

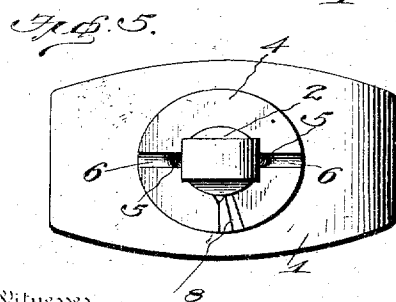
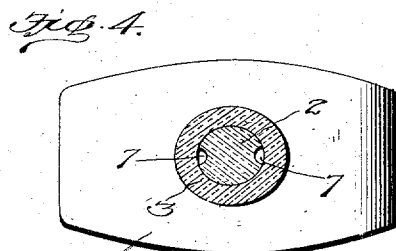
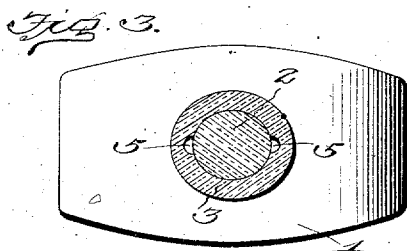
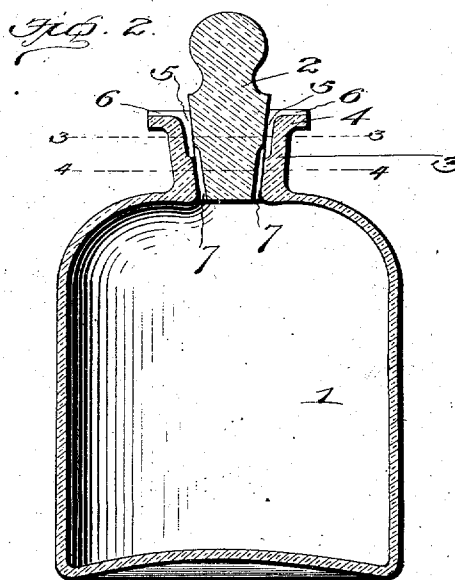
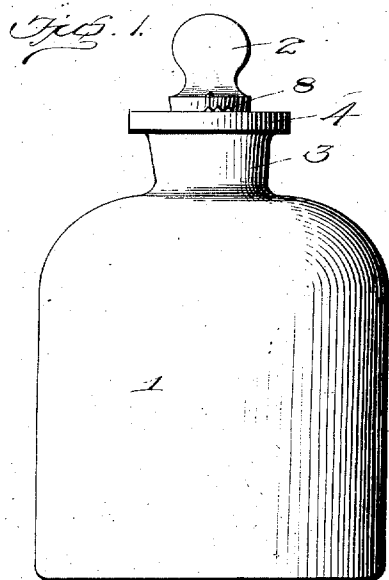
No. 729,583.

PATENTED JUNE 2, 1903.

A. HEUSLER.
BOTTLE.

APPLICATION FILED MAR. 5, 1903.

NO MODEL.



Witnesses

E. E. Hunt.
Edwin

By

A. B. Wilson

Inventor

Adolphe Heusler

Attorney

UNITED STATES PATENT OFFICE.

ADOLPHE HEUSLER, OF FERNANDINA, FLORIDA.

BOTTLE.

SPECIFICATION forming part of Letters Patent No. 729,583, dated June 2, 1903.

Application filed March 5, 1903. Serial No. 146,402. (No model.)

To all whom it may concern:

Be it known that I, ADOLPHE HEUSLER, a citizen of the United States, residing at Fernandina, in the county of Nassau and State of Florida, have invented certain new and useful Improvements in Bottles; and I do 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.

This invention relates to improvements in bottles or other containers and valved stoppers for the same.

The object of the invention is to produce a bottle and a stopper for the same by which liquids may be dropped from the bottle or by removing the stopper the liquid may be poured out in the usual manner.

Another object is to provide means for graduating the size of the drops and indicating such graduations.

Another object is to provide means for the admission of air into the bottle to facilitate the dropping of the liquid therefrom.

Still another object is to produce such a bottle which will be simple in construction, having no loose parts to get out of order, and which can be cheaply manufactured and sold.

With these and other objects in view the invention consists in certain novel features of construction, combination, and arrangement of parts, which will be hereinafter fully described, and particularly defined in the appended claims.

In the accompanying drawings, Figure 1 is a side view of a bottle embodying the invention. Fig. 2 is a vertical sectional view of the same, the parts being in position for use. Fig. 3 is a horizontal sectional view on the line 3 3 of Fig. 2. Fig. 4 is a similar view on the line 4 4 of Fig. 2. Fig. 5 is a top plan view of the bottle, and Fig. 6 is a detail side view of the stopper detached.

In the drawings, 1 denotes the bottle. 2 denotes the stopper for the same. The bottle 1 may be of any desired size, shape, or configuration and is provided with the usual neck 3, having at its upper end an annular flange 4.

5 denotes two vertically-disposed grooves formed in the inner wall of the neck of the bottle, arranged at diametrically opposite

points and extending from just below midway the length of the neck upwardly and ending at the top in horizontally-disposed grooves 6, formed across the top of the flange 4 and serving as spouts for the delivery of the liquid which has passed through one or the other of the grooves 5.

7 denotes two vertically-disposed grooves formed in the side walls of the stopper and arranged at diametrically opposite points and extending from just above midway the length of the stopper to the lower end of the same.

In practice when the stopper is inserted in the neck of the bottle the upper portion of the grooves 7 in the stopper end in a plane a little above the lower ends of the grooves 5 in the neck of the bottle, as clearly shown in Fig. 2, so that when the stopper is turned to bring the grooves 5 and 7 into alinement, as is also shown in Fig. 2, two passages or channels are formed between the stopper and the neck of the bottle at diametrically opposite points, so that when the bottle is tilted to either one side or the other the liquid will run out of the lower channel in the form of drops, while air will be admitted to the bottle through the upper channel, which facilitates the discharge of the liquid through the lower channel. In order that the amount of liquid flowing from either of the channels may be regulated or controlled, the channels may be varied in size by turning the stopper so that the lower ends of its grooves 6 coincide to a greater or less degree or entirely aline with the upper ends of the grooves 5 in the bottle-neck, or the stopper may be turned to move the grooves entirely out of alinement, which will effectually seal the bottle against the admission of air or evaporation of the contents. To permit the size of such graduations of the openings and consequent size of the drops to be positively ascertained, a graduated indicating-scale 8 is formed on top of the flange 4 and an indicating mark or pointer is arranged in proper position on the stopper, so that as the stopper is turned to increase the size of the channels the indicating mark or pointer on the stopper will register with the corresponding size-mark on the scale 8, as will be clearly understood. The scale-marks 8 on the bottle-top, as well as the indicating-pointer on the stopper, may be in the shape of projections cast

upon the bottle and stopper or in the form of lines cut upon the same.

In the form of device herein described it will be seen that a simple and efficient means is provided for dropping liquids from bottles or other containers that will always be reliable and which can be graduated to discharge drops of different volume. The bottle and stopper therefore may be constructed of any suitable material, or the bottle may be of one material and the stopper of another—as, for instance, the bottle may be of glass and the stopper of rubber or other material.

From the foregoing description, taken in connection with the accompanying drawings, the construction, mode of operation, and advantages of my invention will be readily apparent, it is thought, without requiring a more extended explanation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a bottle having an interiorly-grooved neck, of a stopper having an exteriorly-grooved side, the grooves in said stopper being adapted to be brought into whole or partial alinement with the grooves in said neck whereby openings or channels changeable in size are formed leading into said bottle, and means for indicating the relative size of said openings or channels, substantially as described.

2. A bottle or other container having a neck ending in an annular flange, vertically-disposed grooves formed in the upper portion of the interior wall of the neck at diametrically opposite points, and pouring channels or grooves formed across the top of said annular flange and connecting with said vertically-disposed grooves, and a stopper adapted to fit within said neck and having vertically-disposed grooves formed in its lower portion and adapted to be brought into partial or complete alinement with the said grooves in the neck, substantially as described.

3. The combination with a bottle or other

container having a neck ending in an annular flange, vertically-disposed grooves formed in the upper portion of the interior walls of said neck at diametrically opposite points, pouring channels or grooves formed across the top of said annular flange and connecting with said vertically-disposed grooves, of a stopper adapted to fit within said neck, vertically-disposed grooves formed in the lower portion of the outer walls of said stopper, said grooves being adapted to be turned into partial or complete alinement with the grooves formed in the neck of said bottle, the lower ends of the neck-grooves being adapted to partially or wholly coincide with the upper ends of the stopper-grooves whereby a contractible opening or channel is formed into said bottle, and means for indicating the relative size of said opening or channel, substantially as described.

4. The combination with a bottle or other container having a neck ending in an annular flange, vertically-disposed grooves formed in the upper portion of the interior walls of said neck at diametrically opposite points, pouring channels or grooves formed across the top of said annular flange and connecting with said vertically-disposed grooves, of a stopper adapted to fit within said neck, vertically-disposed grooves formed in the lower portion of the outer walls of said stopper, said grooves being adapted to be turned into partial or complete alinement with the grooves formed in the neck of said bottle, the lower ends of the neck-grooves being adapted to partially or wholly coincide with the upper ends of the stopper-grooves whereby a contractible opening or channel is formed into said bottle, a graduated scale formed on the top of said annular neck-flange, and a mark or pointer formed on said stopper and adapted to operate in connection with said scale to indicate the relative size of said opening or channel, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ADOLPHE HEUSLER.

Witnesses:

I. BEUGNET,
R. P. CARLETON.

Affidavit having been filed showing that the name of the patentee in Letters Patent No. 729,583, granted June 2, 1903, for an improvement in "Bottles," should have been written and printed *Adolphe Heusler* instead of "Adolphe Heusler," it is hereby certified that the proper correction has been made in the files and records pertaining to the case in the Patent Office, and should be read in the Letters Patent that the same may conform thereto.

Signed and sealed this 7th day of July, A. D., 1903.

[SEAL.]

E. B. MOORE,

Acting Commissioner of Patents.

upon the bottle and stopper or in the form of lines cut upon the same.

In the form of device herein described it will be seen that a simple and efficient means is provided for dropping liquids from bottles or other containers that will always be reliable and which can be graduated to discharge drops of different volume. The bottle and stopper therefore may be constructed of any suitable material, or the bottle may be of one material and the stopper of another—as, for instance, the bottle may be of glass and the stopper of rubber or other material.

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4. The combination with a bottle or other container having a neck ending in an annular flange, vertically-disposed grooves formed in the upper portion of the interior walls of said neck at diametrically opposite points, pouring channels or grooves formed across the top of said annular flange and connecting with said vertically-disposed grooves, of a stopper adapted to fit within said neck, vertically-disposed grooves formed in the lower portion of the outer walls of said stopper, said grooves being adapted to be turned into partial or complete alinement with the grooves formed in the neck of said bottle, the lower ends of the neck-grooves being adapted to partially or wholly coincide with the upper ends of the stopper-grooves whereby a contractible opening or channel is formed into said bottle, a graduated scale formed on the top of said annular neck-flange, and a mark or pointer formed on said stopper and adapted to operate in connection with said scale to indicate the relative size of said opening or channel, substantially as described.

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[SEAL.]

E. B. MOORE,

Acting Commissioner of Patents.

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E. B. MOORE,
Acting Commissioner of Patents.