

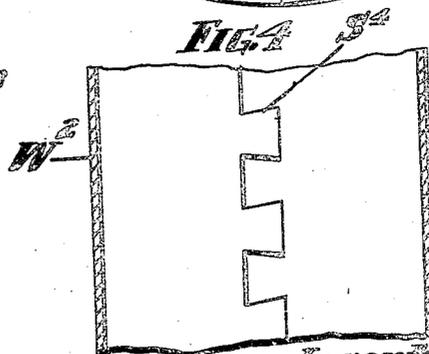
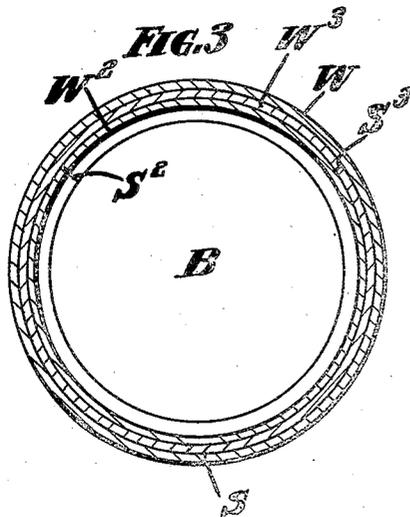
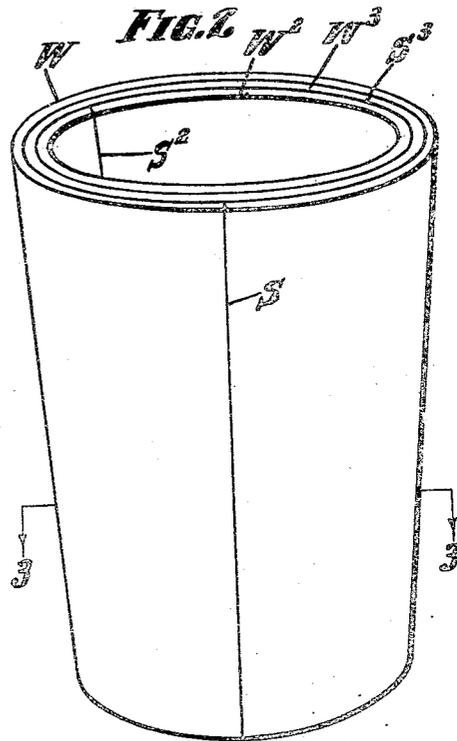
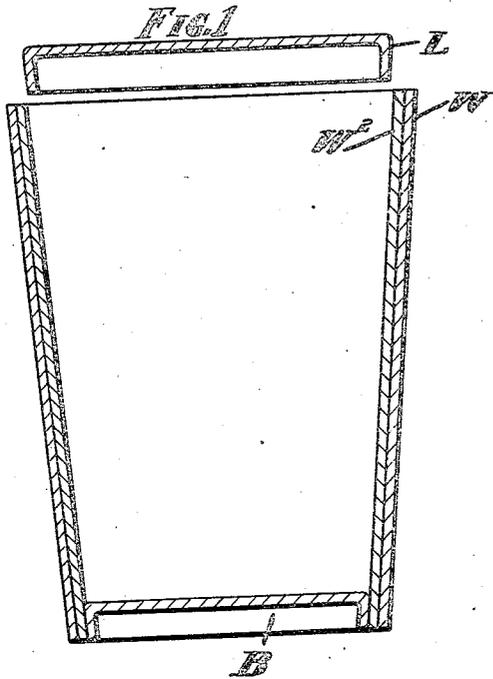
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CONTAINER

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CONTAINER

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My present invention relates to improvement in containers by which I am able to produce a side wall of great strength and with many advantages.

In forming the side walls of paper containers, it has become usual practice to overlap the wall edges in order to get a sufficient strength to withstand usage.

This seamed construction has disadvantages both structurally and as a matter of factory methods. The presence of the old lapped seam is particularly disadvantageous in the case of inserted bottom containers or where a top closure or cover is used. It also makes trouble in the external decorating or the printing of advertising matter on account of the extra thickness at the seam.

My present invention relates to a container wall structure by which various advantages are gained and the seam avoided and by which certain advantages are gained, as will later more fully appear.

While container types vary considerably, I have selected as an illustrative form of embodiment of my invention the flaring wall container as it is generally considered as the most difficult type to produce on a commercial basis in a degree of perfection. The application of the principles thereby illustrated to other types will be made so readily by those skilled in the art that the illustration of modifications and variant is not believed necessary.

In the drawings:

Fig. 1 is a sectional view of a two ply container.

Fig. 2 is a somewhat exaggerated view of a three ply container wall.

Fig. 3 is a section on the line 3—3 of Fig. 2 and container, and

Fig. 4 is a modified cross section showing a modified butt joint.

The container shown in Figs. 1, 2 and 3 comprises the tapered wall which is generally designated by W and the bottom B inserted therein. It may be closed or sealed by a cap, cover or lid L .

The wall member as shown in Figs. 2 and 3 is a ply structure comprising an outer member W , an inner member W^2 , and in Fig. 2

an interposed member W^3 . This member W^3 is preferably of more porous stock and preferably is coated with glue or other adhesive on both faces. In some cases, it may be actually impregnated and can be made to add various factors to the wall structure as, for example, to introduce a stiffening resultant due to its impregnation.

The external and internal sheets W' and W^2 may be of any desired character and may be of different stock or of stock differently processed. The internal member W^2 may be waterproofed if extra impermeability is desired and the external sheet may be of fancy colored or embossed stock or may be printed prior to assembly if desired.

The number of the wall members may be varied as desired from a simple pair cemented face to face to larger members which may be paired or otherwise assembled in groups.

In most cases, the bottom member B is formed of simple sheet stock, but it may be composite throughout or centrally reinforced.

In the production of my containers, I provide die members not shown. Considered in its simplest form, my method consists in first inserting into the die the outside blank W . In the insertion, the blank is brought roughly to shape and deposited within the die in which it fits exactly with its edges closely butt jointed.

At the next step if a two ply can or container is to be formed a second blank W^2 is inserted. If a three ply container is to be formed as shown in Fig. 2 a wall member W^3 is inserted. This member may be of absorbent stock and coated with adhesive on both faces. The seams S , S^2 and S^3 are staggered with reference to each other.

Another factor advantageous to fine container making arises from the possibility of shrinking the outer member to the inner member or members, is that in this phase of my invention, I form the member to be shrunk by cutting it with its peripheral dimension transverse to the grain or run of the paper. By a selection of stock with reference to its expansibility with water or wet adhesive applied to the inner face of the outer wall member I can get inner or outer or intermediate

members that will shrink on drying or will give no shrinkage or relatively so much less shrinkage that I am able to make one member squeeze to another.

In containers of standard measure size the importance of providing for a filling to the top level thereof is important. In tapered wall containers it is difficult to get a tight seal if a lap seam or other irregularity is present. Crimping is extremely difficult and expensive. With my container I can use such a cover as L which can be forced down on the level full container and which gives a tight and permanent closure.

Closures produced according to my invention are not only of superior finish, but also may be given any degree of stiffness desired or any of a great variety of finishes. When produced according to my method, they can be manufactured at reasonable cost and in quantity production.

The seams of the side walls of my container as shown are straight line seaming but the wall edges may be interrupted as at S⁴ as shown in Fig. 4. In this a wall W² is shown with dovetail projections and recesses. The edges may also be skived or tapered to get a flat seam. The bottom B is shown as a simple inserted member but it may be of any form and assembled in any desired manner. As indicated the container may be of tapered wall type or of cylindrical type as shown in Fig. 4.

In claiming my invention, I desire to indicate a reasonable scope of my invention which I believe is fairly represented by its definition in the following claims.

What I therefore claim and desire to secure by Letters Patent:—

1. In a container of the class described, a side wall comprising a plurality of wall members having edge abutted joints, said joints being in non-registering relation to each other, each wall having the grain of its paper disposed differently than the grain of the paper of the other walls whereby said walls have different degrees of shrinkability when wet and drying, a stiffening adhesive material between said walls, a bottom member having a downturned flange lying parallel to said walls, and a closure having a resilient downturned flange adapted to be wedged within the open end of said container wall.

2. In a container of the class described, a side wall comprising a plurality of tapered wall members having edge abutted joints, the innermost of said wall members having a crenelated edge abutted joint, said joints being in non-registering relation to each other, each wall having the grain of its paper disposed differently than the grain of the paper of the other walls whereby said walls have different degrees of shrinkability when wet and drying, a reinforcing member between said walls impregnated with an adhesive ma-

terial, and a bottom member united within said inner wall.

3. In a container of the class described, a side wall comprising a plurality of wall members having edge abutted joints, said inner wall member having a crenelated edge abutted joint, said joints being in non-registering relation to each other, each wall having the grain of its paper disposed differently than the grain of the paper of the other walls whereby said walls have different degrees of shrinkability when wet and drying, a stiffening adhesive material between said walls, and a closure having a resilient downturned flange adapted to be wedged within the open end of said container wall.

In testimony whereof I affix my signature.
WILLIAM EVERETT BENSON.

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