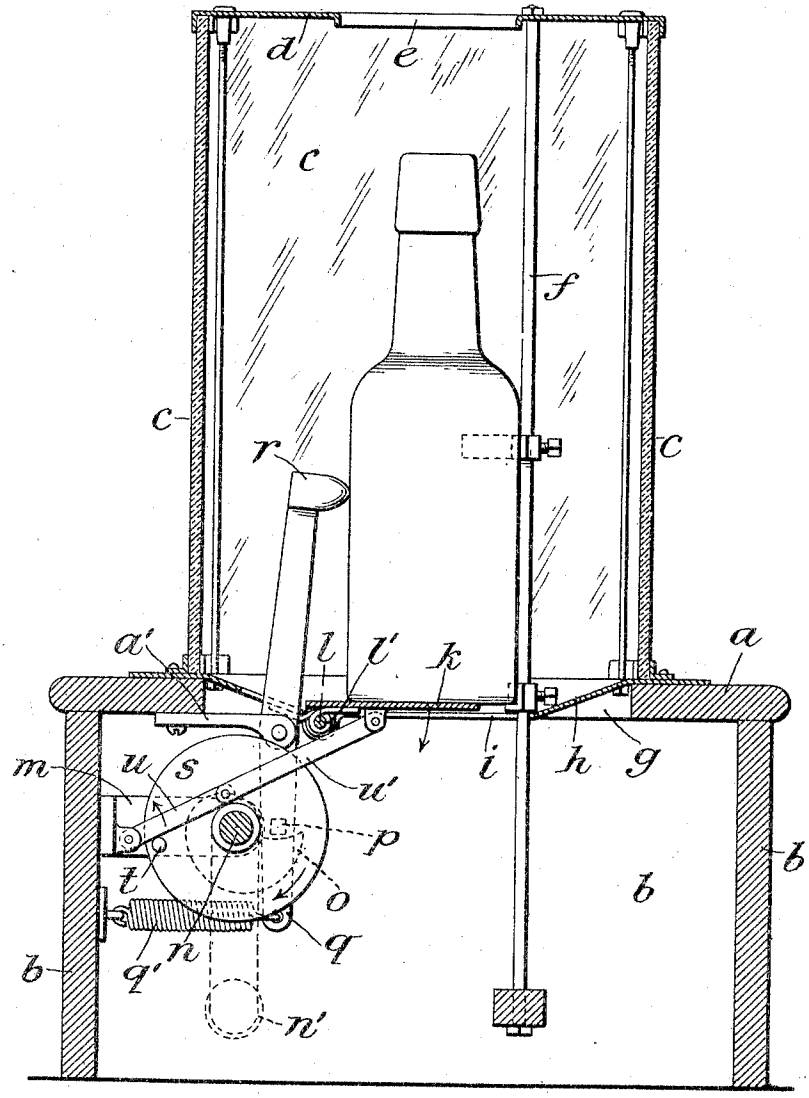
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J. H. GERNHARDT.

BOTTLE SMASHER.

APPLICATION FILED OCT. 21, 1904.



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UNITED STATES PATENT OFFICE.

JOSEPH H. GERNHARDT, OF NEW YORK, N. Y., ASSIGNOR TO THOMAS M. CROWLEY, OF BROOKLYN, NEW YORK.

BOTTLE-SMASHER.

SPECIFICATION forming part of Letters Patent No. 780,097, dated January 17, 1905.

Application filed October 21, 1904. Serial No. 229,433.

To all whom it may concern:

Be it known that I, JOSEPH H. GERNHARDT, a citizen of the United States, residing in the borough of Manhattan, city of New York, in the State of New York, have invented certain new and useful Improvements in Bottle-Smashers, of which the following is a specification, reference being had to the accompanying drawing, forming a part hereof.

Various attempts have been made in the past to produce bottles which would permit of ready outflow of the contents, but which would not permit the reintroduction of any liquid into the bottle after the original contents have been exhausted. All such devices, however, have either failed to accomplish the desired purpose or have added so much to the cost of the bottle as to render the general adoption of the devices impracticable. As a matter of fact, the original cost of the bottle is ordinarily so small as to render such cost a factor of no importance in the problem, and in cases where the dealers are honest the breaking of the bottle in the presence of customers would be the easiest and cheapest solution of the problem. The actual breaking of the bottle might be easily accomplished; but in order that it may be effected without danger either to the dealer or to customers from flying glass and without objectional scattering of broken glass, and yet within the immediate observation of customers, it is desirable to provide a machine or apparatus in which a bottle may be smashed under the observation of customers, so that they may have assurance that the bottle will not be refilled with any liquid, while the scattering and flying of the fragments is prevented.

It is accordingly the object of this invention to produce such a machine, and in order that the invention may be clearly understood it will be more fully described hereinafter with reference to the accompanying drawing, in which it is illustrated and described in a convenient and practical form.

The single figure of the drawing is a view of the machine partly in elevation and partly in vertical section.

In the machine represented in the drawing there is provided a suitable base composed of a top *a* and walls *b*, which supports the working parts of the machine. Upon the base is erected a case or cabinet *c*, which has one or more of its walls of glass, so that the interior thereof can be seen readily. At a suitable point in the case or cabinet *c*, preferably in the top *d* thereof, is provided an aperture *e* of size and shape to permit the introduction of the bottle to be smashed. One or more guide-rods *f* may be secured to the top *d* of the case or cabinet and extended downward through the top *a* of the base for the purpose of guiding the bottle to proper position and also for supporting it while being smashed, so that there shall be no danger of breaking the walls of the case or cabinet and also so that the fragments may be the more readily discharged. The top *a* of the base is cut out within the walls of the case or cabinet *c*, as at *g*, and a bottom *h* is secured in the aperture, such bottom having a central opening *i* with sides dished toward such central opening, so that no fragments of glass shall lodge thereon. A gate *k* is provided for the opening *i*, being preferably hinged, as at *l*, to the bottom *h* at one side of the opening *i*, while means are provided for maintaining it normally in a horizontal position for the purpose of supporting the bottle while it is being smashed, the gate then opening to discharge the fragments into the base *b* or into any suitable receptacle beneath the same.

Upon suitable brackets, one of which is shown at *m* within the base *b*, is supported a shaft *n*, which may be provided outside of the base with a suitable handle *n'*. Upon the shaft is secured a cam *o*, having a quick drop which coöperates with a stud *p* on a hammer-lever *q*. The latter having a head *r* for impact upon the bottle is pivoted upon a bracket *a'*, secured to the under side of the top *a*, and has connected to its lower end a spring *q'*. There is also secured to the shaft *m* a disk *s*, having a pin *t*, which engages one of the two members of a toggle-lever *u u'*, one end of which is pivoted upon the bracket *m*, while the other is pivotally connected to the under side of the gate or door *k*. A spring *l'* in the

hinge *l* of the gate or door *k* serves to return the gate or door to its horizontal position, in which it is held by the straightened toggle-lever until the pin *t* again flexes the toggle-lever and swings the gate downward on its hinge.

It will now be understood that with the parts in the position represented in the drawing a bottle to be smashed is inserted through the opening *e* and is permitted to rest upon the gate or door *k*, being guided to position and supported by the rod or rods *f*. The shaft *n* is then rotated and the cam *o* first puts the spring *q'* under tension, coöperating with the pin *p* of the hammer-lever *q*, throwing the head *r* of the hammer back, and then passes beyond the pin *p*, permitting the spring *q'* to act and to throw the head of the hammer sharply against the bottle, whereby the bottle is smashed, the operation taking place under the observation of customers. The parts are represented in the positions which they assume just after the cam has passed beyond the pin *p* and has permitted the hammer to smash the bottle. A further rotation of the shaft causes the pin *t* in the disk *s* to act upon the toggle-lever in such manner as to cause the gate or door *k* to drop on its hinge, whereby the fragments of the broken bottle are discharged within the base *b*. As the rotation of the shaft is continued, the door *k* is again returned to its horizontal position in readiness for the reception of another bottle, and the hammer is then drawn back, putting the spring *q'* under tension in readiness for another operation.

It will be obvious that various changes may be made in the details of construction and arrangement of the machine without departing from the spirit of the invention.

I claim as my invention—

1. A machine for preventing the refilling of bottles, the same comprising a case or cabinet adapted for the reception of the bottle, means to support a bottle in position to be smashed, a hammer within the case or cabinet, means to actuate the hammer to smash the bottle, and means to discharge the fragments of the bottle, substantially as described.

2. A machine for preventing the refilling of bottles, the same comprising a case or cabinet adapted for the reception of the bottle, a gate or door upon which the bottle may rest, a hammer within the case or cabinet, means to actuate the hammer to smash the bottle, and means to move the gate or door to discharge the fragments of the bottle, substantially as described.

3. A machine for preventing the refilling of bottles, the same comprising a case or cabinet adapted for the reception of the bottle, a vertical guide to support the bottle within the case or cabinet, a hammer within the case or cabinet, and means to actuate the hammer to smash the bottle, substantially as described.

4. A machine for preventing the refilling of bottles, the same comprising a case or cabinet adapted for the reception of the bottle, means to support the bottle in the position to be smashed, a spring-actuated hammer within the case or cabinet, and a cam to place the hammer-actuating spring under tension and to release the hammer to smash the bottle, substantially as described.

5. A machine for preventing the refilling of bottles, the same comprising a case or cabinet adapted for the reception of the bottle, a hammer within the case or cabinet, a gate or door upon which the bottle may rest, and a cam and intermediate connections whereby the gate or door may be moved to discharge the fragments of the bottle, substantially as described.

6. A machine for preventing the refilling of bottles, the same comprising a case or cabinet adapted for the reception of the bottle, a hammer to smash the bottle, a gate or door upon which the bottle may rest, and a shaft having a cam to coöperate with the hammer, and a cam with connections to move the gate or door to discharge the fragments of the bottle, substantially as described.

This specification signed and witnessed this 13th day of October, A. D. 1904.

JOSEPH H. GERNHARDT.

In presence of—
ANTHONY N. JESBERA,
M. A. BRAYLEY.