J. A. WALGREN.

COLLAPSIBLE CONTAINER.

APPLICATION FILED AUG. 15, 1917.

1,344,601. **Patented June 22, 1920.**

Fig. 1.

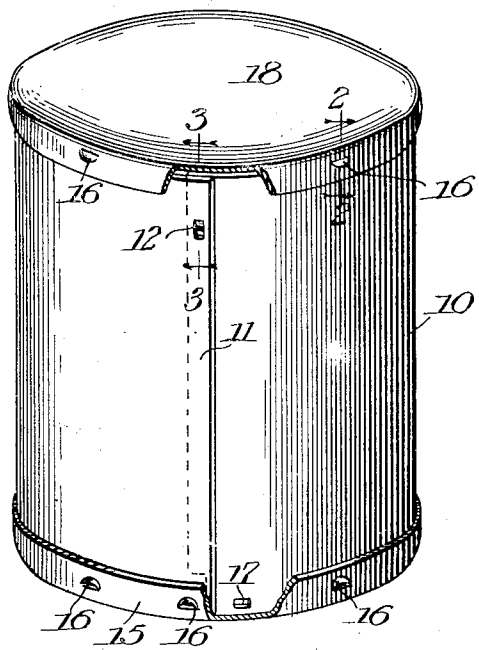


Fig. 2.

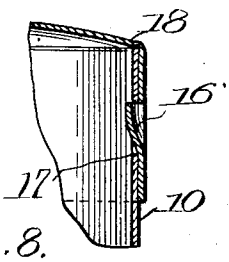


Fig. 8.

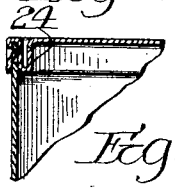


Fig. 3.

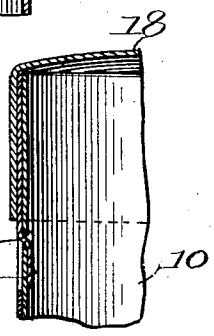


Fig. 5.

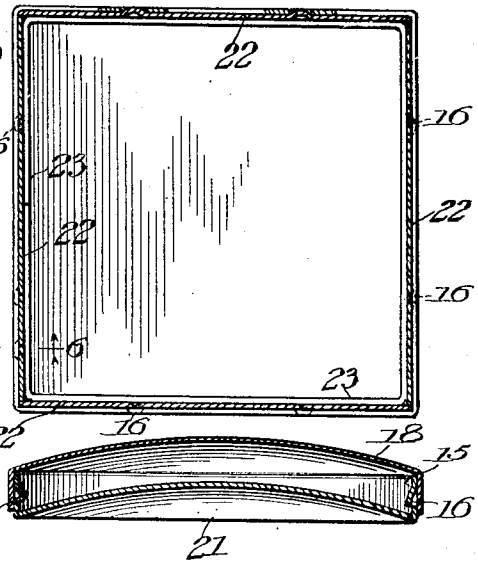


Fig. 4.

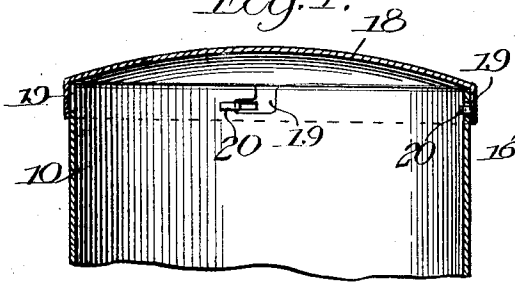


Fig. 6.

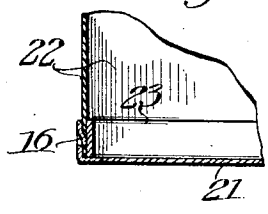


Fig. 7.

Inventor

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UNITED STATES PATENT OFFICE.

JOHN A. WALGREN, OF DECATUR, ILLINOIS.

COLLAPSIBLE CONTAINER.

1,344,601. Specification of Letters Patent. **Patented June 22, 1920.**

Application filed August 15, 1917. Serial No. 186,251.

To all whom it may concern:

Be it known that I, JOHN A. WALGREN, a citizen of the United States, residing at Decatur, in the county of Macon and State of Illinois, have invented a certain new and useful Improvement in Collapsible Containers, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to collapsible containers and has for its object the provision of a container of this character which may occupy a very small space when in its collapsed condition, which can be readily brought into form so that it can be used for shipping all kinds of articles, in particular such articles as vegetables and like materials. In general, my device when thus utilized could be filled with the materials which it is to contain, and when empty could be placed in its collapsed position, and if desired returned to its source. Thus a great saving is made in the occupancy of space when containers of this nature are being shipped from place to place in their collapsed condition. The container of my invention furthermore has means whereby it may be practically instantaneously placed into its article containing form, the parts snapping automatically into position both to maintain the container in its operative form and to hold the cover or closure in place.

I will explain my invention more in detail in connection with the accompanying drawing, in which

Figure 1 is perspective view of a container constructed in accordance with my invention, certain portions being broken away more clearly to reveal features of construction;

Fig. 2 is a sectional view on line 2—2 of Fig. 1;

Fig. 3 is a sectional view on line 3—3 of Fig. 1;

Fig. 4 is a fragmentary view similar to that of Fig. 1 showing a modified form of the device;

Fig. 5 is a transverse sectional view of a modified form of container;

Fig. 6 is a sectional view on line 6—6 of Fig. 5;

Fig. 7 is a view showing nested covers, and

Fig. 8 is a fragmentary sectional view of a modified form of cover plate.

Referring more particularly to Fig. 1, my improved container consists of a sheet 10 which is bent into cylindrical form with an overlapping edge having one or more catches 12 as shown more clearly in Fig. 3 wherein the overlapping edge is provided with the finger 13 entering through the hole 14 provided in that portion of the sheet which forms the underneath portion of the overlapping ends. A bottom 15 is provided which has a plurality of spring clips 16 adapted to coöperate with holes 17 provided in the cylindrical wall 10, and a similar top 18 is provided having spring catches 16 utilized for the same purpose. These spring catches are shown more clearly in Fig. 2. The cover 18 and bottom 15 nest as shown more clearly in Fig. 7.

The container thus constructed when in its collapsed condition consists of the flat sheet 10 and the two nested covers 15 and 18. It will be seen that the containers when collapsed will occupy little more than the space required for the actual metal.

When it is desired to place the container into its operative condition, the flat sheet 10 is bent into cylindrical form and the bottom 15 placed in position so that the spring catches automatically lock the two parts together. Before the bottom 15 is put on, of course, the catches 12 are arranged in position. The container may then be filled and the cover 18 snapped into its closed position through the agency of the spring catches 16. A very strong container is thus obtained. When the container is to be returned to its source, or to be returned to some other place for use it can again be changed to its collapsed condition by merely dismantling it. The sheet 10 may be of metal or any other suitable material which would have the required rigidity necessary for the work in hand.

In Fig. 4, I show a modified from of the device, in which the sheet 10 has bayonet slots 19 which accommodate catches 20 provided upon the cover 18 so that the cover besides being held in place also maintains the sheet 10 in its distended or circular form.

In Figs. 5 and 6 I show a modified form in which I have a square container consisting of the square bottom 21 adapted to contain the four separate and distinct side ele-

ments 22, 22. These side elements are mounted in place at the periphery of the cover, and a square retaining rim 23 is then mounted in position to hold the parts in their upright condition. Suitable spring catches 16 may again be employed. The cover plate 24 may then be desirably constructed as shown in Fig. 8 so as to hold all of the parts in their proper relation.

As is apparent from Fig. 7 the top and bottom covers are constructed so that one nests within the other and thus it necessarily follows that the sides of the container must converge slightly in order to provide a suitable fit of the top and bottom covers. For ordinary sheet metal containers the sides are of course, of thin metal so that the convergence is very slight, but regardless of the material used it is such that the ends of the sides fit snugly into the top and bottom covers.

From what has been thus described the nature of my invention will be readily clear to those skilled in the art.

What I claim as new is:

1. A knock-down shipping container comprising a slightly tapered sheet metal tubular body portion, having over-lapping locked edges and ends of different widths, locking elements formed along the end edges of the body portion, and covers for the ends readily removable and of widths corresponding with the different ends of the body portion so as to nest when removed and having clips to engage said locking elements, said tapered body portion being shaped so that a plurality may be telescoped in the knock down condition of the container.

2. A knock-down shipping container comprising a slightly tapered tubular body portion having over-lapping edges and ends of different widths, and readily removable covers for the ends, of widths corresponding with the end widths of the body portion so as to nest when removed, said body portion having a longitudinal locked joint construction at its over-lapping edges whereby it may be arranged flat in knock-down condition of the container.

3. A knock-down shipping container comprising a slightly tapered sheet metal tubular body portion, having over-lapping edges and ends of different widths, and readily removable covers for the ends, of widths corresponding with the end widths of the body portion, so as to nest when removed, said tapered body portion having a longitudinal locked joint construction at its over-lapped edges whereby it may be arranged flat, or a plurality may be telescoped in a knock-down condition of the container.

4. A knock-down shipping container comprising a slightly tapered sheet metal tubular body portion having over-lapping edges one of which has a slot and the other of which has a tongue adapted to engage the slot to hold the edges in over-lapped relation, locking elements formed along the end edges of the body portion, a convex top closure and a concave bottom closure for the container, said closures being of widths corresponding to their respective ends of the body and means on said closures adapted to engage said locking elements to detachably secure the closures to the body portion.

5. A knock-down shipping container comprising a slightly tapered sheet metal tubular body portion having over-lapping edges one of which has a slot and the other of which has a tongue adapted to engage the slot to hold the edges in over-lapped relation, locking elements formed along the end edges of the body portion, a convex top closure and a concave bottom closure for the container, said closures being of widths corresponding to their respective ends of the body, and spring clips on said closures adapted to engage said locking elements to detachably secure the closures to the body portion.

In witness whereof, I hereunto subscribe my name this 14th day of June, A. D. 1917.

JOHN A. WALGREN.

Witnesses:
HAZEL A. JONES,
MAX W. ZABEL.