Dec. 30, 1958 P. ROUMELIOTIS 2,866,574

LATCH ASSEMBLY FOR RELEASABLY CONNECTING A COVER TO A RECEPTACLE

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FIG. 1.

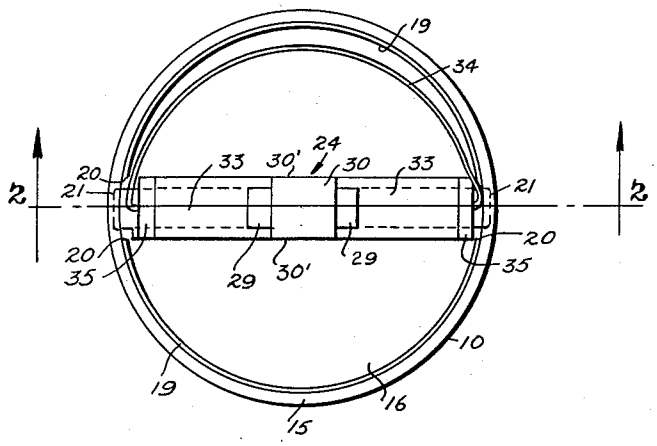


FIG. 2.

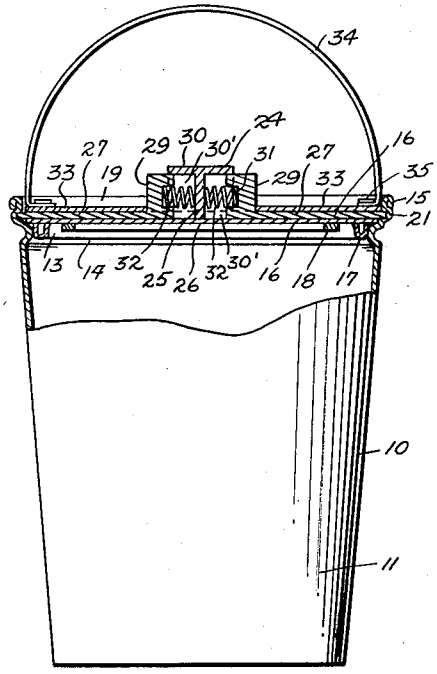


FIG. 4.

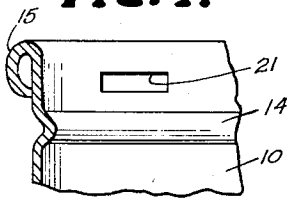
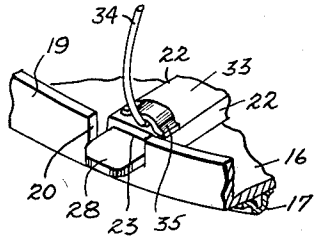


FIG. 3.



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LATCH ASSEMBLY FOR RELEASABLY CONNECTING A COVER TO A RECEPTACLE

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2 Claims. (Cl. 220—55)

The present invention relates to improved locking means for releasably connecting a cover to a receptacle.

An important object is to provide a simple, efficient, compact, and economical latching assembly associated with a cover or closure, for releasably connecting the latter to a receptacle such as a cylindrical paper container or the like at a minimum expenditure of time and effort.

Other objects and advantages of the invention will become apparent from the following description, when taken in conjunction with the accompanying claims and drawings.

Referring to the drawings:

Figure 1 is a plan view of a container, closed by a cover provided with my improved latch assembly;

Figure 2 is a sectional view taken substantially along the line 2—2 of Figure 1;

Figure 3 is a detailed perspective view of one side of the cover and the latch assembly, and

Figure 4 is a detailed sectional view of the upper end portion of the cover showing one of the recesses formed therein.

Referring to the drawings, **10** indicates a receptacle, of any suitable size and shape, such as a cylindrical paper container or cup having a tapered body **11**, a closed bottom **12**, and opened mouth or top **13**. The inner wall of the receptacle **10** adjacent the mouth **13** may be provided with an annular bead **14** and the top may terminate in out-turned rim bead **15** (Fig. 2).

A cylindrical shaped cover or closure **16** of substantially the same diameter as the internal diameter of the mouth **13** is arranged to close the same. The container **10** and cover **16** are made of any suitable durable material, such as cardboard or the like, capable of withstanding the use to which articles of think kind are normally subjected. The cover **16** has a depending annular bead **17** arranged frictionally to engage the annular bead or lip **14**. The underside of the cover **16** may also be provided with an annular member or ring **18** within and concentric with the bead **14**. The bead **17** and the member **18** may be secured to the cover **16** in any suitable manner, such as by adhesive.

The cover has an annular upwardly extending peripheral rim or flange **19** (Fig. 3) provided with diametrically disposed slots **20** arranged to register with complementary formed recesses or openings **21** in the inner wall of the container **10** adjacent the top or mouth **13** thereof. The outer surface of the cover **16** has extending upwardly and transversely thereof, a pair of spaced flanges or members **22** adhesively secured thereto and which register with the side walls of the slots **20** in the rim **19**, and coact with the upper surface of the cover **16** to form a diametrically disposed channel or guide **23** (Fig. 3). Extending upwardly and medially from the channel **23** is a substantially T-shaped member **24** in cross section and having a vertical web **25** secured as at **26** to the top of the cover **16** in any suitable manner such as by adhesion. Latch members or bars **27** are slidably mounted in the channel **23** on opposite sides of the member **24** and are of such a length that their outer ends **28** may each be moved to project through a slot **20** of the rim **19** or be contracted and moved inwardly out of engagement with the slot **20**. The inner ends of each of the latch members **27** are formed with an upwardly extending projection or lug **29**, which may be overlapped by the horizontal arm **30** of the T-shaped member **24** and enclosed at the sides by downwardly turned extensions **30'** thereof. Thus, it will be seen that the web **25** forms with the longitudinal arm or portion **30** and the depending sides **30'**, a fixed housing having confronting spaced sides and open ends that slideably receive the lugs **29**. The depending extensions **30'** provide spaced means for retaining the latch bars **27** against transverse movement relative to the closure **16**. The inner surface of each of the arms **29** may be recessed as at **31**. Between the recesses **31** and the web **25** on opposite sides of the latter, are confined coil expansion springs **32** which normally urge each of the latch bars outwardly so that their ends **28** project beyond the margin or periphery of the cover **16** into the slots **20** when the cover is applied to the container **10** and the channel **23** positioned in registry with the recesses **21**. The top or exposed portion of the channel **23** on opposite sides of the member **24** may be bridged by closing strips or members **33** which extend outwardly and radially from the arms **29** to the rim **19** (Fig. 3). The inner edges of the strips **33** constitute stops or abutments limiting the outward sliding movement of the latch bars **27**, by engagement with the projections **29**. A flexible bail or handle **34** may be connected at its ends in any suitable manner to the closures **33**, such as by the straps **35**.

It will be seen that, in operation, in order to releasably connect the cover **16** in firm locking engagement with the container **10**, the cover is moved to fit within the top or mouth of the container and the arms **29** are manually pressed towards each other so as to retract or withdraw the ends **28** of the latch bars from projecting outwardly beyond the rim **19**. The slots **20** are then moved into registration with the keeper recesses **21**. The inward pressure applied to the arm **29** is then released and the expansion of the coil springs causes outward movement to be imparted to each of the latch bars **27**, thus moving the outer ends **28** of the bars through the slots **20** into the keeper recesses **21**, so as to maintain the cover in firm closed position relative to the container **10**. Conversely, when it is desired to remove the cover from the container, the arms **29** are manually engaged and, upon inward pressure being applied, they and their associated keeper bars are moved inwardly, so as to withdraw the ends **28** of the bars from engagement with keeper recesses. Upon the application of upward pressure, the cover is readily removed from the container. When the cover **16** is in locking engagement with the container **10**, the bail **34** may be utilized for conveniently carrying the container. The flexible bail **34** may, at the same time, be manually engaged to facilitate the removal of the cover. The annular concentric members **17** and **18**, on the underside of the cover, provide means for using the cover as a coaster, when the cover is removed from the container.

It will be understood that the elements, covered by the claims, typify any substantial equivalent means capable of being used for the same purpose.

I claim:

1. In combination with a container having an open top and provided with diametrically disposed keeper recesses on its inner wall adjacent the top, the inner wall of said container having an annular supporting bead below said keeper, a cover shaped to fit within the top and engage said bead, said cover having an upwardly pro-

jecting peripheral rim provided with opposed slots registering with the keeper recesses, said cover having spaced flanges extending transversely thereof and projecting upwardly therefrom and registering with said slots so as to form with the cover a diametrically disposed channel, a fixed member extending upwardly from the cover and medially of said channel, said spaced flanges being bridged by horizontal strips disposed on opposite sides of said fixed member and having their inner ends spaced therefrom to form openings, said fixed member having a horizontal top portion extending laterally in opposite directions therefrom and overlapping said channel, said horizontal top portion having spaced depending sides and open ends so as to form a housing above the cover, latch members slidably mounted in said channel on opposite sides of said fixed member, each of said latch members having an outer end movable into locking engagement with one of said diametrically disposed recesses, the inner ends of the latch members having upwardly extending lugs extending through said openings and projecting into said housing at opposite ends thereof, the inner ends of said strips constituting stops for limiting the outward movement of said lugs, the depending sides of said housing providing means for limiting transverse movement of said lugs, and spring means confined between said fixed member and said lugs for normally urging the latch members outwardly into locking engagement with said keeper recesses.

2. A cover for an open-ended container, said cover having an upwardly projecting peripheral rim provided with

opposed slots, said covering having spaced flanges extending transversely thereof and projecting upwardly therefrom and registering with said slots so as to form with the cover a diametrically disposed channel, a fixed member extending upwardly from the cover and medially of said channel, said spaced flanges being bridged by strips disposed on opposite sides of said fixed member and having their inner ends spaced therefrom to form openings therebetween, said fixed member having a horizontal top portion extending laterally in opposite directions therefrom and overlapping said channel, said horizontal portion having spaced depending sides and open ends so as to form a housing above the cover, latch members slideably mounted in said channel on opposite sides of said fixed member, said latch members having inner ends provided with upwardly extending lugs projecting through said openings and into said housing, the inner ends of said strips providing means for limiting the outward movement of said lugs, the depending sides of said housing providing means for limiting transverse movement of said lugs, and spring means confined between said fixed member and said lugs for normally urging the latch member outwardly through said slots.

References Cited in the file of this patent

UNITED STATES PATENTS

907,085	McNutt	Dec. 15, 1908
1,892,743	Wenger	Jan. 3, 1933
2,535,275	Dixon	Dec. 26, 1950