

Dec. 2, 1941.

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2,264,489

BOTTLE SUPPORT

Filed June 12, 1940

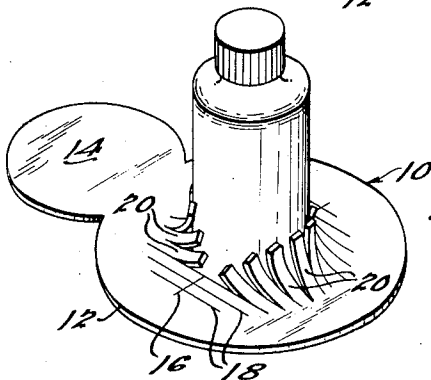
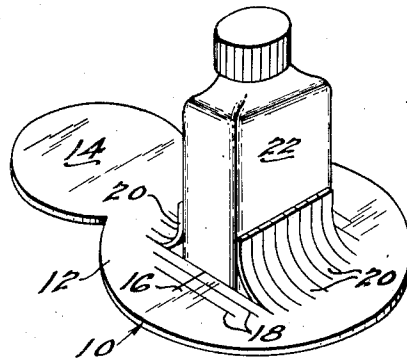
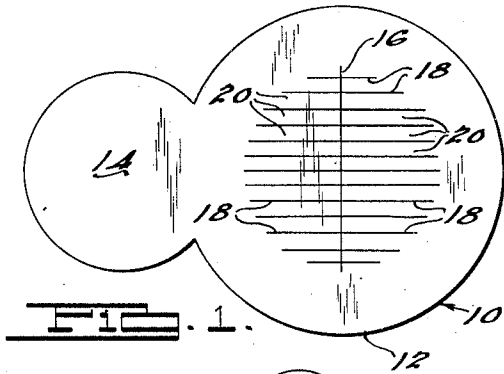


FIG. 3.

FIG. 5.

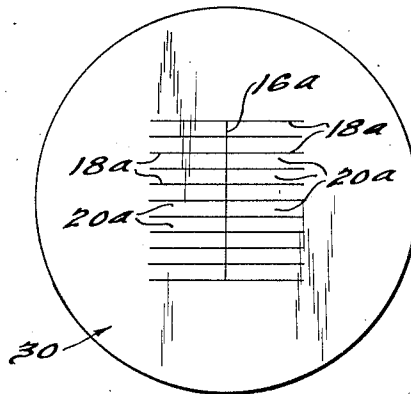
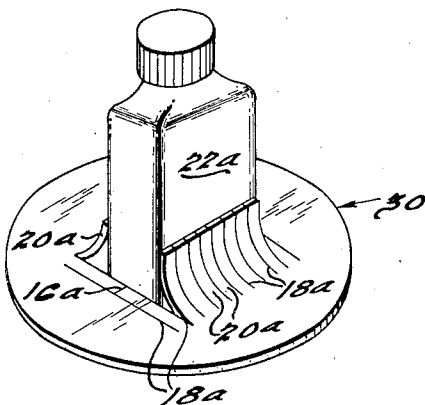


FIG. 4.

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## UNITED STATES PATENT OFFICE

2,264,489

## BOTTLE SUPPORT

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Application June 12, 1940, Serial No. 340,168

3 Claims. (Cl. 215-100)

This invention relates to means for supporting bottles in standing position so as to minimize inadvertent tipping over of the same, the principal object being the provision of a device of this type that is simple in construction, economical to manufacture and efficient in use.

Objects of the invention include the provision of a bottle support that is applicable for use with bottles of varying sizes and varying cross-sectional configurations; the provision of a device of the type described that is easily and quickly applicable to and removable from a bottle; the provision of a device of the type described including a relatively flat member provided with two opposed groups of flexible fingers between which a bottle to be supported may be inserted; the provision of a bottle support of the type described formed from a piece of sheet-like rubber and slitted to provide opposed groups of fingers therein; the provision of a bottle support of the type described in which the fingers are of substantially equal length; and the provision of a bottle support of the type described in which the fingers are of varying lengths.

The above being among the objects of the present invention, the same consists in certain novel features of construction and combinations of parts to be hereinafter described with reference to the accompanying drawing, and then claimed, having the above and other objects in view.

In the accompanying drawing which illustrates suitable embodiments of the present invention and in which like numerals refer to like parts throughout the several different views,

Fig. 1 is a plan view of one form of our improved bottle support;

Fig. 2 is a perspective view of the bottle support shown in Fig. 1 in operative relation with respect to a bottle of rectangular cross-sectional configuration;

Fig. 3 is a view similar to Fig. 2 but illustrating the bottle support in operative relation with respect to a bottle of circular cross-sectional configuration;

Fig. 4 is a view similar to Fig. 1 but illustrating a modified form of construction; and,

Fig. 5 is a perspective view illustrating the bottle support shown in Fig. 4 as applied to a bottle having a rectangular cross-sectional configuration.

Although the present invention is capable of being constructed in such sizes as to enable bottles of any size to be used in conjunction therewith, it is recognized that it is ordinarily only small bottles having a limited bottom area that

are most likely to be inadvertently tipped over, endangering spilling the contents thereof, and for that reason the utility of the present invention will be found greatest in connection with relatively small bottles. As a matter of illustration it may be stated that bottles of the type in which finger nail enamel, cuticle remover and the like are conventionally sold in, and which ordinarily are from two to three inches in height, are particularly exposed to inadvertent tipping over when supported solely on their base because of the fact that the user is constantly inserting and removing a brush or the like into or from the contents in the bottle. The present invention has for its principal object the provision of a simple and economical device removably applicable to and particularly useful in connection with bottles of the type described which will provide a temporary sufficiently wide supporting base therefor as to substantially eliminate inadvertent tipping over of the same.

Referring to the accompanying drawing and particularly to Figs. 1, 2 and 3 thereof it will be noted that the support comprises a relatively flat sheet of material indicated generally at 10. This material is a relatively soft grade of rubber or rubber-like material or compound, referred to herein broadly as rubber, but, of course, of such body as to permit the objects of the present invention to be realized as will hereinafter be more apparent. The support 10 may, of course, be formed to any external or perimetrical configuration desired, that shown in Figs 1 to 3, inclusive, being formed to provide a main circular part 12 and an auxiliary circular part 14 attached thereto and serving as a tab or finger piece merely as a matter of convenience. The main portion 12 is centrally severed as at 16 on a diametrical or central line, such line of severance extending completely through the thickness of the material from a point spaced from one edge of the part 12 to a point spaced from the opposite edge thereof. The line of severance 16, as well as the lines 18 to be described, may be formed in the moulding operation where the support 10 is of a moulded character, or may be mechanically cut through the support, particularly when the same is formed by cutting or stamping it out of a sheet of rubber as is the preferable method. In the latter case the lines 16 and 18 will be formed by slitting such sheet and, accordingly, will hereinafter be referred to as slits as a matter of convenience. At preferably equally spaced distances along the length of the slit 16 and arranged in perpendicular re-

relationship with respect thereto and on both sides thereof are a plurality of additional slits 18. The slits 18 form between them fingers 20 the free ends of which lie along the slit 16. Thus two opposed groups of such fingers 20 are provided, all the fingers being parallel with the free ends of the fingers of one group abutting or being adjacent to and opposed to the free ends of the fingers of the other group. In the particular embodiment illustrated in Figs. 1 to 3, inclusive, the slits 18 vary in length from one end of the slit 16 to the other end thereof, being shortest adjacent the opposite ends of the slit 16 and longest adjacent the mid-point thereof, the length of the slits 18 being such that a line drawn to include their outer ends substantially represents a circle concentric with the periphery of the portion 12.

The support 10 is, of course, reversible so that either side thereof may be employed as the upper surface. In employing the support 10 the preferable mode of operation is to place the bottle to be supported in normal position upon a table or other supporting surface, and apply the support 10 with the plane of its thickness in parallel relation to the surface of the table downwardly and centrally over the bottle, this action causing the fingers 20 over the cross-sectional area of the bottle to be bent upwardly to permit the bottle to pass through them. Where a bottle of square or rectangular cross-sectional configuration as illustrated at 22 in Fig. 2 is used in conjunction with the support, the bottle is preferably inserted with the longest dimension of its cross-sectional shape parallel with the slit 16, as indicated, and in such event those fingers 20 over the central portion of the support 10 and for a distance equal to the width of the bottle 22 will be the ones which yield upwardly to permit the bottle 22 to pass between the group of fingers on each side of the line of slit 16. The support 10 is, of course, pressed outwardly until it firmly engages the surface of the table or other support for the bottle 22 and the free ends of the fingers 20, in bending upwardly, because of their resiliency will maintain their contact with the opposite sides of the bottle 22, and the areas of contact will be a material distance above the upper surface of the member 10 depending upon the thickness of the bottle. The fingers 20 thus provide braces between opposite sides of the bottle 22 and the rim of the member 10 engaging the sides of the bottle at a point intermediate the length or depth thereof. For this reason it will be appreciated that the rubber from which the support 10 is formed, while of such yieldability as to permit the ready application of the support to the bottle, is preferably of such nature as to have a material bracing effect on the bottle when applied thereto. The thickness of the material is, of course, a factor in this respect but from the standpoint of economy in manufacture it is preferable that the mass of rubber in the support be maintained at a reasonably low figure. As a matter of illustration it may be stated that with a suitable grade of rubber the support 10 may be formed from sheets approximately  $\frac{1}{8}$  of an inch thick when adapted for use with bottles from 2 to 3 inches in height.

It will, of course, be appreciated that bottles such as the bottle 22 illustrated in Fig. 2 of varying cross-sectional dimensions may be employed with a support 10 of one size, for in applying the support to the bottle only those fingers over the width of the bottle will be affected and these will

be sprung to an extent commensurate with the size of the bottle in supporting the bottle. Additionally, almost any bottle regardless of its shape and having a cross-sectional configuration which will fall within the circle defined by the outer ends of the slits 18 may be advantageously employed in conjunction with the support.

In Fig. 3 the support 10 is shown in operative relation with respect to a bottle of round cross-sectional configuration from which it will be apparent that those fingers 20 over the length of the slit 16 equal to the diameter of the bottle are bent up during application of the support 10 to the bottle an amount corresponding with the particular portion of the bottle which such fingers are engaged with, and it will be noted that the fingers 20 provide bracing engagement with substantially the entire periphery of the bottle 24. It will likewise be appreciated that the support 10 may be advantageously employed with any bottle having a diameter up to substantially the diameter of the circle including the outer ends of the lines of slit 18. It will be understood that because of the resilient characteristics of the rubber material from which the support 10 is made the fingers 20 will always return to their normal position illustrated in Fig. 1 when the support is removed from a bottle, and the support may be readily removed from any bottle for future use in connection therewith or in connection with any other bottle of a size capable of being received by the support and regardless of the cross-sectional configuration thereof.

In Figs. 4 and 5 a modified form of bottle support is shown and indicated generally at 30. It will be understood that the support 30 is formed from the same material and in substantially the same manner as the support 10, but in this case a tab or finger hold such as the tab 14 in Figs. 1, 2 and 3 is eliminated so that the support 30 is entirely circular in plan view. Similarly to the support 10 it is provided with a diametrically arranged slit 16a corresponding to the slit 16 of the support 10, and transverse slits 18a corresponding to the slits 18 forming fingers 20a between each adjacent pair of slits 18a. The main difference in this modification is, however, that the slits 18a are all of equal length thus making all of the fingers 20a of equal length. As will be appreciated from an inspection of Fig. 5 the support 30 cooperates with a rectangular sectioned bottle 22a, corresponding to the bottle 22 previously described, in substantially the same manner as the support 10, the main difference being that perhaps the construction illustrated in Figs. 4 and 5 may adapt itself more readily to bottles of rectangular cross-sectional configuration than the support 10 but obviously will be operable in conjunction with any bottle capable of being received by it regardless of the cross-sectional configuration of such bottle.

Formal changes may be made in the specific embodiments of the invention described without departing from the spirit and substance of the broad invention, the scope of which is commensurate with the appended claims.

What is claimed is:

1. A bottle support comprising a substantially flat piece of rubber, two groups of substantially parallel fingers forming the central portion of said support, said groups being arranged on opposite sides of a centrally located line and with the free ends of said fingers of one group lying in adjacent and opposed relation with respect to the free ends of the fingers of the other group.

2. A bottle support comprising a sheet-like piece of relatively soft rubber centrally slitted from a point adjacent one edge thereof to a point adjacent the opposite edge thereof, a group of parallel fingers forming the central portion of said support and arranged in two groups one on each side of said slit, said fingers being formed integrally with said support and arranged with the free ends of the fingers in one group in adjacent and opposed relation with respect to the free ends of the corresponding fingers of the opposite group.

3. A support adapted to engage a bottle and be arranged in surrounding relation with respect thereto, said support being initially formed from a substantially flat piece of relatively flexible rubber-like material and including two groups of substantially parallel fingers forming the central portion of said support, said groups being ar-

ranged on opposite sides of said support with the free ends of the fingers of one group disposed in adjacent and opposed relation with respect to the free ends of the fingers of the other group, and a substantially flat base portion surrounding all of said fingers and integrally connected to the outer ends thereof, said base portion being adapted, when said support is arranged in surrounding relation with respect to a bottle, to lie substantially in the plane of the base of the bottle and thus increase the available base area effective to prevent upsetting of said bottle, and said fingers being adapted, when said support is arranged in surrounding relation with respect to said bottle, to be bent upwardly and engage the sides of the bottle at points spaced upwardly from the plane of the base of the bottle.

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