

Dec. 19, 1933.

M. R. SHOFER

1,940,190

SHIPPING CONTAINER

Filed July 29, 1932

2 Sheets-Sheet 1

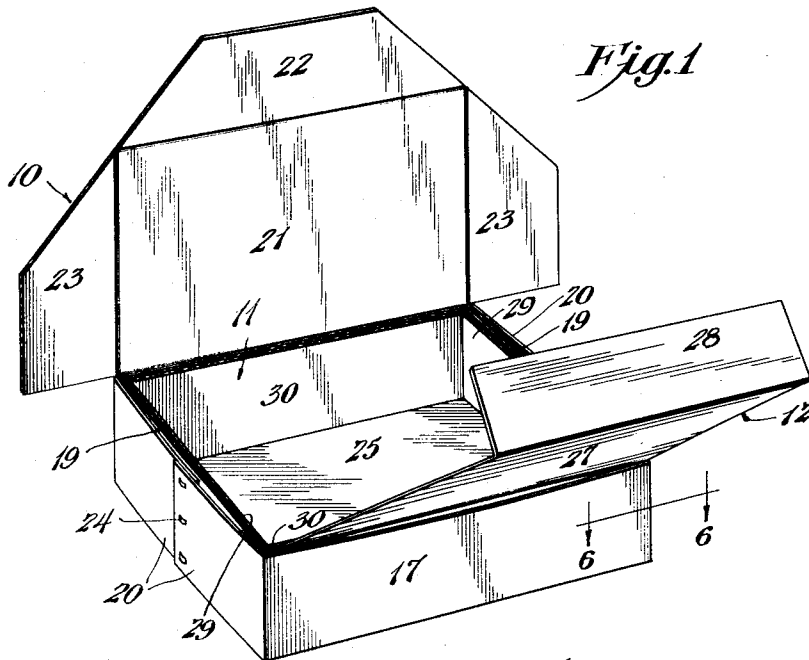


Fig. 1

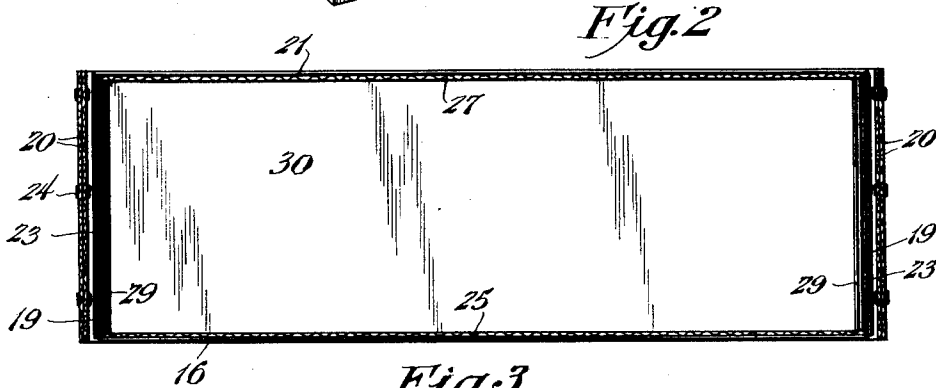


Fig. 2

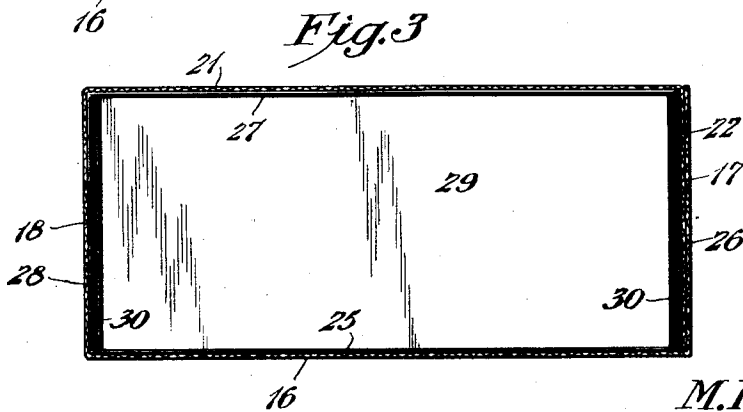


Fig. 3

Inventor
M. R. Shofer

By

Philip E. Siggers

Attorney

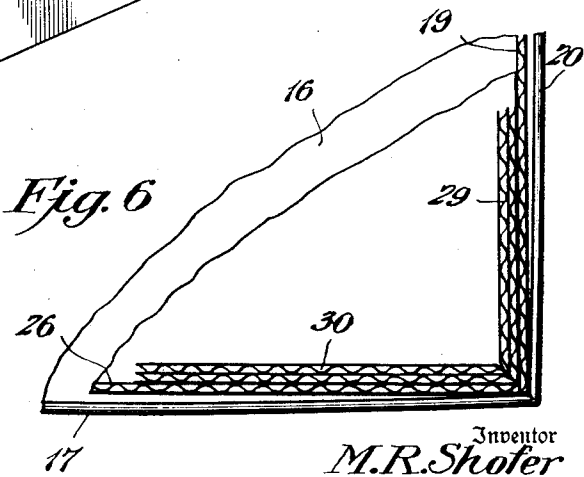
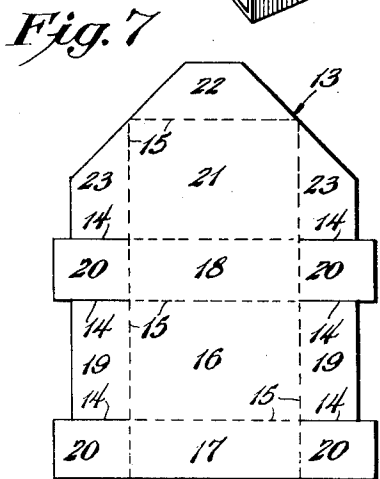
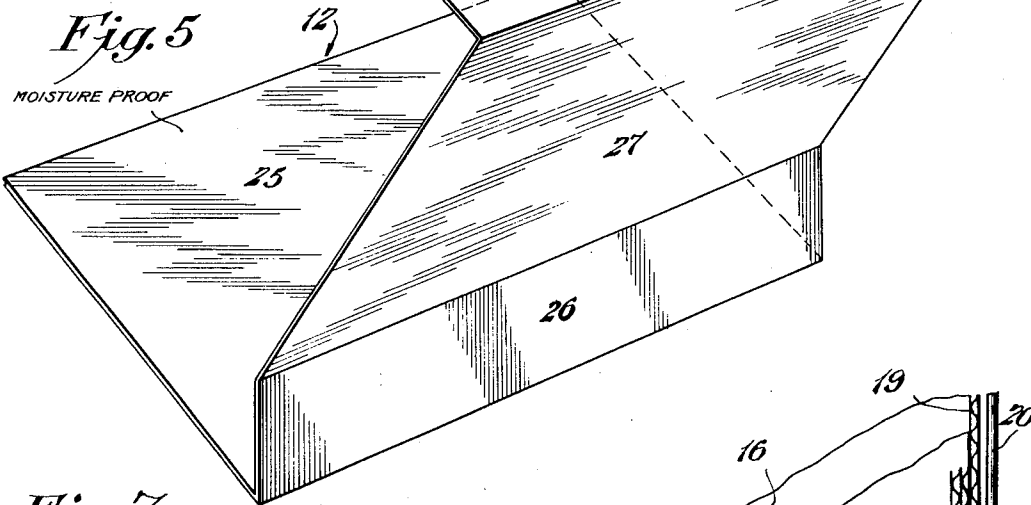
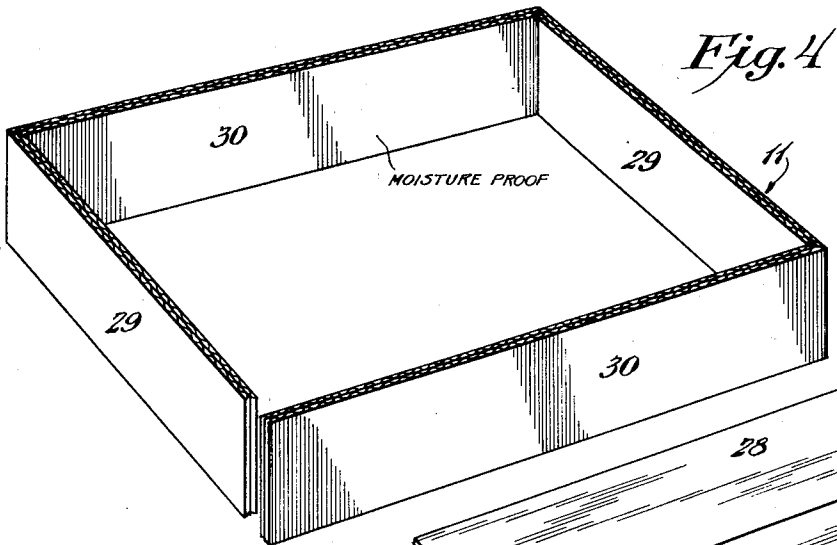
Dec. 19, 1933.

M. R. SHOFR
SHIPPING CONTAINER

1,940,190

Filed July 29, 1932

2 Sheets-Sheet 2



Inventor
M.R. Shofer
By
Philip P. Siggers
Attorney

UNITED STATES PATENT OFFICE

1,940,190

SHIPPING CONTAINER

Marc R. Shofer, Minneapolis, Minn., assignor of one-half to Iowa Fiber Box Company, Keokuk, Iowa, a corporation of Delaware, and one-half to South West Box Company, Sand Springs, Okla., a corporation of Delaware

Application July 29, 1932. Serial No. 626,156

2 Claims. (Cl. 229—14)

This invention relates to shipping containers and aims, among other objects, to provide an improved, durable container having a moisture-proof reinforcing lining, the inner faces of which are sanitary, moisture-proof and pleasing in appearance.

In the drawings showing the preferred embodiment of the invention:—

Fig. 1 is a perspective view of the container in open position;

Fig. 2 is a vertical longitudinal sectional view taken through the closed container;

Fig. 3 is a vertical transverse sectional view taken through the closed container;

Fig. 4 is a perspective view of one part of a two-piece liner;

Fig. 5 is a perspective view of the other part of the liner;

Fig. 6 is a sectional view taken on line 6—6 of Fig. 1 and drawn on an enlarged scale; and

Fig. 7 is a plan view on a reduced scale of the blank from which the box, forming the exterior part of the container, is made.

In shipping various commodities, and more especially dressed poultry, it is highly desirable that a strong moisture-proof, sanitary container be used. The present invention provides a light weight, durable container made of corrugated fiber board having a lining of similar material, whose inner surfaces are both moisture-proof and pleasing in appearance. When poultry are tightly packed in a box breasts up, the breasts are squeezed into narrow triangular form. Poultry heretofore have been packed in wooden boxes, the idea being to nail the lids down tight, so that the breasts are flattened to a certain extent to make a better appearance for the market. In all previous attempts to use corrugated fiber-board boxes, there was not the strength in the box by virtue of its construction, to flatten the breasts. In the present container, however, by the force which may be applied in shutting the lid and by the leverage pressure placed on the top of the liner, which is in direct contact with the breasts, it is possible to flatten the breasts.

The boxes of poultry as now brought in the market to be sold, are opened, the birds examined, and either purchased or rejected. When the present type wooden box is opened and not sold, the next prospect at once sees from the condition of the box that someone has rejected it (although the rejection may be solely because of personal prejudice, nearly all poultry being packed in accordance with U. S. Standards) and therefore may not want to buy it. With the

improved corrugated box, it may be opened, and, if the prospect declines to buy, the box may be closed and no one can tell that it has been opened before, because it is not necessary to seal the box in any manner, except to guarantee against pilfering. This can be done by placing a single small seal over the joint at the front of the box.

The greatest difficulty in the use of corrugated fibre boxes with refrigerated food products is that the moisture breaks down the walls of the corrugations. Naturally this moisture is most destructive where the open corrugations are exposed. The present box is so constructed that there is no point where the corrugations are exposed that has any vital bearing on the strength and durability of the box. All parts of the box which must bear the weight and hold up under usage, and have open corrugations, are covered with other layers of corrugated board.

Referring particularly to the drawings, the improved container is shown as comprising a folding box 10 having a two-piece lining, one piece 11 forming a reinforced front, rear and end walls and the other piece 12 forming reinforced top, bottom, front and rear walls.

The body of the box 10 is preferably formed from a single sheet of corrugated board which is first cut and scored, so that, if desired, it may be shipped flat, and later bent into box formation. The blank 13 from which the box 10 is made (see Fig. 7) is cut out to the proper contour and incised on lines 14 and scored, as indicated by dotted lines 15, to provide a bottom 16, front and rear walls 17 and 18, end walls 19, flaps 20, lid 21 and front and end lid flaps 22 and 23. When setting up the box, the walls 17 and 18 and end walls 19 are bent upwardly at right angles to the bottom and the end flaps 20 are then bent inwardly at right angles to the walls 17 and 18. The flaps 20 are secured together by suitable fastening means, such as staples 24. The lid flaps 22 and 23 may then be bent inwardly at right angles to the lid 21 and when desired the lid may be folded down to close the box, the score line between the lid and the wall 18 acting as a hinge.

It will be noted in Fig. 1 that when the box is set up, the connected end flaps 20 and also the front wall 17 are arched outwardly to provide a resiliency which will tend to protect them from injury should they be struck a blow during handling of the box. This construction also more readily permits the insertion of the flaps 22 and 23. The flaps 23 are inserted in the spaces be-

tween the end flaps 20 and the ends 19, as shown in Fig. 2, and the flap 22 is inserted between the front wall 17 and the front wall of the liner 12, which will be later described. The adjacent corners of the flaps 22 and 23 are cut off to facilitate further the closing of the lid.

The parts 11 and 12 forming the reinforcing liner for the box are each made of a corrugated fiber board and scored to be folded to fit the inside of the box. The part 12 is bent to form a bottom portion 25, which covers the entire bottom of the box; a front wall 26 integral with the bottom 25; a top 27 integral with the wall 26, and a rear wall 28 constituting a flap which is integral with the top 27.

The part 11 is bent to form end walls 29 and front and rear walls 30, the open joint being at one corner. The material forming part 11 is preferably double corrugated board with the corrugations extending vertically, as shown, to give the container the desired vertical strength. The walls 29 about the inner faces of the walls 19 of the box while the walls 30 about the inner faces of the walls 26 and 28.

It will be noted that the corrugations are so arranged that moisture cannot enter their open ends. The corrugations on the bottom 16, walls 17 and 18, top 21 and flap 23 extend longitudinally of the box; on walls 19 and flaps 23 they extend vertically; and on flaps 20 they extend transversely. On the walls 29 and 30 of part 11, the corrugations extend vertically; on the top 27 and bottom 25 of part 12 they extend transversely; and on walls 26 and 28 of part 12 they extend vertically.

The ends of the corrugations on walls 29 and 30 are closed by the top 27 and bottom 25; on walls 19 they are closed by the lid 21; on wall 28 by bottom 25; and on bottom 25 by wall 18. The only corrugations open to moisture are those on the ends of flaps 20 and at the edges of flaps 23 and these points have no vital bearing on the strength of the container. Moreover, by arranging the corrugations in this manner, all of the six sides of the container are composed of several thicknesses of material, the corrugations of which extend at right angles to each other, thereby providing a very strong and durable container.

To make the container both sanitary and pleasing in appearance, the inside faces of the liner parts 11 and 12 are treated to provide a white, moisture-proof surface. When the containers are opened, the contents are displayed against a clean white background which tends to promote sales.

When the container is set up, the box 10 is first assembled, the bottom 25 of the liner 12 is then placed on the bottom 16 with the wall 26 at the front of the box and the top 27 hinged outwardly from the wall 26. The liner 11 is then placed in the box on bottom 25 and, after the container is packed, the top 27 is closed, the wall

28 being inserted between walls 18 and 30. The lid 21, which is hinged at the rear wall 18, is then closed, the flaps 23 being inserted between flaps 20 and wall 19 and the flap 22 being inserted between walls 17 and 26, as before described. In addition to their use for shipping poultry, the containers can be used for many other purposes, such as for crackers, fruit, hard candies, etc., and also for perishable foods, such as meats and vegetables.

The containers may be manufactured at very low cost and shipped in knocked down condition, if desired. To assemble one requires very little time as it is only necessary to bend the several blanks on the various score lines and fasten the flaps 20 together by a couple of staples 24 which can be very easily applied with an ordinary hand stapling machine.

Obviously, the present invention is not restricted to the particular embodiment thereof herein shown and described.

What I claim is:—

1. A shipping container comprising, in combination, a box formed of corrugated fiber board and having a bottom; front, rear and end walls integral with the bottom and bent upwardly therefrom; end flaps integral with and bent inwardly from the front and rear walls and secured together; a lid integral with the rear wall; marginal end and front flaps integral with the lid, said lid and flaps being insertable between the end walls and the end flaps, said lid front flap being insertable behind the front wall; a lining element having a bottom and a front wall integral with the bottom and abutting the rear face of the lid front flap; said element having a top integral with the front wall and a rear wall integral with the top; and a second single piece lining element bent to form front, rear and end walls extending between the top and bottom of the first lining element.

2. A shipping container comprising, in combination, a box formed of corrugated fiber board and having a bottom; front, rear and end walls integral with the bottom and bent upwardly therefrom; end flaps integral with and bent inwardly from the front and rear walls and secured together; a lid integral with the rear wall; marginal end and front flaps integral with the lid; the corrugations of the end walls extending vertically and being closed at their upper ends by the lid; a one-piece lining element in the box made of corrugated board and bent to form a bottom portion, a top portion, and front and rear walls; and a second one-piece lining element made of double corrugated board within the first lining element and bent to form front, rear and end walls; the corrugations of the second lining element extending vertically and being closed at their upper and lower ends by the top and bottom of the first lining element.

MARC R. SHOFER.