F. KRONENBERGER.

EGG CARRIER.

APPLICATION FILED AUG. 9, 1913. RENEWED DEC. 1, 1916.

1,257,252. Patented Feb. 19, 1918.

Fig. 1.

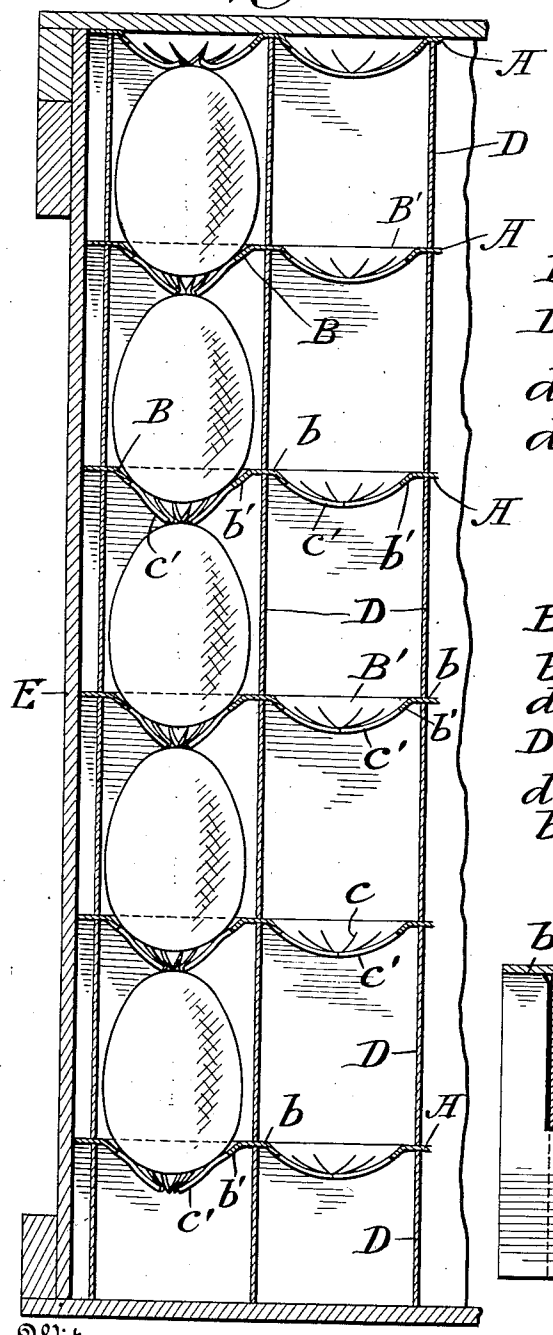


Fig. 2.

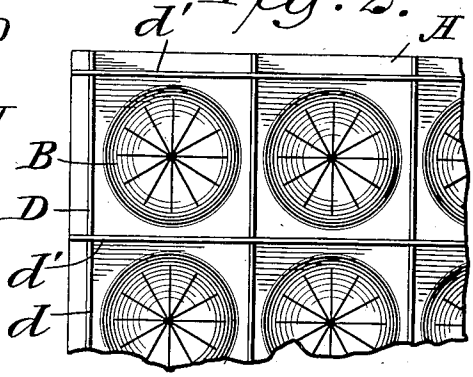


Fig. 4.

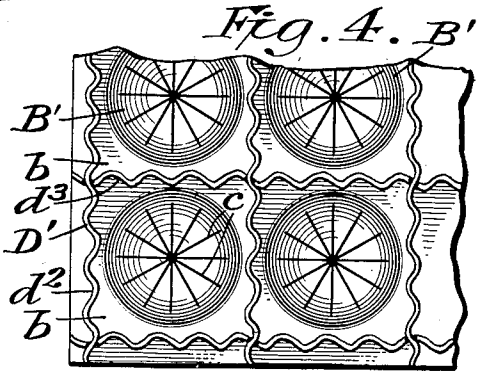
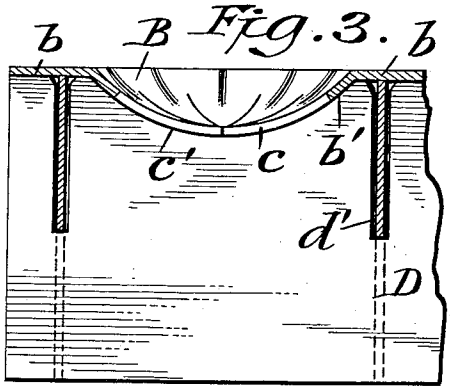


Fig. 3.



Witnesses:
A. R. Appleman
W. C. Rodriguez

Inventor.
Ferdinand Kronenberger.
By His Attorneys.
Griffin & Bernhard

UNITED STATES PATENT OFFICE.

FERDINAND KRONENBERGER, OF HASTINGS, NEW YORK, ASSIGNOR TO FREDERIC B. CLARK, OF ENGLEWOOD, NEW JERSEY.

EGG-CARRIER.

1,257,252. Specification of Letters Patent. **Patented Feb. 19, 1918.**

Application filed August 9, 1913, Serial No. 783,862. Renewed December 1, 1916. Serial No. 134,499.

To all whom it may concern:

Be it known that I, FERDINAND KRONENBERGER, a citizen of the United States, residing at Hastings, county of Oswego, and State of New York, have invented a certain new and useful Egg-Carrier, of which the following is a specification.

This invention is a means for shipping eggs, fruits, vegetables, and other articles which are liable to become broken, bruised or otherwise injured due to rough handling, jarring, or jolting during transportation.

The object is to pack the articles in such manner that they will be retained under yielding pressure and precluded from contact with each other so that the articles will not become broken or bruised.

In a companion application filed by me on even date herewith there is disclosed and broadly claimed the combination of article supporting sheets provided with pockets and cell cases acting as separators for the sheets, the articles being retained between the sheets and not entering the cells of the cell cases.

According to the present invention a series of sheets are employed in conjunction with the cell cases to secure an important function, to wit:—the contact of the cell cases with the sheets to serve as stays therefor; but the present invention is distinguished from the prior one, among other things, by such a relation of the sheets to the cell cases that the articles are housed or contained within the spaces of the cell cases and are retained yieldably by the pockets of the sheets. It is preferred to so arrange the cell cases and the pocketed sheets that the yieldable members formed in the pockets will contact with articles placed above and below the sheets, thus securing the requisite pressure upon the articles.

Furthermore, it is preferred to employ cell cases the walls or members of which are composed of corrugated paper or paper board in order to stiffen and strengthen the cell case structure.

Other features of the invention and the advantages thereof will be apparent from the following detailed description.

In the drawings,

Figure 1 is a vertical section through a packing case adapted to contain article supporting sheets and cell cases in accordance with this invention.

Fig. 2 is a plan view showing a portion of one article supporting sheet and a portion of a cell case in operative relation thereto.

Fig. 3 is an enlarged vertical section through a portion of one article supporting sheet having a pocket therein, and illustrating the relation of the cell case to said sheet.

Fig. 4 is a modification illustrating in plan the relation of the cell case to an article supporting sheet.

Referring more particularly to Figs. 2 and 4, A designates a sheet or layer provided with rows of pockets B B′. The sheet A may consist of any material suitable for the purpose, although it is preferred to employ paper, paper board, card board, or other paper material. Each sheet is formed in a press or other machine so as to produce the pockets B B′ in rows therein, an imperforate part or section *b* being left between the adjacent pockets of the row or rows. The pocket B or B′ is shown more particularly in Fig. 3, by reference to which it will be noted that said pocket consists of a permanently depressed portion *b′*, the bottom of which is slitted at *c*, thereby producing a series of yieldable members *c′*. The slits *c* extends radially from the center of the bottom of the pocket well toward the permanently depressed and imperforate part *b′*; in other words, the slits extend from the center nearly to the imperforate part *b* of the sheet. This results in yieldable members *c′* of considerable length, said members extending from the center of the bottom well toward the imperforate marginal portion *b′*. When the article is placed in the pocket and pressure is applied thereto, said article is forced well down into the pocket so as to rest upon the imperforate part *b′* of the pocket and the yieldable members *c′*, but these members are, by the pressure of the article, forced downward substantially as shown to the left in Fig. 1, whereby the members are pressed below the normal plane of the bottom of the pocket so that the members will contact with the top of an article placed in a cell case below the sheet, all as clearly shown.

D designates a filler or cell case, composed of intersecting members *d d′*. These members are composed of ordinary paper material so that the cell case of Fig. 2 is similar to ordinary cell cases in the art of egg carriers, but in this connection it is to be noted that the members *d d′* of filler or cell

case D are of such form and arrangement that the filler or cell case will contact with article supporting sheet A at the imperforate parts *b* of said sheet between the rows of pockets B B′.

In Fig. 4 of the drawings there is illustrated another form of the filler or cell case. Said cell case D′ consists of corrugated members d^2 d^3, the same being positioned in crossing relation and interlocking with each other in the ordinary way. It is preferred to employ a filler or cell case composed of corrugated members, for the reason that the corrugated members impart additional strength and stability to the filler or cell case.

The article supporting sheets and the filler or cell cases are assembled within a packing case E, substantially as shown in Fig. 1, the sheets A alternating with the cell cases, and the latter being of such depth as to receive the articles within the cells or spaces thereof. When case E is to be packed a filler or cell case D is placed upon the bottom, a sheet A being positioned upon the upper edges of the members composing the filler or cell case, which members contact with the imperforate parts or sections *b* of sheet A, as shown in Figs. 1 and 3, and a second filler or cell case is placed upon the sheet A so as to contact with the imperforate parts or sections *b* thereof. The eggs or other articles are now placed within the cells of the second filler or cell case and upon sheet A and within the pockets thereof, each article resting upon the imperforate rim or part *b′* of the pocket and the upper end portions of the yieldable member *c′*. When pressure is applied to the articles the yieldable members *c′* are depressed substantially to the condition shown at the left of Fig. 1, but ordinarily the slitted bottom of the pocket is continuous with the imperforate rim *b′* of said pocket, as shown to the right in Fig. 1.

After placing the first layer of articles within the second filler or cell case and upon the first sheet, a second sheet A is placed on the second filler or cell case in the manner described, and a third filler or cell case is placed upon the second sheet, after which a second layer of articles is placed within the cells of the third filler or cell case and into contact with the pockets in the second sheet, whereby the yieldable members in the pockets of the second sheet are depressed into contact with the top portions of the first layer of articles in the second filler or cell case. The operations of assembling the sheets, cell cases and layers of articles are continued until the case is filled, and then a top sheet A of the character described is placed upon the uppermost filler or cell case so that the yieldable members in the pockets of the top sheet will contact with the top portions of the articles in the upper layer, all as shown in Fig. 1.

It will be noted that by applying pressure to the articles, the slitted bottoms of the pockets in the sheets A will be depressed so that the yieldable members will contact with the articles below said members. Accordingly, each article will rest at its bottom in the permanent rim and in contact with the yieldable members of one sheet, whereas the top portion of the article will be engaged by the yieldable members in the pockets of the sheet next above it, thus retaining the article securely in position and preventing it from moving loosely within the space of the cell case. The articles are thus retained so firmly in position that they cannot become broken or bruised by rough handling, jolting or jarring of the packing case during transit thereof. The cell cases act as separators for the slitted sheets, and the members of the cell cases engage with the imperforate parts of the sheets between the rows of pockets therein so as to substantially reinforce and strengthen the sheets against any tendency to break or tear by the pressure or weight of the articles supported thereon.

Having thus fully described the invention, what I claim as new, and desire to secure by Letters Patent is:

1. In a device of the class described, the combination of a plurality of article engaging sheets each provided with rows of pockets, each pocket having a permanently depressed rim, the bottom of which is slitted to produce a series of yieldable fingers, and a plurality of fillers positioned in alternate order to said sheets, each filler being in contact with sheets above and below it and adapted to receive in the cells thereof the articles to be packed, whereby each article is adapted to be seated upon the rim of the pocket below it and to contact with the yieldable fingers depressed from the pocket in the sheet above it.

2. In a device of the class described, the combination with a plurality of article carrying sheets, and a plurality of article receiving fillers positioned in alternating order with said sheets, each sheet being provided with a series of pockets adapted to receive and support the articles positioned within the fillers, the bottoms of said pockets being slitted and producing in each pocket a series of yieldable fingers, said fingers being depressible by the article within the pocket and to contact with an article in the pocket below it.

3. In a device of the class described, a series of article-carrying sheets each provided with permanently formed pockets depending from the plane of the sheet, the bottom portion of each pocket being slitted to produce yieldable members, combined

with a plurality of cell-case fillers each comprising attached crossing members which form rows of cells, said fillers alternating with said sheets and the members of said fillers contacting with the sheets in the intervals between the pockets therein, the yieldable members of the sheets above each filler depending into the cells of said filler so as to contact with the articles therein.

4. In a device of the class described, the combination of a series of article carrying sheets each having rows of pockets the bottoms of which are slitted, and a series of article receiving fillers each composed of corrugated interlocked strips, said strips of the fillers being positioned for contact with two adjacent sheets in the intervals between the pockets therein, the slitted pockets of each sheet being depressible into the cells of the filler beneath it.

5. In a device of the class described, a plurality of article-carrying sheets each provided with permanently depressed pockets the bottoms of which are slitted, in combination with a plurality of cell-case fillers each comprising crossing attached members arranged to produce rows of cells, said sheets alternating with the fillers for the members of said fillers to contact with the sheets in the spaces intermediate the pockets, the slitted portions of each sheet being depressible into the cells of the filler contacting with the under surface of said sheet.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FERDINAND KRONENBERGER.

Witnesses:

M. C. RODRIGUEZ,

H. I. BERNHARD.