April 24, 1934. W. J. DE REAMER 1,955,907

PAD FOR SHIPPING CASES

Filed Sept. 15, 1933

FIG 1

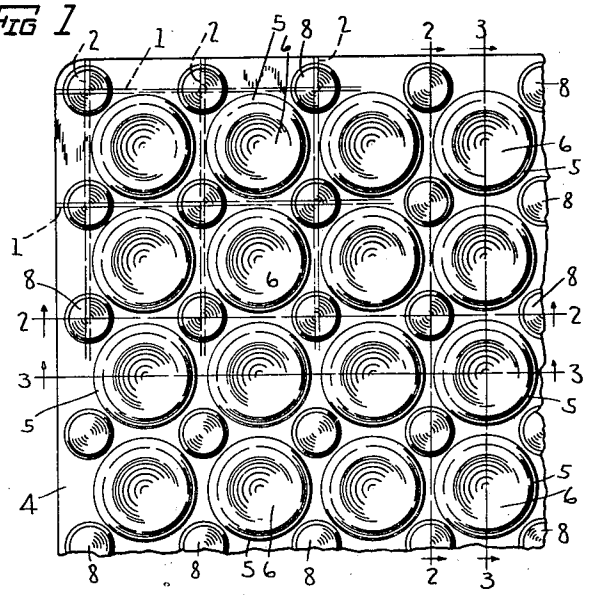


FIG 2

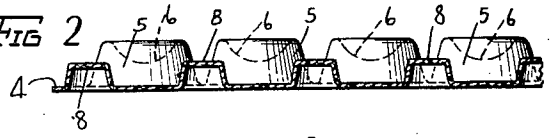


FIG 3

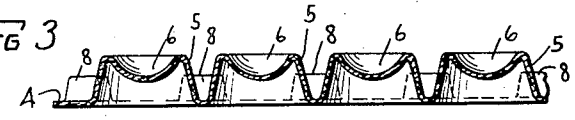


FIG 4

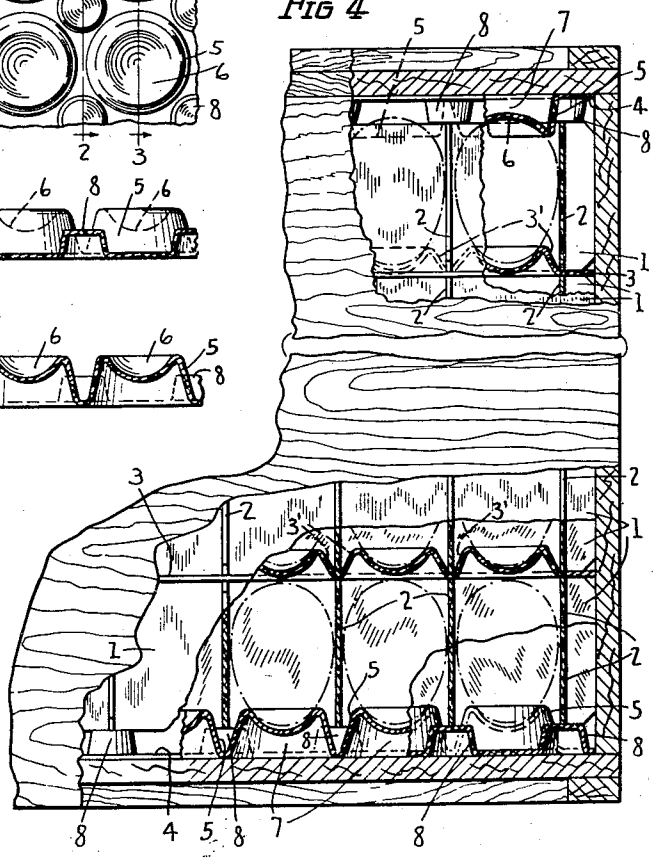
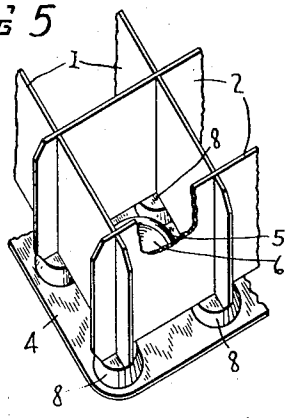


FIG 5



INVENTOR

William J. De Reamer

BY

Staley & Welch

ATTORNEYS

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PAD FOR SHIPPING CASES

William J. De Reamer, Crown Point, Ind., assignor to Mapes Consolidated Manufacturing Company, Griffith, Ind., a corporation of Delaware

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8 Claims. (Cl. 217—26)

This invention relates to improvements in pads for egg shipping cases, it more particularly relating to pads which are used at the top and bottom of the pack as distinguished from the well-known flats which are employed to support layers of eggs, the invention relating more especially to an improved construction whereby the weight imposed on the pad may be carried without crushing or cutting the same.

One of the objects of the invention is the provision of an egg case pad of improved construction which is capable of serving as a combined pad and flat.

Since the standard egg case carries fifteen dozen eggs in each half of the case, it can be seen that the weight carried by the pad at the bottom of the pack is considerable. In the present case the improved pad carries the lowermost layer of eggs in indented cup-like depressions very similar to the depressions found in the well-known flats, and the eggs of this lowermost layer are surrounded by the cell-forming strips or filler strips which in turn support the flat immediately thereabove. Each flat carries a layer of eggs, therefore, the weight of all the layers excluding the lowermost layer is supported by the lowermost cell-forming strips, and as these strips are usually cardboard set edgewise in a vertical plane, the pressure of the strips on the edges of the pads results in cutting through and crushing down the pad to the extent that damage to the eggs occurs. Therefore another object is to provide a pad having ample cushioning effect but which is also capable of supporting the weight mentioned without breaking down as described.

Other objects and advantages will appear from the following description and claims.

In the accompanying drawing:

Fig. 1 is a fragmentary plan view of the pad.

Fig. 2 is a vertical section on the line 2—2 of Fig. 1.

Fig. 3 is a vertical section on the line 3—3 of Fig. 1.

Fig. 4 is a fragmentary view, partly in elevation and partly in vertical section on various planes, of an egg case, flats and fillers, in which the improved pads are employed at the top and bottom of the pack.

Fig. 5 is a fragmentary perspective view of a portion of cell-forming filler-strips in position on a portion of the improved pad.

Referring to the drawing, Figs. 4 and 5 show a method of packing eggs which is widely followed insofar as the use of cell-forming filler-strips formed of intersecting and interlocking cardboard strips and any well known flat is concerned, for supporting and protecting a layer of eggs. There is shown in these figures filler-strips 1 and 2 and flats 3 of well known construction, the flat being similar to that described and shown in the patent to Koppelman and Cooper No. 1,429,207. Heretofore, the pack was started by laying in on the bottom of the case a cushioning pad of some nature such as corrugated board or an inverted flat, and on the pad so formed was placed one of the ordinary flats 3 just mentioned. On this flat was then placed the first layer of filler strips and in the cells thereof the first layer of eggs. A second flat was placed on the upper edges of the filler strips, the second layer of filler strips and the second layer of eggs were then deposited, and the entire pack was built up in repetition of this order until completed, two flats being employed at the top to cushion the pack at that point. With the present pad it is possible to eliminate the cushion and a flat at both the bottom and top of the case, since the present pad is formed to receive and cushion the lowermost layer of eggs, and also has sufficient cushioning properties to support and cushion the remainder of the pack, and it is adaptable for use at the top of the pack for the same purpose by being inverted and placed over the upper layer of eggs.

The pad is preferably formed of moulded pulp and consists of a flat sheet 4 having on one side thereof a series of parallel, intersecting rows of circular, hollow bosses 5 having a central cup-like depression 6 in which an end of an egg is received. Each boss 5 is spaced apart from its adjacent bosses according to the distance from center to center of the cells formed by the intersecting filler strips 1 and 2; therefore when such strips are positioned on the pad as shown by the broken lines in Fig. 1, a boss 5 will be centrally located in each cell.

Since the improved pad takes the place of the formerly used pads and flats at the bottom of the pack, the bosses 5 are somewhat higher than, although similar in shape, to the bosses 3' of the flat, the difference being substantially equal to the pads which are rendered unnecessary. This higher elevation of the bosses 5 provides an ample cushioning effect, it being seen at 7 in Fig. 4 that an egg in the lower row is so supported that its lower end is at a considerable distance above the plane of the flat portion of the pad and consequently well above the bottom or top of the case.

It is preferable to use the standard filler strips throughout the pack, and as with the present pad, with the high egg receiving bosses, the distance

between the flat portion 4 of the pad and the adjacent flat will be greater than the height of the standard strip. The strips are supported on the pad by posts 8 formed on the same side of the flat sheet 4. To provide the greatest amount of bearing surface for the strips with the least amount of moulding difficulties, these posts 8 are circular, hollow, and flat-topped in form and are positioned at the points of intersection of the filler strips, as shown in Fig. 5.

In some of the formerly used pads crushing was most prevalent along the outer edges of the pads, particularly those pads which had supporting feet, as the flat sheet was more or less depended upon to help support the imposed weight, with no proper support for the sheet at the points where the weight was applied. It will be seen that in the present pad, the posts in the outer rows thereof are amply able to support their load and to resist crushing from the outer filler strips, and also resist the cutting through of the filler strip.

In the present instance, the eggs are packed with their small ends down, this method being customarily followed. When the pack is completed, one of the pads is inverted and placed over the top layer as shown in Fig. 4. This pad preferably projects slightly above the upper edges of the case, due to the contact of the bosses 5 with the large ends of the eggs, so that when the cover of the case is fitted thereto, a slight squeezing pressure will occur on the entire pack which effectively results in preventing looseness of eggs therein, and thereby aids in preventing breakage.

Having thus described my invention, I claim:

1. In a pad for shipping cases, a sheet of packing material, means formed on one side thereof to receive and support articles above the plane of the sheet, and separately formed raised supports formed on the same side of the sheet to support the walls of compartments for said articles.

2. In a pad for shipping cases, a sheet of packing material, a plurality of raised bosses formed on one side of the sheet each having a depression to support articles above the plane of the sheet, and a plurality of separately formed raised posts formed on the same side of the sheet to support the walls of compartments for said articles.

3. In a pad for shipping cases, a sheet of packing material, a plurality of equally spaced rows of raised equally spaced supports formed on one side of said sheet to support articles above the plane of the sheet, and a plurality of rows of separately formed raised equally spaced posts formed on the same side of said sheet and extending between the rows of article supports to support the walls of cells for said articles.

4. In a pad for shipping cases, a flat sheet, a plurality of equally spaced rows of equally spaced separately formed partition supporting posts formed on one side of said sheet, and a plurality of raised equally spaced article-supporting bosses formed on the same side of the said sheet between any two rows of said posts to support articles above the plane of the sheet, the number of the bosses in a given row being one less than the number of posts in any adjacent row of posts.

5. The combination of a filler formed of a plurality of intersecting and interlocked transverse and longitudinal strips forming egg cells of uniform size, a pad of packing material formed of a sheet of packing material having raised egg-supporting means formed on one side of said sheet to support the eggs above the plane of the sheet, one for each cell of the filler and also having a plurality of raised separately formed supporting posts formed on the same side of said sheet to support the filler strips only when placed on said sheet.

6. The combination of a filler formed of a plurality of intersecting and interlocked transverse and longitudinal strips forming egg cells of uniform size, and a pad of packing material formed of a sheet of packing material having raised egg-receiving supports formed on one side thereof to support the eggs above the plane of the sheet, one for each cell of the filler, and also having a plurality of raised posts formed on the same side of the sheet to support said filler strips when placed on said sheet, said posts being located each at a point of intersection of said filler strip.

7. The combination of a filler formed of a plurality of intersecting and interlocked transverse and longitudinal strips forming egg cells of uniform size, a pad of packing material consisting of a flat sheet, a plurality of rows of raised bosses each having a depression formed on one side of said sheet to support eggs above the plane of the sheet, a plurality of rows of raised posts formed on the same side of the sheet to support the filler strips, a post being positioned at each point of intersection of said filler strips.

8. The combination of a filler formed of a plurality of intersecting and interlocked transverse and longitudinal strips forming egg cells of uniform size, a pad of packing material consisting of a flat sheet, a plurality of equally spaced partition supporting posts formed on one side of said sheet, and a plurality of raised equally spaced article-receiving bosses formed on the same side of said sheet between any two rows of said posts to support articles above the plane of the sheet, the number of bosses in a given row being one less than the number of posts in any adjacent row of posts, one of said posts being positioned at each point of intersection of said filler strips.

WILLIAM J. DE REAMER.