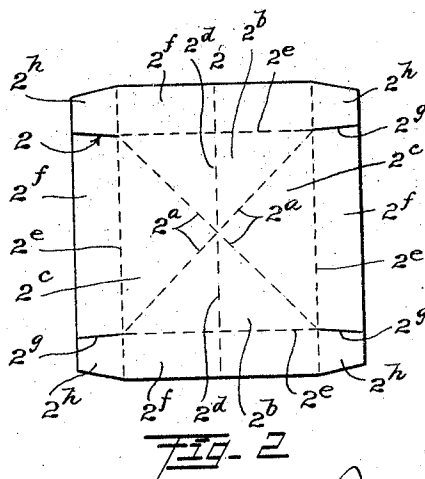
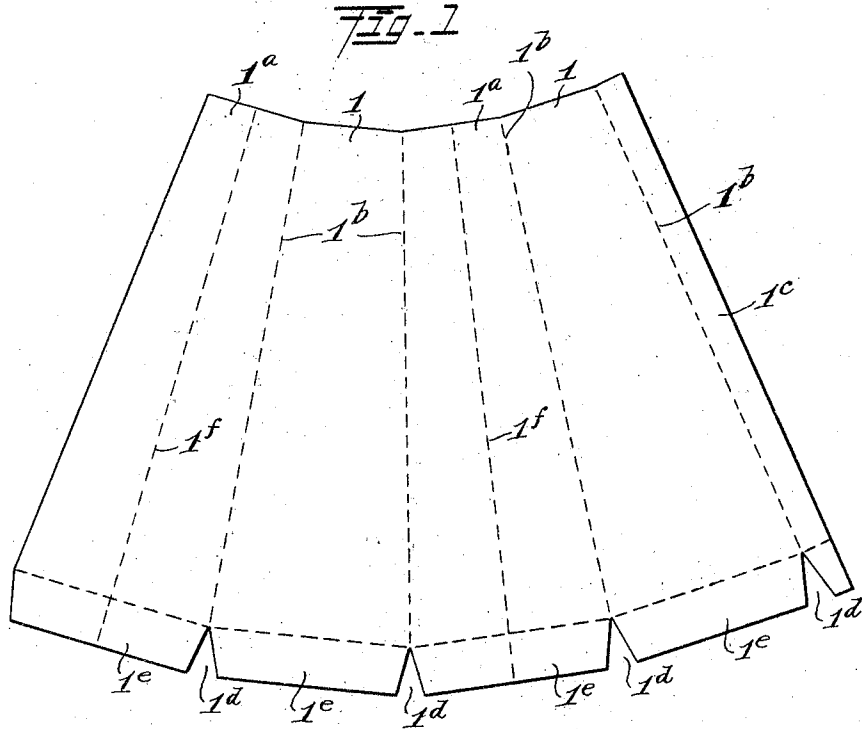


A. L. AUSTIN.
 COLLAPSIBLE CONTAINER.
 APPLICATION FILED JUNE 18, 1919.

1,380,880.

Patented June 7, 1921.
 2 SHEETS—SHEET 1.



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 Albert L. Austin

By Chas. B. Dickman Att'y.

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Fig. 3

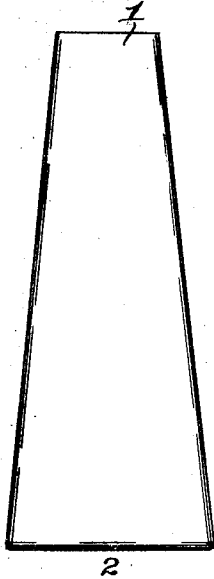


Fig. 4

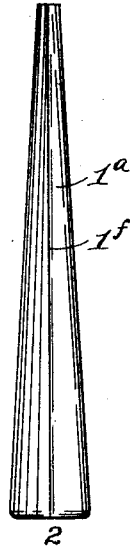


Fig. 5



Fig. 7

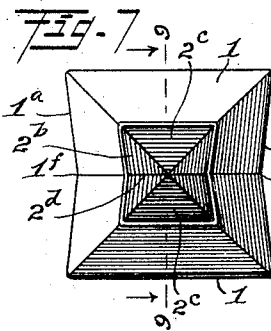


Fig. 6

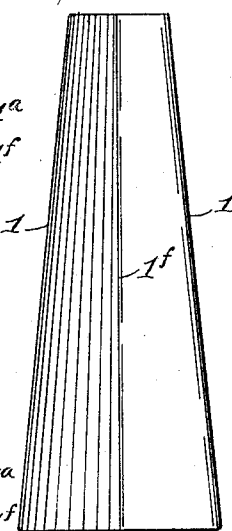


Fig. 9

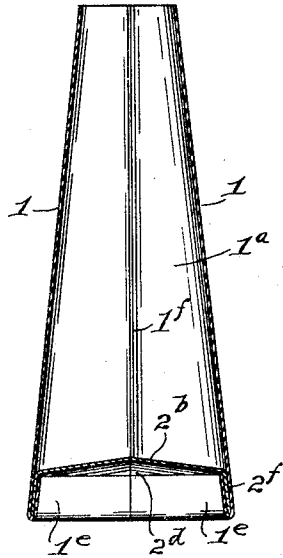


Fig. 8

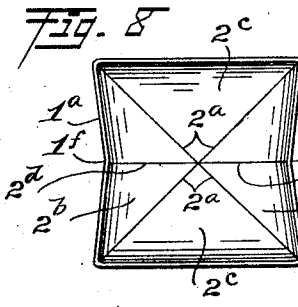


Fig. 10



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UNITED STATES PATENT OFFICE.

ALBERT L. AUSTIN, OF CLEVELAND, OHIO.

COLLAPSIBLE CONTAINER.

1,380,880.

Specification of Letters Patent.

Patented June 7, 1921.

Application filed June 18, 1919. Serial No. 305,129.

To all whom it may concern:

Be it known that I, ALBERT L. AUSTIN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Collapsible Containers, of which the following is a specification.

My invention relates to improvements in collapsible containers or receptacles, and more particularly to that class or type which are adapted to be collapsed or folded so as to occupy but little space in transportation or storage when in an unfilled condition.

My invention relates more particularly to that class or type of collapsible containers or receptacles which are adapted to be made of suitable light weight flexible material, such as paper, card-board, or the like, the primary object of the invention being to provide a generally improved container or receptacle of the class indicated, which will be exceedingly simple in construction, cheap of manufacture, and efficient in use.

In carrying out my invention or improvements, I provide improved container or receptacle lateral or side walls adapted to be connected and folded along predetermined lines, together with an improved end or bottom wall adapted to be folded along predetermined lines and to cooperate with the foldable lateral or side walls and in an improved manner, whereby the container or receptacle may be readily folded or collapsed when not in use and may be readily expanded for filling when it is desired to use the same.

While the present embodiment of my invention is particularly designed and adapted for use as a container or receptacle for milk for use in lieu of the ordinary glass milk bottle now in common use, it will, of course, be understood and should be obvious that the improvements are capable of a wide range of use and may be readily incorporated and embodied in containers or receptacles of varying forms and sizes and as occasion or demand may require.

With the above mentioned and other ends in view, the invention consists in the novel construction, arrangement and combination of parts hereinafter described, illustrated in one of its embodiments in the accompanying drawings, and particularly pointed out in the appended claims.

Referring to the drawings, forming a part of this specification, Figure 1, is a plan view of a blank suitably cut, and notched and scored along certain predetermined lines of fold, preparatory to being formed or folded up to form the lateral or side walls of the container or receptacle.

Fig. 2, a similar view of the bottom or end wall forming blank.

Fig. 3, a side elevation of the improved container in filled or expanded position, one of the oppositely arranged plain or ungusseted lateral walls being shown.

Fig. 4, a side elevation of the same in a partially filled or expanded position, one of the plaited or gusseted lateral walls being shown.

Fig. 5, a similar or edge view of the same in completely folded or collapsed position.

Fig. 6, a side elevation of the same in completely filled or expanded position.

Fig. 7, a top plan view of the same.

Fig. 8, a bottom view of the same, illustrating in particular the score or fold lines of the improved bottom or end wall of the same.

Fig. 9, a central vertical sectional view taken on line 9—9, of Fig. 7.

Fig. 10, a top plan or edge view of the same in folded or collapsed position.

Similar numerals of reference designate like parts throughout all the figures of the drawings.

The improved collapsible container or receptacle comprises suitable lateral or side walls together with a suitably shaped end wall adapted to cooperate therewith, as hereinafter explained and being in the specific form of a bottom wall or member where it is desired to form an open ended receptacle or container, such as a milk bottle, drinking cup, or the like, and as illustrated in the present embodiment of the invention for the purposes of illustration.

The lateral or side walls 1 and 1^a of the container are preferably formed of a single blank of suitable flexible material, suitably cut, and notched and scored along predetermined lines of fold, as illustrated most clearly in Fig. 1, of the drawings.

In forming the side or lateral walls 1 and 1^a, the blank is adapted to be folded along certain predetermined lines of fold, as indicated by the dotted lines at 1^b, to form the corners of the container or receptacle, one

edge of the blank being provided with an overlapping portion 1^c, adapted to extend over and to be pasted upon the adjacent marginal edge of the blank when set up.

5 As a convenient means of securing the end or bottom wall to the marginal edges of the lateral or side walls, the blank is preferably provided at one edge with notches 1^a, opposite the predetermined lines of fold 1^b, to
10 form the corners of the receptacle, said notches forming attaching folds 1^c, adapted to extend upwardly within the bottom wall and to receive the similarly shaped marginal folds of the end or bottom section, herein-
15 after referred to and shown in the drawings.

As a means of causing the side walls to fold inwardly along predetermined lines and between the side or lateral walls 1, the side or lateral walls 1^a, are preferably provided
20 with a median longitudinally extending line of folds 1^f, preferably formed by means of scorings or creasings, thereby forming inwardly movable folds or gusset members 1^a, so that when the container or receptacle is
25 in its set up or expanded position, as shown in Fig. 7, the same may be readily collapsed or folded by pressing inwardly on the side walls 1, thereby causing the side wall gussets 1^a, to move inwardly toward each other
30 and between the side walls 1, and take the position shown in Fig. 10, of the drawings.

As a means of providing an improved bottom or end wall, adapted to fold and unfold with the folding and unfolding move-
35 ments of the improved lateral or side walls above mentioned, I provide an improved bottom or end wall 2, preferably formed of a single blank of material, as shown in Fig. 2, of the drawings, the blank being pro-
40 vided with score or crease lines 2^a, extending diagonally or from corner to corner and forming oppositely arranged bottom or end gussets 2^b, and oppositely arranged triangular shaped bottom folds 2^c.

45 The gussets 2^b, and triangular folds 2^c, are adapted to register at their base portions with the side walls 1^a and 1, and as a means of causing the bottom or end gussets 2^b, to be moved simultaneously with
50 and to cooperate with the side gussets 1^a, the bottom gussets 2^b, are provided with median gusset fold 2^d, preferably formed by scorings or foldings, said gusset folds 2^d, extending in alinement or coincident with
55 the lateral gusset folds 1^f. It will thus be seen that the side and bottom gussets 1^a and 2^b, respectively, are arranged in coincident relation to each other, so that when the lateral gussets 1^a, are moved in by pressure
60 upon the side walls 1, the bottom or end gussets 2^b, will be correspondingly moved inwardly and upwardly, the bottom gusset folds 2^d, gathering themselves upon and progressively traveling upwardly toward
65 the apex portions of the triangular shaped

folds, as the sides are collapsed, as will be obvious upon reference to Figs. 7, 8, 9 and 10, of the drawings.

As a convenient means of securing the bottom or end wall 2, in the marginal ends
70 of the side walls 1 and 1^a, the bottom blank, as shown in Fig. 2, of the drawings, is preferably provided with a crease or fold line 2^e, forming marginal attaching folds 2^f, adapted to extend downwardly and fit
75 within the attaching folds 1^c, of the side walls 1 and 1^a, as shown most clearly in Fig. 9, of the drawings, said attaching folds 2^f, being provided with cut outs or slits 2^g, forming attaching tabs or tongues 2^h, 80 adapted to fold over adjacent portions of the folds when folded downwardly and to extend from the corner portions of the receptacle when set up.

Upon reference to the accompanying
85 drawings, taken in connection with the foregoing description, it will be seen that the side gussets 1^a, and bottom or end gussets 2^b, are arranged in registering cooperative relation to each other and that when the
90 side gussets 1^a, are moved inwardly by the side walls 1, the gusset folds 2^d, will move upwardly over the gusset folds 1^f, and that the triangular folds 2^c, in the bottom will move upwardly within the marginal edges
95 of the side walls 1, when folded, forming a flat and practically uniform collapsible container, as shown most clearly in Figs. 5 and 10.

In forming a container or receptacle for
100 milk the lateral or side walls 1 and 1^a, are preferably formed in upwardly tapering or converging relation and the walls of the container or bottle will be preferably formed of prepared sheet material, such as par-
105 affined paper, or other moisture resisting flexible cheap material.

Having thus described one of the embodiments of my invention, what I claim and desire to secure by Letters Patent is,—
110

1. A container, comprising separate side and bottom walls having opposite inwardly and upwardly foldable coincident gussets, respectively.

2. A container, comprising separate side
115 and bottom walls having opposite inwardly and upwardly foldable coincident gussets, respectively, said bottom being spaced from the adjacent ends of the side walls and said bottom gussets being triangular in shape
120 and foldable over the inner base portions of said side gussets.

3. A flexible container having separate oppositely arranged side walls connected by inwardly foldable longitudinally extending
125 side gussets forming opposite side walls, and upwardly foldable coincident triangular bottom gussets connected to opposite triangular bottom portions foldable within said gusset-
130 ed and ungusseted side walls, respectively.

4. A collapsible receptacle, comprising receptacle side walls formed of a single blank folded at the corners and having opposite foldable side walls made up of inwardly foldable coincident gussets, and a separate inset bottom having coincident inwardly foldable gussets whereby said receptacle side walls and bottom may be collapsed and folded longitudinally.

5. A collapsible container having oppositely arranged longitudinally extending inwardly foldable gussets conjointly forming oppositely arranged side walls and inwardly and upwardly foldable triangular shaped end or bottom gussets having their line of fold coincident with said side gussets and foldable simultaneously therewith and rolling upwardly over and within the same.

6. A collapsible receptacle, comprising a single blank of sheet material folded along predetermined lines at the corners forming similarly shaped side or lateral walls, two of said walls embodying inwardly foldable coincident gussets, and a separate inset bottom or end wall folded between said lateral walls having inwardly foldable coincident gussets having their line of fold coincident with the line of fold of said lateral gussets and arranged to fold simultaneously with the latter and within the same.

7. A collapsible container, comprising lateral inwardly foldable gussets conjointly forming two oppositely arranged side walls

flexibly connected to and inwardly foldable between the opposite remaining side walls, and a separate end wall made up of triangular shaped end wall portions connected by end gussets foldable simultaneously with said lateral gussets and having their line of fold coincident with and rolling upwardly over and beneath the line of fold of said lateral gussets and foldable on and within the latter and between said similarly shaped end wall portions.

8. A container, comprising a single blank of material foldable along predetermined lines to form the corners of the container, two of said walls being provided with a median longitudinal scoring forming similarly shaped gussets inwardly foldable within and between the remaining or opposite unfoldable lateral walls, and an inset separate end wall having similarly shaped triangular portions, two of said triangular portions being provided with a creased line of fold in alinement with and rolling over the line of fold of said lateral wall and forming inwardly foldable gussets foldable within said lateral gussets and between the remaining triangular portions of said end wall.

In testimony whereof I have affixed my signature in the presence of two witnesses.

ALBERT L. AUSTIN.

Witnesses:

ELEANOR B. HOLWICK,
H. STITCH.