

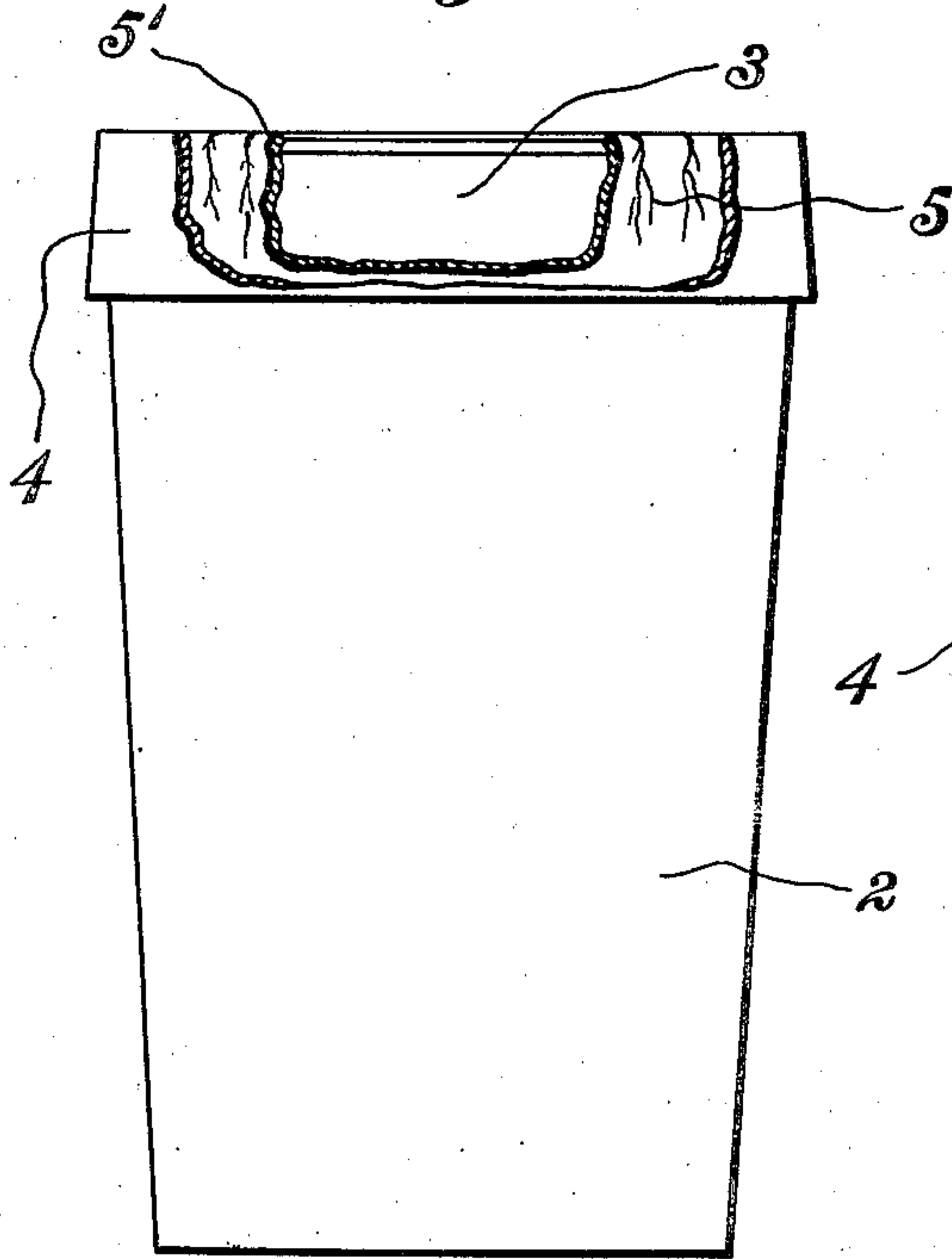
G. MORTSON.  
CARTON.

APPLICATION FILED FEB. 11, 1909.

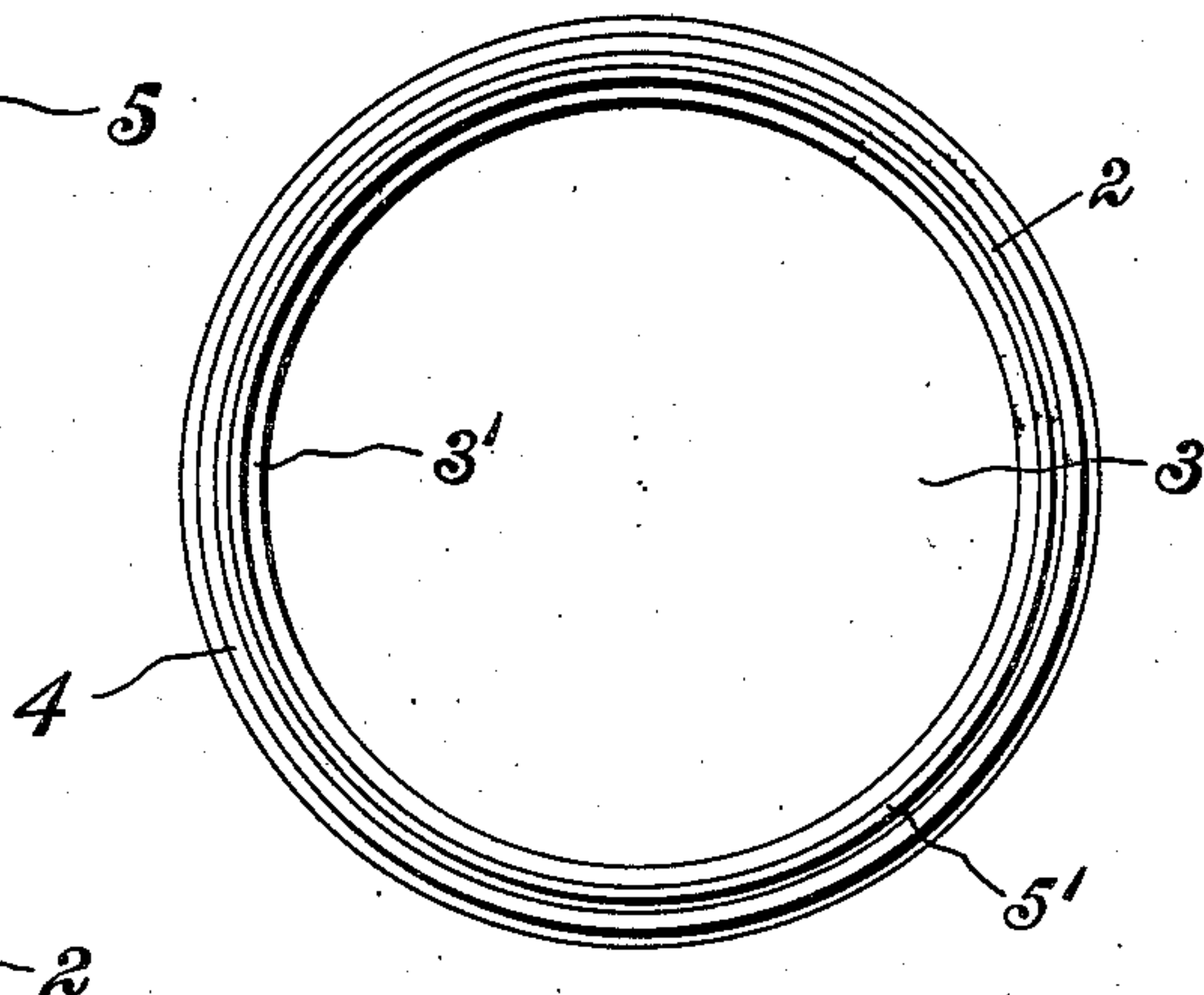
931,074.

Patented Aug. 17, 1909.

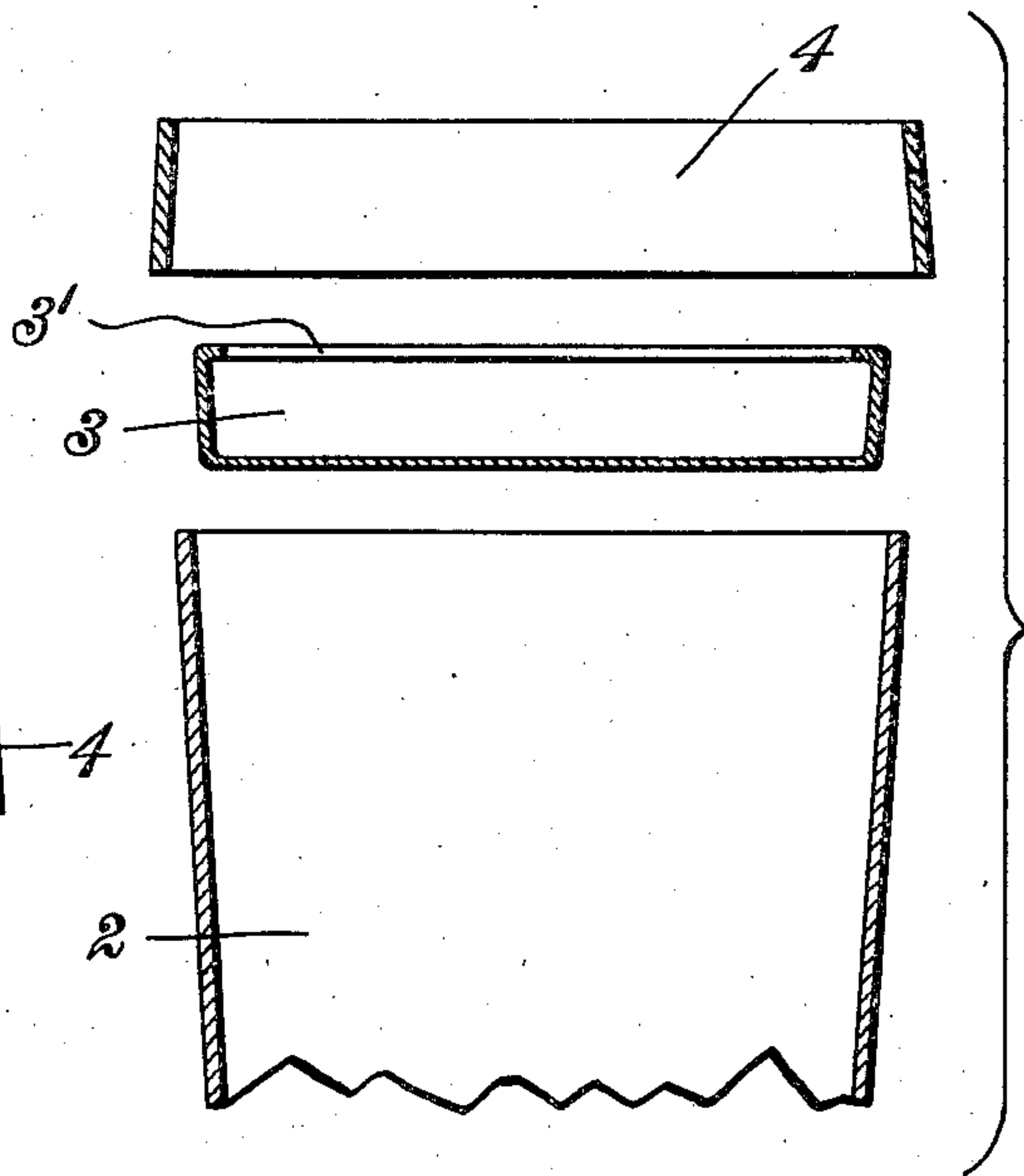
*Fig. 1.*



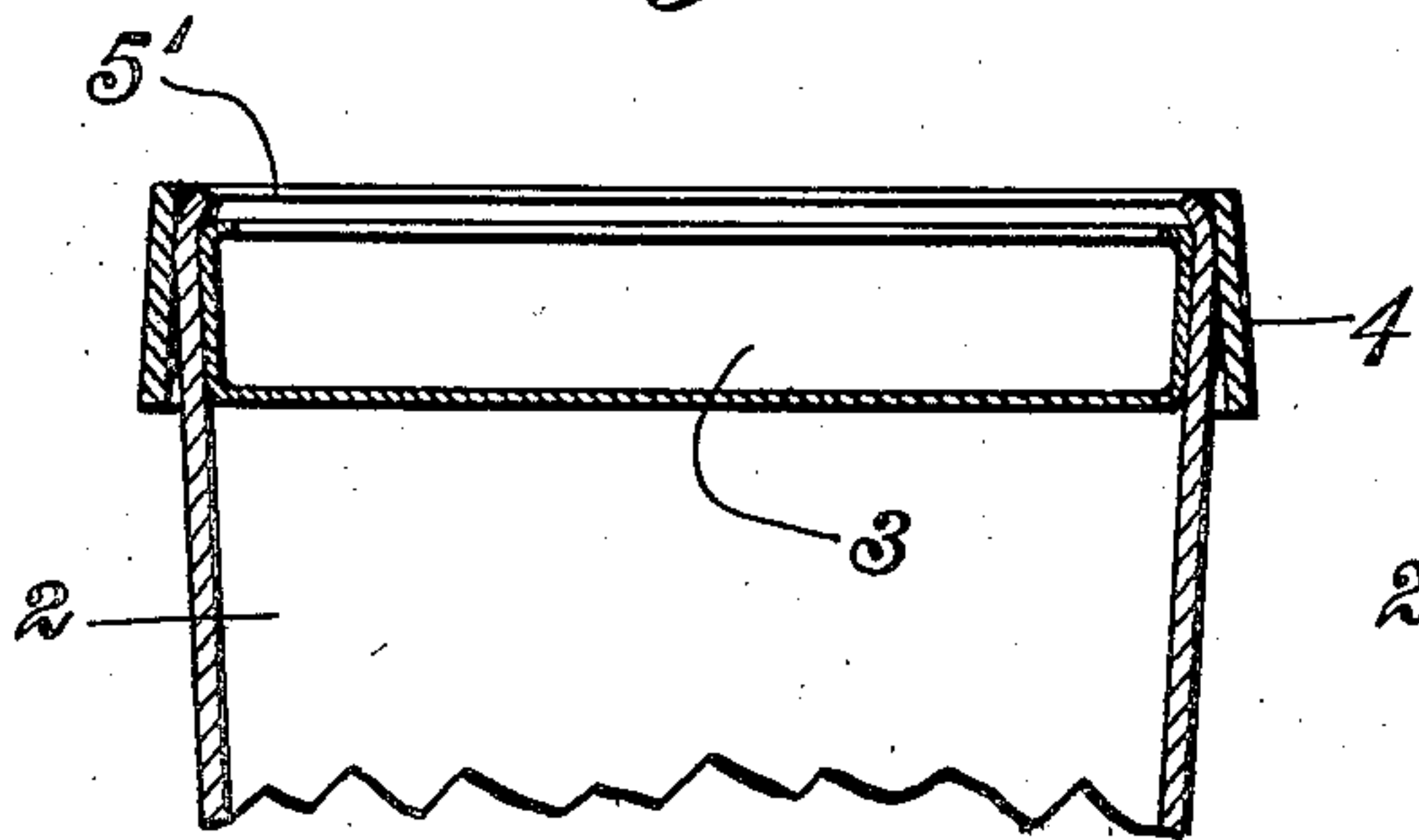
*Fig. 2.*



*Fig. 4.*



*Fig. 3.*



Witnesses:

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# UNITED STATES PATENT OFFICE.

GEORGE MORTSON, OF HARTFORD, CONNECTICUT.

## CARTON.

No. 931,074.

Specification of Letters Patent.

Patented Aug. 17, 1909.

Application filed February 11, 1909. Serial No. 477,402.

*To all whom it may concern:*

Be it known that I, GEORGE MORTSON, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Cartons, of which the following is a specification.

This invention relates to cartons the object of the invention being to provide an article of this character so constructed as to effectually retain the contents thereof against accidental removal or loss although when desired the same can be easily removed.

In the drawings accompanying and forming part of the present specification I represent in detail one simple and convenient embodiment of the invention which to enable those skilled in the art to practice said invention will be fully set forth in the following description while the novelty of the invention will be included in the claims succeeding said description.

Referring to said drawings, Figure 1 is a side elevation of a carton or box involving my invention. Fig. 2 is a top plan view of said carton. Fig. 3 is a vertical sectional view of the upper portion of the same, and, Fig. 4 is a view of said carton with the several parts thereof separated from each other and in section.

Like characters refer to like parts throughout the several figures.

My carton includes in its make up a body, a cover for said body, and a locking ring for holding the said cover in place. In the present case this ring surrounds the body and one of these two parts has a tapered portion or surface engageable by the other and so disposed that when the ring or band is thrust home it serves to constrict said body preferably around the cap or cover the consequence being that said cap or cover is firmly and snugly held in place with a wedge-like locking action. While I do not restrict myself to the presence of this tapered portion or surface on either said body or ring I find that it is of advantage when on the ring or band owing to the fact that such construction is one that can be easily and cheaply manufactured. When said ring or band is in operative position it causes the mouth portion of the body to closely embrace the marginal or peripheral portion of the cap or cover by reason of which the latter cannot be withdrawn by ordinary pulls.

I have described in a general way a carton,

box or can comprising my invention and such a device can be used for containing a great variety of substances whether they be solid, liquid or a combination of both. I find that by the relation specified, it is not only possible to securely retain the cover or cap in place but that the contents of the carton can be air-sealed therein which is an important consideration in the case of those materials which decompose when subjected to the action of the atmosphere. In the present instance therefore I make the interior of the ring or band to which I have alluded of taper form and it is not material what the shapes of the body and cover are although both said last mentioned parts are also preferably tapered as will hereinafter more particularly appear. In like manner it is not consequential of what materials the three parts are made. I find that sheet material, such as paste-board, answers satisfactorily both for the body and ring while the cap or cover can be best made from sheet tin. Said ring or band in addition to securely locking the cover or cap in closed position also constitutes an advantageous reinforce at the place where it is situated.

While I have employed the terms "cap" and "cover" to denote a closure for a receptacle it may not be always necessary that the same be located at the top of the carton as it is conceivable that such part might be at the bottom of the carton at which time it might not be, strictly-speaking, a cap. From this it will be evident that I use the terms in question in their broadest senses.

Referring to the drawings for a more detailed description of the carton or can it will be observed that the several parts thereof are shown as assembled in Fig. 1 while they are separated from each other in Fig. 4. Said carton comprises a body as 2, a cover or cap as 3 and a band as 4. It is quite unnecessary to describe the bottom of the device as this does not concern the present invention or form any part thereof.

It is not essential of what form I make the body 2 although one which tapers toward its top both interiorly and exteriorly is quite satisfactory in that such a body is best adapted both for actual coöperation with the cover 3 and the band 4. Owing to the fact that said body is made of paste-board or some analogous material the same is flexible and can therefore be made to readily and solidly embrace the cap. There



may of course be cases where I should prefer that the body 2 or analogous part be in the form of a cylinder or possibly some other shape. So also with the cap or cover.

5 While the latter is of utility when made of taper or frusto-conical form there may be times when I should prefer that it be of cylindrical or other shape. Said cap or cover 3 as shown has its taper corresponding with  
10 the taper of the interior of the body 2; that is in a downward or inward direction or toward the bottom of the body 2.

After I have filled the body 2 the cap 3 is inserted into the upper open and enlarged  
15 end of said body and then pressed down or into the body until its upper surface is a trifle below the upper edge of the body. When the cover has been inserted the desired distance into the body it will be held  
20 therein owing to the tapered construction thereof and of the body in a very tight manner owing to which it might be considered that the said cap or cover is self locked in its closed position; in other words the cap  
25 is driven into the body sufficiently as to be in effect wedged therein. This is an important feature although probably not vitally essential for as I indicate there might be cases where I should prefer that  
30 the body and cover be both cylindrical and in such an event as this I should rely wholly on the locking ring or band 4 to retain the cover against accidental removal or dislodgment. The body 2 will closely embrace  
35 the circumference of the cap or cover 3 but I find that by crimping the body around said cap more desirable results are secured in that the grip of the body on the cap is somewhat enhanced and the retention of the  
40 cap in place will be further assisted by folding the upper portion of the body over the cap or cover. After the cap or cover has been firmly seated the body 2 will be circumferentially crimped as at 5 while it will  
45 be also crimped over the cap as at 5'. After the cap or closure 3 has been put into position the locking ring 4 is applied. Said locking ring 4 in depth may be greatly less than that of the body 2; as a matter of fact  
50 I can obtain excellent results by making said ring or band but a very little deeper than the cap or cover 3 although as will be obvious I do not restrict myself to any special size of the several parts.

55 While it is of great advantage that the interior of the ring or band 4 be of tapered form, and the taper in the present case is downward, it is not material what the shape of the outer surface of said ring is although  
60 said ring can be best made as the frustum of a cone. It will be clear that in the construction stated the ring is put into position with the large end down. It will be assumed that the cap or cover 3 has been applied and that the body 2 has been crimped

around and over said cap as hereinbefore set forth. The ring will then be lowered onto the capped body with its large end down and will be then pushed downward squarely or with equal pressures throughout its entire extent this action continuing until the  
70 upper edge of said ring is flush or substantially in the plane of the top or upper edge of the cap 3. As said ring 4 is pressed home it constricts or compacts the upper  
75 portion of the body 2 and causes the same to hug very closely the cap or cover 3, the crimped portion of the body being crowded over, upon or against the peripheral surface of the cap or cover so that when said ring  
80 or band is finally seated it is a very difficult matter to pull the cover 3 from the body 2. The action of the ring thereof is that of a wedge and it crowds or presses the stock of the body solidly against the cap. It will be  
85 quite apparent that a ring of the character described is of advantage although the wedging action might be otherwise secured within the scope of my invention.

When the parts are constructed and related as set forth it is a very simple matter  
90 to close a box and positively retain the contents thereof against accidental removal.

The interior of the ring or band 4 as will be clear has a taper opposite to that of the  
95 body 2 although that of said body 2 and cap is similar so that when the cap or cover is introduced into the body the latter will have an ample bearing against or upon the cap which would not be the case were these two  
100 last mentioned parts of opposite taper as in such a case the body would have simply what is known as a "line bearing" against the cap which is of disadvantage as it would probably permit the leakage of liquid from a carton or can embracing such a relation. This  
105 wide bearing to which I have referred as present in my construction affords in itself a tight closure. The cap or cover 3 is preferably though not necessarily made from  
110 tin. It might of course be made from pasteboard or from some easily moldable substance. Usually, however, it is of tin and can be stamped with the aid of dies practically into cup form as shown. Said cap or  
115 cover 3 is also provided with some suitable means whereby it can be withdrawn after the locking ring 4 has been removed, and the internal bead 3' answers very well this purpose.  
120

When the ring or band 4 is in position it serves not only as an effective lock for the cap 3 but it materially reinforces or  
125 strengthens the upper part of the carton or can. I find that I can hold the ring or band against all possible accidental motion simply by its frictional fit on the body 2 augmented of course by the wedge action to which reference has already been made by virtue of which no extraneous or independent means  
130



will be necessary for immovably holding said ring in place. To obtain access to the contents of the carton the ring 4 will be first removed and this can be accomplished by giving it a slight turn to unloosen it after which it will not be a difficult matter to pull said ring from place. When this is done it will be easy to pull out the cap or plug 3.

I wish to indicate that I may adopt many variations within the scope of my invention; some of these I have expressly stated while others may be inferred.

What I claim is:

1. A carton comprising a body interiorly and exteriorly tapered toward its bottom, a cap to fit within said body and tapered to correspond with the interior of said body, and a ring having an interior taper opposite to that of said body and cap, fitting snugly

around the body at said cap to constrict said body around the cap. 20

2. A carton comprising a paste board, approximately flexible body of interior and exterior downward taper, a cap fitted tightly in said body and tapered to correspond with the latter, and a ring having an interior taper opposite to that of the body said ring being of paste-board and snugly fitting the body at the cap to constrict the former around the latter the upper edge of the ring when in set position being substantially flush with the upper edge of the body. 25 30

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE MORTSON.

Witnesses:

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