

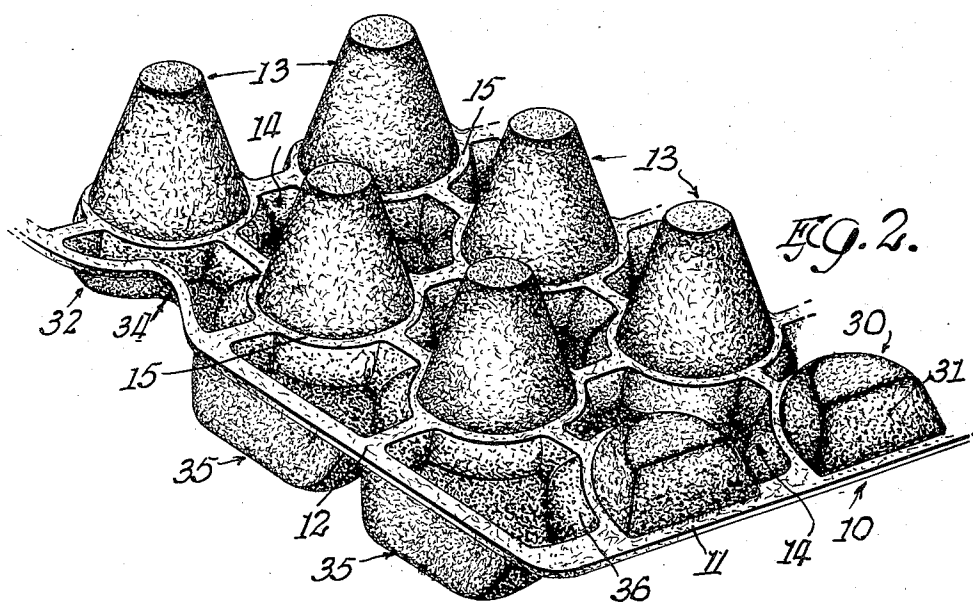
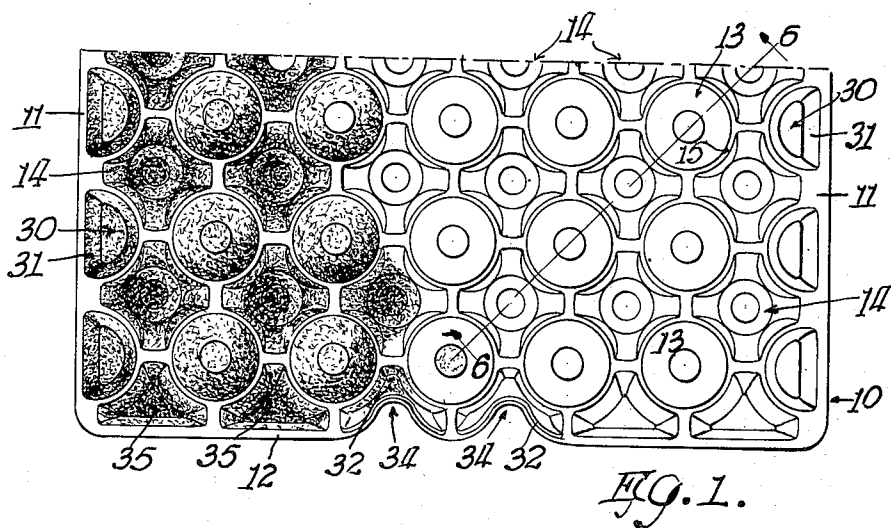
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H. E. LAMBERT
EGG PACKING FLATS

2,872,062

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3 Sheets-Sheet 1



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FIG. 3.

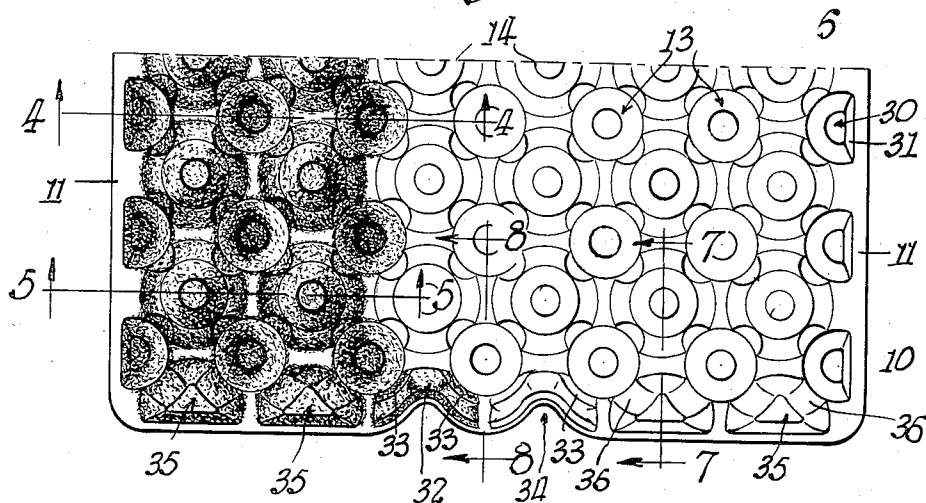


FIG. 4.

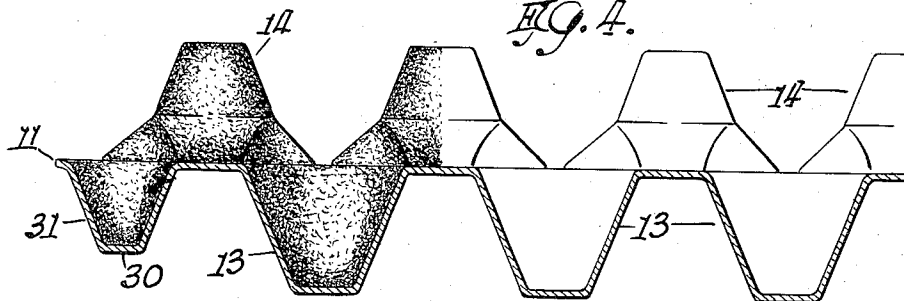
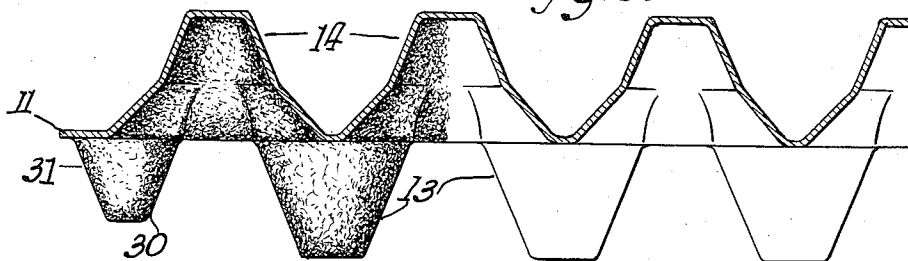


FIG. 5.



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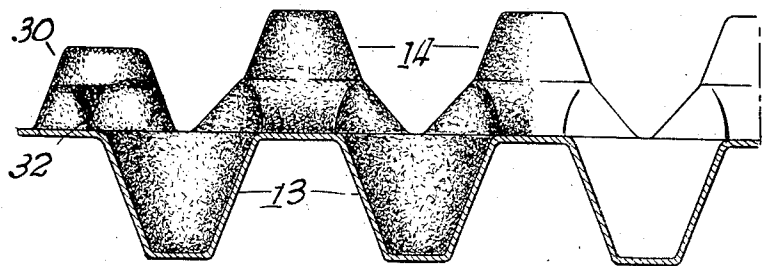
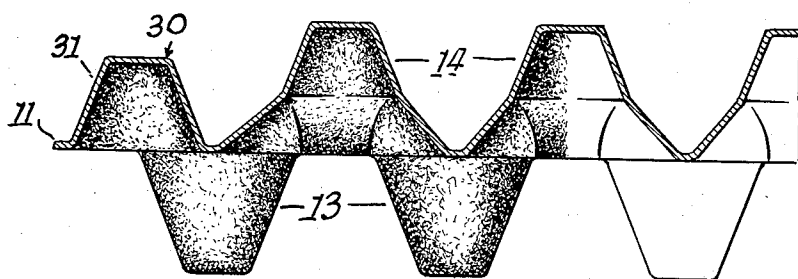
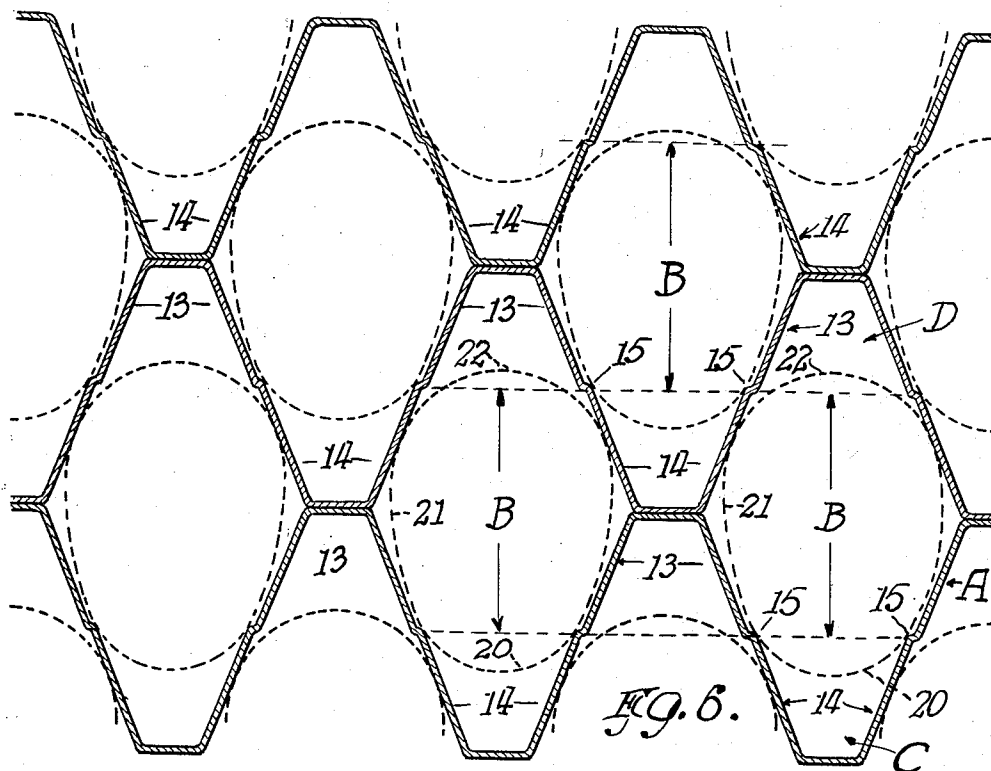
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EGG PACKING FLATS

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2 Claims. (Cl. 217—26.5)

This invention relates to packing sheets for use in packing eggs for shipment. More particularly, the invention relates to a flat which is made of molded pulp fibre and which is adapted for use in the packing of eggs in a standard egg case without the necessity of using so-called fillers, for which reason packing sheets of this general type have become known as filler flats. A flat of this general construction is disclosed in U. S. Patent 1,970,436, to which reference may be made for a detailed explanation of the manner in which the flats of this type are assembled in the case for the packing of eggs therein.

Eggs vary in size and indeed more and more eggs of larger size are being marketed now than in the past. Yet, the general dimensions of the cases are limited so that there is presented the problem of accommodating the larger eggs in a satisfactory manner within the prevailing space limitations.

One of the objects of the present invention is to provide an improved filler flat which can be molded of fibre pulp, which will be of such size as to be usable in packing eggs in a case of standard dimensions, and which will, at the same time, accommodate oversize eggs with safety.

Another object of the present invention is to provide a filler flat of this type which can be molded of pulp fibre by dies of various kinds, including dies in which the surface on which the fibre pulp is deposited comprises wire fabric.

The above, as well as further objects of the invention, will be more readily understood from the following description and accompanying drawings, in which

Fig. 1 is a plan view of one-half of a filler flat embodying the invention, as viewed from that face which contacts the die during the molding operation, the scale being about half-size, the other half being a duplicate thereof,

Fig. 2 is a fragmentary perspective view of one corner of the filler flat, as shown in Fig. 1, on a scale enlarged thereover, the scale being approximately full size,

Fig. 3 is a view similar to Fig. 1 and on the same scale, but showing the opposite face of the filler flat, and as when rotated through 180 degrees on its horizontal axis,

Fig. 4 is a fragmentary vertical sectional view on the line 4—4 of Fig. 3, but on a scale enlarged with respect thereto, the scale being substantially full size,

Fig. 5 is a fragmentary vertical sectional view on the line 5—5 of Fig. 3, but on the scale of Fig. 4,

Fig. 6 is a detail vertical sectional view showing a plurality of filler flats in superposed relation to form egg receiving pockets, each filler flat being turned 90 degrees on its vertical axis with respect to the adjacent filler flat, the section being taken on the line 6—6 of Fig. 1, but the scale being substantially full size,

Fig. 7 is a fragmentary vertical sectional view on the line 7—7 of Fig. 3 but on the scale of Fig. 6, and

Fig. 8 is a fragmentary vertical sectional view on the line 8—8 of Fig. 3, but on the scale of Fig. 7.

As is fully explained in U. S. Patent 1,970,436 of 1934, when using flats of this type a flat is first placed in the bottom of one compartment of the egg case, if it be of

the divided type, or in the sole compartment, if it be of the single compartment design. Preferably, in every instance, the side shown in Fig. 1 will be positioned to face up.

The half pockets, of which there are thirty as provided by a single flat, are then filled with eggs. A second identical filler flat is then placed over the first filler flat, but rotated ninety degrees on its vertical axis relative to the lower filler flat, thus completing the thirty pockets. A second layer of eggs is then placed in the half pockets of the second filler flat, after which a third filler flat is positioned over the second flat, but rotated through ninety degrees on its vertical axis relative to the second. This operation is continued until the case is completely filled.

Referring now to the drawing, 10 represents the filler flat as a whole. It includes flat flange portions 11 along two opposite margins and flange portions 12 along the two other opposite margins. These margins may be termed the plane of the filler flat sheet. Each flat has a symmetrical series of truncated conical hollow projections 13 extending upwardly from the plane of the filler flat sheet. Extending downwardly from the plane of the flat is a symmetrical series of somewhat similar truncated conical hollow projections 14. Rows of upwardly extending projections 13 alternate with rows of downwardly extending projections 14. Hence when one flat is superposed upon another, having first been turned through one-quarter revolution, the respective sets of half pockets of one flat, formed by a single hollow projection extending away from the plane of the flat in one direction and four surrounding hollow projections extending away from the plane of the flat in the opposite direction, register with the half pockets of the other flat to define thirty complete pockets between each pair of flats.

In such an arrangement the downward projections 14 of the overlying flats are in end-to-end abutment with the upward projections 13 of the next underlying flat and the upward projections 13 of the overlying flat register with the downward projections 14 of the flat next above to define therewith thirty complete pockets.

Explanation of the manner of packing eggs

Referring to Fig. 6, assume that flat A of the group is the lowermost one of a group of a pack, in which event 14 represents the downwardly projecting hollow projections and 13 the upwardly projecting hollow projections, the flats being turned through a quarter revolution relative to the next adjacent flat. Each complete pocket includes a relatively wide intermediate area B between the light dotted lines and lower and upper restricted areas C and D respectively, the latter being outwardly of the offset or jog portions 15.

Due to the structural formation of the filler flats, when a plurality of flats are associated together in operative relation in the manner described, it will be seen (see Fig. 6) that the upper limits of the wide intermediate areas of the pockets in one layer terminate in the plane of the lower limits of the wide intermediate pocket areas of the layer next above.

Eggs, normally, are not symmetrical in shape, one end usually being smaller than the other. In placing the eggs, which are indicated by the heavy dotted lines (Fig. 6), the smaller end 20 is preferably placed to extend downwardly, which enables it to be located deep down in the egg-receiving half cell or pocket.

The larger intermediate portion 21 of the egg is then accommodated in the larger intermediate area B of the pocket whilst the other end 22 is accommodated within the area defined by the immediately overlying hollow projection which provides the space D.

Description of marginal structural portions

Along the two sides 11, on one face of the flat, a plurality of hollow projections 30 are provided. The hollow projections 30 are in line with the hollow projections 13 and are in the nature of half projections. That is to say, they are slabbed off vertically, as indicated at 31. The half projections 30 form the outside walls of the pocket spaces near the edges of the flat. They are also slightly lower than the projections 13.

Along the two margins 12, on the opposite side of the flat, are two hollow projections 32, each of which has two curved inner faces 33. Each face 33 coacts with the confronting face portion of the nearest hollow projection 14 along a diagonal line which passes through the center of the projection 14 and the centers of the curved face 33 in forming part of an egg pocket.

The outer parts of the hollow projections 32 are of inwardly curved formation, as indicated at 34 to form finger grip areas.

At opposite ends of each margin or side 12 there is formed two hollow projections 35, each of like construction. Each projection 35 includes two curved inclined faces 36, each of which coacts with the confronting portion of the nearest hollow projection 13 along a diagonal line which passes through the center of the projection 14 and the center of the curved face 35 in forming part of an egg pocket.

The various hollow projections along the sides or margins of the flat not only function with the hollow projections in the remaining area of the flat to form egg pockets, but they also serve to rigidify the marginal portions of the flat.

It is believed that the many advantages of the present invention will be understood by those skilled in the art, to which it appertains, without further comment.

I claim:

1. A filler flat for use in packing eggs in an egg case, said flat comprising a sheet of molded pulp fibre having a plurality of hollow projections integrally formed therewith, said projections extending out from the surface of the sheet and being aligned in alternate rows with the projections in one row extending out in one direction from the sheet and the projections in the next row extending

out from the sheet in the opposite direction, the projections extending in one direction being offset with respect to the other projections to form hollows surrounded by four upstanding projections, each of said projections having diametrically opposed wall portions tapering from a given dimension at the outer distal end to a larger dimension substantially in the plane of the sheet, confronting wall portions of the hollows tapering from a dimension substantially in the plane of the sheet to a smaller dimension at the end thereof, the dimension of the hollow in the plane of the sheet being less than the dimension between confronting portions of the projections along a vertical plane extending diagonally through the centers of a plurality of projections, said difference in dimensions defining an abrupt offset at the juncture of the projections and hollows in the plane of the sheet, said vertical plane defining half-pockets each comprising a major and a minor wedge-shaped area, the apex of the major wedge-shaped area terminating substantially in the plane of the sheet and at the base of the minor wedge-shaped area.

2. A packing for eggs comprising flats of the construction defined in claim 1, in which a plurality of flats is arranged in superposed relation, alternate flats being rotated through ninety degrees relative to the contiguous flat and positioned so that the downwardly extending posts of an overlying flat rest upon the upstanding posts of the underlying flat, thereby providing a complete egg pocket comprising a relatively large and wide intermediate area formed by the base to base disposition of the major wedge-shaped areas of respective flats, and relatively small wedge-shaped minor areas at opposite ends of the pocket.

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