March 15, 1927. 1,621,277

S. RICHMAN

STIRRER FOR BARRELS

Filed Aug. 21, 1924

Fig. 1.

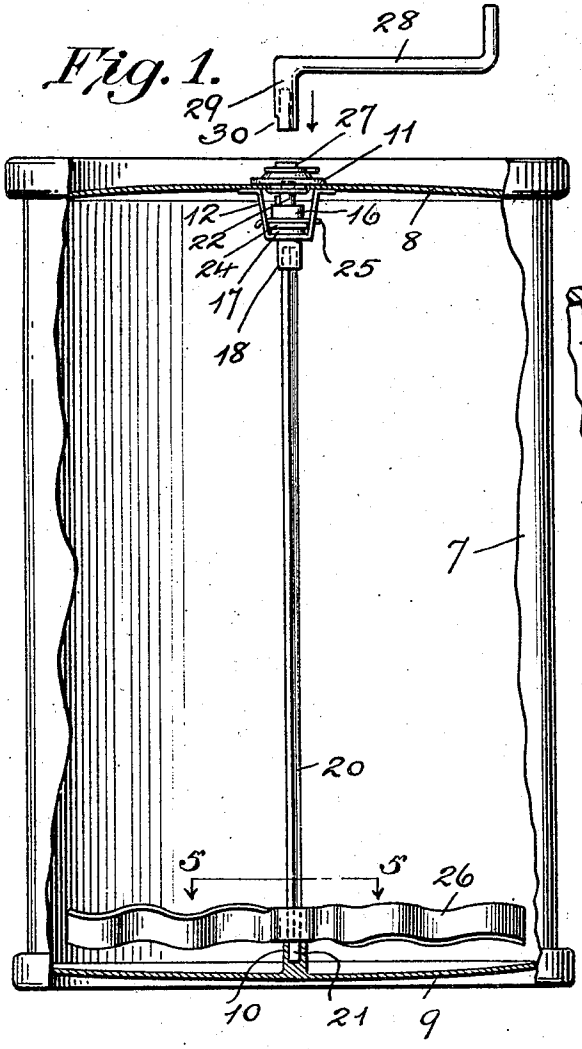
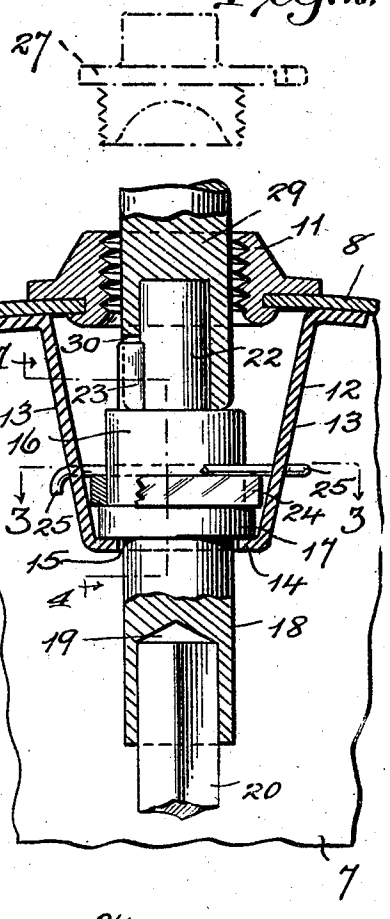


Fig. 2.



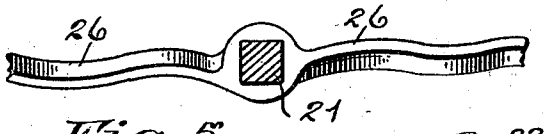


Fig. 5.

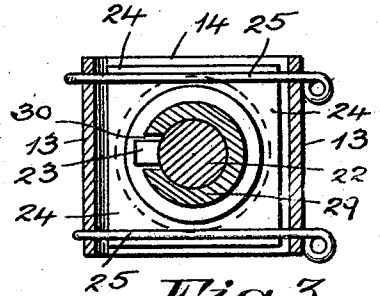


Fig. 3.

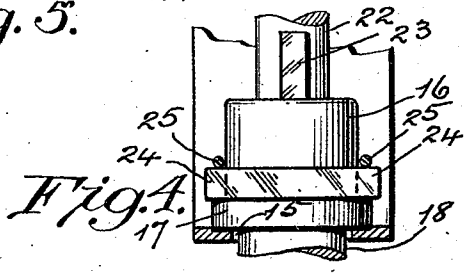


Fig. 4.

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UNITED STATES PATENT OFFICE.

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STIRRER FOR BARRELS.

Application filed August 21, 1924. Serial No. 733,360.

This invention relates to agitators or stirrers for barrels, kegs, cans and like receptacles, wherein the stirrer is a permanent part of the receptacle and may be actuated at any time desired, to mix, agitate or stir the contents of the receptacle.

The device of the invention is especially useful when attached to barrels or receptacles containing paints, oils, liquid blockings or other substances in which a thorough mixing of the ingredients is desired before dispensing from the receptacle, and the invention resides particularly in the novel means employed for mounting the agitator within the receptacle so that an actuating crank may be readily attached thereto.

The invention is illustrated in the accompanying drawing, wherein,—

Fig. 1 shows a longitudinal sectional detail through a receptacle with my improved devices therein.

Fig. 2 illustrates on an enlarged scale a vertical sectional detail through the shaft-supporting bearing and hanger at one end of the receptacle.

Fig. 3 shows a sectional plan through the same,—the section being taken on the line 3—3 of Fig. 2.

Fig. 4 illustrates the upper end of the agitator-shaft and its hanger-bracket showing the same as it would appear if viewed on the line 4—4 of Fig. 2, and

Fig. 5 shows the agitator in top view together with the shaft which carries it, as the same would appear if viewed on the line 5—5 of Fig. 1.

Referring to the drawing the numeral 7 designates a receptacle, in this instance a steel barrel, having the permanently-attached heads or ends 8 and 9 respectively and which is usually provided with bungs in the side and end but which are not shown in the present drawing.

The end 9, which may also be termed the bottom of the receptacle, is provided on its upper inner side with a central step-bearing 10, while the head 8 has a central opening with a bung-spud 11 secured therein so that the spud at the one end and the bearing at the other end will be in alinement with the longitudinal axis of the receptacle.

To the under side of the head 8 there is secured a bearing-bracket 12 which latter has two side arms 13 that depend from the head where they are permanently attached, as by welding, and these arms are connected by a crosswise bearing-bar 14.

The arms and bearing-bar are therefore permanently attached to the under side of the head.

The bearing-bar 14 has a central vertical opening 15 whose center or axis is in alinement with the axis of the spud and step-bearing.

A head 16 with an enlargement or annular flange 17 and a depending stem 18, is sustained by the bearing-bracket,—the stem 18 thereof passing through the opening 15 and the annular flange 17 seating upon the upper side of the bearing-bar 14 of said bracket.

The stem 18 of the head has a squared socket 19 in its lower end for the reception of the upper end of a squared agitator-shaft 20 while the lower end 21 of this agitator-shaft is rounded so as to fit and revolve in the lower step-bearing.

From the top of the head 16 there projects a central stem 22 with a side lug or key 23 thereon said stem and lug or key both having position at or near the inner side of the spud 11 where they will be accessible through the threaded opening of the spud as shown in Fig. 2 of the drawing.

To prevent vertical displacement or movement of the head 16 and its stems 18 and 22 with respect to the bearing-bracket 12, I place a washer-plate 24, around the head and allow the same to seat on top of the annular flange 17. The outer edges or outline of this washer-plate 24 are square, as clearly shown in Fig. 3 of the drawing, and the opposite square sides of said plate fit between the side arms 13 of the bracket-bearing in such a way that rotation of the plate, when the head is rotated, will be prevented.

Suitable keys, or pins 25 extend crosswise between the arms 13 and over the upper side of the washer-plate 24 in order to hold the plate down on the flange 17.

By locating the washer-plate 24 on top of the annular flange 17 and holding it against rotation or vertical movement, it will act as an upper bearing or guide for the head in addition to the guide formed by the stem 18 passing through the opening 15 of the bearing-plate, so that the head and

its stems 18 and 22 will be prevented from wabbling in the bearing-bracket.

On the shaft 20, I place as many agitator blades 26 as may be desired,—each blade having a central square passage to fit the shaft so it will be revolved with the latter.

Each receptacle is provided with a bung-plug 27, which will screw into the central opening of the spud to close the latter but upon removal of this plug access to the stem may be readily gained.

To actuate the stirrer a crank 28 is provided which has a socketed head 29 with a vertical slot 30 at one side of the latter.

The socketed head may readily be passed down through the central opening of the spud and fitted over the end of the stem 22 and the slot 30 in the side of the head when brought into register with the side lug or key 23 will straddle the latter as shown in Fig. 2 of the drawing so that by turning the crank 28 the head 16 and shaft 21 will be revolved causing the stirrer blades 26 to be swung around on the interior of the receptacle and thereby agitate the contents of the receptacle.

Having described my invention, I claim,—

1. The combination with a receptacle having an end with a central opening therein and means to close said opening, of a bracket having two depending arms that are attached to said barrel-end at opposite sides of said central opening said arms being connected at their lower ends by a flat crosswise bearing-bar which bar has a vertical opening therein, a head seated on the upper side of the bearing bar and having a vertical stem which projects down through the opening of the said bar and said head also having a stem at its upper side above the said bearing bar for engagement with a crank, means extending from the arms of the bracket for engaging and holding the head down on the bearing bar, a shaft in the receptacle and having its upper end connected to the lower end of the head-stem and its other end sustained in the receptacle and agitator means on the shaft.

2. The combination with a receptacle having an end with a central opening therein and means to close said opening, of a bracket having two depending arms that are attached to said barrel end at opposite sides of said central opening the lower ends of said arms being connected by a flat crosswise bearing-bar with a vertical opening therein, a head seated on the upper side of the bearing-bar and having a lower stem which projects through the vertical opening of the bearing-bar said lower head-stem being provided with a squared socket in its lower end, means including a stem and a side lug at the upper side of the head for engagement by a crank, a square washer seated on top of the head and having its square edges confined between the bracket-arms, a shaft in the receptacle with one squared end to engage the socket in the head-stem and another end which is sustained in the receptacle and agitator-means on the shaft.

In testimony whereof I affix my signature.

SOLOMON RICHMAN.