

March 22, 1927.

1,621,487

C. J. AULBACH

COVERED RECEPTACLE

Filed Nov. 12, 1925

Fig. 1.

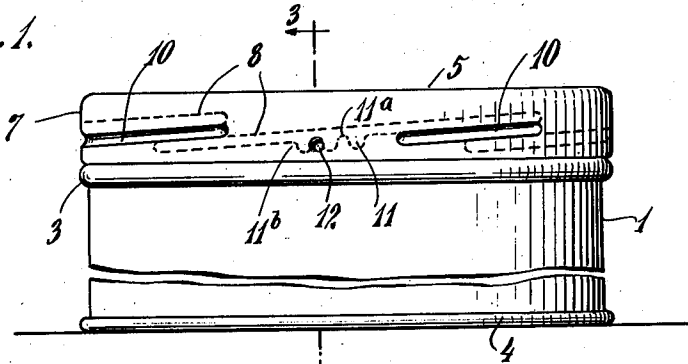


Fig. 2.

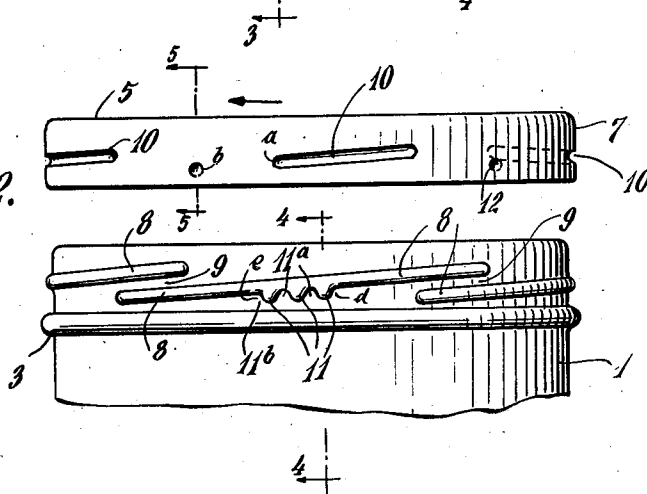


Fig. 3.

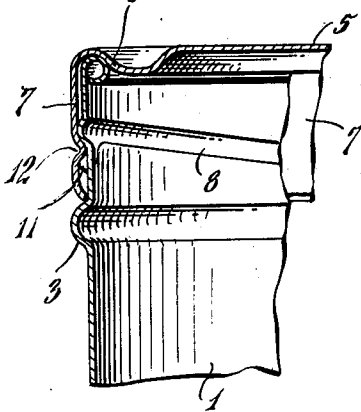


Fig. 4.

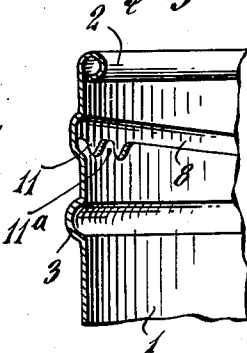
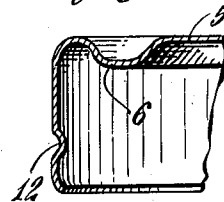


Fig. 5.



INVENTOR
Charles J. Aulbach
BY
T. F. Bourne
ATTORNEY

UNITED STATES PATENT OFFICE.

CHARLES J. AULBACH, OF PASSAIC, NEW JERSEY, ASSIGNOR TO PASSAIC METAL WARE COMPANY, OF PASSAIC NEW JERSEY, A CORPORATION OF NEW JERSEY.

COVERED RECEPTACLE.

Application filed November 12, 1925. Serial No. 68,525.

My invention relates to improvements in containers, such as so-called tin cans, provided with detachable covers having flanges, the containers and the cover flanges having
5 cooperative thread means or screw threads, whereby the covers may be screwed tightly upon the containers. In such class of containers there is liability that the covers may become loosened during transportation and
10 handling, that is to say, the covers may become more or less unscrewed due to jars and other such incidents, whereby air may enter the containers or the contents may sift out.

The object of my invention is to provide
15 cooperative means between the container and the flange of the cover so related that when the cover is screwed tightly upon the container they will be locked together against accidental or spontaneous loosening
20 or unscrewing of the cover.

My invention comprises novel details of improvement that will be more fully hereinafter set forth and then pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part hereof, wherein—

Fig. 1 is a side elevation of a receptacle embodying my invention;

30 Fig. 2 is a similar view showing the cover detached from the receptacle;

Fig. 3 is an enlarged detail cross section on line 3, 3, in Fig. 1;

35 Fig. 4 is a cross section on line 4, 4, in Fig. 2; and

Fig. 5 is a detail section on line 5, 5, in Fig. 2.

Similar numerals of reference indicate corresponding parts in the several views.

40 The container body 1, as illustrated, is generally of ordinary construction and is represented in the form of a conventional so-called tin can shown provided with an inwardly extending rolled edge 2 at the open end and with an outwardly extending bead
45 3 at a distance from said end, a suitable bottom 4 being attached to the container in any desired way. The cover of the container is indicated at 5 shown having a substantially flat top provided with an annularly disposed inwardly inclined projection or indenture at 6 adapted to cooperate with the edge 2 of the container body to make a
50 tight fit therewith, the cover being provided with a flange or skirt 7 adapted to fit

around the container body at the open end. Thread means are provided between the container body and the flange 7 for detachably securing the cover on the former. In the example illustrated the body 1 is provided adjacent to its open end with angularly disposed spaced threads 8, which may be made by pressing the material of the body outwardly, which threads each extend for a suitable distance around the body and the end portions of adjacent threads overlap, or extend one beyond the other, providing spaces 9 therebetween, the mid-portions of the threads being exposed free from one another. The flange 7 of the cover is provided with spaced threads 10 which are shorter than the threads 8 and have substantially the same general angular position as the threads 8 when the body and cover are assembled. The threads 10 may be made
75 by pressing the metal of flange 7 inwardly. It will be assumed that the foregoing parts are made of suitable sheet metal, such as so-called tin plate, whereby the open end of the container body is more or less flexible and the flange 7 of the cover is more or less flexible. The thread means may be of any suitable length relatively one to another on a container body and the cover flange so long as they cooperate in securing the cover upon
85 the body when the cover is rotated in the appropriate direction, as in the manner of uniting screw threaded parts. The parts above described are substantially similar to the container set forth in United States Letters Patent No. 1,443,682, granted January 30, 1923.

Upon the container body near its open end and upon the flange 7 I provide locking means that will operate, when the cover has
95 been screwed tightly upon the body, to retain the cover from accidental or spontaneous unscrewing or loosening from the body. In the example illustrated projections 11 are provided upon the body adjacent to the threads 8, and extending at one side thereof, thereby being located between the open end of the body and the bead 3, and stops or
100 projections 12 are provided on the flange 7 to cooperate with corresponding projections 11 when the cover is screwed upon the body to lock the parts together. The stops 12 are shown located in the angular direction or plane of the thread means 10 of the flange 7, said stops being shown located nearer the
110

inner edge of the flange than the threads 10, so that said stops will enter and pass through the spaces 9 between the end portions of adjacent threads 8 to encounter the projections 11 when the cover is screwed on the body. The projections 11 may be pressed outwardly from the metal of body 1, and by preference said projections merge with and extend from the corresponding thread 8, extending therefrom toward the bead 3, and the stops 12 may be pressed inwardly from the flange 7. The projections 11, as shown, extend under the corresponding thread 8. The relative locations of the threads, projections and stops on the body and the cover flange are such that when the cover has been screwed tightly upon the body a stop 12 will have passed over a projection 11 and have snapped behind the same to lock the cover in place on the body, the flexibility of the flange 7 permitting sufficient expansion thereof to enable projection 12 to ride upon a projection 11 and snap behind the same, although the flexible open end of the body may bend inwardly for the purpose. It is not possible in the commercial production of tin cans for all of them to have equal dimensions from the threads 8 to the extreme outer edges of the bodies, nor from the beads 3 to such edges, nor to have the cover flanges 7 all of the same depth from the tops of the covers to the extreme lower edges of the flanges that would engage the beads 3. Hence I provide one or more series of adjacent projections 11, having spaces 11^a therebetween to receive a corresponding complementary stop or projection 12 on flange 7, so that the stop may pass one or more of the projections 11 of a series to enter a corresponding space 11^a, or to enter the space at 11^b, to accommodate extreme inequalities in the dimensions specified between various bodies and covers, when the thread means have functioned in the screwing of the cover on the body.

In the example illustrated the distance between the edges *a* and *b* of an adjacent thread 10 and stop or projection 12 is slightly greater than the distance between the outer edges *d* and *e* of three associate projections 11, (Fig. 2), to prevent a thread 10 of the cover flange from abutting against a projection 11 on the body before the cover is locked thereon by the cooperation of an adjacent stop 12 with the last projection 11 of a series of three. It also will be observed that the projections 11 and the stops 12 are independent of the thread means in such a way that the latter may cooperate in screwing the cover on the body without regard to the locking means 11 and 12, and the latter cooperate independently of the thread means.

When the cover is to be secured upon the body 1 the parts may be located substantially

in the position shown in Fig. 2 and then the cover may be applied on the body so that a thread 10 and its associate stop 12 will engage the opposing thread 8 on the body therebelow. When the cover is rotated in the direction of the arrow in Fig. 2 the stop 12 will advance through the space 9 to be followed by the associate thread 10, the latter engaging under the left hand thread 8, and said stop will advance into engagement with the nearest projection 11 of said thread to ride over said projection and rest in the first space 11^a in case the cover fits tightly at the open end of the body with its inward projection or indenture 6 engaging the open end of the body. In case the cover is not entirely tight upon the body the cover will be further rotated in the direction of said arrow so that the aforesaid stop 12 will ride over the next projection 11 of the series and enter the adjacent space 11^a. If the cover is not then securely tightened at the end of the body the cover will be further rotated so that said stop 12 will ride over the last projection 11 and enter the space 11^b. In either event, when the cover is screwed securely on the end of the body a stop 12 will have passed beyond one of the projections 11 and serve to lock the cover on the body and prevent reverse rotation of the cover spontaneously or accidentally, as from jars occurring in transportation or handling, whereby to retain a tight closure between the cover and the body to prevent the entrance of air and dust into the body or the sifting of contents therefrom. When the cover is unscrewed from the body the stop 12 will ride on a projection or projections 11 to release the locking effect.

It will be understood that the cover flange may be provided with one stop 12 spaced from a companion thread 10 and the body may be provided with one or more projections 11 to cooperate with said stop 12. I find it preferable to provide a stop 12 for each thread 10 and several projections 11 for each thread 8 to assure locking of the covers on the bodies and provide against accidental or spontaneous unscrewing or loosening of the covers from the bodies.

Having now described my invention what I claim is:—

1. A container comprising a body having an open end, a cover having a flange to fit around said end, thread means upon the body and flange to detachably retain the cover on the body, and locking means on the body and cover flange distinct from the thread means and cooperative independently of the thread means to prevent accidental loosening of the cover from the body.

2. A container as set forth in claim 1, in which the locking means comprise one or more laterally disposed spaced projections on one part and a complementary laterally dis-

posed stop on the other part to ride upon and beyond the projections to cooperate in locking the cover on the body when the thread means have functioned in the screwing of the cover on the body, the thread means and the locking means operating independently of one another to perform their respective functions.

3. A container as set forth in claim 1, in which the locking means comprise one or more spaced outwardly disposed projections on the body and a complemental inwardly disposed stop on the cover flange spaced from its thread means to ride over and beyond a projection to lock the cover on the body when the thread means have functioned in the screwing of the cover on the body.

4. A container comprising a body having an open end, a cover having a flange to fit around said end, spaced threads upon the body near its open end, outwardly disposed projections located upon the body at one side of the threads between the ends of the latter, threads upon the cover flange to cooperate with the first named threads solely in screwing the cover upon the body, and inwardly disposed stops upon said flange spaced from and independent of the threads upon the flange to cooperate independently of the thread means with said projections to lock the cover on the body when the threads

have functioned in screwing the cover on the body.

5. A container as set forth in claim 4, in which the projections upon the body are located in planes parallel to and spaced from the adjacent body threads and the stops upon the cover flange are spaced from the adjacent flange threads and located in the angular planes thereof.

6. A container comprising a body having a flexible open end, a cover having a flexible flange to fit around said end, threads upon the body near the open end, spaced projections at one side of the threads, and stops upon the flange to cooperate with said projections for locking the cover on the body, the flexibility of the body end and the flange permitting the stops to ride upon and beyond the projections, said stops being located in position to pass under the body threads without cooperating with the latter to engage said projections, the thread means cooperating to attach the cover upon the body without cooperating with the projections and stops.

7. A container as set forth in claim 6, in which the stops are spaced from the adjacent flange threads and are located nearer the inner edge of the cover flange than the last named threads.

CHARLES J. AULBACH.