

June 19, 1923.

1,459,017

W. K. DEAN

PACKING CASE

Filed Nov. 12, 1921

3 Sheets-Sheet 2

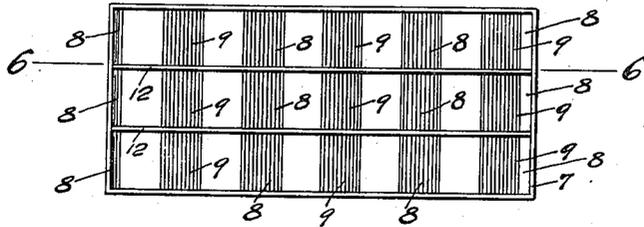


Fig. 5.

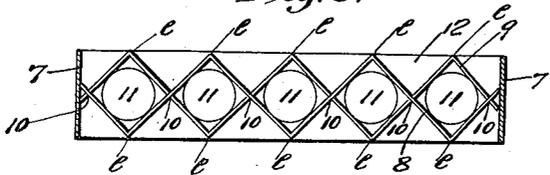


Fig. 6.

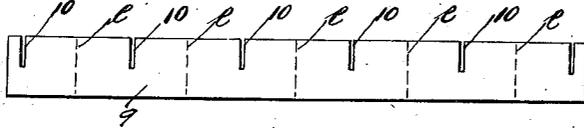


Fig. 7.



Fig. 8.

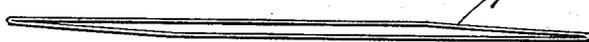


Fig. 9.



Fig. 10.

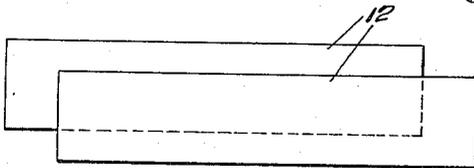


Fig. 11.

Walter K. Dean
Inventor

W. R. Reed
Attorney

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3 Sheets-Sheet 3

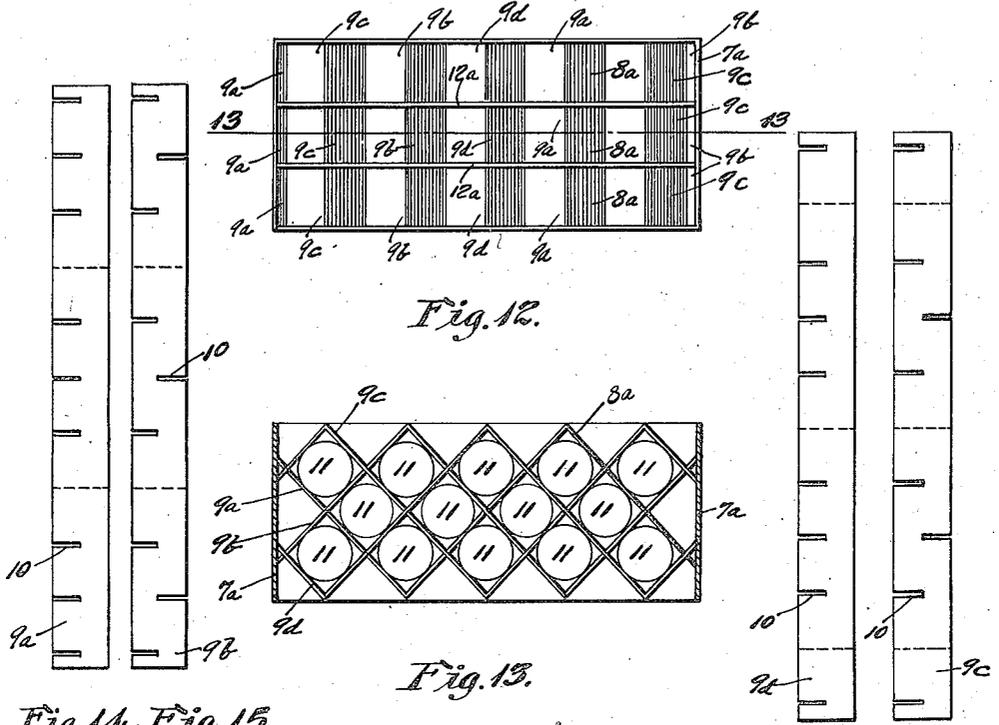


Fig. 12.

Fig. 13.

Fig. 14 Fig. 15.

Fig. 17.

Fig. 16.



Fig. 18.



Fig. 19.

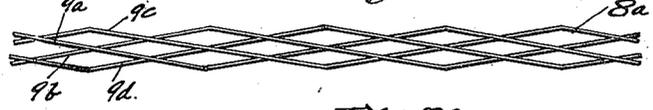


Fig. 20.

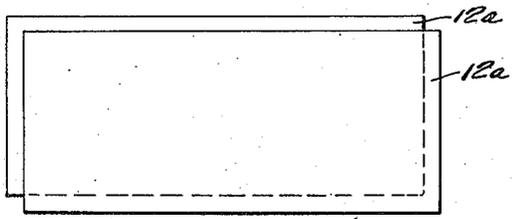


Fig. 21.

Walter K. Dean
Inventor

W. R. Lenz
Attorney

UNITED STATES PATENT OFFICE.

WALTER K. DEAN, OF ERIE, PENNSYLVANIA.

PACKING CASE

Application filed November 12, 1921. Serial No. 514,537.

To all whom it may concern:

Be it known that I, WALTER K. DEAN, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented new and useful Improvements in a Packing Case, of which the following is a specification.

The purpose of this invention is to provide a packing case which may be readily used for packing fragile articles, such as eggs, in such a way that they will pass through ordinary shipments and particularly in the parcels post without breakage. Preferably the case is such that the constituent parts are collapsible so that the empty cases may occupy small space both for shipping and for storage. In carrying out the invention the collapsible features, the strength of the receptacle, and the cushioning effect of the pockets are all matters of consideration together with the cheapness of manufacture.

The invention is illustrated in the accompanying drawings as follows:—

Fig. 1 shows a perspective view of the case complete.

Figs. 2 and 3 plies of corrugated paper from which the outer case is formed.

Fig. 4 a section on the line 4—4 in Fig. 2.

Fig. 5 a plan view of parts of the packing case, the outer shell being removed.

Fig. 6 a section on the line 6—6 in Fig. 5.

Fig. 7 an elevation of one of the partition plates or strips.

Fig. 8 a perspective view of the outer shell collapsed.

Fig. 9 an end view of the inner shell collapsed.

Fig. 10, an elevation of the pocket piece collapsed.

Fig. 11 a front elevation of the partition pieces separating the pocket pieces in the case.

Fig. 12 a plan view of a part of the case, the outer shell removed showing the pocket pieces carrying a plurality of rows of pockets.

Fig. 13 a section on the line 13—13 in Fig. 12.

Figs. 14, 15, 16 and 17 elevations of the partition pieces forming the pocket piece.

Fig. 18 a perspective view of the outer shell collapsed.

Fig. 19 an end view of the inner shell collapsed.

Fig. 20 a side elevation of the pocket piece collapsed.

Fig. 21 a side elevation of the partition pieces.

1 marks the outer shell. This is made of two plies of corrugated paper as shown in Figs. 2 and 3, the piece as shown in Fig. 2 being first wound into the shape of the shell, the folds being shown at *a*, *b*, *c* and *d*. The piece shown in Fig. 3 is then wrapped over this first being supplied with adhesive material and preferably the folds are reversed so that the joints are as completely broken as possible. The layers of paper 5 and 6 are then secured to the inner and outer surfaces of these plies. This makes a very rigid construction, the paper preventing the flattening out of the corrugations and the reverse direction of the corrugations giving rigidity in both directions. An inner shell 7 has openings extending through it and is assembled with the outer shell by placing it within the outer shell, the outer shell closing the openings in the inner shell and the side walls of the inner shell closing the openings of the outer shell. Both of these shells are collapsible so that they may be readily shipped empty or stored. The pocket pieces 8 are formed of partition strips 9 which extend in the form of a zig zag in parallel diagonal lines and with return bends at the upper and lower edges of the pockets, the strips being provided with slits or notches 10 at the crossings so as to permit the interlapping of the strips. The eggs 11 are placed in the pockets so formed. This pocket strip is collapsible as shown in Fig. 10. In the smaller unit 1 the inner shell ordinarily is provided with a plurality of the pocket pieces and the different pieces are separated by separating plates 12 formed preferably of corrugated paper.

In the structure shown in Fig. 12 and following a larger unit is formed. In this the outer shell 1^a corresponds to the shell 1 and the inner shell 7^a corresponds to the shell 7. The pocket piece 8^a is made up with a plurality of rows. This is formed by carrying the strips with a plurality of crossings in each diagonal direction but the strips have the return bends at their upper and lower

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edges as in the construction shown in Fig. 6. The notching of the strips in order to provide them for a plurality of rows of pockets is illustrated in Figs. 14, 15, 16 and 17 wherein are shown the strips 9^a, 9^b, 9^c and 9^d as formed prior to the assembling and with the lines on which the bending at the top and bottom is accomplished. The case is provided with a plurality of the pocket pieces 8^a and these are separated by the separating plates 12^a. As will be seen all the parts 1^a, 7^a and 8^a are collapsible so that these parts may be put together and readily stored or shipped.

This provides a very rigid packing case so far as resisting crushing strain is concerned and at the same time there is sufficient cushioning effect to save such articles as eggs from undue breakage.

What I claim is new is:—

1. In a packing case, the combination of a container; and a pocket piece comprising a series of parallel zig zag shaped partition strips extending diagonally across the container with return bends at the container walls, said strips crossing each other and being oppositely notched and interlapped at the crossings.

2. In a packing case, the combination of a container; and a pocket piece comprising a series of parallel zig zag shaped partition strips extending diagonally across the container with return bends at the container walls, said strips crossing each other and being oppositely notched and interlapped at the crossings, said partition strips having a plurality of crossings in each direction and forming a series of rows or pockets.

3. In a packing case, the combination of a container; a plurality of pocket pieces each comprising a series of parallel zig zag shaped partition strips extending diagonally across the container with return bends at the container walls, said strips crossing each other and being oppositely notched and interlapped at the crossings; and separating plates between the pocket pieces.

4. In a packing case, the combination of a container; and a pocket piece comprising a series of parallel zig zag shaped partition strips extending diagonally across the container with return bends at the container walls, said strips crossing each other and

being oppositely notched and interlapped at the crossings, said container and pocket piece being collapsible.

5. In a packing case, the combination of a container; and a pocket piece comprising a series of parallel zig zag shaped partition strips extending diagonally across the container with return bends at the container walls, said strips crossing each other and being oppositely notched and interlapped at the crossings, said partition strips having a plurality of crossings in each direction and forming a series of rows of pockets, said container and pocket piece being collapsible.

6. In a packing case, the combination of a container comprising two telescoping shells open at their ends, one shell opening in a direction at right angles to the opening of the other when assembled; and a pocket piece within the container comprising a series of parallel zig zag shaped partition strips extending diagonally across the container with return bends at the container walls, said strips crossing each other and being oppositely notched and interlapped at the crossings.

7. A container case formed of two plies of corrugated paper, each ply being wound to form the shell and having its meeting edges extending diagonally across the shell and the corrugations of one shell being in a direction at an angle to the corrugations of the other shell.

8. A container case formed of two plies of corrugated paper, each ply being wound to form the shell and having its meeting edges extending diagonally across the shell and the corrugations of one shell being in a direction at an angle to the corrugations of the other shell, the joints between the edges of the two shells being broken.

9. A container formed of two plies of corrugated paper, each ply being folded to form a shell and having its meeting edges extending diagonally across the ply, the slant of the edges making the ply of sufficient length to make two wraps of the shell, and one ply being secured to the other with its corrugations at an angle to the corrugations of the other ply.

In testimony whereof I have hereunto set my hand.

WALTER K. DEAN.