No. 797,750. PATENTED AUG. 22, 1905.

H. G. ROTH.

DEVICE FOR FILLING BOTTLES.

APPLICATION FILED DEC. 13, 1904.

Fig. 1.

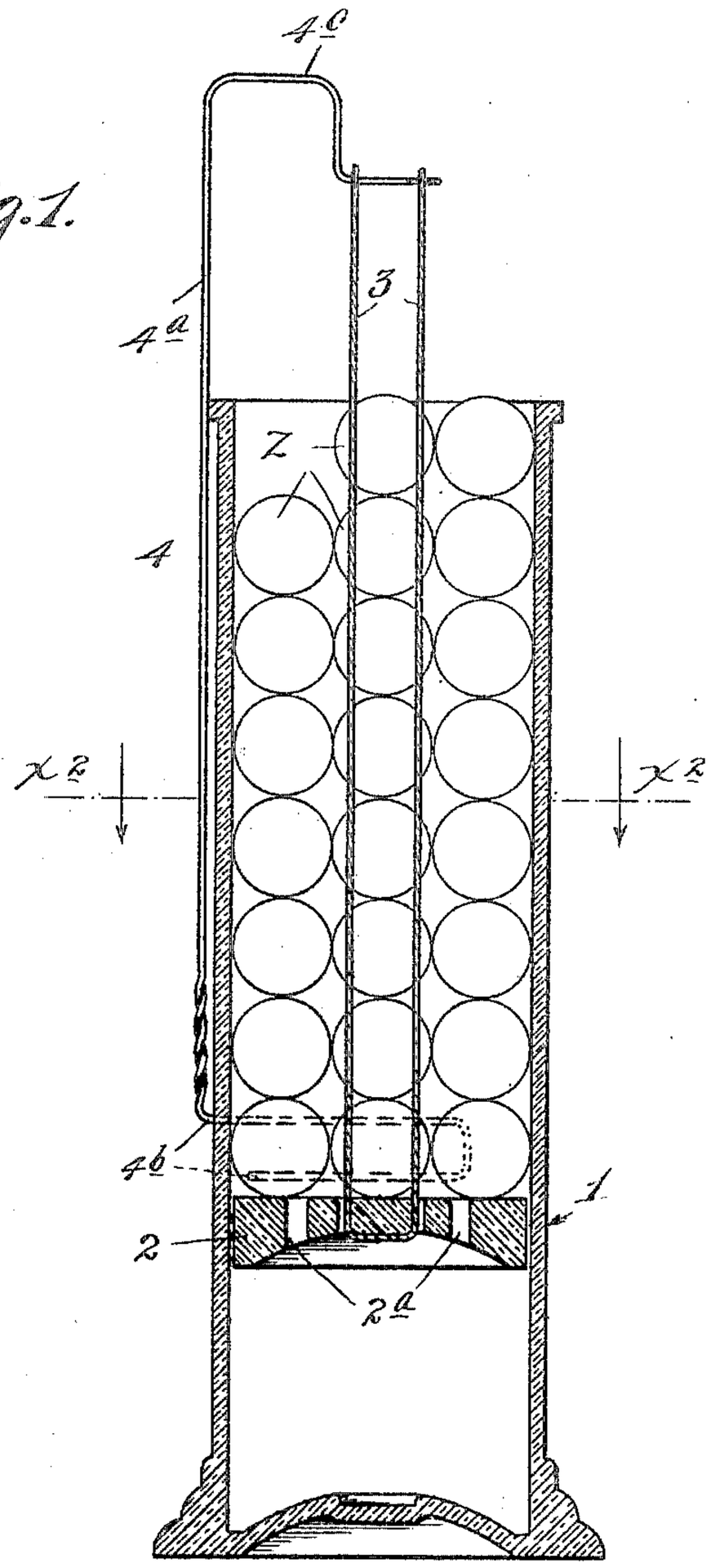
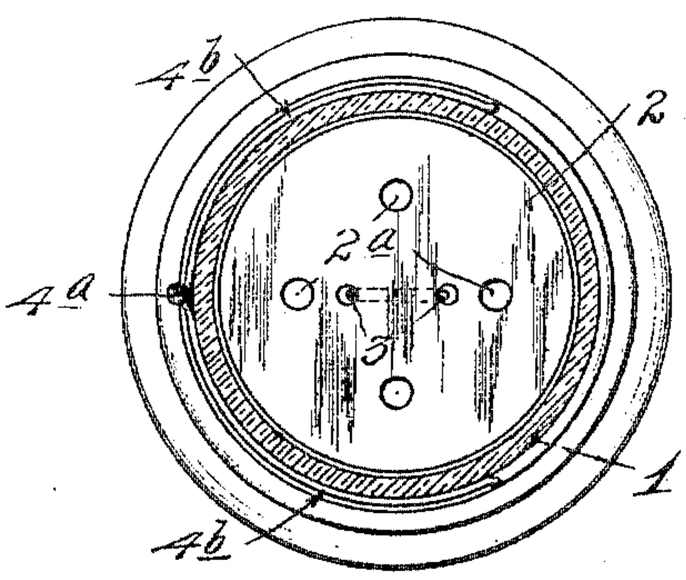


Fig. 2.



Witnesses.
H. D. Kilgore.
E. W. Jeppesen.

Inventor
Henry G. Roth.
By his Attorneys.
Williamson Merchant

UNITED STATES PATENT OFFICE.

HENRY G. ROTH, OF MINNEAPOLIS, MINNESOTA.

DEVICE FOR FILLING BOTTLES.

No. 797,750. Specification of Letters Patent. Patented Aug. 22, 1905.

Application filed December 13, 1904. Serial No. 236,681.

To all whom it may concern:

Be it known that I, HENRY G. ROTH, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Devices for Filling Bottles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My present invention has for its especial object to provide improved means for use in filling bottles with olives, pickles, fruit, vegetables, &c.; and to this end it consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

To all persons familiar with the packing in bottles of articles such as those above enumerated it is a well-known fact that such articles must be assorted and packed or arranged with a great deal of care, so that those which are at the outside of the bottle and are exposed to view through the transparent walls of the bottle will present an attractive appearance and so that there will be as little waste space as possible left within the bottle after it has been filled. In the process of packing as hitherto carried out long-jawed pincers have usually been employed, by means of which the articles after being assorted or in the process of assortment are placed in the desired arrangement first at the bottom of the bottle and then are built up to the top of the bottle. This old process has been very slow and has required skilled labor, chiefly because of the difficulty of properly arranging the articles at the bottom of the bottle by use of the pincers and on account of the difficulty of removing any such article which after having been placed in position is not found to be of the proper size to fit or make up a layer.

By my invention I provide a device by the use of which the packing is always done at the upper end or the mouth-opening of the bottle, where the articles may be packed by the use of the fingers, and hence are capable of rapid handling.

A salient feature of the invention consists in the provision of a vertically-movable false bottom, which is adapted to be depressed or forced downward as the articles are packed within the bottle in the properly-assorted arrangement.

Another important feature of the invention consists of means whereby the false bottom may be moved from the upper portion or mouth of the bottle, and still another feature consists in the provision of a sliding frictional support for the false bottom which is detachably applicable to the outside of the bottle and is adapted to travel over the same as the false bottom is forced downward.

The invention is illustrated in the accompanying drawings, wherein like characters indicate like parts throughout both views.

Figure 1 is a vertical section taken through a bottle having my invention applied thereto and Fig. 2 is a horizontal section taken on the line x^2 x^2 of Fig. 1.

The numeral 1 indicates the body of a bottle, which bottle is of cylindrical form. The numeral 2 indicates a quite heavy disk-like false bottom, which fits loosely within the bottle and is preferably constructed of glass and provided with perforations 2^a, that permit the said false bottom to settle under very slight resistance from the brine or liquid within the bottle. A cord, wire, or similar flexible connection 3 is passed downward through and then upward through the central portion of the false bottom 2, and its ends are brought upward and are detachably secured to the slidable support which frictionally engages and travels over the outer surface of the bottle. This slidable false-bottom support is constructed from a single piece of spring-wire 4, which is bent to form a vertical standard 4^a, a pronged lower end spring-clamp 4^b, and inturned head-sections 4^c. The spring-clamp or base portion 4^b of the support is adapted to be sprung onto or off from the bottle and when applied to the bottle clamps the same with such friction that it will slide upon the bottle only when considerable downward or upward force is applied thereto.

The ends of the cord 3 are adapted to be secured in any suitable way to the outer portion of the head-section 4^c. When the slidable or frictional support is applied to the bottle and to the cord 3 as shown in Fig. 1 and the false bottom 2 and the support 4 are forced upward near the top of the bottle, the bottle is in condition to be packed.

In Fig. 1 the character *z* indicates what may be assumed to be olives. Assuming that the bottle is to be filled with olives, they are selected and picked by the fingers, and one layer is laid upon the raised false bottom close to the transparent wires of the bottle. The central portion of the layer should also be filled

in. When one layer has been completed, it is pressed downward to make room in the top of the bottle or at the bottle-mouth for another layer and the false bottom and its frictional traveling support are forced downward as successive layers are filled in. They are forced downward until the bottle is filled and until the sliding false bottom has reached the bottom proper of the bottle.

The frictional support 4 and the cord 3 may and usually will be removed from the bottle. However, the cord 3 may be left within the filled bottle. This cord will then serve as means for raising the false bottom 2 to bring the olives or other articles up to the top of the bottle where they may be easily reached.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. A bottle-filling device of the character described, comprising a false bottom adapted to work in a bottle, and provided with a flexible operating connection adapted to extend outward through the open mouth of the bottle, substantially as described.

2. A bottle-filling device comprising a false bottom adapted to work in a bottle, and provided with a detachable flexible operating connection adapted to extend outward through the mouth of the bottle, substantially as described.

3. A bottle-filling device comprising a false bottom adapted to work within a bottle, and a flexible operating connection threaded through said bottom, and the ends of which connection are adapted to work through the open mouth of a bottle, substantially as described.

4. A bottle-filling device comprising a false bottom, and a frictional support therefor, and which support is subject to friction that is distinct and independent of the friction between said bottom and the body of the bottle within which it is applied, substantially as described.

5. A bottle-filling device comprising a false bottom adapted to work within a bottle, and a frictional support for said bottom, which support is adapted to detachably engage with the exterior of the bottle within which said false bottom is inserted, substantially as described.

6. A bottle-filling device comprising a false bottom adapted to work within a bottle, and having a connection extending to the open end of the bottle, and a sliding support detachably securable to the outer end of said connection, and having a spring-clamp adapted to frictionally engage with the exterior of the bottle, substantially as described.

7. A bottle-filling device comprising a false bottom adapted to work within a bottle, and having a connection extending to the mouth of the bottle, and a sliding support formed from a single piece of wire bent to form a standard 4^a, the spring clamping-prongs 4^b and the head 4^c, said head being adapted to hold said false-bottom connection, and which prongs 4^c are adapted to frictionally clamp and slide over the exterior of the bottle, substantially as described.

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

HENRY G. ROTH.

Witnesses:

ROBERT C. MABEY,

F. D. MERCHANT.