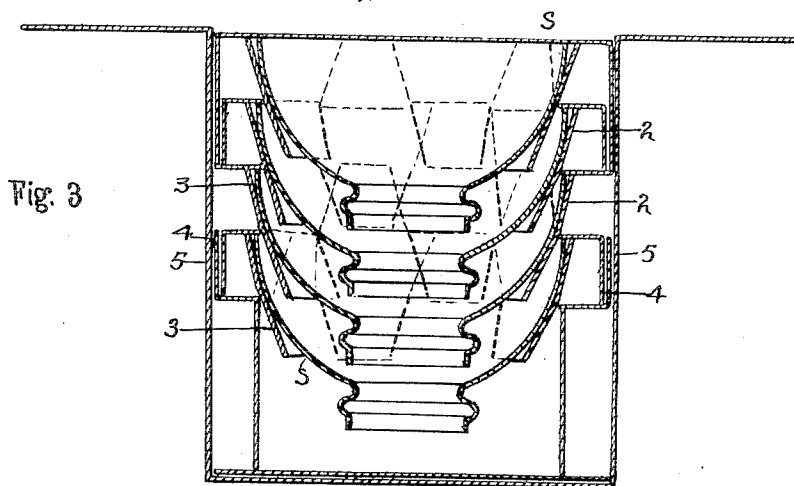
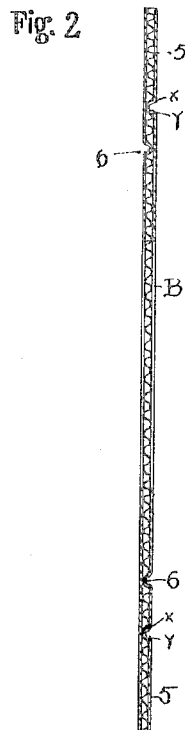
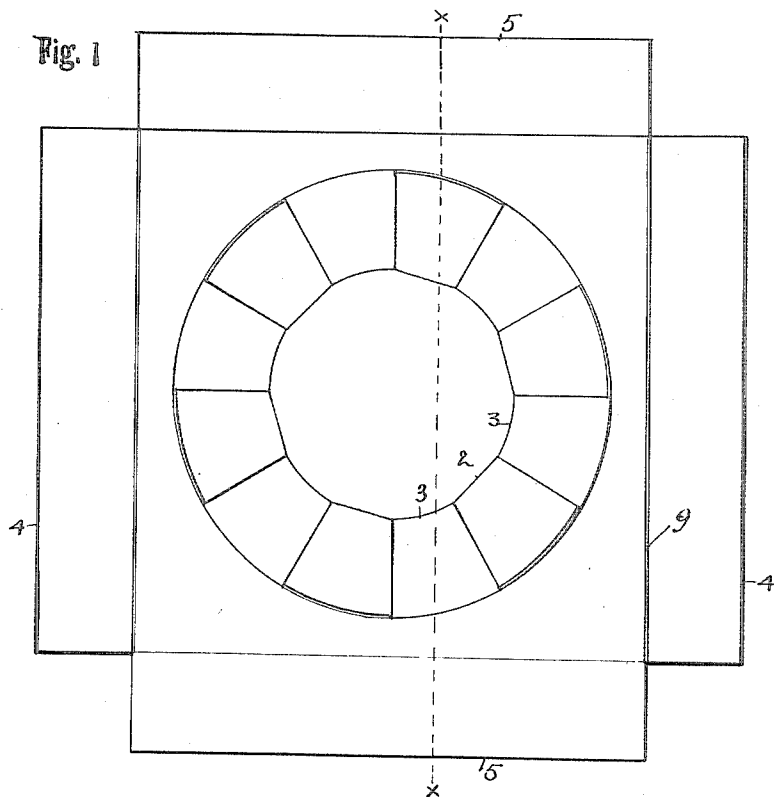


J. N. HAHN.
 PACKING TRAY AND CASE.
 APPLICATION FILED OCT. 27, 1913.

1,116,694.

Patented Nov. 10, 1914.

2 SHEETS--SHEET 1.



ATTEST
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2 SHEETS-SHEET 2.

Fig. 4

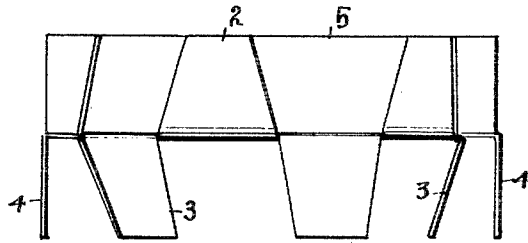


Fig. 5

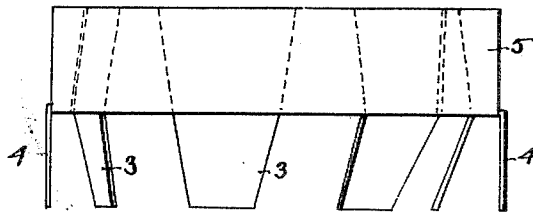
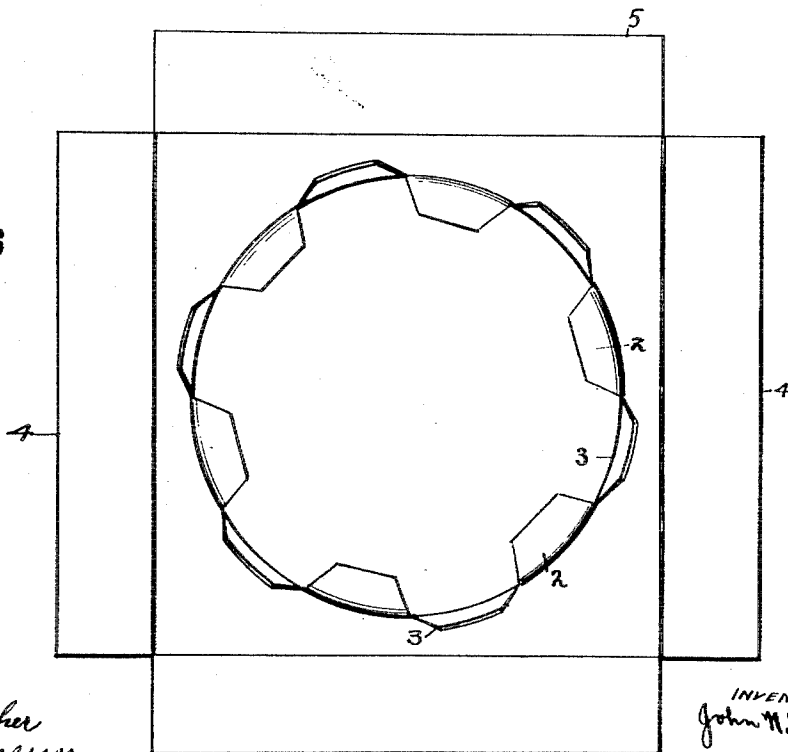


Fig. 6



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15

UNITED STATES PATENT OFFICE.

JOHN N. HAHN, OF CLEVELAND, OHIO.

PACKING TRAY AND CASE.

1,116,694.

Specification of Letters Patent.

Patented Nov. 10, 1914.

Application filed October 27, 1913. Serial No. 797,456.

To all whom it may concern:

Be it known that I, JOHN N. HAHN, citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Packing Trays and Cases, of which the following is a specification.

This invention relates to packing trays and cases for porcelain shades and like fragile objects, and is an improvement on my Patent No. 1,059,359, April 22, 1913, and a companion to my application filed concurrently herewith in which a series of downwardly projecting spurs are shown as the sole supports for the shades.

In the accompanying drawings, Figure 1 is a plan view of one of the trays as it appears when ready to be used in the packing case. Fig. 2 is a sectional elevation of one of the creased blanks before cutting out the spurs. Fig. 3 is a sectional elevation of a packing case and a series of trays and shades therein in shipping relations. Fig. 4 is a sectional elevation of one of the packing members as otherwise seen in Fig. 2. Fig. 5 is a full side elevation of said member and Fig. 6 shows the same as formed up in the cutting dies with two spurs turned in opposite directions.

The material and distinguishing difference in this application over the patent mentioned is the series of spurs 2 and 3 in the edge of the central opening therein, and as compared with the companion application referred to the difference lies in the construction and use of the spurs or tongues and in the total size of the opening, the present spurs being cut to a length corresponding to the width of the side wings, or about one-fourth the width of the opening for the shade and adapted to be utilized as supports for both the trays and the shades as shown. To these several ends I first cut or stamp out a blank B to make the tray, as seen in Fig. 3, said blank being of corrugated paper-board and form the same with wings 4 and 5, respectively, at its sides and spurs 2 and 3 about its center. The said wings are turned up and down respectively, and overlap other wings of the trays next above and below as set forth in said Letters Patent, and the said spurs are struck on radial lines in the edge of the opening in which the shade S is seated and are cut to a length about equal to the width of the said

wings. The bracing spurs 2 serve as supplementary supports for the trays, especially when excessively heavy objects are shipped and the trays require supports at the middle to prevent sagging. Hence if the shades or other objects carried are unusually heavy every other spur is turned into bracing position while the others are bent downward and bear against the body of the shade on a plane beneath the plane of the board as shown. The spurs that are turned upward into bracing relation bear against the side of the shade above the tray and afford both a lateral cushioning support for the shade and a direct support for the tray next above. As braces they co-act with the side wings in sustaining the load both in transit and at rest.

The several spurs 2 and 3 herein are shown as narrower than those in the companion application, there being twelve as against eight in the said application, but the matter of numbers is not deemed material. It is material, however, that the said spurs should be provided with a spring hinge connection with the body of the tray, especially those turned down, and to this end I provide creases at the base of said spurs in which the corrugated interior sheet of the board is broken down and a three-ply paper hinge is produced by pressing the three sheets together and which serves all the purposes of a hinge with spring effect to the spurs. This means that all the spurs have segmentally curved creases 6 at their base whichever way they are to be turned, and the creases generally are on the side to which they are turned, up or down. The said creases also are on a true circle or on segments of circles for the respective spurs and may be on opposite sides when the spurs are to be bent oppositely, of course with spurs comparatively narrow at their base it is possible to use a continuous crease for all the spurs on the same side and turn the spurs in either direction therefrom, because a relatively narrow spur has such a short crease line that the spur can be bent up or down without rupturing or destroying the hinge. In such case I may make the entire crease on the bottom of the tray and thus preserve the spring sustaining effect for the shades in the down spurs 3 while the upturned spurs do not lose in sustaining effect. In either case the spurs cooperate to protect the shade in transit and handling, and the

former objection in the patent cited of having nothing but the sharp edge in the hole of the board to engage the shade and the consequent tendency to breakage is overcome.

5 Of course I do not in this case rest the shade exclusively in or upon the down spurs as in the companion application above mentioned, and show the base of the spurs at the edge of the tray as in supporting relation to the shade, but it will also be noticed
10 that the tray has no sharp edge as such like the patent construction but has the widely extended bearing of the broad base portions of all the spurs together, and the total effect
15 is to so distribute the sustaining surface that what otherwise would be an actual edge support is minimized and relieved if not actually displaced by the surfaces of the said spurs. As a result I can carry shades with
20 this construction with perfect safety whereas an all edge support would break many.

The spurs 2 are provided with straight transverse edges because the said spurs have alternative uses, and when used as braces
25 they require straight edges to bear against the tray above and also must have a length corresponding substantially to the width of the wings 4 and 5. If the crease 6 is all on one side any of the spurs can be bent upward, but if each spur has its own crease
30 every other crease would be on the top side of the board. I make them both ways. Of course the spurs are stiff, like the board, and creasing is necessary in order to get a
35 hinge or bending line where it is wanted. Furthermore creasing produces the shoulders x and y , which are material.

Speaking of the opening or hole in the tray for the shade I mean the full width
40 of the opening as it appears when the spurs are turned to supporting position and the shade rests on the base of said spurs. Otherwise there is an opening within the ends of the spurs as seen in Fig. 1, but this is not
45 the opening referred to in the claims, but only part of it.

The wings 4 and 5 have creases 9 on which they turn to supporting position. Emphasis needs to be placed on the creases
50 for the spurs because without them it is physically impossible to turn the spurs up

or down with uniformity as to the line on which they turn and without breaking the stock on the bending line and rendering the spurs practically worthless for the purposes
55 named. This is so because the spurs cannot be bent down on curved lines without breaking, nor on straight, and in no case will all the spurs break on the same lines. But by creasing the stock at the base so as
60 to form hinges for the spurs they simply turn on said hinges and no breakage or rupture of the stock occurs.

What I claim is:

1. In packing devices for fragile articles, 65 a tray made of three-ply paper board having supporting wings at its four sides and an opening in its middle and radially disposed spurs terminating at said opening having approximately straight transverse
70 edges and of the same depth as said wings, the said board being creased from side to side in a circle at the base of said spurs and adapting the spurs to be turned to supporting position whereby the said trays are provided
75 with means of support immediately next to the article carried in addition to the wings at the sides.

2. In packing devices for porcelain shades and other fragile articles, a tray consisting
80 of three-ply corrugated paper board smooth on both sides and having a circular opening provided with a series of tapered spurs about the same having substantially straight transverse terminal edges, the said spurs
85 projecting forward from the edge of said opening and said tray being creased at intervals on opposite sides from side to side on the line of said opening at the base of said spurs to enable the spurs to be turned
90 either up or down into supporting position according to the crease at the base thereof, and said tray provided with wings at its sides adapted to be turned to right angles into supporting position and having a width
95 corresponding to the length of said spurs.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN N. HAHN.

Witnesses:

F. C. MUSSUN,
E. M. FISHER.