 2.



WITNESSES

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HENRY B. ANDERSON, OF ST. LOUIS, MISSOURI.

BOTTLING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 262,911, dated August 22, 1882.

Application filed October 5, 1881. (No model.)

To all whom it may concern:

Be it known that I, HENRY B. ANDERSON, of the city of St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Bottling-Machines, of which the following is a specification.

The object of this invention is a bottling-machine that can be used for bottling either still or aerated liquors, whether the bottles are closed with external or internal stoppers. Its object is also to provide for the use of dry instead of soaked or steamed corks, and to prevent injury to the corks while being driven into the necks of the bottles, the bottles which I prefer to use, when stoppering with cork stoppers, being provided at the mouth with an enlarged chamber terminating in an annular ledge on which the lower outer edge of the cork is seated, thus admitting of the use of corks of but half the length of those in common use. These objects are accomplished by the means illustrated in the accompanying drawings, in which—

Figure 1 is a side view of my machine, a portion being shown in central vertical section. Fig. 2 is an enlarged detail view of the plunger and its attachments.

A represents the standard; B, the cylinder-support, vertically adjustable in an opening through the standard A.

The cylinder is represented by C. It is held in the outer end of support B by a nut, *c*.

D is the plunger guide-bar, fitted to slide through piece B and a stud, *a*, cast upon the upper end of standard A. The plunger-bar is actuated by a weighted lever, E, through a link, F, which is adjustable in lever-bar E, by means of bolt and holes in said bar, to obtain a longer or shorter stroke of the plunger G to adapt it to convenient use in charging either with outside or inside stoppers. The stroke of the plunger G is limited by set-screws *d*, which are changed into different holes of the guide-bar D, as desired.

Except the provisions for varying and limiting the stroke of the plunger G, the plunger itself and the cylinder in which it works, the machine does not materially differ from those in common use for bottling with outside stoppers.

The novel features of my machine will now be described.

In machines now used for outside stoppers the bore of the cylinder is made about the size of the throat of the bottle used, and is much smaller than the corks to be used, while the plunger is of a uniform diameter throughout its length, being much less than the diameter of the cylinder to permit the ordinary wire cork-fasteners to pass over the cork, the loop in the locking-wire passing upon each side of the plunger while it holds the cork in the bottle. In these cases the corks must be soaked or steamed to admit of their being compressed sufficiently to pass into the bottle. This compression is effected in the cylinder, into which the cork is tightly forced from above to prevent the escape of the gases.

In steaming corks that have been previously used they become contaminated by the different liquids in the bottles they have been used to close, and absorb the water in which they are steamed. This foul liquid is forced out of the cork as it is compressed in the cylinder and is discharged into the bottle being filled, thus injuring the liquid.

The corks, when used, are from the steaming very soft, and many of them are injured or entirely destroyed by the plunger in being forced through the cylinder.

By my invention these difficulties are overcome. I bore out my cylinder to the size about of the enlarged upper opening in the bottle-neck, make the plunger, except the lower end, to snugly fit the cylinder, and in the upper end of the cylinder provide a stuffing-box packed with a hard textile packing, *e*. By this means I am enabled, when bottling aerated liquors, to prevent the escape of gas through the cylinder, as the plunger fits snugly in the stuffing-box. The reduced end of the plunger is bored out and fitted with a rubber plug, H. Within the upper end of the cylinder, just below the packing, is a spring-wire, I, which projects out from the wall of the cylinder, and when forced back by a cork or marble recedes within a slot cut in the cylinder. The purpose of this is to prevent a small cork or marble from dropping through the bore of the cylinder before the enlarged portion of the

plunger reaches the stuffing-box to close the cylinder and prevent the escape of gas in bottling aerated liquids.

The bottle represented in the accompanying drawings (and claimed in another pending application filed by me) is made with an annular rabbet at the mouth which enlarges the throat, leaving a beveled offset to form a seat for the common cork stopper. By this arrangement I am enabled to use corks of about half the length of those now commonly used and make a more secure stopper.

Corks are made with the seep-pores running transversely to the length of the cork. As only the bottom of the cork is in contact with the liquid in my improved bottle, none of the contents can reach the cylindrical portion of the cork to be absorbed by the pores. The corks may therefore be used over again with any kind of liquor, as they are not contaminated by the contents of the bottle.

To bottle with outside stoppers the operation is the same as with the machines now used. The dry cork or marble is forced through the stuffing-box and cylinder and into the enlarged upper portion of the bottle, the rubber cushion compressing the cork upon its seat. In this case the cork is compressed endwise, instead of in the direction of its circumference, and is held compressed by the wire locking device. The rubber cushion prevents injury to the corks, and when the wire fastener is thrown off the cork will not stick, as is often the case in the common mode of bottling, which necessitates the use of an instrument—usually an ice-pick—to remove the cork, by which so many bottles are chipped out at the mouth and ruined.

The machine is changed to bottle with inside stoppers by removing the rubber plug H and inserting in the screw-threaded opening within the end of the plunger the wire hook J, Fig. 2. This wire is made of spring-steel. The lower hooked end is made to sustain a weight of about five pounds without straightening. The set-screw *d* in the guide-bar D is set below the upper stud the proper distance to permit the hook J to be released from the hook of the stopper without withdrawing the enlarged portion from the stuffing-box. As the plunger is brought down the spring end of the hook J trips past the end of the stopper-loop and hooks into it, at the same time pushing the stopper down, should it be drawn up into the neck of the bottle. After the bottle is charged the lever is released or thrown up, drawing the stopper into the neck of the bottle, and as the upward stroke continues straightening the hook J and withdrawing it from the stopper-loop. The bottle is then removed and another put in place and the operation continued.

It will thus be seen that my machine saves corks when outside stoppers are used, and can be readily changed to operate with stoppers closed from the inside, and thus my cushioned plunger will save corks, even when steamed and compressed by it in the ordinary way.

I do not claim the improved bottle here, as I intend to make it the subject of a separate application.

What I claim is—

1. In a bottling-machine, the combination, as specified, of plunger G, cylinder C, open from top to bottom for the passage of corks, and packing *e*, arranged to operate as specified.

2. The combination, in a bottling-machine, of the plunger G, packed cylinder C, and spring-wire I, substantially as specified.

3. The plunger of a bottling-machine, provided at its lower end with a counterbore or socket adapted to be fitted either with a cushion (such as H) for stoppering with corks, or with a spring-wire hook (such as J) for stoppering with inside stoppers, substantially as before set forth.

4. The combination, substantially as before set forth, of the cork-seating plunger G and elastic cushion H with the cylinder of a bottling-machine.

HENRY B. ANDERSON.

Witnesses:
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