No. 797,751. PATENTED AUG. 22, 1905.

H. G. ROTH.

DEVICE FOR FILLING BOTTLES.

APPLICATION FILED DEC. 13, 1904.

Fig. 1

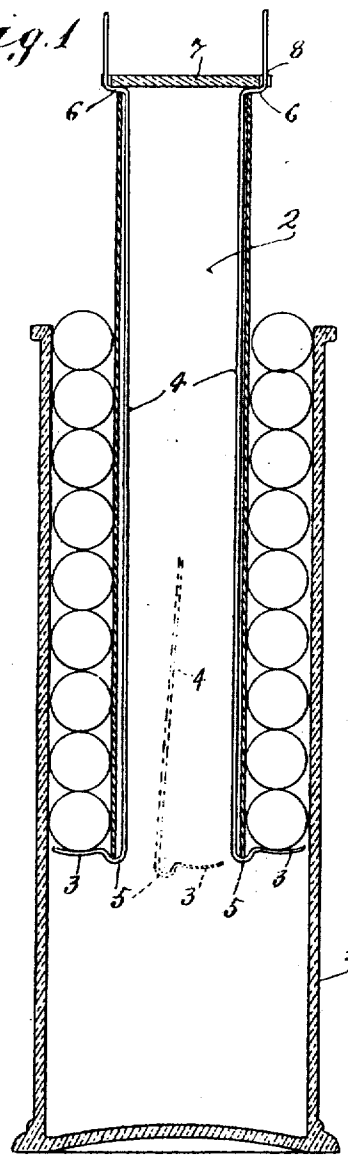


Fig. 4.

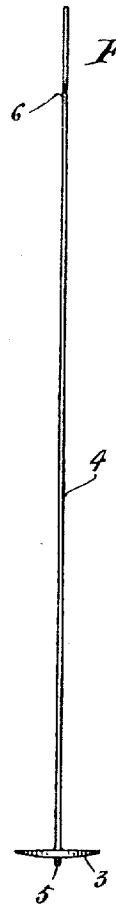


Fig. 3.

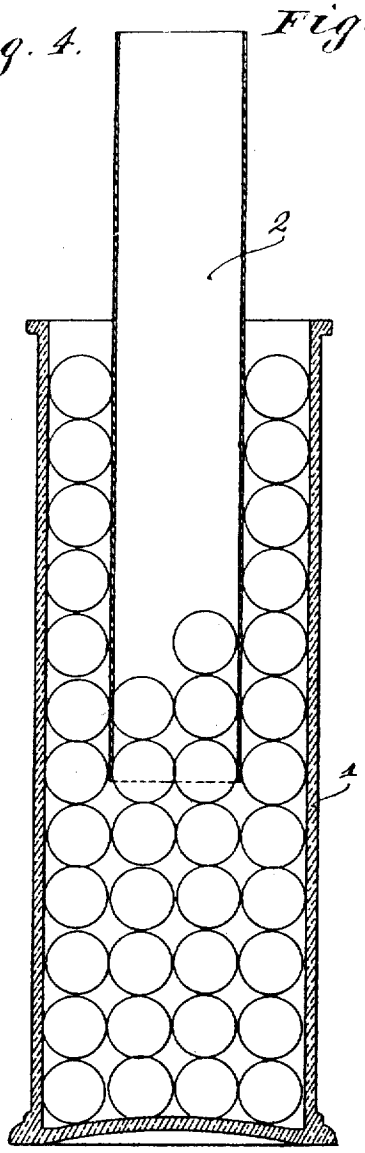
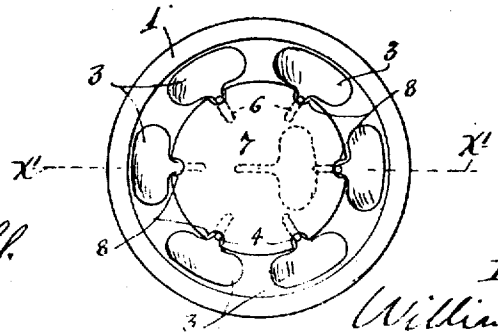


Fig. 2.



Witnesses.
A. H. Ogsahl.
E. W. Jeppesen.

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

ANDREW. B. GRAHAM CO., PHOTO-LITHOGRAPHERS. WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HENRY G. ROTH, OF MINNEAPOLIS, MINNESOTA.

DEVICE FOR FILLING BOTTLES.

No. 797,751. Specification of Letters Patent. Patented Aug. 22, 1905.

Application filed December 13, 1904. Serial No. 236,682.

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 heretofore 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 in 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 articles which after having been placed in position are not found to be of the proper size to fit or make up a layer.

My present invention provides an improved device by the use of which the packing is always done at the upper end or mouth-opening of the bottle, where the articles may be packed by the use of the fingers and hence may be rapidly handled. In a companion application, filed of even date herewith, entitled "Device for filling bottles," I have claimed from the broadest possible point of view a bottle having a vertically-movable false bottom. In my present invention the bottle is provided with a vertically-movable false bottom which is made up of a plurality of sections that are adapted to be separately removed from working position after the bottle has been filled or partly filled.

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

Figure 1 is a vertical section taken through a bottle having my invention applied thereto, said section being taken approximately on the line $x' x'$ of Fig. 2. Fig. 2 is a plan view of the parts shown in Fig. 1. Fig. 3 is a view corresponding to Fig. 1, but with certain of the parts removed; and Fig. 4 is a detail view showing in elevation one of the spoon-like false-bottom-forming sections.

The numeral 1 indicates a bottle which is cylindrical in form and is of course preferably made of glass.

The numeral 2 indicates a hollow cylindrical core or spacing-sleeve which is of a greal deal smaller diameter than the bottle, but of approximately the same length. This core 2 may be made of glass, metal, celluloid, or other material, but should have thin walls. In this arrangement of the device the "false bottom," so called, is made up of a plurality of sections 3, which when applied in working position afford a broken outturned flange to the lower end of the core 2 and are adapted to support articles, such as olives or pickles, which are placed in the annular space between the bottle's wall and the wall of the core. The said bottom-forming sections 3 have somewhat the form of a spoon-bowl, and they extend horizontally and are provided with long vertically-extended stems 4, preferably in the form of wire sections that are bent at their lower ends to afford depressions or seats 5, that lap around the lower edge of the core, as shown in Fig. 1. The upper ends of the stems 4 are bent outward at 6 over the upper edge of the core and are then again extended vertically upward. A loose lock-disk 7 is provided with peripheral notches 8, that receive the upper ends of the stems 4 and hold them properly spaced and the stems interlocked with the core when the said lock-disk is placed in working position, as shown in Figs. 1 and 2. As is evident, when the several so-called "spoons," made up of the bottom sections 3 and the stems 4, are locked to the core 2 and the said sections 3 and the lower end of the core are inserted slightly into the upper end of the

bottle the first annular layer of the olives, pickles, or other articles may by the fingers be placed in the annular space between the core and the bottle and the desired adjustment thereof may be easily accomplished. After the first layer has been thus inserted the core is lowered slightly and another layer is placed within the bottle. This process is repeated and the core is successively lowered until the lower end thereof is brought nearly into contact with the bottom end of the bottle. Then the lock-disk 7 is removed and the spoons are removed one after the other through the hollow core. This being done, the hollow core is filled with the olives, pickles, or other articles, and the core is then withdrawn, leaving the bottle filled and with the articles in the desired arrangement.

By the use of this device bottles may be very quickly filled and the articles may be arranged in the desired order, and this may be accomplished rapidly without requiring any particular skill on the part of the packer.

From what has been said it will of course be understood that the device described is capable of a great many modifications within the scope of my invention as herein set forth and claimed. The core even when used without a projecting support or false bottom is an important feature, because it affords means for holding the outside layer of olives or other articles in a fixed arrangement adjacent to the transparent wall of the bottle. The sectional or collapsible support or false bottom may take a great many different forms and, as is evident from the illustration given, may be in the form of skeleton or fragmentary support.

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

1. A bottle-filling device comprising a false bottom formed in sections separably removable from the bottle, and means for connecting said sections, substantially as described.

2. A device for filling bottles comprising a hollow core, having at its lower end an outturned false bottom made up of a plurality of sections, substantially as described.

3. A device for filling bottles comprising a hollow core having, at its lower end, an outwardly-projecting false bottom, substantially as described.

4. A device for filling bottles comprising a hollow core and a plurality of removable bottom-forming sections, detachably secured to the lower end of said core, and normally projecting outward therefrom, but removable through the said core, substantially as described.

5. A device for filling bottles comprising the hollow core 2, the plurality of bottom-forming sections 3 having stems 4, said stems being bent at 5 and 6 to interlock with the ends of said core, and the lock-disk 7, engageable with the upper ends of said stems, to hold the same interlocked with said core, substantially as described.

6. A bottle-filling device, having a collapsible false bottom adapted to move vertically within 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.