A. R. WEISS.

Bottle Stopping Machine.

No. 202,080. Patented April 2, 1878.

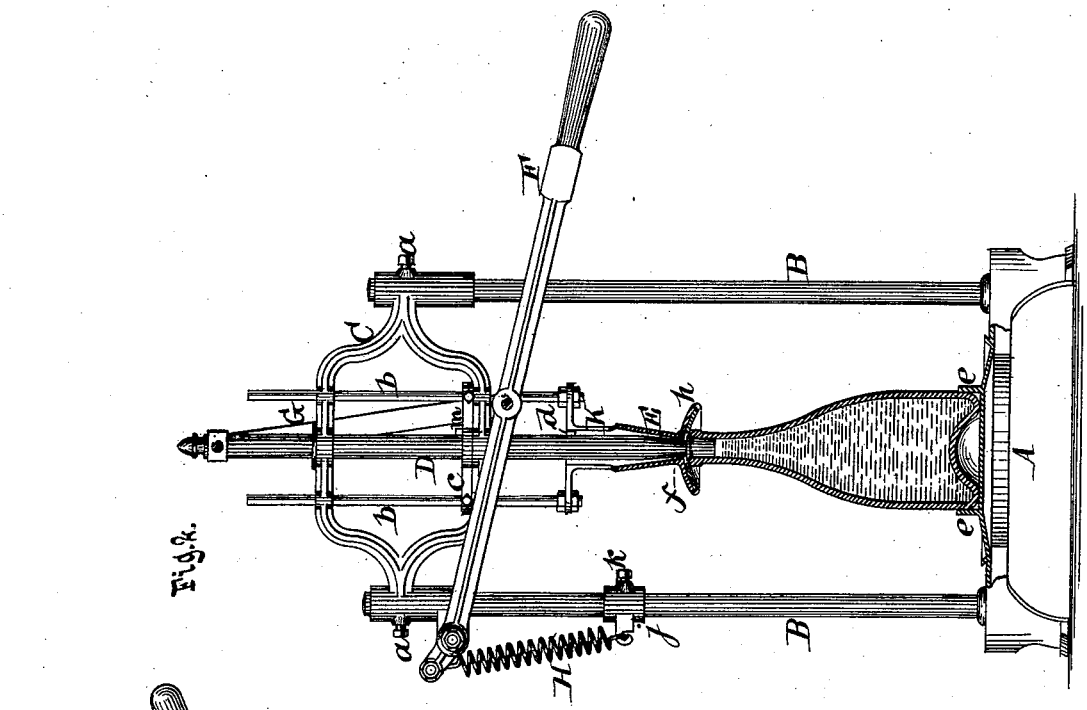

Fig. 2.

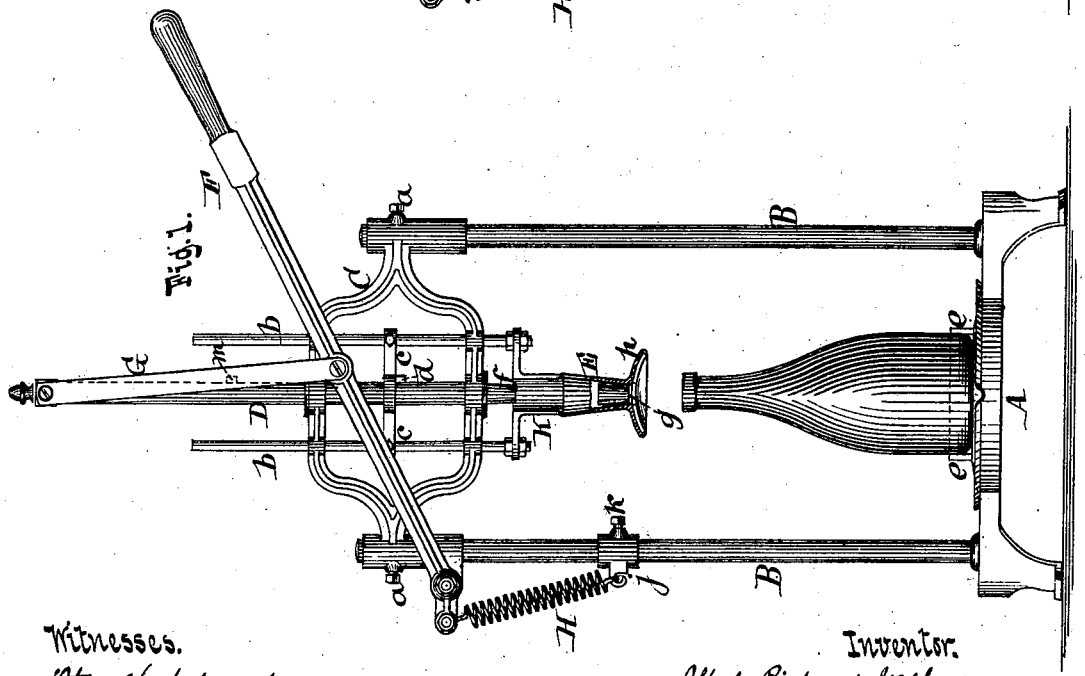

Fig. 1.

Witnesses.

Otto Schulland.

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by

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UNITED STATES PATENT OFFICE.

ALBERT R. WEISS, OF BROOKLYN, E. D., NEW YORK.

IMPROVEMENT IN BOTTLE-STOPPING MACHINES.

Specification forming part of Letters Patent No. **202,080**, dated April 2, 1878; application filed March 1, 1878.

To all whom it may concern:

Be it known that I, ALBERT RICHARD WEISS, of Brooklyn, E. D., in the county of Kings, State of New York, have invented a new and useful Improvement in Bottle-Stopping Machines, which improvement is fully set forth in the annexed specification, reference being had to the accompanying drawing, in which—

Figure 1 is a front view, partly in section, with the lever raised. Fig. 2 is a front view, partly in section, with the lever depressed.

Similar letters indicate corresponding parts.

This invention consists in the combination, in a machine for inserting stoppers into bottles, of a stop secured to the plunger, which acts on the connecting-bar and prevents the plunger from pressing the stopper in too far, and from driving it into the bottle, a spring or weight which raises the lever, and a guide which leads the stoppers into the stopper-receiving funnel; also, in the combination, in a machine as above described, of a sliding frame which carries the stopper-receiving funnel, so that said funnel descends until it rests on the bottle, and a stop attached to the plunger and acting on the connecting-bar, which raises the frame, carrying the receiver away from the bottle when the cork has been inserted and the lever is raised by the spring or weight supplied for that purpose.

In the drawing, the letter A designates a base-plate of any desired material, to which are attached the uprights B B. To these uprights B B the cross-piece C is firmly fastened by clamp-screws *a a*, or any other desirable means. My object in fastening the cross-piece C by clamp-screws, as shown in the drawing, is that I can adjust said cross-piece at various heights by loosening the clamp-screws and sliding said cross-piece to the desired height on the uprights B B. This arrangement is desirable in order to adapt my machine to bottles of various lengths. The cross-piece C is preferably made of the form shown in the drawing, with two parts or arms, one above the other. Each part or arm is provided with three holes, through which pass the plunger D and the guide-bars *b b*, which bars *b b* carry the stopper-receiving funnel E and connecting-bar *c*. By this arrangement the plunger D and bars *b b* descend and ascend perpendicularly, and the plunger D is made to press perpendicularly downward.

G G are two connecting-rods, which transmit the power applied to the lever F to the plunger D. These connecting-rods are hinged to the plunger D and the lever F, so that the plunger D moves up and down, while the lever F describes an arc of a circle. The lever F has its fulcrum on the cross-piece C, and the end of the lever extends a little beyond the fulcrum, so as to afford opportunity for the attachment of a spring, H. The object of this spring is to raise the handle of the lever F, and thereby to lift the plunger D and stopper-receiving funnel away from the bottle. In the example shown in the drawing the spring is attached to a slide, *j*, fastened to the upright B by a clamp-screw, *k*, so that by placing the slide on different places along the upright B the efficiency of the spring may be varied to suit circumstances.

E represents the funnel-shaped receiver, in which are placed the corks or stoppers. From this receiver E extends a guide, K, which reaches up to a level with the end of the plunger D when the lever F is raised, Fig. 1. This guide K leads the stoppers or corks into the receiver E, and allows the workman to introduce the corks easily and rapidly. The receiver E is provided at its lower end with a hood, *h*, which prevents the bottle from sliding out from underneath the receiver E when said receiver is pressed down on the bottle. In the bottom of the receiver E is a hole, through which the corks are pressed by the end *f* of the plunger.

The operation of the machine is as follows: The bottle is placed on the platform, its place being determined by the elevation *e*. A cork is placed in the receiver E, and then the lever F is depressed. This causes the stop *d* to descend, and allows the bars *b b* and receiver E, which have before been held up by said stop *d* on the plunger, to slide down until either the hood *h* rests on the bottle or the connecting-bar *c* rests on the lower arm of the cross-piece C. When the receiver E rests on the neck of the bottle its downward motion is arrested, the plunger D passes on into the receiver, and forces the cork through the opening *g* into the mouth of the bottle. To prevent the plunger

D from pressing the cork too far into the bottle, I provide a stop, *m*, on the plunger D. This stop strikes against the connecting-bar *c*, and prevents the end *f* of the plunger from forcing the cork farther in the bottle than is desired. When the cork is inserted into the bottle the lever F is released, and rises under the action of the spring H. The plunger D is, by this means, also raised, and in sliding up the stop or projection *d* strikes the connecting-bar *c* and lifts the receiver E away from the bottle. The bottle is then taken out, another one introduced, and the operation proceeds as before.

Of course, the machine can be modified in various ways—as, for example, the spring H might be replaced by a weight, or the spring might be attached in any other way, so as to act in raising the lever F. I do not confine myself to the precise construction shown in the drawing; but the material parts of the machine are substantially as above described.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a bottle-stopping machine, of a stop, *m*, attached to the plunger D, which stop acts on the connecting-bar *c*, and prevents the plunger from descending too far, and a spring or weight, H, which raises the lever F, all combined and operating substantially as set forth.

2. The combination, in a bottle-stopping machine, of a weight or spring, H, to raise the lever F, a stop, *m*, attached to the plunger D, which stop prevents it from descending too far, and a stopper-guide, K, to lead the corks into the stopper-receiving funnel E, all combined and operating substantially as set forth.

3. The combination, in a bottle-stopping machine, of a sliding frame which allows the stopper-receiving funnel to descend until it rests on the top of the bottle, a stop, *d*, attached to the plunger, for lifting the frame, and a spring or weight, H, for raising the lever F, all combined and operating substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 14th day of February, 1878.

ALBERT RICHARD WEISS. [L. S.]

Witnesses:

W. HAUFF,

CHAS. WAHLERS.