

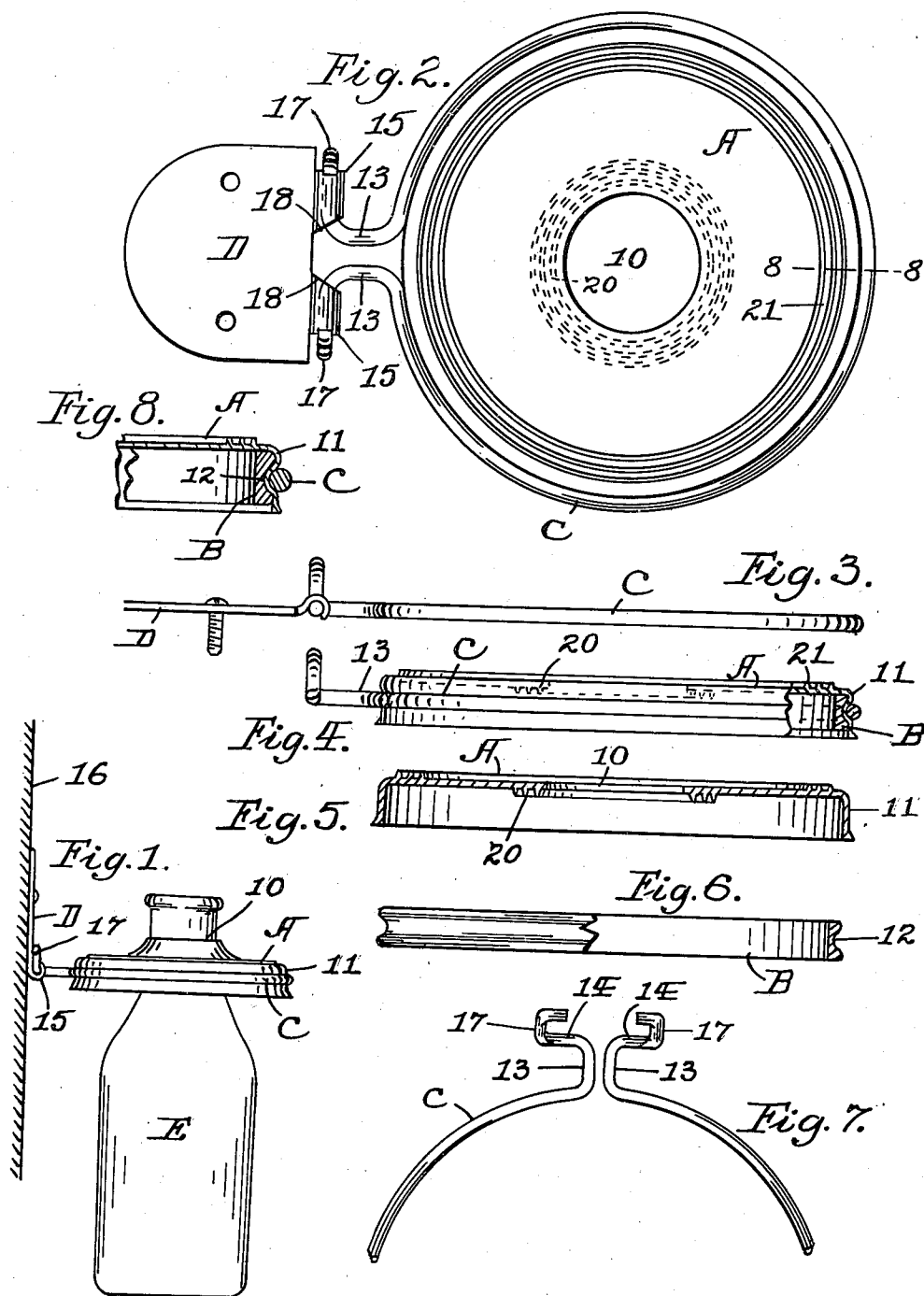
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BOTTLE DRIER

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## UNITED STATES PATENT OFFICE

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## BOTTLE DRIER

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2 Claims. (Cl. 15—210)

This invention relates to a bottle drier, the primary object being to provide a novel and improved device for removing wetness, moisture and particles of ice from bottles or other containers, whereby they may be served in a substantially dry, clean and sanitary condition to, and without soiling the clothing of, patrons or customers. Among advantages of my invention is the fact that the improvement obviates the necessity of using towels which are unsanitary and unsightly for drying the containers before use. The invention is also useful in bottling factories for cleaning or wiping bottles after they have been filled or in order that they may be handled in a clean and sanitary manner. The invention is particularly valuable for use in removing water, moisture and particles of ice from beverage bottles and the like, especially after they have been taken from a refrigerator or cooler, so that the bottles will be substantially dry, which renders them easy to handle as well as prevents the accumulation of water on tables and the like when the bottles are placed thereon. A further advantage is that the bottle drier is capable of being folded out of the way when not in use. When extended for use the elastic squeegee element employed is automatically held more firmly under compression upon its support than when folded and not in use, thereby relieving strain and reducing wear. Also when folded the squeegee can be removed and the parts of the squeegee assembly cleaned before re-assembling, thereby rendering the device thoroughly sanitary. A further object is simplicity and reduced cost in construction and greater effectiveness in use than heretofore.

In the accompanying drawing forming part of this specification, Fig. 1 is a side elevation showing my invention when in use, and a bottle thrust part way upwardly through the elastic squeegee element; Fig. 2 is a plan of my invention; Fig. 3 is a side elevation of the clamping element and its hinge support, when the squeegee and its annulus are removed; Fig. 4 is a side elevation, partly broken away and in section, with the clamp applied to hold the squeegee on the supporting annulus; Fig. 5 is a vertical central section through the squeegee; Fig. 6 is a side elevation, partly broken away and in section of the squeegee supporting annulus; Fig. 7 is a perspective view looking down upon a portion of the clamp, and Fig. 8 is a section of a detail taken on the line 8—8 of Fig. 1.

In the drawing, A represents an elastic diaphragmatic squeegee, resembling a circular disk having a central bottle neck receiving aperture

10 and a downwardly extending rim 11 as shown in Fig. 5. B is a rigid circular annulus resembling a ring having a broad perimeter in which is a circular recess 12. The squeegee is adapted to be drawn taut over the annulus and held thereon by an embracing clamp C, resembling a spring wire loop which holds the rim of the squeegee in the annulus recess 12. The squeegee is made out of rubber, neoprene or any other suitable elastic material. The loop portion of the clamp has a pair of radiating supporting arms 13—13, normally sprung apart. These arms terminate laterally in oppositely extending horizontal pintle members 14—14, which are journaled in a pair of sockets 15—15 on a suitable hinge leaf D. The hinge leaf is shown mounted on a support such as 16 (see Fig. 1). The outer ends of the pintles terminate in upwardly extending stop shoulders 17—17, which serve to limit the outstanding position in which the squeegee assembly is held when in use. The socket members 15—15 are formed with cam shoulders 18—18 (see Fig. 2), which serve to draw the clamp loop tightly around and hold the squeegee firmly compressed on the annulus in the outstanding position of the squeegee assembly when in use as shown in Fig. 1. When not in use the squeegee assembly may be swung down into vertical position out of the way, in which position the clamp releases most of the compression on the elastic rim of the squeegee, thus relieving strain upon and prolonging the life of the material out of which the squeegee is constructed and permitting the squeegee assembly being dismantled and the parts cleaned and re-assembled. Thus the device is easily kept in sanitary condition.

In use the squeegee assembly is swung outwardly into horizontal position as shown in Fig. 1 and the neck followed by the body of the bottle, such as E, thrust upwardly through the aperture 10. The elastic diaphragmatic squeegee stretches to accommodate the bottle and removes substantially all water, moisture and particles of ice from its neck and body. During this operation a plurality of concentric drip flanges 20 on the lower face of the squeegee precipitate water, etc., removed by the inner edge of the aperture 10 and prevent the same from running outwardly to the rim of the device. A series of concentric ridges 21 on the upper surface of the diaphragm serve to remove water, moisture and particles of ice from the bottom of the bottle after the neck and body have been wiped, this function being performed by wiping the bottom of the bottle laterally over the upper surface of the squeegee.

It is contemplated to use any form of hinge in place of that shown in the drawing and to employ any modification of the means disclosed for tightening the clamp automatically and holding the squeegee upon the supporting annulus or its equivalent. In accordance with the patent statutes, I have described the principles of operation of my invention, together with the construction which I now consider to represent the best embodiment thereof, but I desire to have it understood that the invention can be carried out by other means and applied to uses other than those above set forth within the scope of the following claims.

I claim:

1. A bottle drier, comprising, a supporting annulus, an elastic diaphragmatic squeegee having a central aperture adapted to receive the neck followed by the body of a bottle while the squeegee stretches to permit the bottle passing upwardly therethrough, said squeegee having its rim engaged over said annulus, a contractible clamp embracing and holding the rim of the squeegee on said annulus having supporting pintle members, a hinge support having sockets

in which the pintle members are journaled to permit outward extending and inward folding movement, said sockets having cam shoulders engaging and adapted to contract the ends of said clamp during said outward swinging movement and tightly embrace and hold the squeegee on said annulus while a bottle is thrust upwardly through said aperture and wetness and moisture are removed from the surface of the bottle.

2. A bottle drier, comprising, a supporting annulus, an elastic diaphragmatic squeegee having an aperture adapted to receive the neck followed by the body of a bottle while the squeegee stretches to permit the bottle passing upwardly therethrough, said squeegee having its rim engaged over said annulus, a contractible clamp embracing and holding the rim of the squeegee on said annulus and a hinge support in which said clamp is journaled to extend outwardly or fold inwardly having means for automatically contracting the clamp during said outward movement to hold the squeegee firmly upon said annulus when a bottle is thrust through said aperture.

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