Nov. 24, 1964 C. H. KING 3,158,393

RECEPTACLE COVER LATCH

Filed Jan. 24, 1963

Fig. 1

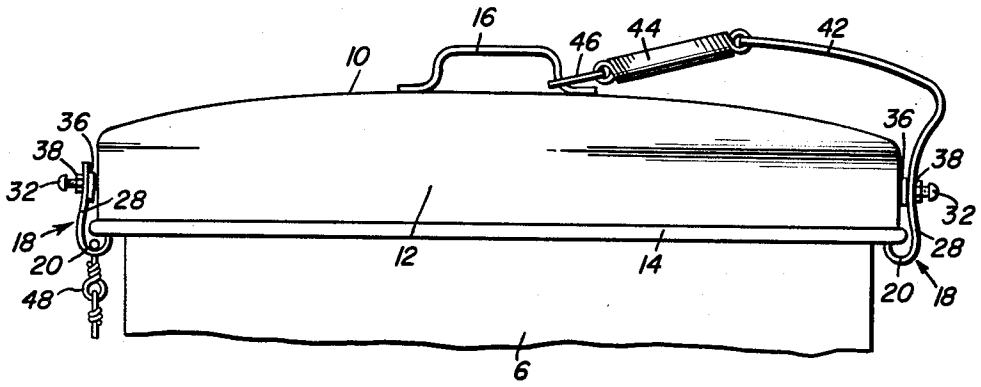


Fig. 2

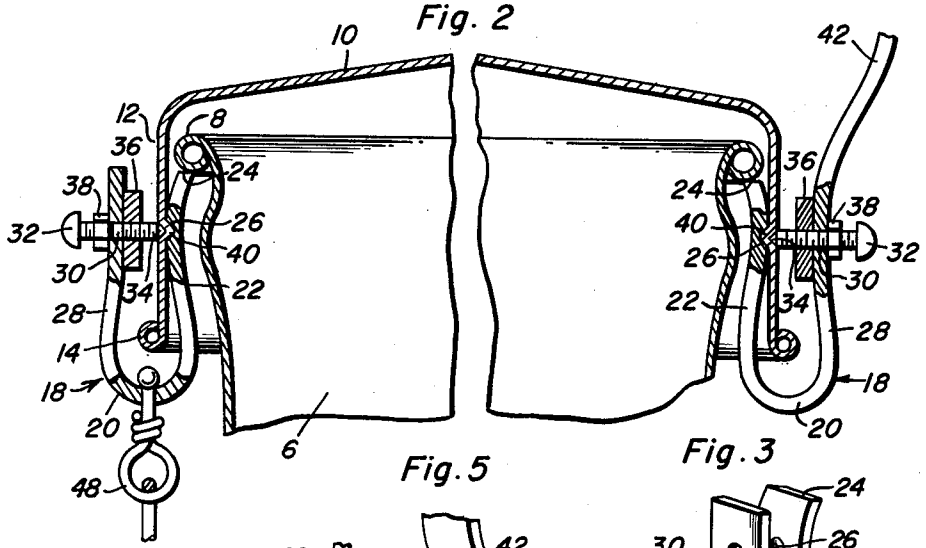


Fig. 5

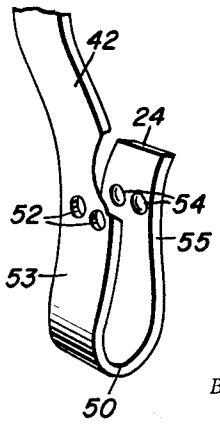


Fig. 3

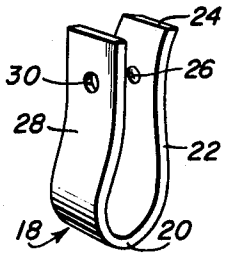
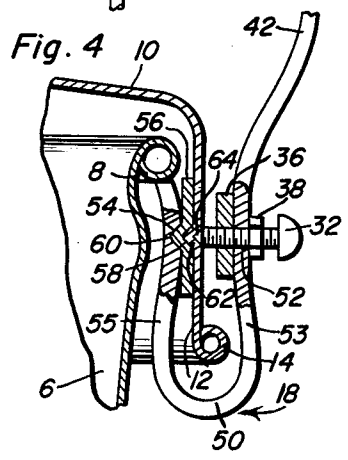


Fig. 4



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RECEPTACLE COVER LATCH

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This invention relates generally to new and useful improvements in covered receptacles, particularly but not necessarily garbage and trash cans and has for its primary object to provide novel means for firmly securing the covers of such receptacles in position thereon in a manner to positively prevent unauthoized or accidental removal as by wind, animals, etc.

Another important object of the present invention is to provide a latch means of the aforementioned character which, without the use of special tools or equipment, may be readily installed for use on the covers of existing cans and, if desired, removed therefrom and transferred to the covers of new cans.

A further object of the invention is to provide a latch of the character described which may be readily released and the cover removed with one hand, leaving the other hand free for other purposes.

A further object is to provide a receptacle cover latch or securing means of the character set forth which is readily adjustable to meet various conditions.

Other objects are to provide a receptacle cover latch of comparatively simple construction, which is strong, durable, and which may be manufactured at low cost.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawing forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a view in elevation of the upper portion of a receptacle the cover of which is equipped with latching means embodying the present invention;

FIGURE 2 is a view in vertical section through the upper portion of the covered receptacle with the latching means thereon, portions of said latching means being broken away in section;

FIGURE 3 is a detail view in perspective of one of the clips;

FIGURE 4 is a fragmentary view principally in vertical section, showing a modification; and

FIGURE 5 is a perspective view of the modified clip of FIGURE 4.

Referring now to the drawing in detail, it will be seen that reference numeral 6 designates a garbage or trash can of suitable dimensions. The can 6 may also be of suitable metal or other material. The top portion of the cam 6 is rolled as usual to provide an outwardly turned bead 8. A removable cover 10 is provided for the can 6. The cover 10 includes the usual depending skirt or flange 12 which more or less loosely receives the top portion of the can 6. The lower portion of the skirt or flange 12 is rolled to provide an outwardly turned bead 14. Mounted diametrically on the central portion of the cover 10 is the usual inverted U-shaped handle 16.

The embodiment of the present invention which has been illustrated in FIGURES 1, 2 and 3 of the drawing comprises latches of suitable metal which are designated generally by reference numeral 18. The latches 18 include generally U-shaped clips 20 which are mounted on diametrically opposite sides of the cover flange 12 in alignment with the handle 16.

The clips 20 comprise inner legs or jaws 22 which abut the inner face of the flange 12 and which terminate in inwardly curved, beveled free end portions 24 which are engageable beneath the can bead 8. Thus, the cover 10

is anchored on the can 6. The legs or jaws 22 of the clips 20 are further provided in their upper portions with substantially conical indentations or recesses 26 the purpose of which will be presently set forth. The clips 20 further comprise outer legs or jaws 28 having smooth or unthreaded openings 30 in the upper portions thereof. The opening 30 are aligned with the depressions 26. The openings 30 receive securing screws 32 comprising pointed ends 34. The screws 32 are threaded through blocks or plates 36 which abut the inner faces of the legs or jaws 28 but which are not affixed thereto. Lock nuts 38 on the screws 32 abut the outer faces of the legs or jaws 28 for securing said screws in adjusted position in the blocks or plates 36. The pointed inner ends 34 of the screws 32 are engageable with the cover flange 12 for pressing therefrom conical detents 40 which are received by the correspondingly shaped depressions 26.

Formed integral with the upper end of the outer leg or jaw 28 of one of the clips 20 is a handle in the form of an arm 42 which extends upwardly, slightly outwardly and then inwardly over the cover 10 in the manner shown to advantage in FIGURE 1 of the drawing. A tensioned coil spring 44 connects the free end of the handle or arm 42 to one end portion of the cover handle 16. Toward this end, a hook 46 is provided on one end of the spring 44 for engagement with the handle 16. The coil spring 44 retains the respective clip 20 in latching position.

The other clip 20 has swivelly mounted in its bight portion a loop or eye 48. A suitable anchor or retainer (not shown) may thus be connected to the cover 10 of the can 6.

In use, the cover 10 is slipped downwardly on the upper portion of the can 6 and the ends 24 of the latches 18 engage beneath the bead 8. Thus, the cover 10 is positively secured in position on the can against accidental or unauthorized removal, as by animals, the wind, etc. The coil spring 44 allows limited lateral movement of the bar 42 but prevents excessive rotation of the assembly about the axis of the respective machine screw 32. To release and permit removal of the cover 10, the bar or handle 42 is lifted. Thus, the respective clip 20 is caused to fulcrum or pivot on the conical detent or bearing 40 in a manner to disengage the beveled upper end portion or lip 24 of said clip from beneath the bead 8. During this phase of the operation the cover 10 may be shifted from left to right as viewed in FIGURE 2 of the drawing whereby the righthand clip may clear the bead 8. There is sufficient play or looseness and resiliency in the assembly, the can and the cover to ensure operation in the manner described. Further, by loosening the lock nuts 38, the screws 32 may be adjusted in the plates or blocks 36 to meet various conditions. The plates or blocks 36 are preferably of the same width as the members 28 to facilitate manually holding said plates or blocks while the screws 32 are turned therein. After the clip 20 which carries the arm or handle 42 has been disengaged from the bead 8, the cover 10 may be readily shifted for disengaging the other clip 20 from said bead. The clips 20 are sufficiently loose on the screws 32 to facilitate seating of the end portions 24 of said clips beneath the bead 8 when the cover 10 is applied.

In the embodiment of FIGURES 4 and 5 of the drawing, each clip 50 is provided with two openings 52 in its outer leg 53 aligned with a pair of depressions 54 in its inner leg 55 to accommodate a pair of the reaction machine screws 32. Then, if the cover 10 is sufficiently loose on the can 6 to warrant it, a spacer or shim 56 of suitable metal is inserted between the cover flange 12 and the inner leg 55 of the clip 50 on either or both sides of said can. The shim 56 has pressed thereinto conical sockets, depressions or recesses 58 providing substantially conical fulcrums 60 which are engaged in the recesses

54 and on which the clip 50 is rockable. The conical recesses or depressions 58 receive correspondingly shaped projections or detents 62 which are pressed out of the cover flange 12 when the screws 32 are tightened thereon. Conical depressions or recesses 64 are formed in the cover flange 12 by the screws 32. In other respects this form of the invention is substantially similar in construction and operation to the embodiment of FIGURES 1, 2 and 3 of the drawing.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. In combination, a receptacle comprising a top bead and a removable cover including a depending flange encircling the receptatcle, a pair of generally U-shaped clips straddling the flange on diametrically opposite sides thereof and engageable at one end beneatth the bead for latching the cover to the receptacle, means for rockably securing the clips on the flange, and means for disengaging one of said clips from said flange, said first-named means including fulcrums on the flange, one of the legs of the clips having depressions therein receiving said fulcrums, and reaction screws threadedly mounted for adjustment on the other legs of the clips and engaged with the flange for retaining said one leg of said clips on said fulcrums.

2. In combination, a receptacle comprising a top bead and a removable cover including a depending flange encircling the receptacle, a pair of generally U-shaped clips straddling the flange on diametrically opposite sides thereof and engageable at one end beneath the bead for latching the cover to the receptacle, means for rockably securing the clips on the flange, and means for disengaging one of said clips from said flange, said first-named means comprising shims on the flange including fulcrums rockably receiving one of the legs of the clip, and reaction screws on the other legs of the clips engaged with the flange for retaining said clips on the fulcrums.

3. The combination of claim 2, said shims having depressions therein, said flange comprising detents engaged in the depressions.

4. The combination of claim 3, said flange having depressions therein receiving the screws.

References Cited in the file of this patent

UNITED STATES PATENTS

1,308,197	Schillinger	July 1, 1919
2,974,990	Mereness	Mar. 14, 1961