June 26, 1928. 1,674,724

C. E. HOUSE

METHOD AND MEANS FOR SHIPPING EGGS

Filed Nov. 24, 1925 2 Sheets-Sheet 1

Fig. 1.

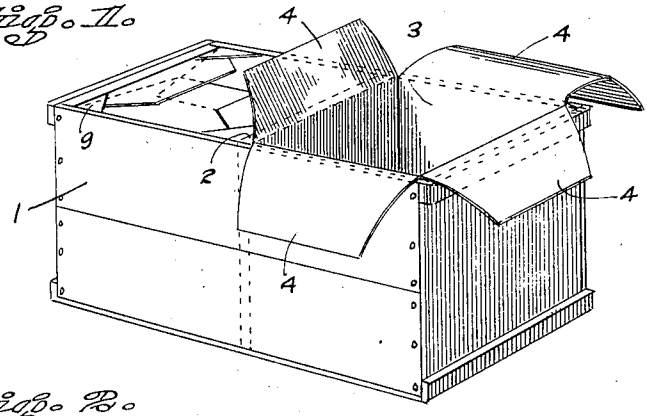


Fig. 2.

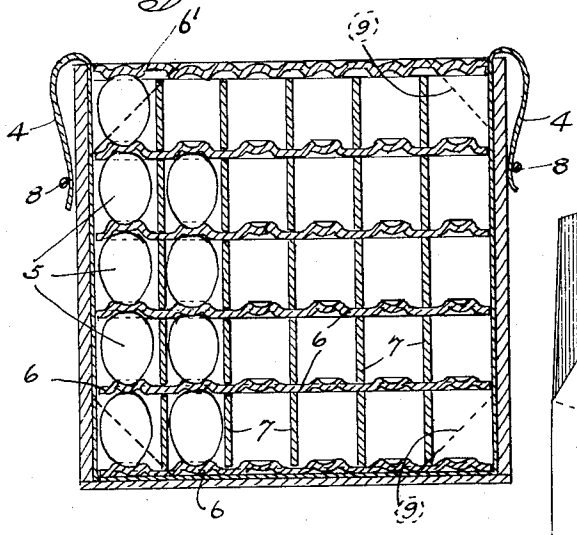
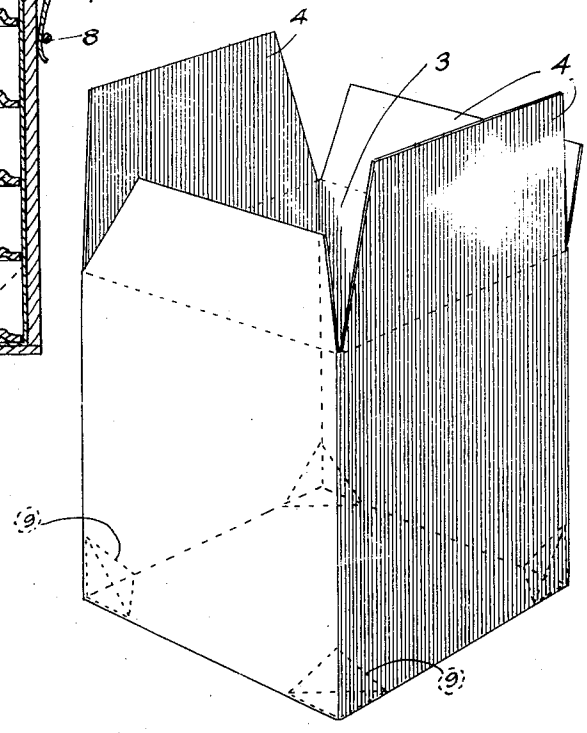


Fig. 3.



INVENTOR.
CHARLES E. HOUSE.
BY Miller & Boyken.
ATTORNEYS.

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Fig. A.

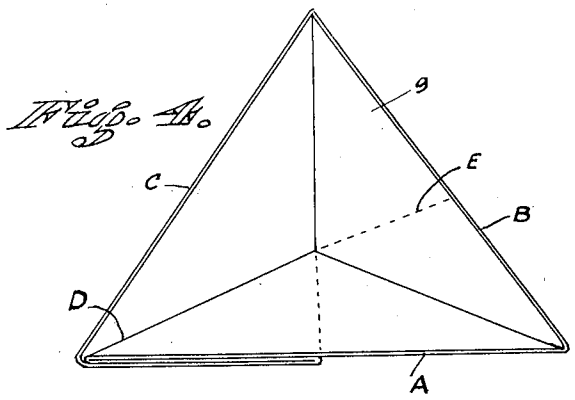


Fig. C.

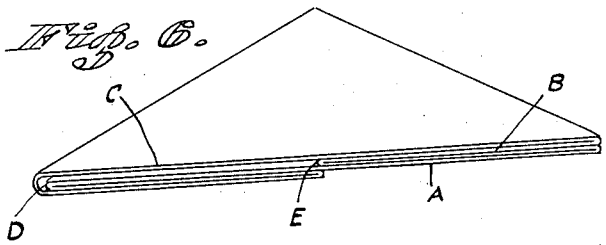


Fig. D.

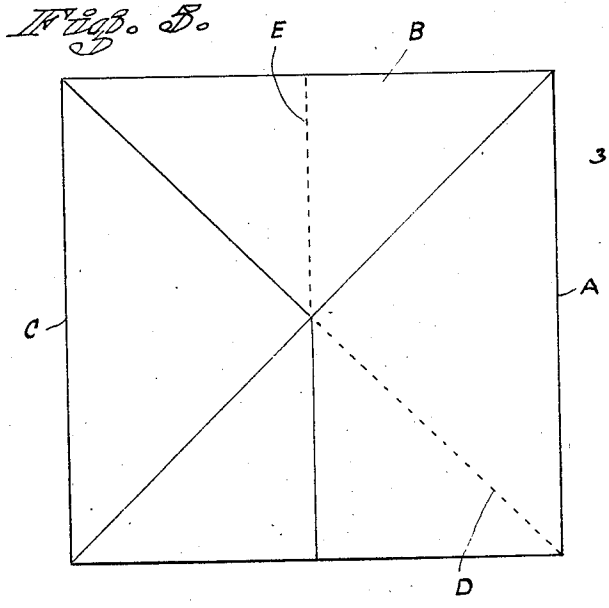


Fig. J.

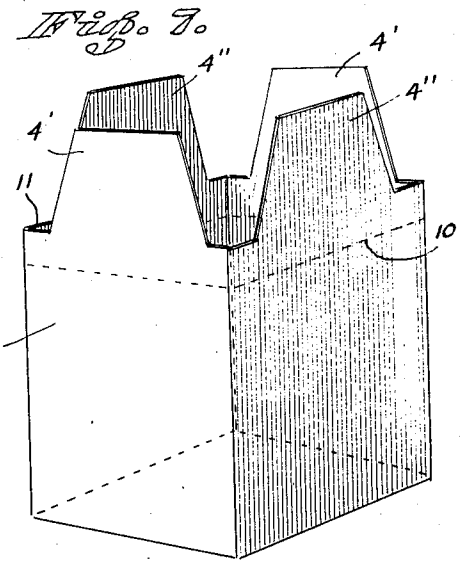
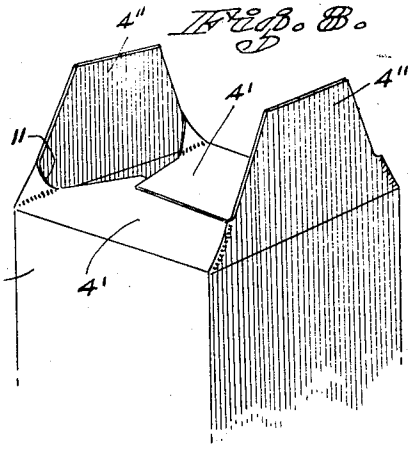


Fig. B.



INVENTOR.
CHARLES E. HOUSE.
BY Miller & Boyken.
ATTORNEYS.

Patented June 26, 1928. 1,674,724

UNITED STATES PATENT OFFICE.

CHARLES E. HOUSE, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO PACIFIC EGG PRODUCERS CO-OPERATIVE INCORPORATED, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

METHOD AND MEANS FOR SHIPPING EGGS.

Application filed November 24, 1925. Serial No. 71,031.

This invention relates to a method of shipping eggs and the means for carrying out the method.

The objects of the invention are to provide a method commercially practicable whereby the evaporation of eggs in shipment may be reduced or prevented, and the packing structure best suited for the purpose.

My invention is illustrated in the drawings hereto in which:

Figure 1 is a perspective view of an egg case with one section packed for shipment in accordance with my invention and with the other section lined and ready to receive the eggs, separators and flats.

Figure 2 is an enlarged cross section of a filled case with the top flat in place before sealing over the liner flaps.

Figure 3 is a perspective view of one form of impervious paper liner as used inside of each section of the case.

Figure 4 is an enlarged perspective view of the corner sealing device, while Figures 5 and 6 show respectively the development of the corner sealing device from a square sheet of impervious paper and its folding to a flat condition for easy shipment preparatory to use.

Figure 7 is a perspective view of another form of the impervious liner, and Figure 8 shows the first operations in folding down the flaps of this form of liner.

Before going into detail concerning my invention attention is called to the fact that eggs are shipped from producing centers to consuming centers of the country in wooden cases holding thirty dozen eggs.

The cases are quite standard in size and are divided by a wooden partition into two sections each holding fifteen dozen eggs, the eggs being arranged in superimposed horizontal layers separated by resilient sheets or "flats" while the eggs in each layer are kept apart by a cardboard grill or separator so that each egg is enclosed in a square cardboard cell resiliently supported top and bottom by the yielding sheets or "flats."

It has been found however, that when eggs are shipped in cases packed as described that a loss of weight is occasioned by evaporation of the water content through the shells of the eggs, especially if the shipment is of long duration and during a dry spell of weather.

Various attempts have been made to overcome this loss, principally by coating the eggs with oils and other films as well as by enclosing each egg in separate rubber bags before placing them in the cases, but the first method has several objectional features, such as changing the natural appearance and feel of the eggs, and the second method is too slow and expensive.

In striving for a solution of the problem which would be commercially practicable I have evolved a method of packing the eggs which comprises arranging the eggs in layers and separators in a case just as heretofore practised and enveloping the entire contents of each case division, flats, separators and eggs all within an impervious lining sealed over the contents before nailing on the wooden lid of the box.

The liner used is preferably of parchmentized or paraffined paper hermetically sealed over the grouped eggs, and it has been found after thorough trial in the wholesale shipment of eggs by the millions to be the long sought solution of the problem.

In the drawings Figure 1 shows a wooden egg case 1 with the central wooden portion at 2 and with the cover or lid omitted, it being understood without further drawings that a simple wooden cover is nailed over the upper side to close the box after the packing of the eggs is completed.

In Figure 1 the left hand section of the case is shown packed ready for closing over by the lid while the right hand section is shown with the impervious liner 3 in place and with free sealing flaps 4 bent over the edges of the case so as to permit packing of the eggs within.

Figure 2 shows the layers of eggs 5 each separated by heavy pulp board flats 6 and the cardboard separators 7.

These flats are of various designs well known, the ones illustrated being formed with pressed annular seats or pockets for the small ends of the eggs and which seats being raised also function to hold the cardboard separators from shifting laterally.

Surrounding the entire contents of the case section is the impervious liner 3 with its flaps temporarily held out of the way if desired by an elastic band spring around the case as at 8.

The upper flat 6′ is inverted over the top layer of eggs so as to better support the

upper layer against shifting and also to provide a smoother surface over which to cement the overlapping liner flaps as shown on the left of Figure 1.

The impervious liner is preferably formed as a rectangular box closed and sealed at the bottom and with the sealing flaps left open at the upper end as shown in Figure 3 so that it is simply inserted into one of the case sections before packing the eggs, but as the construction indicated will leave imperfectly closed extreme corners through which evaporation could take place I provide a special corner seal 9 either made by molding from wet pulp or by folding from one piece of impervious paper as indicated in Figures 4, 5 an 6, the square piece of paper of Figure 5 being folded inwardly on the heavy diagonal lines and forwardly on the dotted lines D to bring the respective letters A, B, C and D to the positions indicated in Figure 4 and in which position the overlapped portions are cemented to form a right angle corner piece, tho for packing prior to use the device of Figure 4 may have a further fold along the dotted line E so that the device will lie flat as shown in Figure 6.

In use the corner pieces are cemented over or within the corners of the liner 3 and if desired the lower ones may be cemented inside of the liner as indicated in Figure 3 either when making the liner or just at the time of packing, probably the latter as the packer always has the necessary cement ready wherewith to seal the top flaps.

The upper corners may have the devices 9 pushed into place as shown in Figure 2 prior to the sealing over the flaps 4, or they may be pushed down between the case outside of the lining and cemented in place as shown at the left of Figure 1.

Another form of impervious liner is shown in Figure 7 at 3′ which extends above the box from the line 10 so that the corners will be entirely closed by the extending corners 11 when the flaps 4′ are folded, first as shown in Figure 8 and then further by sealing over the remaining two flaps 4″.

This liner however has a serious fault in making it very difficult to insert the eggs and separators as the flaps cannot be bent back over the edge of the case without splitting the corners of the liner, and recourse is had to tucking the flaps down inside the case while packing the same and pulling out the flaps when packed.

The liner shown in Figure 3 is if desired simply supplied cut out and scored or folded, and all laps cemented by the packer of the eggs as it is a simple operation, tho it may be furnished as also the liner of Figure 7 with bottom cemented to form an open box, and in which case the liner is folded to a flat article in any approved manner, such for instance as is done with the common paper bags.

As an adhesive for the liner flaps, a cement made of water glass is found satisfactory, and while I prefer parchmentized or paraffined paper for the liner it is evident that oiled asphalt treated, or paper otherwise rendered impervious to air and moisture might be substituted, and other cements may be used.

I claim:

1. A packing element for the shipment of eggs comprising a rectangular paper lining rendered substantially impervious and adapted to fit within a standard egg shipping case, said lining being open on top for packing the eggs, flats and separators therein in the common manner of packing egg cases and the lining being provided with extending flaps adapted to hang outward over the case while packing the same and for closing the top of the case when packed, and means for sealing the extreme corners of the folded flaps after folding the same.

2. A packing element for the shipment of eggs comprising a foldable paper lining adapted to be outfolded to rectangular box form to fit within an egg shipping case, and corner pieces for the lining adapted for sealing over the extreme corners thereof said corner pieces comprising each a rectangular sheet of flat paper folded diagonally to present a three sided pyramidal right angled corner closed at the juncture of its three sides.

CHARLES E. HOUSE.