Sept. 12, 1933. A. S. SHAW 1,926,655

COMBINED CONTAINER AND STIRRER

Filed Jan. 18, 1932

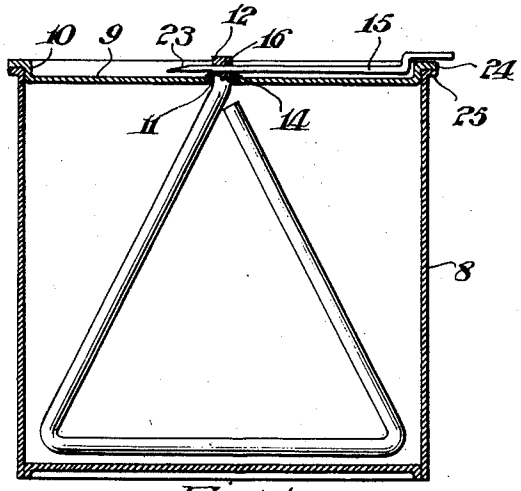


Fig. 1.

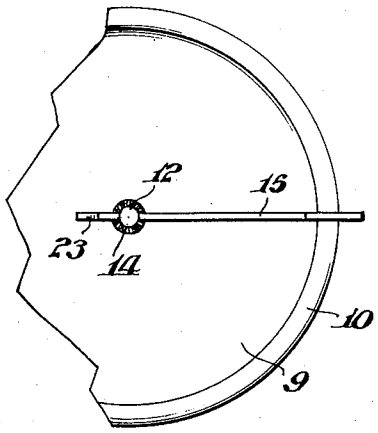


Fig. 2.

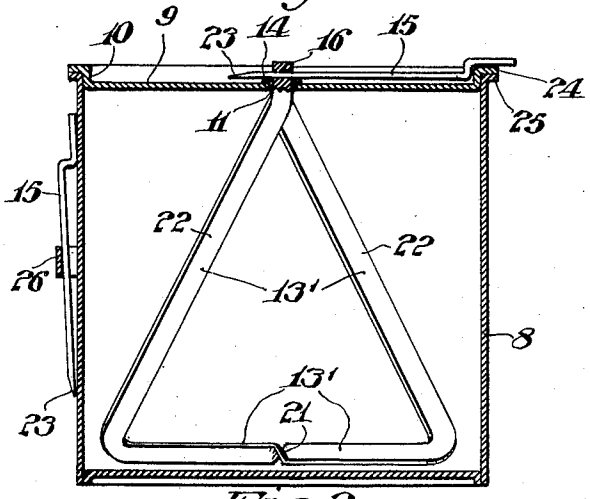


Fig. 3.

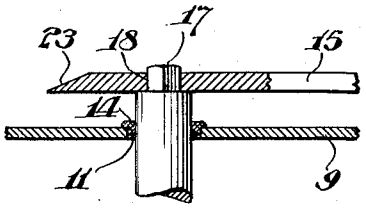


Fig. 4.

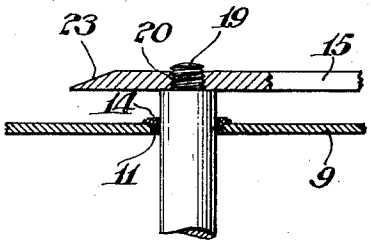


Fig. 5.

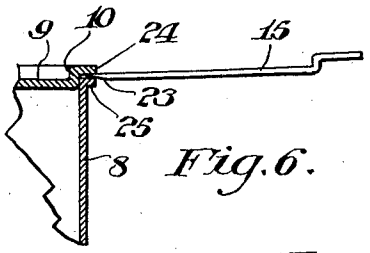


Fig. 6.

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UNITED STATES PATENT OFFICE

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COMBINED CONTAINER AND STIRRER

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Application January 18, 1932. Serial No. 587,261

1 Claim. (Cl. 259—122)

The invention relates to improvements in combined container and stirrer. The object is to provide a receptacle, especially adapted to contain a viscous material, such as paint enamel, lacquer, etc., means, having a normally rigid hermetic seal therewith for stirring the contents of the container before opening the same.

As is well known paint, varnish and the like are sold in large quantities in air-tight tin or similar containers. It is especially desirable that the containers shall be air-tight so that no part of the more volatile ingredient shall escape by evaporation.

It is also known that when such containers are allowed to rest in one position for a substantial period, the ingredients of the paint, varnish or the like, will separate to a considerable extent, and that after the can or receptacle is open the contents must be thoroughly stirred in order to bring the contents back to a homogeneous mass. Since these containers are usually filled when received by the consumer, it is exceedingly difficult to stir the contents sufficiently without spilling or splashing some of the contents from the receptacle.

It is the purpose of the present invention to provide efficient means for thoroughly mixing said contents without said spilling or splashing, and at the same time providing means whereby said container shall remain hermetically sealed until it is desired to use said contents. The invention also provides improvements in details of construction.

Referring to the drawing which illustrates merely by way of example, a suitable embodiment of the invention.

Fig. 1 is a vertical section of the container showing the stirrer and actuating means in elevation.

Fig. 2 is a fragmentary plan view of same.

Fig. 3 is a vertical section showing a modification of the stirring element.

Figs. 4 and 5 are fragmentary sections on enlarged scale, showing modifications in means for disengageably attaching the actuating element.

Fig. 6 is a fragmentary view in elevation, indicating the method of opening the container.

Similar numerals refer to similar parts throughout the several views.

The usual form of container for paint, varnish and the like in small amounts, is the tin can as indicated by 8, in Fig. 1. This can is provided with a closure or lid 9 having a portion 10 fitting closely into the top of the can and making a substantially air-tight seal therewith.

This lid, in accordance with the present invention in its simplest form, is provided with a centrally disposed opening or hole 11 for receiving the projection 12 of the stirring element 13. For purposes of transportation and storing, the space between the margin of the opening 11 and the rotatable projection 12 therein, is hermetically sealed by solder, as at 14, or other material softer than the surrounding and surrounded parts, so that this seal, while normally rigid, will release the smooth shaft or projection 12, when sufficient torsional force is applied thereto. The term solder is used in this application, as defined in the standard dictionaries.

This projection 12 is provided with means for disengageable engagement with a suitable actuating element 15. In the example shown in Fig. 1, this comprises a hole 16 in projection 12 for receiving the end of actuating element 15.

In Figs. 4 and 5 are shown modifications in the means for disengageably connecting the actuator with the projection or stud 12. In Fig. 4 an angular end 17 is provided for engaging in a corresponding opening 18 of the actuator. While in Fig. 5 is shown a stud provided with a threaded end 19 for engaging in a corresponding threaded opening 20 of the actuator.

Other means may of course be provided for securing disengageable locking cooperation between actuator 15 and projection 12, as will readily occur to those versed in the art.

In Fig. 3 is shown a modification in the stirring element. It comprises a flat bar or strip bent into triangular form. The bottom extension of the triangle is preferably bent at the middle part thereof, as at 21, so that the opposite parts thereof shall be inclined to the horizontal or plane of the bottom of the container. These inclinations are adapted to lift the heavier material from the bottom of the can when the stirrer is rotated in the clockwise direction.

The upwardly inclined extensions or sides 22 of the triangle may have their flat planes radially disposed, or, as shown in the drawing, they may be slightly inclined to the radial plane, to cause a movement of the material away therefrom and upwardly, when the stirrer is rotated in clockwise direction.

The actuator 15 is shown also as provided with a tapered or sharpened end 23 for insertion between the flange 24 and margin 25 of the lid and can, respectively, as shown in Fig. 6, so that after the stirring operation, the actuator 15 may be disconnected from the projection 12, and then used in the manner described for removing the lid or

closure 9 from the can. A keeper 26 is shown in Fig. 3, for securing the actuator 15 for transportation. Other means of course may be employed for connecting the keeper to the container for transportation.

The actuator 15 is preferably bent as shown in Fig. 1, to facilitate the engagement thereof with projection 12, and so that the free end may extend over the flange of the lid while maintaining the part engaging the projection 12 in horizontal position. This form of actuator also secures a wedging pressure engagement with keeper 26 when the actuator is packed for shipment.

A special advantage of the triangular formation of the stirring element 13', shown in Fig. 3, is that the upwardly inclined extensions 22 and the inclined faces of the lower extension of said element all tend upon rotation to propel the heavier and thicker constituent of the material, which is at the bottom, upwardly into the lighter and thinner constituent, thus securing a rapid and efficient mixing of the material.

What I claim is:—

The combination with a container, a removable metallic closure therefor, a rotatable stirring element having an actuating shaft projecting through the closure, manually operated means for actuating the shaft and means, comprising a solder joint, forming a normally rigid hermetic seal between the shaft and the surrounding wall of the closure, adapted to release the shaft upon the application of torsional force thereto.

ANNE SPENCER SHAW.