March 7, 1939. C. D. BLANCHARD 2,149,722

SUPPORTING MEANS FOR FUNNELS AND THE LIKE

Filed Oct. 18, 1937

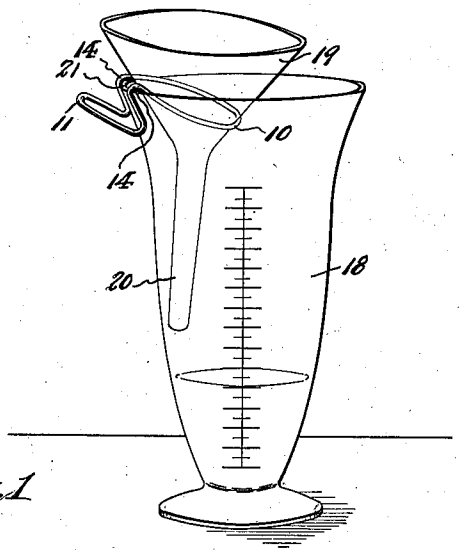


Fig. 1

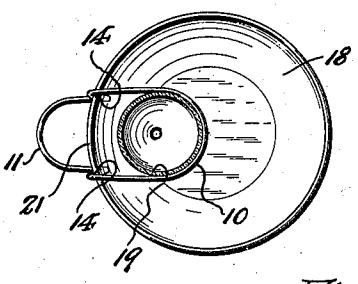


Fig. 2

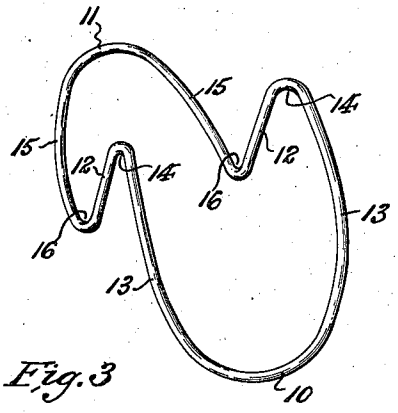


Fig. 3

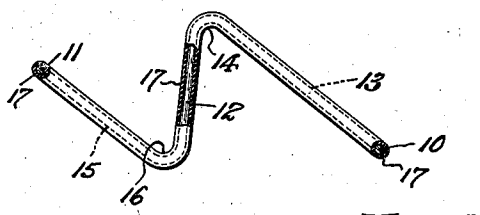


Fig. 4

INVENTOR.
Carlton D. Blanchard,
BY
George D. Richards
ATTORNEY.

Patented Mar. 7, 1939 2,149,722

UNITED STATES PATENT OFFICE

2,149,722

SUPPORTING MEANS FOR FUNNELS AND THE LIKE

Carlton D. Blanchard, Norwich, Conn.

Application October 18, 1937, Serial No. 169,663

3 Claims. (Cl. 248—94)

This invention relates, generally, to improvements in means for supporting and operatively coupling funnels, filters, strainers or like instrumentalities in connection with receiving or collecting vessels or containers or the like.

The invention has for an object to provide, in the form of a unitary member, a very simple, easily applied and efficient supporting and coupling device adapted to unite, in conveniently operative relation, a funnel or the like and a receiving vessel, so as to facilitate filling, filtering, straining and similar operations as carried on in the household, in laboratories, pharmacies, etc.; the device being so constructed that it is reversible, end for end, to selectively accommodate funnels or the like of various sizes, one end serving to receive comparatively large funnels and the other end comparatively small funnels; the device being operatively engageable with the receiving vessel in either position.

The invention has for another object to provide a novel supporting and coupling means adapted for separable engagement with a funnel or the like to hold the same, and likewise being separably engageable with the marginal mouth portion of a receiving vessel to operatively dispose said funnel or the like in discharging relation to the interior of the latter, and especially in such manner and position as to facilitate or quicken the discharge of liquid from the funnel to the vessel interior.

Other objects of this invention, not at this time more particularly enumerated, will be understood from the following detailed description of the same.

Illustrative embodiments of this invention are shown in the accompanying drawing, in which:

Fig. 1 is a perspective view of a receiving vessel and a funnel united in operative relation by means of the novel supporting and coupling device made according to this invention; Fig. 2 is a top end view of the assembly shown in Fig. 1, but with the funnel shown in horizontal section.

Fig. 3 is a perspective view of the novel supporting and coupling device per se; and Fig. 4 is a longitudinal sectional view of a modified form of the novel supporting and coupling device.

Similar characters of reference are employed in the above-described views, to indicate corresponding parts.

As shown, the novel supporting and coupling device comprises a continuous ring-like or annular body or formation of ovate oblong form, preferably made of wire or like suitable material, thus providing a major or relatively large end loop member 10 at one end and a minor or relatively small end loop member 11 at the other or opposite end. This formation is bent in opposite directions respectively along spaced apart transverse points or lines intermediate said end loop members, thus providing side portions 12 by which said end loop members are disposed in relatively offset parallel planes angularly acute to the plane of said side portions 12. The junctures of the arms 13 of the major end loop member 10 with the side portions 12 form elbows or hook-like portions 14 operatively related to said major end loop member, while the junctures of the arms 15 of the minor end loop member 11 with said side portions 12 form elbows or hook-like portions 16 operatively related to said minor end loop member. The resultant device is of more or less S-shaped form in side edge elevation.

In Fig. 3 the device is shown as made of wire or like material. In Fig. 4 there is shown a modified form of the device, wherein the wire formation is coated with an external covering or coating 17, such as rubber, lacquer, or other suitable material designed to provide non-abrasive, acid-resistant or some other desired characteristic which the particular selected coating or covering material is adapted to provide.

Illustration of the application of the novel supporting and coupling device in use is shown in Figs. 1 and 2 of the drawing, wherein the reference character 18 indicates a receiving vessel or container and 19 a funnel desired to be coupled therewith in operative supported relation thereto. Either the major end loop member 10 or the minor end loop member 11 may be selected to engage the funnel 19, depending upon the size of the latter. As shown in the drawing, for purpose of illustration, the stem 20 of the funnel is inserted downwardly through the end loop member 10 until the funnel body 19 is stopped and supported by the embrace of said end loop member, whereupon the stem 20 is entered into the interior of the vessel or container 18, until the supporting and coupling device is brought into engagement with the marginal portion or lip 21 of the mouth of the vessel or container 18, in such manner that said marginal portion or lip 21 enters between the arms 13 of the end loop member 10 and the side portions 12 so as to be engaged in the bights of the laterally spaced elbows or hook-like portions 14. The free end of the funnel stem 20 will, by gravity abut the inside surface of the vessel or container wall, with

the consequence that a very stable three point suspension of the funnel relative to the vessel or container is provided, the points of support being the laterally spaced elbows or hook-like portions 14 which engage the lip of the vessel or container and the funnel stem extremity which engages the vessel or container wall. The support of the funnel thus provided holds the same rigidly immovable relation to the vessel or container to which it is applied, and the greater the weight of the funnel, the more stable is the support, since the center of gravity of the thus united funnel and vessel or container falls within the base of the latter. The freely projecting minor end loop member 11, when the assembly is made in the manner above stated, may serve as a finger piece for lifting the funnel when applying or removing the same from operative relation to the vessel or container 18.

A marked advantage of the device, when serving to unite a funnel or the like in operative relation to a vessel or container, is that the funnel is supported substantially vertical with the extremity of its stem in contact with the inner wall surface of the vessel or container, so that the discharge from the funnel stem flows down the vessel or container wall, thus maintaining a continuous column or stream of liquid which greatly facilitates and quickens the discharge flow of liquid from the funnel into the vessel or container.

Other advantages of the novel supporting and coupling device are that it possesses no moving or adjustable parts requiring manipulation to adapt the same to different sizes of vessels or containers; it saves time in use since it does not require erecting manipulations as do most of the previously used funnel supports, it being necessary merely to hook the device over the lip of the vessel or container to which it is desired to apply the funnel; when not in use, the device occupies but little storage space.

The novel supporting or coupling device being reversible to permit selective use of either its major or minor end loop member according to the size of funnel desired to be used, widens its range of usefulness for application to quite a number of various sized and shaped funnels, strainers, filters and like instrumentalities.

It is also pointed out that the novel supporting and coupling device of this invention is not limited for use as a support for funnels and the like for filling, filtering, straining and similar operations, but is likewise adapted for many other purposes, as, for example, a coupling support to unite inverted water reservoirs in self-feeding poultry and animal drinking troughs, as well as for many analogous purposes.

Having thus described my invention, what I claim is:—

1. A supporting and coupling device for the purposes described comprising, an elongated annular body terminating at its ends in loop members, side portions intermediate corresponding arms of said loop members, said side portions being acutely angular to the planes of said loop members and adapted to dispose said loop members in offset planes, and the junctures of said loop member arms and said side portions providing hook-like elbows.

2. A supporting and coupling device for the purposes described comprising an annular body of ovate form made of wire and terminating at its respective ends in a major loop member and a minor loop member, side portions intermediate corresponding arms of said loop members, said side portions being acutely angular to the planes of said loop members and adapted to dispose said loop members in offset planes, and the junctures of said loop member arms and side portions providing hook-like elbows.

3. In a supporting and coupling device for the purposes described and as defined in claim 2, in which the wire forming the same is enveloped throughout its entire extent in an external covering of rubber.

CARLTON D. BLANCHARD.