June 19, 1923.

1,459,260

L. D. ROBERTS

PAPER CAN

Filed July 27 1921

Fig. 1.

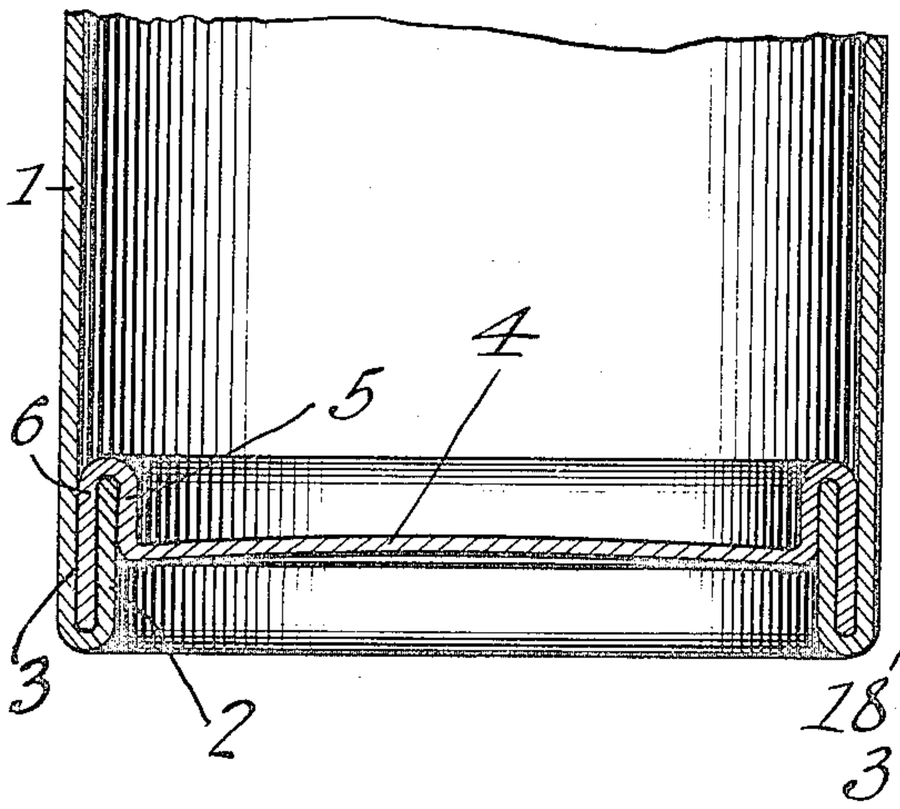


Fig. 2.

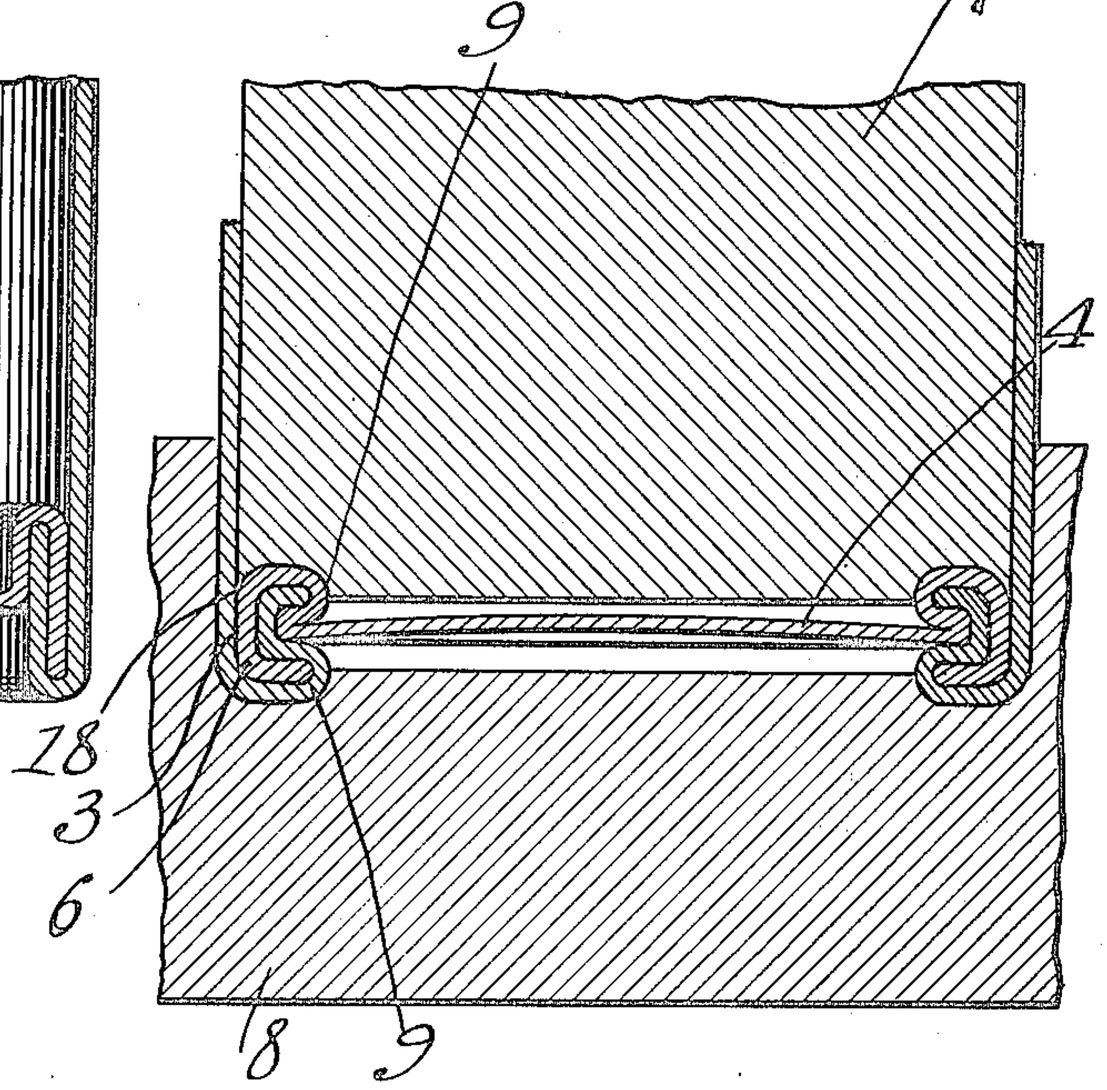


Fig. 3.

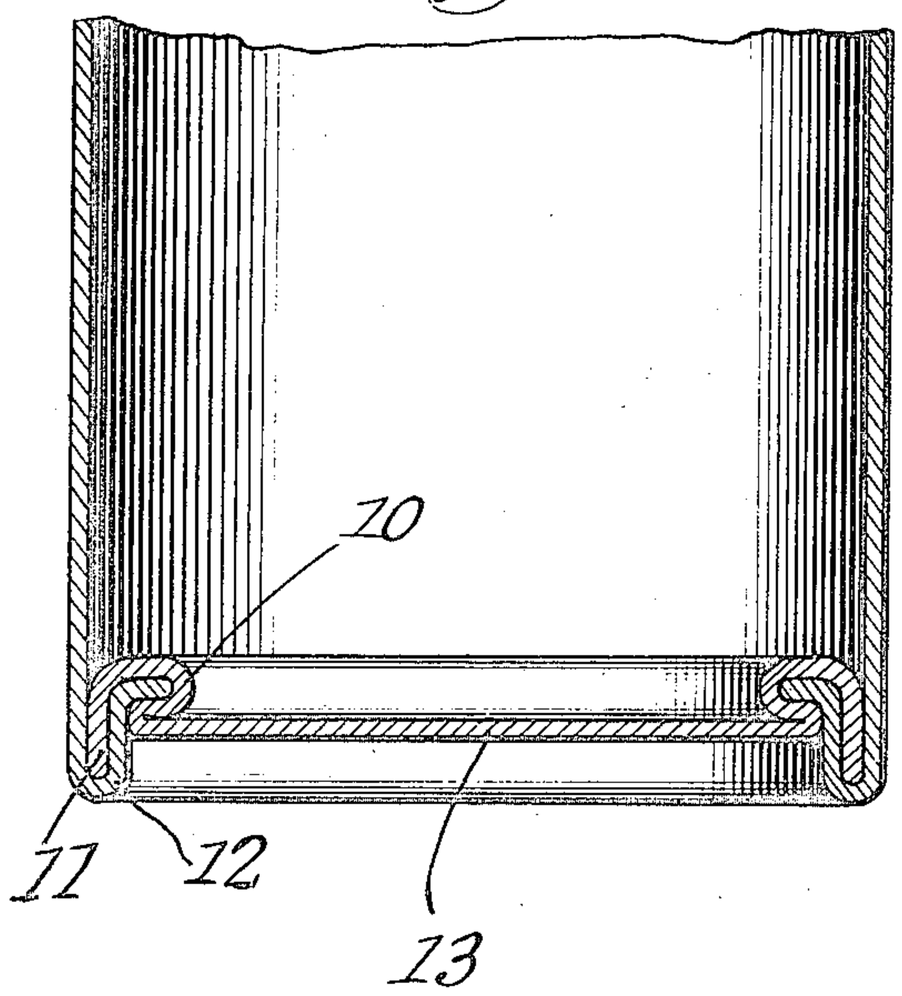
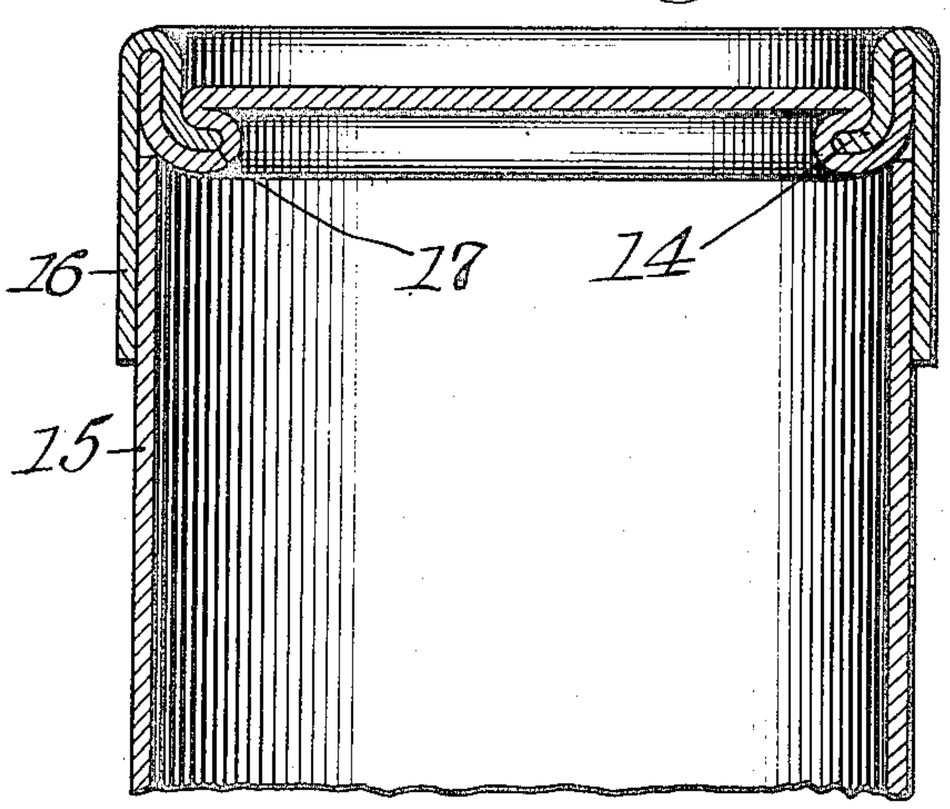


Fig. 4.



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Patented June 19, 1923. 1,459,260

UNITED STATES PATENT OFFICE.

LEWIS D. ROBERTS, OF WASHINGTON, DISTRICT OF COLUMBIA.

PAPER CAN.

Application filed July 27, 1921. Serial No. 488,000.

To all whom it may concern:

Be it known that I, LEWIS D. ROBERTS, a citizen of the United States, residing at Washington, in the District of Columbia, have invented a new and useful Paper Can, of which the following is a specification.

This invention relates to paper cans or containers, the primary object of the invention being to provide a container the head or bottom of which can be so interlocked with the wall as to provide a sealed joint the parts of which will not gap when left standing but will be held properly assembled under all climatic conditions.

Another object is to provide a structure of this character the parts of which can be assembled and interlocked by means of dies whereby a tight and well finished joint is obtained.

Another object is to provide a can or container which is simple and durable in construction, supports the bottom head out of contact with the surface on which the can is mounted, and has a joint or seam between the bottom head and the wall of the container which will tighten and become better sealed when the bottom head is subjected to the weight of the contents of the container.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that, within the scope of what is claimed, changes in the precise embodiment of the invention shown can be made without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings—

Figure 1 is a section through the bottom of a paper can or container and showing the relative positions of the parts when said bottom or head is first placed in the body of the can or container.

Figure 2 is a similar view showing the finished can and dies engaging the same subsequent to the completion of the finishing operation.

Figure 3 is a view similar to Figure 2 without showing the dies and illustrating a finished can in which there is only one lock.

Figure 4 is another view showing the structure of Figure 3 applied to a cover.

Referring to the figures by characters of reference, 1 designates a container preferably cylindrical although it is to be understood that the same can be of any other desired contour. This container is made of paper spirally wound or formed in any other manner and one end of the container is inturned as shown at 2 so as to provide a deep annular channel 3. A head or bottom has been indicated at 4 and is also formed of paper stock, this head being provided with an annular wall 5 extending from one face thereof and merging into and spaced from an annular flange 6 which extends below the head 4 and is of the same proportions as the channel 3. Thus when the parts of the can are to be assembled the head is inserted into the container 1 and forced longitudinally therein until the flange 6 becomes seated in the channel 3 so as to completely fill it. This operation can be effected by means of a die 7 in which event the container 1 will be supported within a die 8. After the parts have been brought together as shown in Figure 1 continued relative movement of the dies will result in the upstanding wall 5 being turned inwardly and the lower portion of the channel 3 and that portion of the flange 6 therein likewise being turned inwardly so that superposed annular beads 9 will thus be formed at the margin of the head 4, these beads straddling the peripheral portion of said head as shown in Figure 2. Obviously if the paper is suitably treated with paraffin or the like this collapsing of the interfitting parts will result in a perfect seal and lock and by subjecting the parts to sufficient pressure they will be prevented from unfolding when left standing for any considerable length of time. It will be noted that in order to escape through the seal, the liquid contents of the can would have to follow a tortuous path back and forth between the interlocked parts and this action, where the parts are subjected to pressure and are treated with paraffin or the like, is impossible.

If desired and as shown in Figure 3 only the inner portion of the seal may be formed. In other words the upstanding wall will be pressed downwardly to form an annular bead 10 while that portion of the flange 11 and of the channel 12 extending below the head or bottom 13 will remain undisturbed. This structure can also be embodied in the formation of the top of the can as shown at 14 in Figure 4. In this arrangement the

end of the container 15 entering the flange 16 of the cap will wedge between said flange and the rounded surface of the rib 17 so as to insure proper sealing action.

It will be noted that when material, particularly granular material, is placed in the container portions thereof will become lodged in the annular V-shaped channel 18 formed between the wall of the container and the bead 9 so that said bead will be prevented from opening up should the paper stock swell or become distorted from any cause. Furthermore the weight of the contents on the head or bottom tends more securely to bind the parts of the seal and lock together. Obviously if desired this bottom or head 4 can be made concavo-convex with its central portion raised above the marginal portion so that the weight of the contents will tend even more tightly to bind the parts of the lock together.

What is claimed is:—

1. A paper can or container including a wall having an inturned end forming an annular channel, a head insertable into said inturned end portion, a wall extending from the periphery of the head, an annular flange integral with the wall and spaced therefrom, said flange extending into and filling the channel and part of the inturned portion extending into and filling the space between the wall of the head and its flange, the inturned portion and the flange and wall being inturned and constituting an annular rib lapping one face of the head at the periphery thereof.

2. A paper can or container including a wall having an inturned end forming an annular channel, a head insertable into said inturned end portion, a wall extending from the periphery of the head, an annular flange integral with the wall and spaced therefrom, said flange extending into and filling the channel and part of the inturned portion extending into and filling the space between the wall and flange, the inturned portion and the flange and walls being inturned and constituting annular ribs lapping opposed faces of the head.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

LEWIS D. ROBERTS.

Witnesses:

IVY E. SIMPSON,

AGNES ROCKELLI.