No. 677,046. Patented June 25, 1901.

E. TYDEN.

CAN OR BOTTLE COVER AND FASTENING FOR SAME.

(Application filed Oct. 5, 1900.)

(No Model.)

Fig. 2.

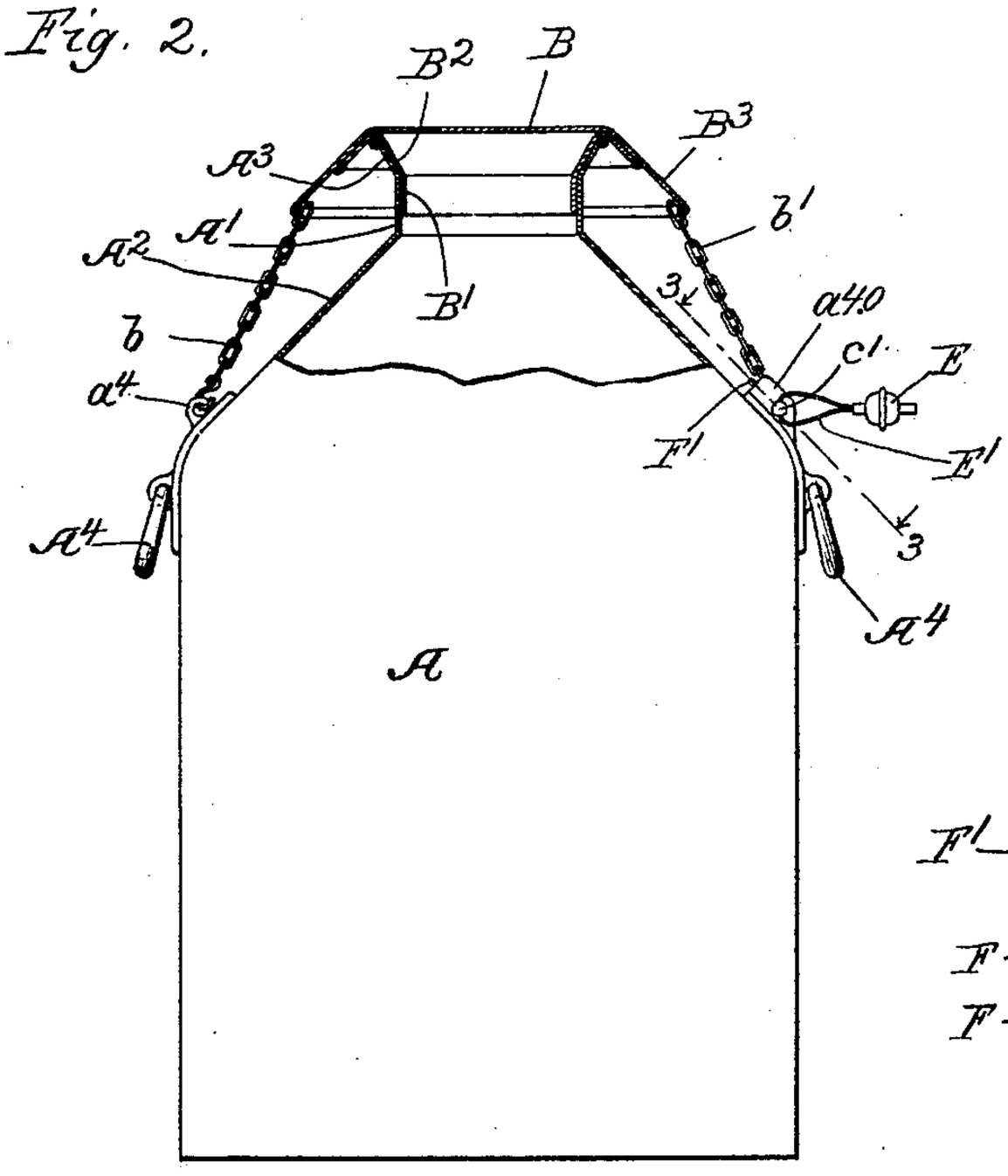


Fig. 3.

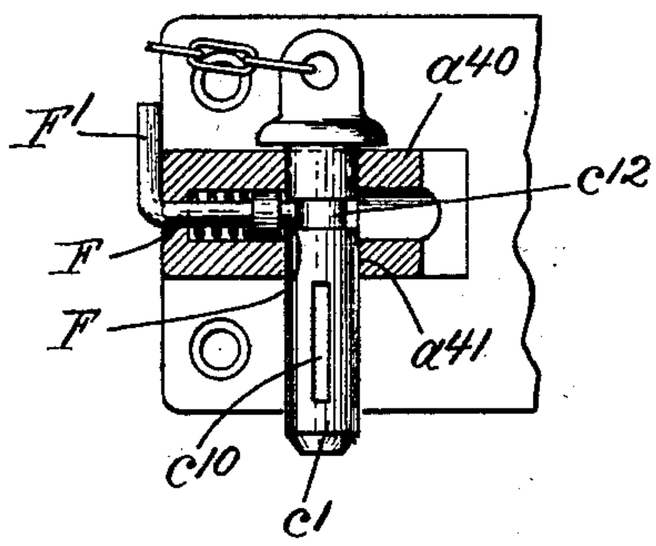
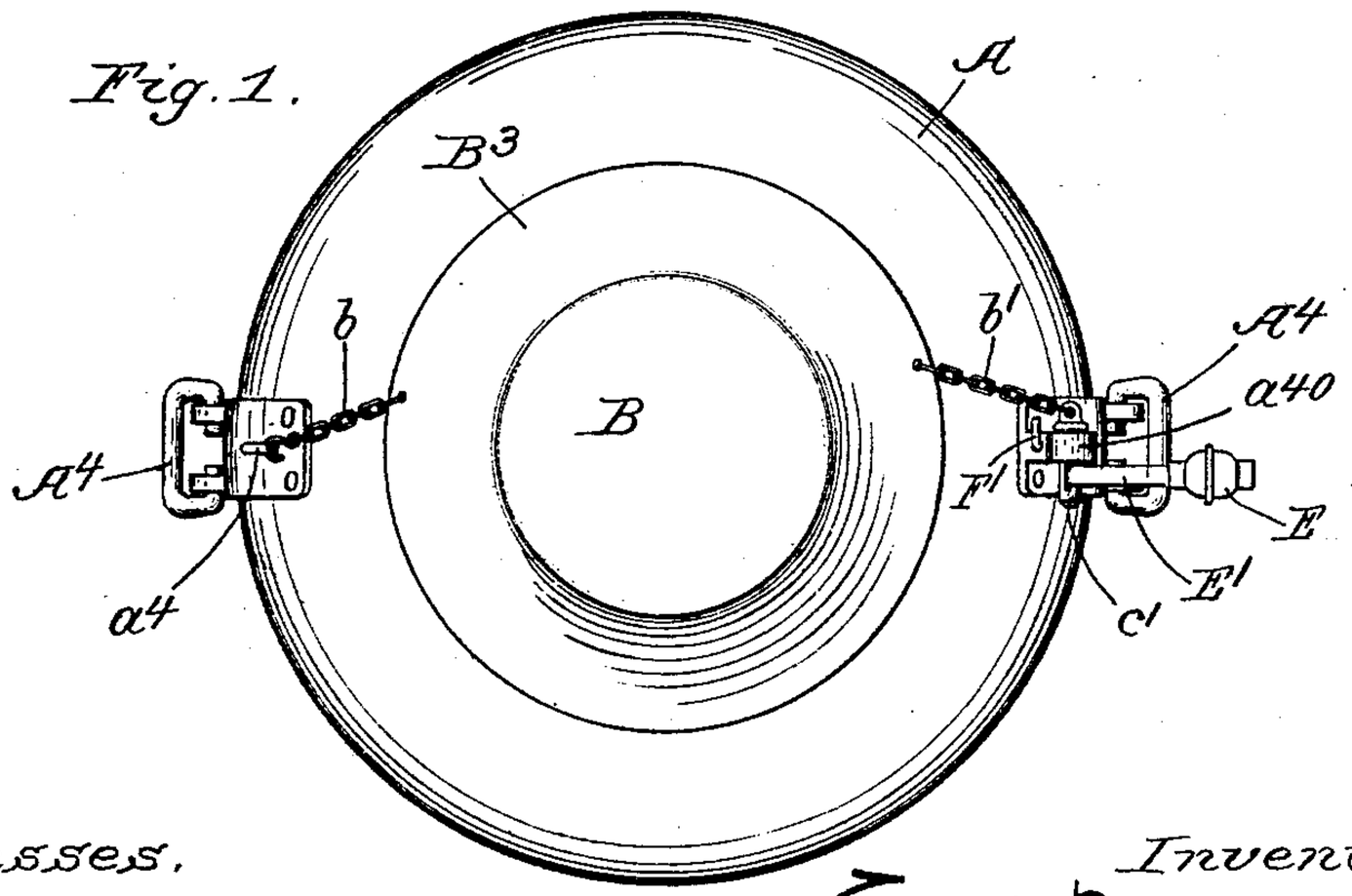


Fig. 1.



Witnesses.

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CAN OR BOTTLE COVER AND FASTENING FOR SAME.

SPECIFICATION forming part of Letters Patent No. 677,046, dated June 25, 1901.

Application filed October 5, 1900. Serial No. 32,114. (No model.)

To all whom it may concern:

Be it known that I, EMIL TYDEN, a citizen of the United States, residing at Hastings, in the county of Barry and State of Michigan, have invented certain new and useful Improvements in Can or Bottle Covers and Fastenings for Same, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

This invention is designed, primarily, to provide an improved fastening for milk-cans adapted to be readily sealed and also to be secured without seals; but it is not limited to that purpose, but is applicable in its general features to cans and bottles of all sizes and designed for all uses, and I employ the term "cans" without intending thereby any limitation to large vessels or to metal vessels, but including in that term any form of vessel to which the general features of my invention are applicable and particularly intending to include such vessels as are commonly called "bottles," especially bottles of the more familiar form, having a reduced neck, causing a shoulder or offset at the base of the neck.

Broadly, my invention consists in the combination, with a can or bottle and a rotatable cover for the same, of links which are attached to both elements of the vessel at such points that slack may be produced in only one link at a time by rotation of the cover from secured position and in making the last of the four engagements of the two links to the can and cover effectible only when the slack in the secured link is substantially taken up and the means for such engagement of such nature that the slack of the link concerned is taken up in making the engagement.

Specifically, my invention consists of particular features of construction set out in the claims.

I use the term "slack" in this specification and claims to denote not what is commonly called "slack," as applied to a flexible connection, but any form of play or looseness indicating or permitting substantial variability of distance between the parts connected by the elements to which the slack is ascribed.

In the drawings, Figure 1 is a plan of a milk-can, with the cover on it connected by my improved devices. Fig. 2 is a side elevation of the can, partly sectional, at the line 2 2 on Fig. 1. Fig. 3 is a detail section at the line 3 3 on Fig. 2.

I have shown a can of familiar construction, A being the body, which has a reduced neck A', causing a shoulder or offset A^2 at the base of the neck on the can-body, and a flaring mouth A^3.

B is the cover, which has a flange B', telescoped with the neck A' and tapered widening at B^2 to correspond with and seat in the flaring mouth A^3 of the body.

The cover B is made with a conical outer flange B^3, which extends beyond the mouth of the can and overhangs the shoulder A^3 and constitutes a water-shed to protect the contents of the can from contamination when exposed to the weather. This flange or water-shed also serves the purpose of a universal handle for lifting the can when the cover is secured by the means constituting my invention.

By the term "universal" above applied I mean a handle which is equally accessible at all sides of the can and can be grasped to lift the can out from a group of cans which would render a side handle inaccessible. Such side handles, however, are provided at A^4 A^4. A top handle is undesirable, because it would interfere with piling the cans one above another for transportation or storing.

The cover is attached to the can-body by two links *b b'* at opposite sides. These links are preferably flexible, and I have shown them in the form of chains. I do not limit myself to chains nor strictly to flexible links; but since such flexible links have certain advantages over non-flexible connections I claim them specifically. Each of these links is longer than the distance between its points of attachment to the can and cover, respectively, when the cover stands in such position that said points of attachment are in the same radial plane. This characteristic must pertain to at least one of the links. I have shown it as pertaining to both. From this it results that when the cover is rotated to such position that the points of attachment of a link are in the same radial plane the links hang slack. Preferably the links are permanently attached at one end. It is more convenient to have the permanent attachment made to the cover, and I have so shown it in the drawings. The slack which results from setting the cover in position is such that the points of attachment of the cover are in the same radial plane and affords opportunity to connect

the other link by hooking into a suitable lug, as a^4, which is provided on the can-body for that purpose. Then when the can-cover is rotated to a position at which the slack is all taken up disengagement of the connection thus made is prevented. In some cases it may be desirable to have this connection a permanent one in the case of one of the links. The two links are attached to the cover at such point and provided with means for engaging the body of the can at such point that after one link has been connected at both ends it is necessary to rotate the cover to take up the slack of that link before the other link can be brought into the engagement provided for it on the can-body. This is effected in the most convenient and desirable manner by making the points of attachment and connection of the links to the can-body at diametrically opposite points, or substantially so, and making the points of attachment of the links to the cover both at the same side of a diameter. Thus the two links when attached at both ends extend in opposite circumferential directions from their respective points of attachment to the cover to their respective points of attachment to the can-body, and the direction of rotation of the cover which would tend to produce slack in one link is prevented by the resistance of the other link, whose slack would have to be increased to permit such rotation. The link which is intended to be engaged last is preferably made to terminate in a short bolt c', and the can-body has a lug a^{40}, having an aperture a^{41}, through which the bolt c' is thrust in the direction in which the can-cover is rotated to take up the slack in the opposite link and bring the end of the link having said bolt-terminal into the aperture of the lug. The bolt-terminal has a slot c^{10} near the end, through which the strap E′ of a self-locking seal E may be inserted beyond the lug after the bolt has been thrust through the latter, and the seal being secured retains the bolt-terminal of the link against disengagement. All the slack of both links being taken up in thrusting the bolt-terminal of the second link through the lug into position to receive the seal-strap, the cover is held closely down onto the body and cannot be rotated to afford slack, which will be necessary in order to disengage the other link.

In order to provide means for securing the can and cover without a seal, as is desirable when the cans are to be returned empty after having been sent out with contents sealed, I set in the lug a^{40} a spring-operated catch-bolt F and provide the bolt-terminal c' with a suitable socket c^{12}, in which the catch-bolt may engage when the bolt-terminal is thrust through the lug. The end of the catch-bolt is extended beyond the lug and bent to form a handle F′, by which it may be withdrawn to disengage the bolt-terminal of the link at will.

I claim—

1. A can and a rotatable cover for the same; two links connecting the cover with the can, the points of connection of either link with the can and cover respectively being not in the same plane radial to the axis of rotation when those of the other link are so situated relatively; whereby rotation of the cover in either direction is resisted by one of the links.

2. A can and a rotatable cover for the same; two links connecting the cover with the can, the points of connection of either link to the can and cover respectively being not in the same plane radial to the axis of rotation of the cover when those of the other link are so situated relatively; whereby rotation of the cover in either direction is resisted by one of the links, one of said links being disengageable at one of its points of connection, and means for securing it at such point.

3. A can and a rotatable cover for the same; two links connecting the cover with the can, the points of connection of either link to the can and cover respectively being not in the same plane radial to the axis of rotation when those of the other link are so situated relatively; whereby rotation of the cover in either direction is resisted by one of the links, one of said links being flexible and the other link being disengageable at one of its points of connection; and means for securing it at such point.

4. A can and a rotatable cover for the same; two links connecting the cover with the can, one of the links being disengageable when the cover is in a certain position, the other link being incapable of disengagement at that position of the cover; whereby the cover must be rotated to position preventing disengagement of the first link in order to effect engagement of the second; and means for securing the second link after its engagement.

5. A can and a rotatable cover for the same; two links connecting the cover with the can, one link being longer than the distance between its points of connection with the cover and can respectively when they stand in the same radial plane, whereby at such position the link has slack; the other link having its connection with the cover and can respectively at points which approach when the cover is rotated in one direction to take up said slack, said second link being of length to be engaged at both ends only when said slack is substantially taken up; and means for securing said second link when thus engaged.

6. A can and a rotatable cover for the same; two links connecting the cover with the can, one link being flexible and being longer than the distance between its points of connection with the can and cover respectively when they stand in the same radial plane; whereby at certain positions the flexible link has slack, the other link having its connections with the can and cover respectively at points which approach as the cover is rotated in one direction to take up said slack; said second link being of length to be engaged at both ends only when said slack is substantially taken

up; and means for securing said second link when thus engaged.

7. A can and a rotatable cover for the same; two links connecting the cover with the can, the points of connection of either link to the can and cover respectively being not in the same plane radial to the rotation of the cover when those of the other link are so situated relatively, whereby the rotation of the cover in either direction is resisted by one of the links; one of said links being longer than the distance between its points of connection with the can and cover respectively when they stand in the same radial plane; whereby at such position the link has slack; the other link being arranged for connection to the can and cover at the opposite side of the first link, and being flexibly attached to one of said elements, the other element having an eye, and said second link terminating in a bolt adapted to enter such eye in the direction in which the cover is rotated to take up the slack of the first link, and means for securing it when thus entered.

8. A can and a rotatable cover for the same; two links connecting the cover with the can, one link longer than the distance between its points of connection with the can and cover respectively when they stand in the same radial plane, whereby at such position such link has slack, said link being flexible to permit movement of the cover to such slack position; the other link being flexibly connected at one end, and provided at the other end with a terminal adapted for engagement by movement in the direction permitted by such flexible connection; and a self-locking seal which secures it at the last-mentioned engagement.

9. A can having a reduced neck; a shoulder or offset for the same at the base of the neck; and a cover for the same having a flange overhanging the shoulder; two links connecting the cover with the can, attached at one end to the shoulder of the can, and at the other end to the overhanging flange of the cover; one link being flexible and longer than the distance between its points of connection with the cover and can respectively when they stand in the same plane radial to the cover's axis of rotation; whereby said link in such position has slack; the other link being flexibly connected at one end, its flexible connection at a point which approaches the connection at the other end as the cover is rotated in one direction to take up the slack in the first link, and being provided with a terminal at the other end adapted to make connection at that end by movement in the direction in which the cover is rotated to take up such slack; and means for securing it after it is thus connected.

10. A can and a rotatable cover for the same; two links connecting the cover with the can, one link being longer than the distance between its points of connection with the can and cover respectively when they stand in the same radial plane, whereby at such position the link has slack; the other link having its connections to the can and cover respectively at points which approach as the cover is rotated in one direction to take up such slack; said second link being of a length to permit its engagement at both ends only when said slack is substantially taken up, and having a terminal adapted to effect its last engagement; a catch for securing it at such engagement, such catch being disengageable at will.

11. A can and a rotatable cover for the same; two links connecting the cover with the can, one link being longer than the distance between its points of connection with the can and cover respectively, when they stand in the same radial plane, whereby at such position the link has slack; the other link having its connections to the can and cover respectively at points which approach as the cover is rotated in one direction to take up such slack; said second link being disengageable at one end and being of a length to permit its engagement at both ends only when said slack is substantially taken up; a terminal on said second link, and a lug with which it engages, one of said engaging elements having an aperture adapted to secure a sealing device to secure such engagement.

12. A can and a rotatable cover for the same; two links connecting the cover and the can, one link being longer than the distance between its points of connection with the can and cover respectively when they stand in the same radial plane; whereby at such position the link has slack; the other link having its connections to the can and cover respectively at points which approach as the cover is rotated in one direction to take up such slack, said second link being on the opposite side of the can and cover from the first link, and being disengageably attachable to one of said elements at one end, and a link to permit its engagement at both ends only when said slack is substantially taken up; an apertured lug, the element with which the disengagable attachment is made having an apertured lug, and a link terminating in an apertured bolt adapted to be inserted through the lug in the direction in which the cover rotates to take up the slack from the other link, the aperture in said bolt being adapted to receive a sealing device to secure the bolt to the lug.

In testimony whereof I have hereunto set my hand, at Chicago, Illinois, in the presence of two witnesses, this 28th day of September, A. D. 1900.

EMIL TYDEN.

In presence of—
ADNA H. BOWEN, Jr.,
EDWARD T. WRAY.