Aug. 14, 1945. L. L. MAROHL 2,382,083

COVER-LOCK FOR CANS

Filed Nov. 18, 1943 2 Sheets-Sheet 1

Fig. 1

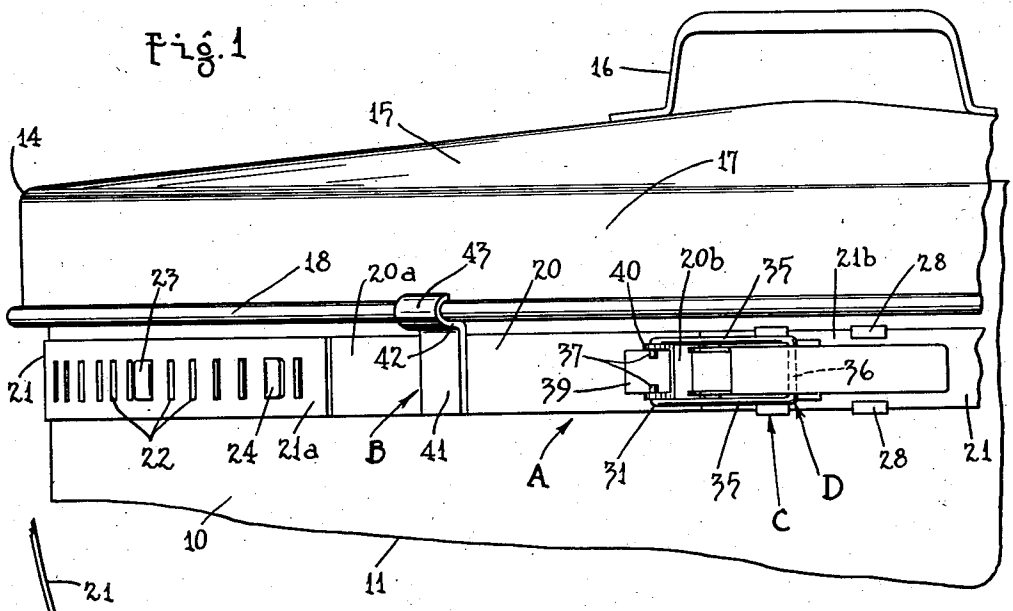


Fig. 2

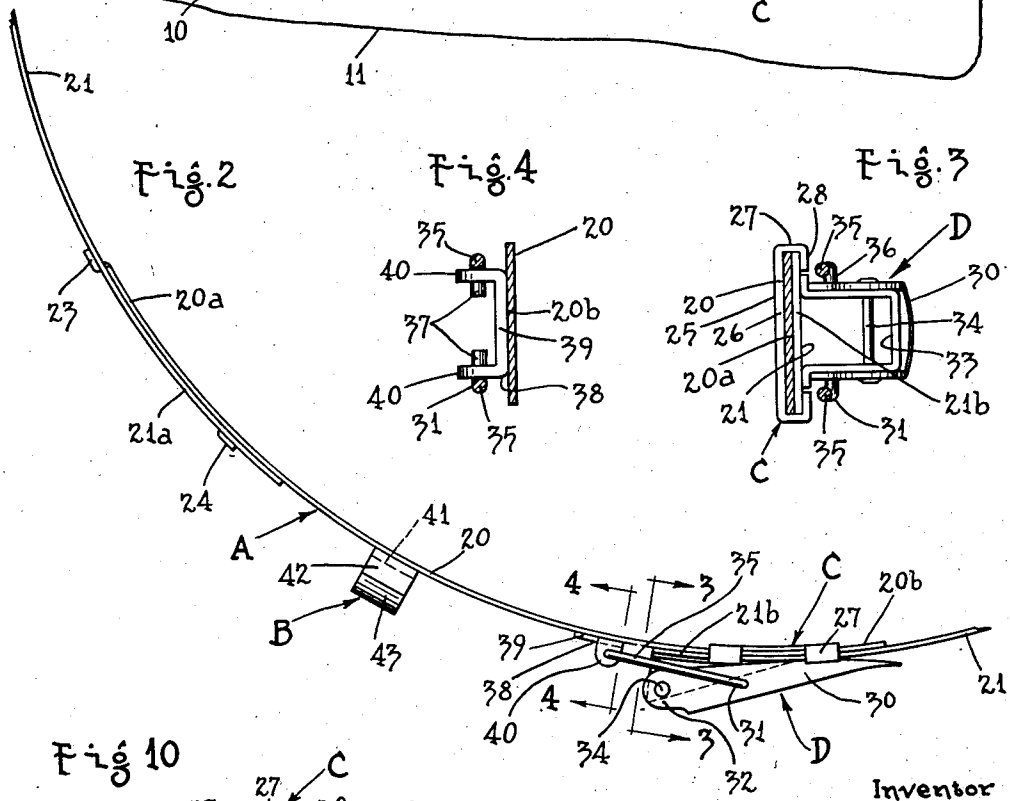
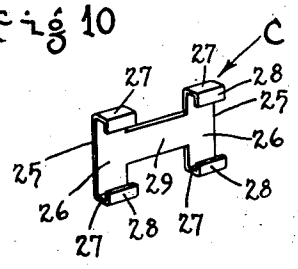


Fig. 4

Fig. 3

Fig 10



Inventor

Lillian L. Marohl

By Caswell & Lagaard

Attorneys

Aug. 14, 1945. L. L. MAROHL 2,382,083

COVER-LOCK FOR CANS

Filed Nov. 18, 1943 2 Sheets-Sheet 2

Fig. 5

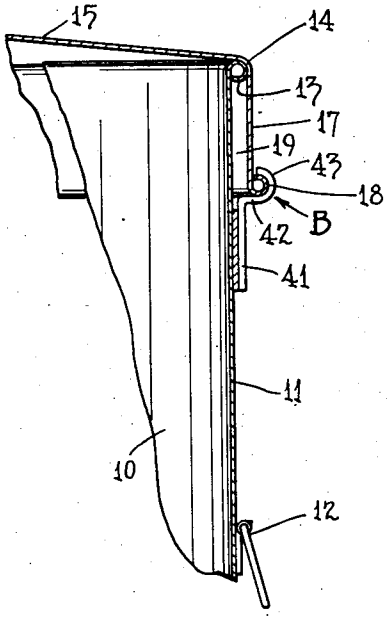


Fig. 6

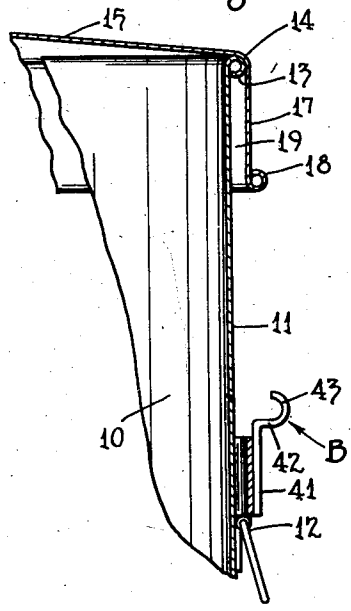


Fig. 7

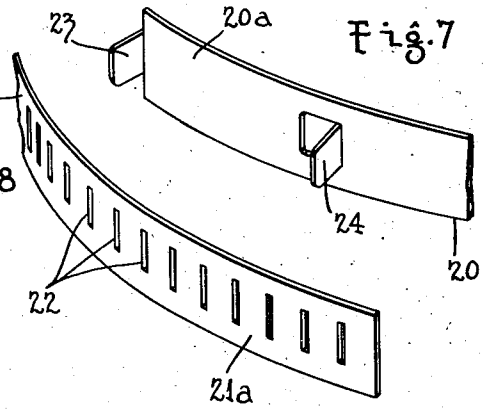
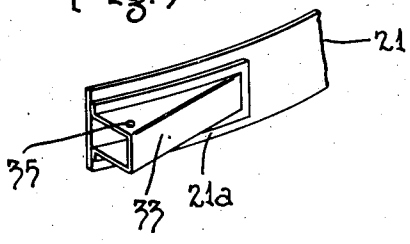


Fig. 8

Fig. 9



Inventor

Lillian L. Marohl

By Cassell & Lagaard

Attorneys

Patented Aug. 14, 1945

2,382,083

UNITED STATES PATENT OFFICE

2,382,083

COVER LOCK FOR CANS

Lillian L. Marohl, St. Paul, Minn.

Application November 18, 1943, Serial No. 510,741

1 Claim. (Cl. 220—61)

My invention relates to improvements in cover-locks for cans, an object of the invention being to provide a simple, durable and inexpensive device readily adapted to be applied to a can and capable of being easily operated to lock the cover on the can and to unlock said cover.

The instant improvement is adapted particularly, though not exclusively for application to garbage cans of the domestic type, which are in present use in large numbers and which are of familiar cylindrical form having a cover telescoped thereover and removable therefrom to give access thereto.

In the ordinary use of garbage cans of this common type, they are frequently knocked over or otherwise upset with the result that the covers of the cans often come off and the garbage from the uncovered cans is scattered about, thus creating unsightly and insanitary conditions.

A main purpose of my invention is to supply a cover-lock that any novice may easily apply to any ordinary garbage can of large or small size and which may be easily operated by anyone to free the cover for removal from the can and to lock the cover in place thereon.

Other objects of the invention reside in the novel combination and arrangement of parts and in the details of construction hereinafter illustrated and/or described.

In the drawings, Fig. 1 is a fragmentary view in side elevation illustrating a portion of a garbage can and a portion of a cover-lock therefor constructed in accordance with my present invention; Fig. 2 is a detail plan view illustrating that portion of the cover-lock shown in Fig. 1; Fig. 3 is a sectional view in detail taken as on the line 3—3 of Fig. 2 and enlarged in scale; Fig. 4 is a sectional view in detail taken as on the line 4—4 of Fig. 2 and enlarged in scale; Fig. 5 is a fragmentary vertical sectional view detailing an upper portion of a garbage can and a portion of a cover-lock of the instant character applied thereto, said cover-lock being shown as clamped upon the can in cover engaging position; Fig. 6 is a view similar to Fig. 5 showing the cover-lock unclamped and out of its cover engaging position; Figs. 7 and 8 are fragmentary perspective views illustrating the companion ends of the two straps comprising the can-encircling hoop of my invention, said views showing the complemental fastening means on said straps for adjustably connecting the same together initially to fit the hoop to a particular can; Fig. 9 is a fragmentary perspective view of the same strap as that shown in Fig. 8, but illustrating the end portion of said strap opposite the end portion thereof portrayed in said Fig. 8, and Fig. 10 is a perspective view in detail showing the guide which is applied to the relatively sliding lapping ends of the hoop straps to stiffen the hoop axially thereof.

Reference being had to the drawings, wherein similar parts are designated by similar reference characters, it will be seen that the can, fragmentarily shown, is a domestic garbage can of familiar type. The cylindrical body 10 of the can 11 proper is fitted at its sides with handles 12 and is formed at its mouth with an outwardly projecting rolled bead 13. A cover 14 for said can includes a top 15 to which a handle 16 is centrally attached, said top 15 having a skirt 17 formed at its lower edge with an outwardly projecting rolled bead 18. Said skirt 17 of said cover 14 telescopes over the upper portion of the can, fitting about the bead 13 and leaving an annular space 19 between the lower portion of said skirt and the body 10 of the can.

The instant cover-lock, devised for application to the conventional garbage can, comprises a contractible-expansible hoop A in the form of a split band-like ring having circumferentially spaced cover engaging hooks B thereon. Included in the hoop A are two metallic straps 20, 21, joined endwise in lapping relation and in circular form. At the one junction between the straps 20, 21, the end 20*a* of strap 20 and the end 21*a* of strap 21, are adjustably connected together initially to fit the hoop to a particular can. At the other junction between the straps 20, 21, the end 20*b* of strap 20 and the end 21*b* of strap 21 slide longitudinally relative to each other.

In supplying the connection between the straps 20, 21 for initially adjusting the hoop A to a can, the overlapping end 21*a* of strap 21 is formed with a plurality of slots 22 extending transversely thereof and equally spaced apart lengthwise of said strap 21. The underlying end 20*a* of the strap 20 is formed with two tongues 23, 24, the tongue 23 being located at the extremity of the strap 20 and turned outwardly at right angles thereto. The second tongue 24 is struck from the strap 20 at a locality spaced from the tongue 23 and is also turned outwardly at right angles to said strap. The relative spacing of the tongue 23, 24 is such that one thereof will register with one of the slots 22 in strap 21 when the other tongue is in register with another of said slots 22 in said strap 21. With said tongues 23, 24 registered with selected slots 22 in the strap 21, they are inserted in said slots and bent back upon the strap 21 in opposite directions. The selection of slots 22 into which the tongues 23, 24 are inserted is made to adapt the hoop A circumferentially to accord with the circumference of the can to which the hoop is to be fitted. The spaced tongues 23, 24 are of approximately the same width as the length of the slots 22, so that the tongue and slot connection between the ends 20*a*, 21*a* of the straps 20, 21 will preserve the longitudinal relation of said straps and

thus stiffen the hoop A axially thereof. To the same end, the longitudinal relation of the ends 20*b*, 21*b* of the straps 20, 21 is maintained by a clip C (Fig. 10). This clip is struck from sheet metal and comprises a pair of spaced channel-like guides 25, each consisting of an elongated web 26 having outwardly extending flanges 27 at their ends and lips 28 turned toward each other from said flanges 27, said webs 26 being integral with a tie 29 unitarily connecting the two spaced guides 25. Said clip C is spot welded or otherwise suitably secured to the inner side of the underlying strap 20 with the flanges 27 of said clip embracing the opposite edges of the lapping straps 20, 21 and the lips 28 overreaching the outer marginal portions of the overlying strap 21.

The lapping ends of the straps 20, 21 are connected together by means of a clasp D working over-center to contract and expand the hoop A. This clasp D includes a lever 30 pivoted to or fulcrumed on the end 21*b* of strap 21 and further includes a link 31 pivoted to the end 20*b* of strap 20 and pivoted also to the lever 30. Said lever 30, struck from sheet metal, is channel-shaped in transverse cross-section, having ears 32 projecting from its sides at its pivoted end. This lever 30 straddles a mounting lug 33 which is also struck from sheet metal in channel-shaped formation, the same being spot welded or otherwise suitably secured to the outer face of the overlying end 21*a* of strap 21. A pintle 34, received in apertures 35 in said mounting lug 33 extends through the ears 32 of the lever 30 and pivotally secures said lever thereto. The link 31 consists of a single piece of wire bent into U-shaped formation to provide two parallel arms 35 extending from a pivot-reach 36 connecting the one arm to the other and further bent to provide trunnions 37 at the ends of said arms 35 opposite said pivot-reach 36. Apertures in the sides of the lever 30 pivotally receive the pivot-reach 36 of the link 31 while the trunnions 37 of said link are engaged with a connecting lug 38 applied to the end 20*b* of the strap 20. This connecting lug 38 is struck from sheet metal and consists of an anchoring plate 39 formed with ears 40 apertured to receive said trunnions 37 of the link 31, said anchoring plate 39 being spot welded or otherwise suitably secured to the outer face of said strap 20.

In closing the clasp D, the lever 30 is swung toward the end 21*b* of the strap 21 into position against said strap (Fig. 2) with the result that the ends 20*b*, 21*b* of the straps 20, 21 are relatively shifted in opposite directions contracting the hoop A. During this hoop-contracting operation of the clasp D, the arms 35 of the link 31 swing inwardly past the axis of the pintle 34 fulcruming said lever 30, thus locking the clasp D closed. The reversal of said lever 30 opens the clasp D and relatively shifts the ends 20*b*, 21*b* of the straps 20, 21 oppositely, to expand the hoop A.

The cover engaging hooks B are preferably three in number, the same being spaced one hundred and twenty degrees apart on the hoop A, two of said hooks being secured to the longer strap 21 and one thereof being secured to the shorter strap 20. Said hooks B are similarly formed from stiff band-iron, each having a butt 41 which is spot welded or otherwise suitably secured to its respective strap in the hoop A. Extending horizontally outward from the butt 41 of each hook B is a shank portion 42 and bent from this shank is the head or bight 43 of the hook which opens inwardly and which is shaped to embrace the bead 18 on the cover-skirt 17 and overreach the same.

When the clasp D is open and the hoop A expanded, said hoop will rest upon the handles 12 of the can (Fig. 6). To lock the cover 14 on said can, the expanded hoop A is slid upwardly on the can until the hook-shanks 42, which provide upwardly limiting guide-stops bridging the annular space 19 between the cover-skirt 17 and can-body 10, engage the lower edge of said cover-skirt 17. Thereupon the clasp D is closed to contract the hoop A and clamp it upon the can, such contraction of said hoop at the same time serving to shift the hooks B radially inward and bring them into locking position (Fig. 5) with the heads 43 thereof overreaching the shoulder-forming bead 18 on said cover-skirt 17. Thus, the cover 14 is securely locked in place upon the can safely to retain the contents thereof even though the can be knocked over or otherwise upset. As will now be understood, the cover 14 is readily freed merely by opening the clasp D, the hoop A, in such case, being expanded and the hooks B being shifted radially outward into positions disengaged from the skirt-bead 18.

It is, of course, desirable rigidly to maintain the coplanar relationship of the hooks B so that when one or more of said hooks is in an elevated position engageable with the skirt-bead 18, the other hook or hooks will likewise be so positioned. This purpose is accomplished through the axial stiffening of the hoop A by maintaining the longitudinal relation of the lapping ends of the straps 20, 21, as above pointed out.

From the foregoing, it will be readily appreciated that the instant device is not only simple and durable, but relatively inexpensive; that it can be easily applied and adjusted to any ordinary garbage can by a novice, without tools, and that the device can be readily operated by anyone.

Changes in the specific form of my invention, as herein described, may be made within the scope of what is claimed without departing from the spirit of my invention.

Having described my invention, what I claim as new and desire to protect by Letters Patent is:

A cover-lock for a cylindrical can provided with a cover having a skirt formed with an outwardly projecting bead about its lower edge and adapted to telescope over the upper portion of the can, said cover-lock comprising a can-encircling contractible-expansible hoop adapted when expanded to be axially guided by and along the can into cover locking relation, cover engaging members mounted on said hoop, and means for contracting the hoop to grip the same about the can and shift the cover engaging members radially inward into cover locking relation and for expanding the hoop to shift the cover engaging members radially outward from their cover locking disposition, each of said cover engaging members comprising a shank extending radially outward from the hoop and a hook extending upwardly and inwardly from the shank, said shanks providing upwardly limiting guide-stops for said hoop engageable with the lower edge of said bead, said hooks providing catches engageable over the upper edge of said bead upon the engagement of said shanks with the lower edge of said bead.

LILLIAN L. MAROHL.