Dec. 14, 1943. N. CORDIS 2,336,924

BOTTLE DISCHARGING MEANS

Filed Oct. 15, 1942

Fig. 1

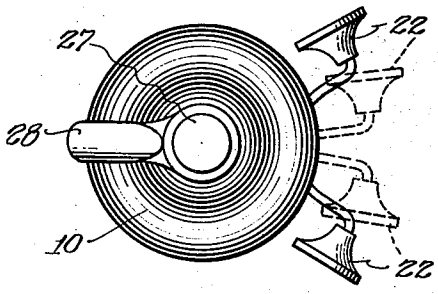
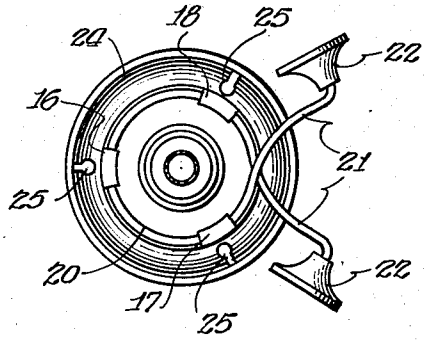


Fig. 3



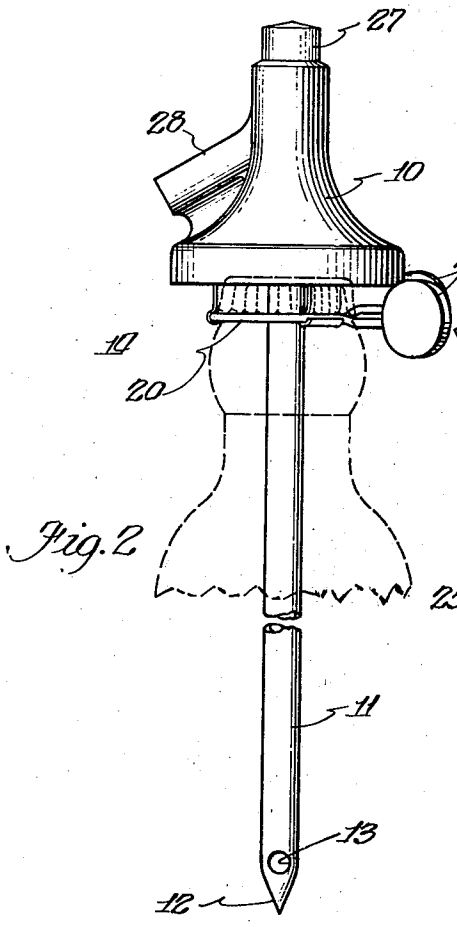


Fig. 2

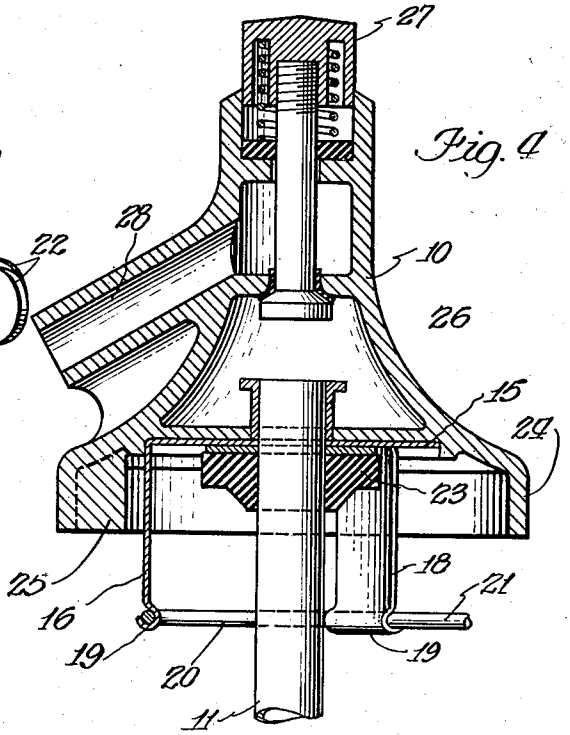


Fig. 4

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BOTTLE DISCHARGING MEANS

Nat Cordis, Chicago, Ill.

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2 Claims. (Cl. 225—22)

The invention relates to improvements in bottle discharging means, and has for its primary object the provision of a simple and efficient device adapted to be readily connected with a bottle filled with charged liquid to effect suitable discharge of the liquid in the bottle in whole or in part as desired.

Other objects will appear hereinafter.

The invention consists of the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawing forming a part of this specification and in which—

Figure 1 is a top plan view of bottle discharging means embodying the invention;

Fig. 2, a side view thereof;

Fig. 3, a bottom view thereof; and

Fig. 4, an enlarged transverse section taken through the valve head of said device.

The embodiment of the invention illustrated in the drawing comprises a suitable valve head 10 which may be conveniently made of plastic or other suitable moldable material. The head 10 carries a depending tubular discharge stem 11 which may conveniently be made of transparent plastic material having its lower end closed and drawn into a point 12, there being transverse discharge openings 13 in said stem just above said point. The stem 11 is preferably made substantially equal in length to the height of the bottle so that the point 12 will contact with or lie closely adjacent the bottom of the bottle and whereby any dregs or sediments in the liquid will not be discharged through the openings 13 as the bottle is emptied under its internal pressure, as will be readily understood.

The valve head 10 is arranged to fit over and rest upon the ordinary bottle cap 14, which is provided with a central opening through which the stem 11 may be inserted when it is desired to withdraw the contents of the bottle. A clamping element is carried by the head 10 and consists of a spring metal plate 15 having depending spring arms 16, 17 and 18 adapted to pass downwardly around the edges of the cap 14, as indicated. The said spring arms are provided at their lower ends with eyes 19 embracing and secured to a spring wire clamping ring 20 as indicated. The ends 21 of the ring 20 are crossed as shown, and provided with thumb and finger pieces 22 which, by being pressed toward each other, will open the spring ring 20 to pass over the edges of the cap 14 and engage under said edges when released, as shown in Fig. 2, and whereby a secure clamping engagement will be effected between the head 10 and the bottle neck. The head 10 is provided with a depending apron 24 carrying inwardly projecting stop members 25 arranged opposite the spring arms 16, 17 and 18 so as to limit the outward movements thereof. By this arrangement when the members 22 are forced toward each other, the adjacent spring arms 17 and 18 will first be spread apart until they contact with the corresponding stops 25, whereupon further approaching movement of the members 22 will cause corresponding outward movement of the arm 16, thereby freeing the clamping wire 20 from the edges of the cap 14 all around, and greatly facilitating the removal of valve head 10 from the bottle when it is empty. A rubber gasket 23 is arranged on the bottom of plate 15 around stem 11 to seat on top of the bottle cap and seal the opening therein.

The valve head 10 is provided with a suitable valve 26 operable by a spring-held plunger 27 which controls discharge of the contents of the bottle through the discharge spout 28, as will be readily understood, and whereby depression of the plunger 27 will effect said discharge as and when desired.

By this arrangement a simple and effective discharging means for bottles containing charged liquids is provided which may be readily attached to any bottle having a centrally perforated sealing cap and which may be conveniently used for whole or partial discharge of the contents of the bottle as and when desired. The specific form and arrangement of parts disclosed is a simple and effective one for the purpose.

While I have illustrated and described the preferred form of construction for carrying the invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I therefore do not wish to be limited to the precise details disclosed, but desire to avail myself of such variations and modifications as fall within the scope of the appended claims.

What I claim is:

1. A device of the class described comprising a discharge valve head arranged to seat against a bottle cap and having a discharge stem arranged to pass through said cap; depending spring arms on said head; and a spring wire ring mounted on said spring arms and adapted to encircle the bottle neck under the edges of the bottle cap, the ends of said ring being extended, crossed and arranged to expand and release said ring from said cap edges under pressure.

2. The construction specified in claim 1 in which stops are provided on said valve head to limit the outward movements of the spring arms adjacent said crossed ends.

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