E. BAKER.

BOTTLE GUIDE.

APPLICATION FILED AUG. 16, 1910.

1,034,406. Patented Aug. 6, 1912.

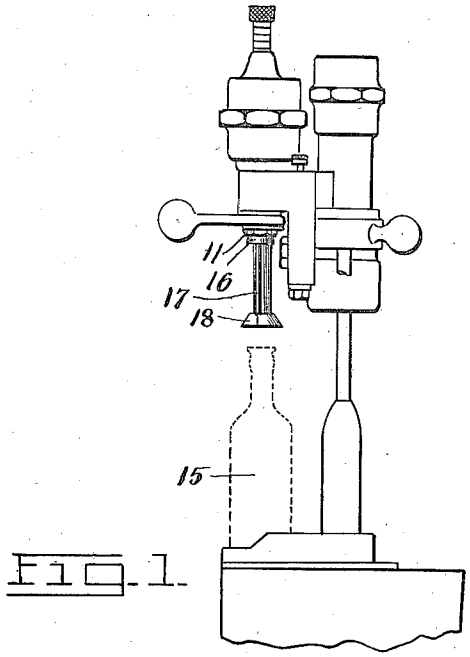

Fig. 1.

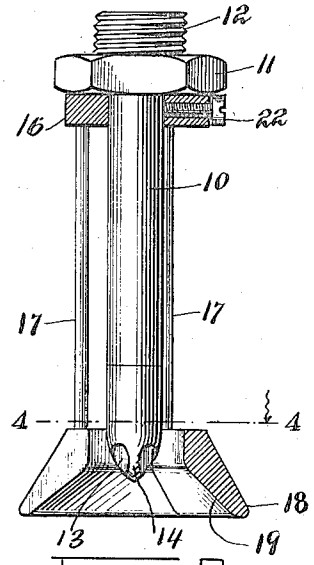

Fig. 2.

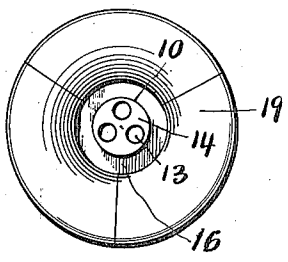

Fig. 3.

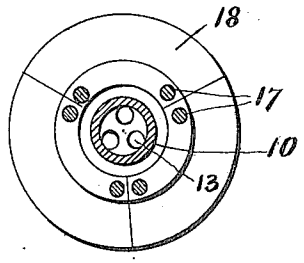

Fig. 4.

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UNITED STATES PATENT OFFICE.

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BOTTLE-GUIDE.

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To all whom it may concern:

Be it known that I, EUGENE BAKER, a citizen of the United States, residing at Darlington, in the county of Darlington and State of South Carolina, have invented new and useful Improvements in Bottle-Guides, of which the following is a specification.

The invention relates to a bottling machine attachment, and more particularly to the class of bottle guides for bottling machines.

The primary object of the invention is the provision of a guide of this character in which the neck of the bottle will be guided, so that the filling tube of the bottling machine will be properly inserted within the said bottle neck for the filling of the bottle without injury thereto.

Another object of the invention is the provision of an attachment of this character in which the neck of a bottle will be guided between resilient fingers whereby the mouth of the bottle will be held in proper position for receiving the feed nozzle of a bottle filling machine, the fingers being adapted to prevent the said feed nozzle from contacting with the mouth edge of the bottle, thereby obviating any possibility of cracking or fracturing the bottle neck when the bottle is being positioned with respect to the said nozzle for the filling thereof by a filling machine.

A still further object of the invention is the provision of a guide of this character in which the bottle will be properly centered with relation to the filling element of a bottling machine and held steady relative to the latter, without any possibility of fracturing or otherwise damaging the bottle when being guided to the filling element.

A still further object of the invention is the provision of a bottle guide in which the neck of the bottle will be properly centered with respect to the filling element of a bottling machine, and that will enable the operator to ascertain when the bottle has been filled with the required quantity of fluid, and also to assure accuracy in the positioning of the bottle should the mouth thereof be out of alinement or displaced relative to the filling element during the descent of the filling head.

In the drawings accompanying and forming part of this specification, is illustrated the preferred form of embodiment of the invention, which, to enable those skilled in the art to carry the invention into practice, will be set forth in the following description, while the novelty of the invention will be pointed out in the claim succeeding the description.

In the drawings: Figure 1 is a fragmentary side elevation of a bottling machine with the invention associated therewith, and also showing a bottle in displaced relation to the guide, whereby it will be acted upon by the latter. Fig. 2 is a vertical longitudinal sectional view through the guide, the nozzle being detached from the machine. Fig. 3 is an end elevation of the guide. Fig. 4 is a sectional view on the line 4—4 of Fig. 2.

Similar reference characters indicate corresponding parts throughout the several views of the drawings.

Referring to the drawings by numerals, 10 designates the feed or delivery nozzle of the bottle filling machine of substantially known form, having a nut 11 and a screw threaded nipple 12 associated therewith, by which the said nozzle may be secured to the filling head of the bottling machine in the ordinary well-known manner. This nozzle is provided with a series of delivery openings 13 in its outer conoidal-shaped end 14, whereby the fluid may be discharged from the said nozzle into the body of the bottle 15 when the said nozzle is inserted in the neck portion of the bottle through the mouth thereof, the latter being supported upon the table of the bottle filling machine, and is adapted to be guided or centered with respect to said filling nozzle by a bottle guide or device, as will be hereinafter more fully described.

The bottle guide or device comprises a collar 16 provided with a central aperture for receiving the nozzle 10 and suitably secured in this collar 16 and depending from its under face is a series of resilient arms or wire lengths 17 arranged in pairs, the outer free ends of which being securely engaged in a centering ring or guide member comprising an annulus formed of a plurality of separable sections 18, the inner wall of which being outwardly flared, as at 19, and each section is carried at the free end of a pair of the arms or wire lengths 17 the adjacent arms of each pair being connected to separate sections of said guide member. The flared or beveled inner face of the annulus is designed to provide for a safe and reliable entrance of the mouth, head or neck

portion of the bottle within the guide element or device, and also to center the said bottle relative to the nozzle 10, whereby it may be inserted in the neck portion of the bottle for the filling thereof. Should the bottle neck be of greater diameter than the inner peripheral diameter of the annulus the resilient arms 17 will permit the spreading of the sections 18 of the said annulus to allow for the free insertion of the bottle neck within the guide, whereby the nozzle 10 will enter the neck of the bottle for the subsequent filling of the latter.

The collar 16 surrounding the nozzle 10 has threaded therein a set screw 22 which is adapted to bind upon the said nozzle 10 to securely fasten the guide device thereon, and in adjusted position with respect thereto.

In operation, should the bottle 15 be placed upon the table out of alinement with the delivery nozzle 10, upon the descent of the said filling head of the bottling machine, the guide device will center the bottle 15 so that its opening in the neck portion thereof will be in position to receive the said nozzle 10, otherwise, if this bottle 15 were placed upon the table out of alinement with the nozzle 10, on the lowering of the filling head the said nozzle would strike the mouth edge of the bottle, resulting in the breakage of the said bottle, with resultant damage to the bottling machine, so that by the guide device such damage to the bottle and the machine is obviated.

What is claimed is:

A guide of the class described comprising a centrally perforated disk adapted to receive a filling nozzle, means for locking said disk in adjusted position on said nozzle, a plurality of resilient members arranged in pairs and having their upper ends fixed in said disk adjacent the periphery thereof, and a mouth piece comprising an annulus formed of a plurality of sections connected with the free ends of said resilient members, said mouth piece having its inner wall outwardly flared, the adjacent arms of each pair of said members being connected to separate sections.

In testimony whereof I affix my signature in presence of two witnesses.

EUGENE BAKER.

Witnesses:
FRED WARLEY LAW,
C. BACOT LAW.