

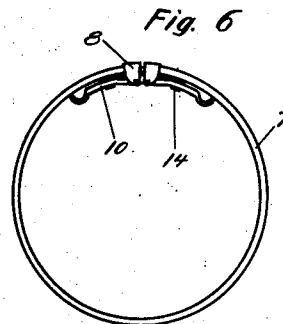
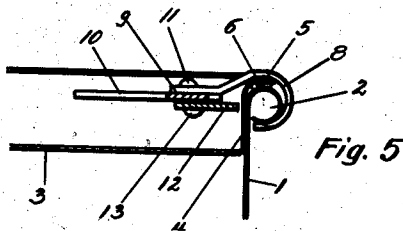
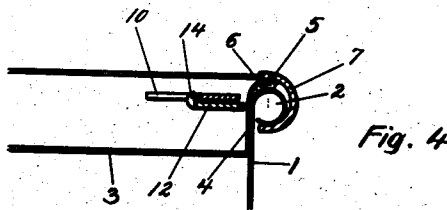
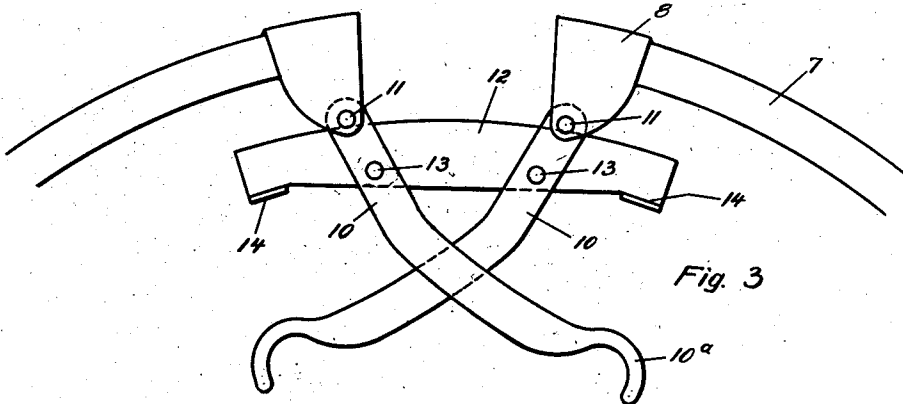
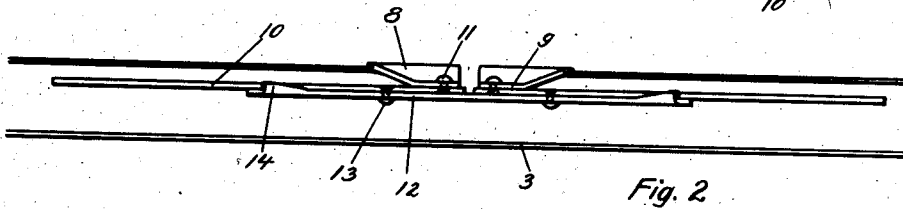
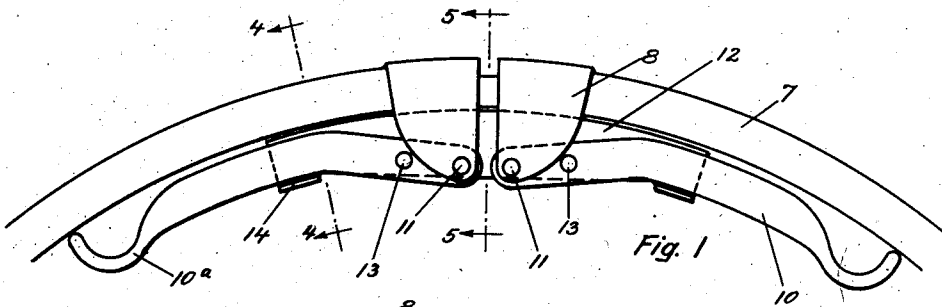
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2,140,456

CLOSURE FOR RECEPTACLES

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UNITED STATES PATENT OFFICE

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CLOSURE FOR RECEPTACLES

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8 Claims. (Cl. 220—61)

This invention relates to closures for receptacles. As exemplified the invention is applied to a steel barrel having an out-turned edge and having a cover with a lip extending over this out-turned edge.

Such covers have heretofore been secured by contracting a ring of channel form over the lip and under the out-turned edge. The present invention is directed to an improvement of the locking means for securing the cover. In some of the prior structures a single lever mechanism is used for effecting the locking of the locking ring. In the present invention a double lever mechanism is used for actuating the ring. A complete operation of the ring requires considerable pressure. The double lever gives a greater total movement than is practical with a single lever and consequently greater power in seating the ring. It makes possible also a short lever. This simplifies the mechanism, makes it more readily housed in the depression of the cover, more surely locked in place and strengthens the mechanism as a whole, thus permitting of lighter construction. It also leaves a greater part of the cover exposed for printing. Features and details of the invention will appear from the specification and claims.

A preferred embodiment of the invention is illustrated in the accompanying drawing as follows:—

Fig. 1 shows a plan view of a fragment of the barrel top with the closing mechanism in closed position.

Fig. 2 an elevation of the closure mechanism from the inside.

Fig. 3 a plan view of the closure mechanism in open position.

Fig. 4 a section on the line 4—4 in Fig. 1.

Fig. 5 a section on the line 5—5 in Fig. 1.

Fig. 6 a plan view of a barrel top showing the complete closure ring and closure mechanism.

1 marks the receptacle, 2 the out-turned edge which, as shown, is in the form of a bead, 3 the cover which is depressed and has the peripheral flange 4 terminating in an outwardly extending lip 5 which is seated on the bead 2, a gasket 6 being ordinarily interposed between the lip 5 and bead 2.

A contractible closure ring 7 is of channel form in cross section, the upper wall of the channel engaging over the lip and the under wall of the channel engaging under the bead. These parts are of common construction.

The ring 7 is split and on the ends adjacent to the separation lever supporting plates 8 are secured

to the ring. These plates extend inwardly from the ring and are preferably slightly depressed on their inner ends 9 so as to be within the depression formed in the cover. Levers 10 are pivotally secured by pins 11 on the plates 8, the levers being preferably arranged on the under sides of the plates. The levers are also pivotally secured to a connecting bar 12 by pivot pins 13. The outer ends 10a of the levers are formed to permit the insertion of the fingers for readily operating the levers. By swinging the levers toward the part of the ring adjacent to its supporting plate the ends of the ring are drawn together and the ring thus contracted. As the levers approach the ring, as shown in Fig. 1, the pivots 13 are carried into, or slightly beyond, alinement so that the expansion pressure of the ring tends to hold the levers in their locked position.

In order to more securely lock the levers the connecting bar 12 is extended beyond the pivot 13 and the locking shoulders, or catches 14 are formed on the edge of the bar and as the levers approach their closed position they are deflected, or sprung upward sufficiently to pass the shoulders. As the levers reach their final, or closing position and are released they spring back to the connecting bar 12, back of the catches 14 and are thus securely held in locked position and adjacent to the ring. The levers are of sufficient resiliency to permit their springing over the shoulders for engagement and disengagement.

In the structure shown it will be seen that the contracting movement of the ends involves the sum of the lever action of the two levers and consequently the lever arm of each lever controlling the movement may be comparatively short and in consequence the power end of the lever may also be comparatively short. The connecting bar affords a simplification of the connection of the lever mechanism and also affords a very simple means for supporting the locking shoulders. It is preferable to place the levers under the supporting plates so that they may be more completely protected and the levers carried into the depression of the cover. While I have shown the levers thus connected the invention in its broader phases is not limited to a connection involving the interposed connecting bar.

Preferably the levers are so alined that when sprung to cross each other in the open position of the mechanism, the friction between the two will maintain the open position for ease in placing the ring over the head of the barrel. This is particularly useful for holding the ring open so

that the hands of the operator may be free to adjust the ring to the barrel.

While I have shown levers in which the lever pivots 13 are between the handle of the lever and the fulcrum pivots 11, it will be understood that in the broader phases of the invention this relation may be reversed. While I have shown the invention as operating on a locking ring arranged outside of the receptacle, in the broader aspects of the invention and some features thereof it may be possible to arrange the locking ring in a different relation to the receptacle in this respect.

What I claim as new is:—

1. In a device of the character described, the combination of a receptacle having an out-turned edge; a cover having a seating edge engaging the out-turned edge; a contractible split closing ring of channel form in cross section extending over the periphery of the cover and under the out-turned edge; a lever pivotally secured to each end of the ring the pivots of said levers being substantially parallel to the axis of the ring; and means connecting the levers, said levers being directed to exert a closing pressure on the ring with a movement of the levers toward the ring.

2. In a device of the character described, the combination of a receptacle having an out-turned edge; a cover having its edge seating on the out-turned edge; a contractible split closing ring of channel form in cross section, said ring having an inwardly extending lever supporting plate at each end; a lever pivotally secured to each plate and within the ring; and means connecting the levers, said levers being directed to exert a closing pressure on the ring with a movement of the levers toward the ring.

3. In a device of the character described, the combination of a rectangle having an out-turned edge; a cover having its edge seating on the out-turned edge; a contractible split closing ring of channel form in cross section, said ring having an inwardly extending lever supporting plate at each end; a lever pivotally secured to the under side of each plate and within the ring; and means connecting the levers, said levers being directed to exert a closing pressure on the ring with a movement of the levers toward the ring.

4. In a device of the character described, the combination of a receptacle having an out-turned edge; a cover having a seating edge engaging the out-turned edge; a contractible split closing ring of channel form in cross section extending over the periphery of the cover and under the out-turned edge; a lever pivotally secured to each end of the ring; means connecting the levers, said levers being directed to exert closing pressure on the ring with a movement of the levers toward the ring; and shoulders on the con-

necting means adapted to engage the levers and lock them in closed position.

5. In a device of the character described, the combination of a receptacle having an out-turned edge; a cover having a seating edge engaging the out-turned edge; a contractible split closing ring of channel form in cross section extending over the periphery of the cover and under the out-turned edge; a lever pivotally secured to each end of the ring; and means connecting the levers comprising a connecting bar pivotally connected with each of the levers, said levers being directed to exert a closing pressure on the ring with a movement of the levers.

6. In a device of the character described, the combination of a receptacle having an out-turned edge; a cover having a seating edge engaging the out-turned edge; a contractible split closing ring of channel form in cross section extending over the periphery of the cover and under the out-turned edge; levers pivotally secured to the ends of the ring; means connecting the levers comprising a connecting bar pivotally connected with each of the levers, said levers being directed to exert a closing pressure on the ring with a movement of the levers; and locking means between the levers and the connecting bar locking the levers in closed position.

7. In a device of the character described, the combination of a receptacle having an out-turned edge; a cover having a seating edge engaging the out-turned edge; a contractible split closing ring of channel form in cross section extending over the periphery of the cover and under the out-turned edge; levers pivotally secured to the ends of the ring; means connecting the levers comprising a connecting bar pivotally connected with each of the levers, said levers being directed to exert a closing pressure on the ring with a movement of the levers; locking means between the levers and the connecting bar locking the levers in closed position; and catch shoulders on the connecting bar adapted to engage the levers and lock them in closed position, said levers being flexible to permit the levers to pass the catch shoulders.

8. In a device of the character described, the combination of a receptacle having a ribbed edge and a cover seat; a cover seating on the seat; a split locking ring locking on the rib; a lever pivotally secured to each end of the ring; and means connecting the levers, said levers being directed to exert a locking pressure on the ring with a movement of the levers toward the edge of the receptacle and having a locking position with the levers adjacent to said edge, said levers being provided with outwardly deflected finger holds on the edges adjacent the edge of the receptacle.

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