

Aug. 6, 1929.

H. W. QUADE

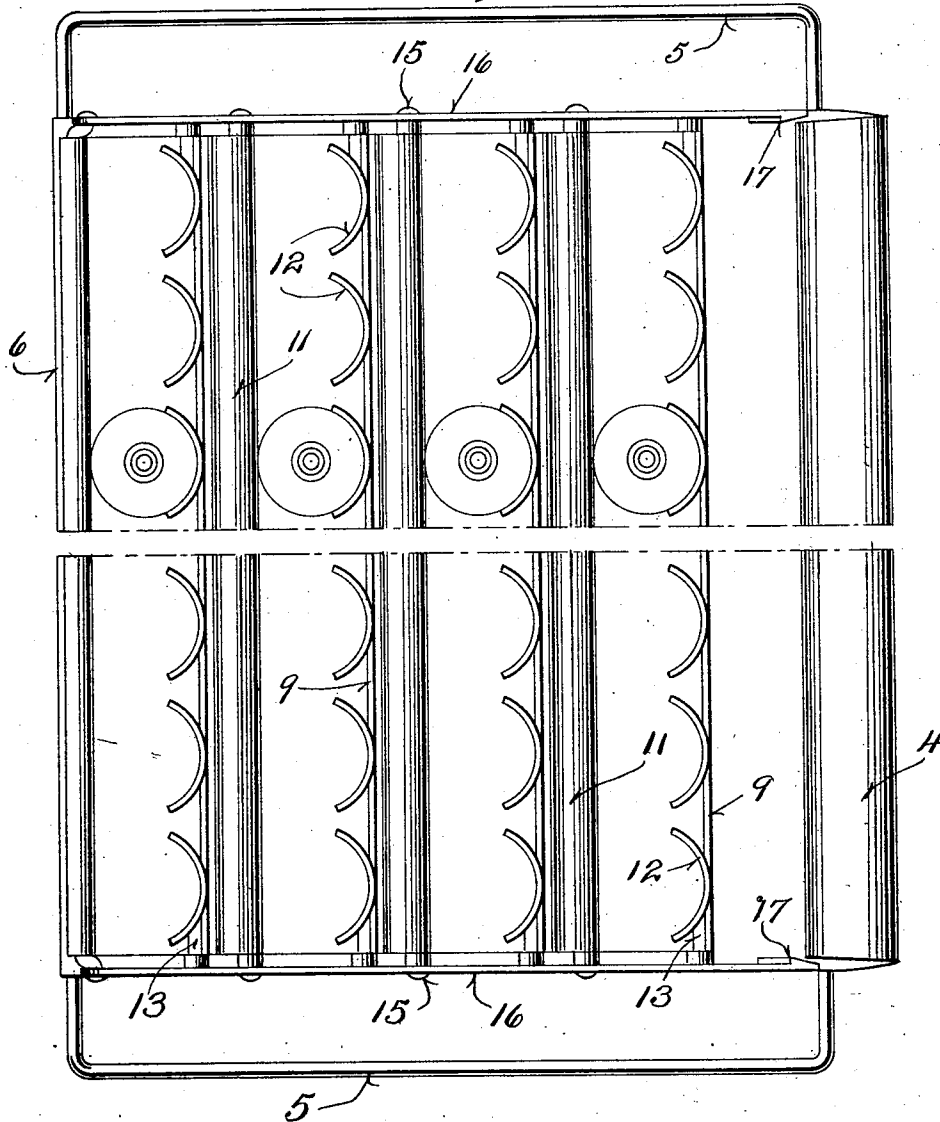
1,723,658

BOTTLE HOLDER FOR MIXERS

Filed Aug. 3, 1928

2 Sheets-Sheet 1

Fig. 1.



Censor
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Boy *Young Young*
Chorweys

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Fig. 2.

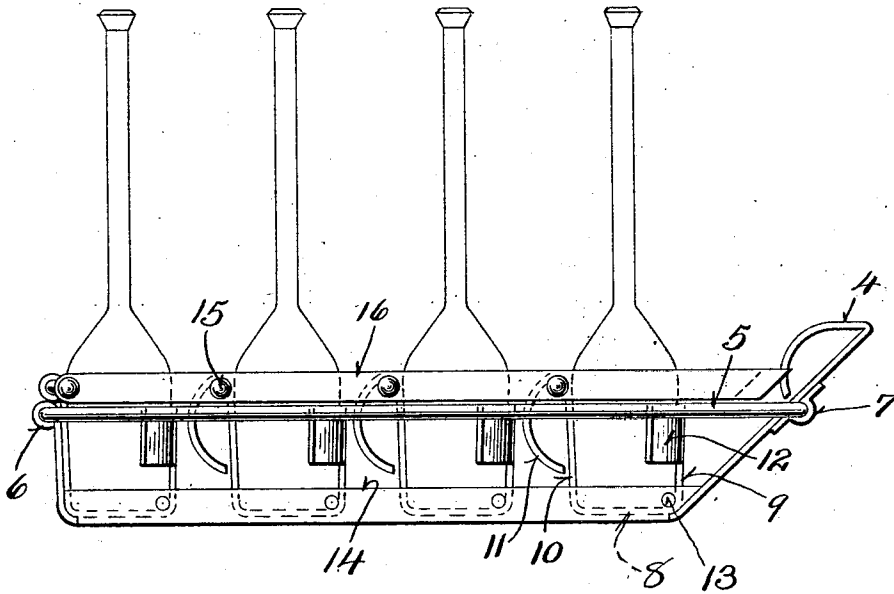
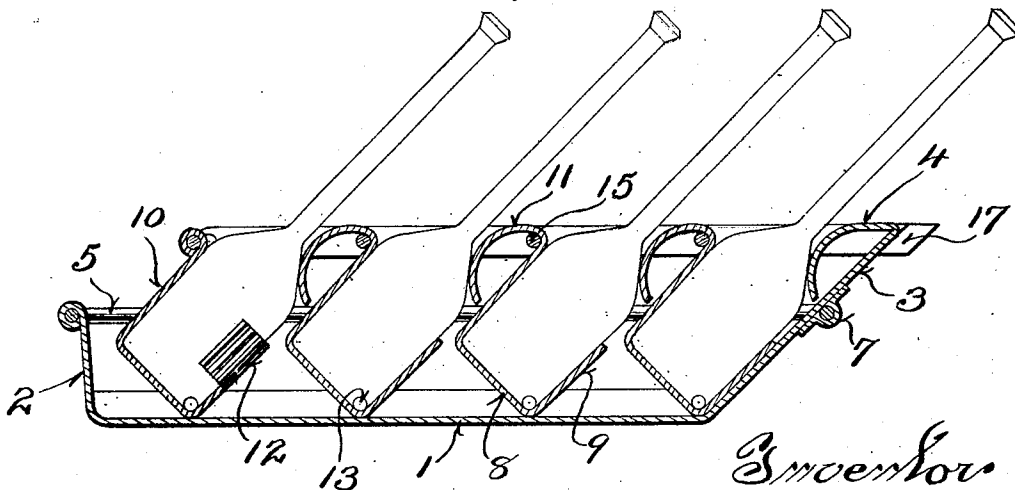


Fig. 3.



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UNITED STATES PATENT OFFICE.

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BOTTLE HOLDER FOR MIXERS.

Application filed August 3, 1928. Serial No. 297,235.

This invention relates to bottle holders for mixers.

In certain operations, such for example, as the Babcock test, it is desirable to hold and simultaneously agitate a large number of mixtures contained in bottles.

This invention is designed to provide a holder for bottles, such for example, as testing bottles, so that a great number of individual mixings may be effected, and in which the bottles are securely and individually held by the device in a slanting position, so that a more effective and quicker mixing results.

Further objects are to provide a device for holding bottles which is so constructed that after the mixing has taken place, the device may be grasped by means of handles and lifted from the mixers and the bottles may be simultaneously lifted by tilting the device, as all of the bottles are tilted in a predetermined direction and to the same extent, and to provide a bottle holder which may be submerged together with the bottles so that simultaneous rinsing of the bottles may be secured.

Further objects are to provide a device having the characteristics enumerated above which is of extremely simple construction, which may be cheaply produced, and which is easy to operate.

An embodiment of the invention is shown in the accompanying drawings, in which:

Figure 1 is a plan view of the device showing a few bottles in place;

Figure 2 is a side elevation thereof showing the bottles just after they are positioned in the device;

Figure 3 is a transverse sectional view showing the bottles in their tilted and locked position.

Referring to the drawings, it will be seen that the device comprises a body portion 1 which may be in the form of a shallow tray and which is provided with an upstanding rear flange 2, and a slanting upstanding front flange 3. The front flange is provided with an turned or rolled portion 4. A pair of handles in the form of rods are positioned at opposite ends of the device and are indicated by the reference character 5. Preferably, these rods extend along the front and rear flanges of the body portion, as shown, and are secured thereto. For instance, the rear flange may be beaded over,

as indicated at 6, and the front flange may be provided with a clip or cleat 7 to secure the rods in place. These handles, it will be noted from Figure 1, are spaced outwardly from the body portion.

Within the body portion, a plurality of trays are positioned and each tray consists of a bottom 8, a front 9, and a back 10. The backs of the intermediate trays are each provided with a roller portion 11, similar to the portion 4 previously described.

Preferably, each of the front portions 9 is provided with a plurality of curved lips 12 adapted to partially encircle a bottle and to thus hold the bottles spaced apart and in position.

Each tray is pivotally mounted within the body portion. Preferably, a rod 13 pivotally joins each of the bottoms of the trays with the side flanges 14 of the body portion, so that the trays are free to pivot about these rods. In addition to this, rods 15 are provided adjacent the upper edge of the back 10 of each tray. These latter rods are joined by means of connected rods or straps 16. The forward ends of the straps 16 are provided with tapered and shouldered catches or lugs 17 which snap in front of the front flange 3 of the body portion when the bottles are tilted forwardly by the operator into the position shown in Figure 3.

Under these conditions, the catches 17 hold all of the trays in their tilted or rocked positions and consequently hold the bottles tilted as shown.

The bottles are prevented from sliding out or disengaging themselves from their trays by means of the bulged or rolled portions 4 and 11, as these bulged or rolled portions are positioned in front of the bottle adjacent the neck of the bottle, as is obvious from Figure 3. The holder may, therefore, be placed upon a shaking device or may be otherwise subjected to rapid shaking action without danger of disengaging any of the bottles. It has been found that when the bottles are held in this tilting position that a quicker mixing results.

After the mixing has been completed and it is desired to empty the bottles the holders may be removed from the mixer by grasping the handles 5. Thereafter, the bottle may be simultaneously emptied by tilting the holder while the bottles are locked in position. Subsequently, the holder may

be submerged to rinse the bottles and finally the bottles may be disengaged by unsnapping the catches 17 and rocking the trays back into the position shown in Figure 2.

5 Thereafter, the bottles may be removed and a new set substituted.

It will be seen that an extremely simple, serviceable and highly practical device has been produced, and by actual tests of this device, it has been found that each of the points enumerated above have been fully realized in practice.

Although the invention has been described in considerable detail, such description is intended as illustrative rather than limiting as the invention may be variously embodied and as the scope of such invention is to be determined as claimed.

I claim:

20 1. A bottle holder for mixers comprising a body portion, a plurality of trays having bottoms and backs and adapted to receive rows of bottles, means pivotally supporting said trays in said body portion, and means for simultaneously rocking said trays and locking said trays in a tilted position, where-

by the bottles are tilted and whereby the back of one tray locks the next succeeding row of bottles.

2. A bottle holder for mixers comprising 30 a body portion having upturned marginal flanges adjacent its side edges and having an upturned front flange, a plurality of trays pivoted at their bottoms to the marginal side flanges of said body portion and adapted to receive bottles, a pair of bars 35 pivoted to each of said trays adjacent the upper portion of said trays and having notched ends adapted to snap over the upturned front flange of said body portion, 40 certain of said trays having rounded protuberances for locking said bottles in place when said notched ends of the bars engage the upturned front flange of the body portion, said upturned front flange having a 45 rounded protuberance for locking the bottles in the next adjacent tray.

In testimony that I claim the foregoing I have hereunto set my hand at Kewaskum, in the County of Washington and State of Wisconsin.

HENRY W. QUADE.