

Sept. 24, 1963

R. N. FUTCH ETAL

3,104,903

LATCHING MEANS FOR RECEPTACLES

Filed May 24, 1961

FIG. 1

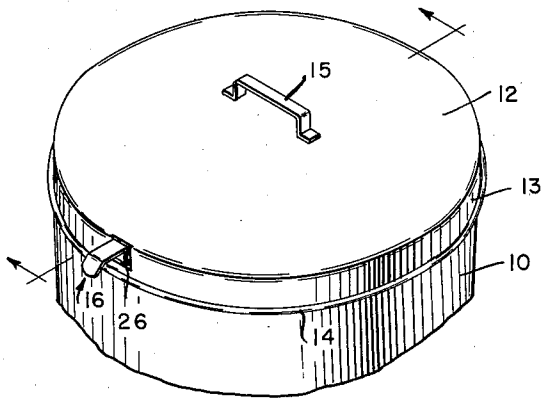
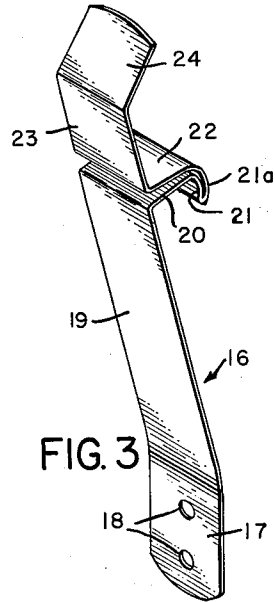


FIG. 3

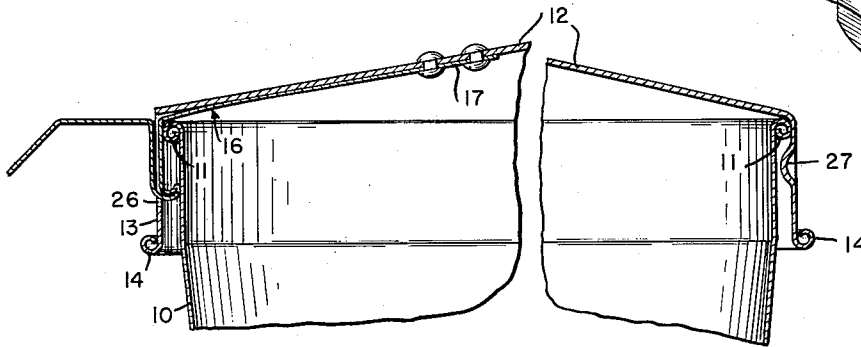


FIG. 2

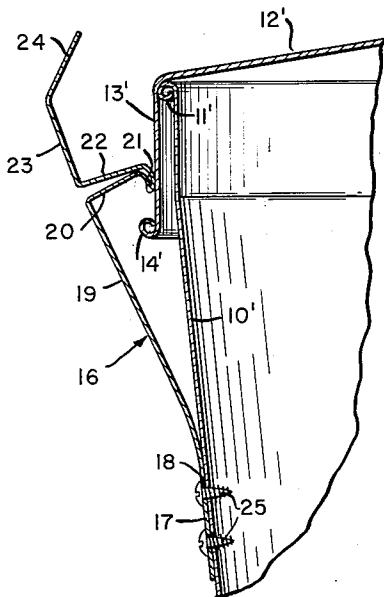


FIG. 4

INVENTOR

ROBERT N. FUTCH
GERALD L. DA SILVA

BY *Fisher, Christen & Goodson*

ATTORNEY

1

3,104,903

LATCHING MEANS FOR RECEPTACLES

Robert N. Futch, 4924 5th St. S., and Gerald L. Da Sylva, 4400 Fairfield Ave. S., both of St. Petersburg, Fla.

Filed May 24, 1961, Ser. No. 112,325

2 Claims. (Cl. 292—87)

This invention relates to containers, and more particularly to an improved type of fastening means for retaining the cover in place on metallic receptacles such as are used for the deposit and collection of refuse, garbage, etc.

It is recognized that in many suburban communities, the disposal of refuse and garbage presents a problem in that individual householders must provide for the storage of these waste products for periods of time varying from several hours up to a week depending on the frequency with which collections are made by the local agency charged with the disposal of these materials. As a practical matter, refuse and garbage is usually stored in large metal containers kept outside of the dwelling house and unless the cover of such a receptacle is securely fastened, these receptacles attract the attention of stray dogs and cats, or other animals in the vicinity, during the evening or early morning hours. Quite frequently, these marauders succeed in removing the cover, upsetting the receptacle and distributing the contents about the immediate area to create an unsightly and insanitary condition.

The invention contemplates the provision of a novel latching member made of a single strip of resilient material which can be easily attached to conventional metal refuse receptacles to ensure that the cover will not accidentally be removed.

An object of the invention is also to provide a cover for a conventional metallic refuse receptacle having locking means to secure the cover in place.

Another object of the invention is to provide a latching mechanism which may be attached either to the receptacle or to the cover of the usual metallic waste receptacle which will be effective in either case to prevent unintentional removal of the cover.

In the drawing,

FIG. 1 is a perspective view of the upper portion of a refuse receptacle provided with a cover having one embodiment of a latching means in accordance with this invention;

FIG. 2 is a cross-section in elevation taken on the line 2—2 of FIG. 1, on an enlarged scale;

FIG. 3 is a perspective view on a greatly enlarged scale illustrating the resilient latching means;

FIG. 4 is a fragmentary perspective view of a portion of the upper end of a receptacle provided with a modified form of latching means in accordance with the invention.

In FIGS. 1 and 2 of the drawing, a conventional circular metallic container is indicated by the numeral 10, the upper margin of which terminates, as is the usual practice, in an outwardly turned bead 11. Such containers are usually provided with a metallic cover 12 having a downwardly extending annular skirt portion 13, the lower margin of which is also outwardly turned to form the bead 14. The handle 15 may also be either welded or riveted or otherwise attached at the top central portion of the cover.

Generally speaking, the depending skirt portion of the cover is provided with a slight outwardly extending flange and is dimensioned to engage frictionally with the outer edge of the bead 11 on the container, but due to manufacturing expediency, more often than not it is found in practice that the cover 12 fit rather loosely on the container 10, with the result that, as previously mentioned, dogs or other animals find by experiment that the cover can

2

be easily pushed aside when it is desired to reach the contents of the receptacle.

To obviate this nuisance, we have developed a novel latching means, one application of which is shown in FIGS. 1 and 2, in which the latching means, indicated generally by numeral 16, is attached to the cover 12. This latching means is formed from a single piece of resilient sheet material and by reference to FIG. 2, it can be seen that the strip is bent so as to provide, in succession, an attaching portion 17, provided with one or more apertures 18 to receive rivets or sheet metal screws, a shank portion 19, a laterally extending portion 20, a reentrantly curved portion 21, a further curved portion 21a extending around behind portion 21, a further lateral portion 22 extending back behind the first lateral portion 20, and a further upwardly extending portion 23, this last portion including if desired an angularly turned finger-engaging portion 24.

Preferably, the latch is attached to the inside of the upper wall of the cover 12 and positioned so that when the cover is in place, the laterally offset portions 20 and 22 will extend downwardly outside of the upper margin of the container 10, with the curved hook portions 21 and 21a disposed under the bead 11.

In order to permit the finger-engaging portion 24 to be actuated, a generally rectangularly shaped opening 26 is provided in the skirt 13 through which the portions 23 and 24 of the latching means may project.

It should be noted that the lateral portions 20 and 22 are positioned with respect to the upper margin of the receptacle so that as the cover is lowered in place, the lower side of the curved portion 21a will first come into engagement with the surface of the bead 11 so that upon further downward movement of the cover, it will be forced outwardly to clear the bead, after which it will be returned by virtue of the springiness of the resilient metal strip to place the curved hook portion 21 against the side of the container and under the bead 11.

It will be understood that two or more latching means 16 could be attached spaced around the periphery of the cover, but we have provided a simpler means acting in cooperation with the single latch for holding the cover in place. As seen in FIG. 2, the skirt portion 13 is provided with an inwardly directed depression or dimple 27 located preferably diametrically opposite from the latch 16. This dimple is located below the upper margin of the skirt a sufficient distance so that it will lie below the bead 11 on the container when the cover is in place.

In use, when the cover 12 is to be placed on the container 11, the procedure is to first place the side of the cover having the dimple on the container so that the dimple will lie under the bead 11, after which the side of the cover with the latching means 16 is pushed down as far as it will go causing the curved portions 21 and 21a to pass outwardly of the bead and, when they have passed below it, to spring back into the position shown in FIG. 2 to positively lock the cover in place.

When it is desired to remove the cover, an upward pull on the finger portion 24 urges the portions 20 and 22 outwardly to clear the bead 11 and release one side of the cover. The cover is then tilted upwardly until the dimple 27 is swung outwardly from under the bead 11, after which the cover may be disengaged from the receptacle 10.

One advantage of this invention is that it may be easily attached to existing refuse containers. All that is necessary to do is to drill or punch openings through the side of the container in alignment with the apertures 18 of the latch and to use self-threading sheet metal screws 25 to attach the latch 16 to the outside surface of the container 10 in a vertical position so that the underside of

3

the curved hook portion 21 will extend over in close proximity to the upper side of the bead 14 when the cover 12 is in place.

In FIG. 4, only one latch is shown, but it will be understood that another similar latch can be attached to the container 10 on its opposite side so that the two latches placed diametrically across from each other will positively lock the cover in place. The laterally extending portions 20 and 22 joined by the hook portions 21 and 21a project inwardly over the bead 14 to lock the cover in place. When it is desired to remove the cover, it is only necessary to exert outward pressure on the finger-engaging portion 24 whereby the resilient shank portion 19 will permit the hook portions to be displaced outwardly a distance sufficient to clear the bead 14 to permit the cover to be lifted upwardly by the handle 15.

Having disclosed the invention in several applications in which it may be practiced, it will be understood that other improvements and modifications may be made by those skilled in the art which would be contemplated as coming within the scope of the appended claims.

We claim:

1. In latching means for open top containers having a cover means extending downwardly over said open top wherein the upper margin of the container and the lower margin of the cover means are both provided with a peripheral outwardly extending flange, a single piece of elongated resilient sheet material having a mounting portion at one end and having in succession, a shank portion, a laterally projecting portion, a backwardly curved portion, a portion re-entrantly curved around the first curved portion, a second lateral portion extending back behind the first lateral portion, and a further portion extending generally at right angles to the lateral portions, the mounting portion of said strip being fixedly attach-

4

able alternatively to the container or the cover means for operative latching engagement with the other of said two elements, and additional means spaced from said latching means to hold the cover in place on the container.

2. In closure means for an open receptacle having an outwardly projecting annular bead, cover means having a horizontal surface provided with a depending annular skirt portion to encircle said annular bead and terminating below the bead, said skirt being provided with an inwardly directed portion to underlie a portion of the bead, and latching means spaced from the inwardly directed portion to underlie another portion of the bead, said latching means comprising a strip of resilient sheet metal having a mounting portion fixedly secured to the underside of the cover means, and having in succession, a downwardly extending portion, a backwardly curved latching portion, a portion re-entrantly curved around behind said first curved portion, a portion extending upwardly behind the downwardly extending portion, and a finger engaging portion projecting laterally outwardly, said skirt portion being provided with a single opening through which said finger engaging portion projects and through which said latching portion may move to release the cover means.

References Cited in the file of this patent

UNITED STATES PATENTS

1,856,877	Loeber	May 3, 1932
1,961,223	Jamison	June 5, 1934
2,756,084	Fraser	July 24, 1956

FOREIGN PATENTS

564,748	Germany	Nov. 22, 1932
669,485	Germany	Apr. 2, 1952

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,104,903

September 24, 1963

Robert N. Futch et al.

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 4, line 35, the reference should appear as shown below instead of as in the patent:

669,485 Great Britain ----- Apr. 2, 1952

Signed and sealed this 7th day of April 1964.

(SEAL)

Attest:

ERNEST W. SWIDER

Attesting Officer

EDWARD J. BRENNER

Commissioner of Patents