

Aug. 30, 1927.

H. N. KNOWLTON

1,640,452

PACKING CASE

Filed Oct. 30, 1923

Fig. 1.

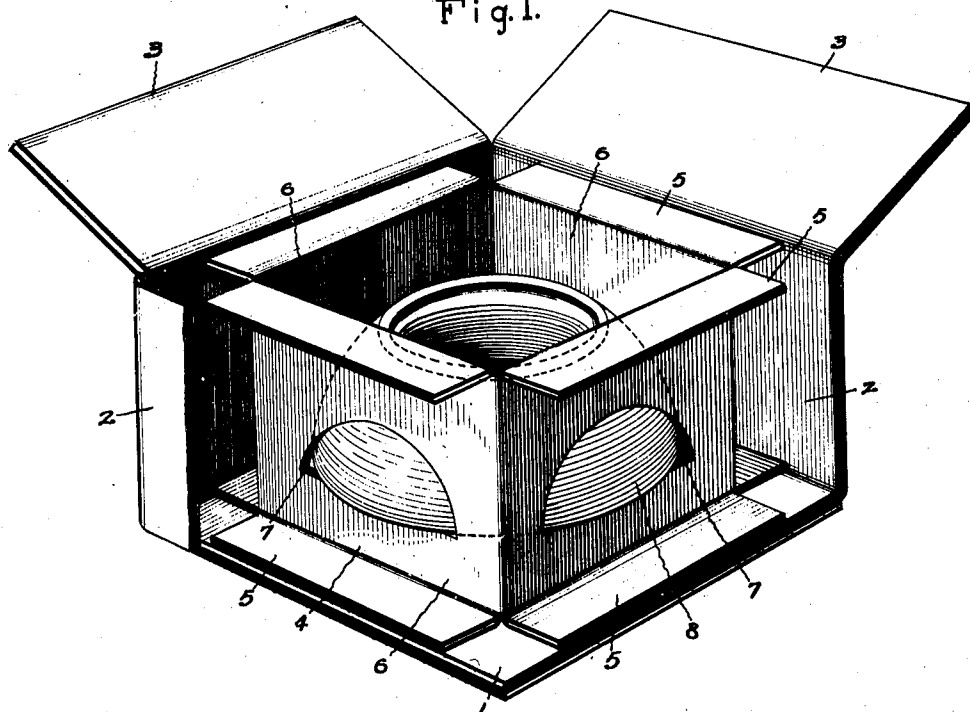


Fig. 2.

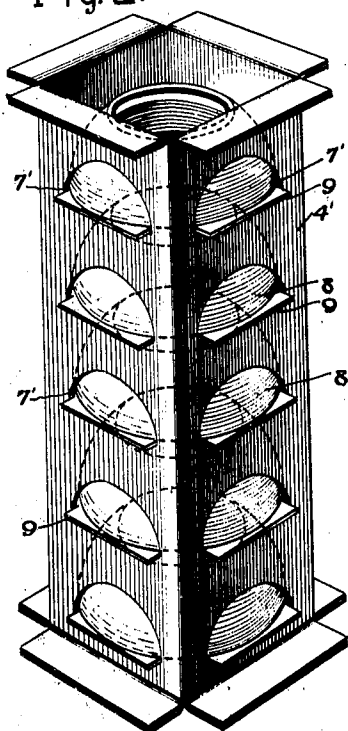


Fig. 4.

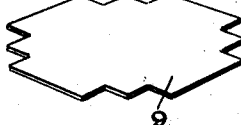


Fig. 5.

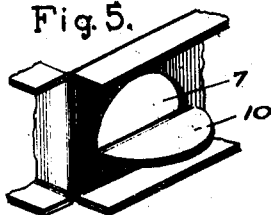
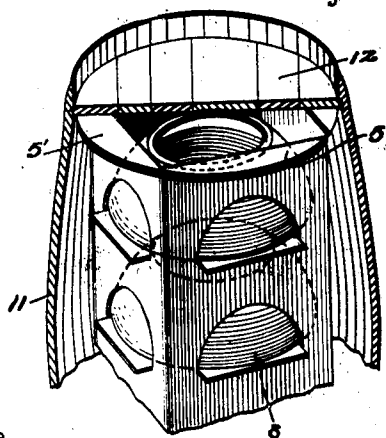


Fig. 3.



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UNITED STATES PATENT OFFICE.

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PACKING CASE.

Application filed October 30, 1923. Serial No. 671,744.

The present invention relates to packing cases in which easily broken articles of commerce may be expressed in safety and has for its object the provision of an improved packing case which shall be especially hardy and resistive to injury to itself and the articles contained therein and in which the articles may be properly packed with facility by the inexpert.

In the accompanying drawing, the invention is shown embodied in a case particularly designed for containing glass lamp shades.

Figure 1 is a perspective view of a case for a single article with the two forward sides of the outer portion broken away; Fig. 2 is a perspective view of an inner case portion for the reception of a plurality of articles; Fig. 3 is a perspective view of an inner case portion similar to that of Fig. 2 with the outer case portion in the form of a barrel; Fig. 4 is a perspective view of one of the stiffening chafe plates or partitions, and Fig. 5 is a perspective view of a fragment of an inner case portion provided with a stiffening chafe tab or bracket.

Referring to the packing case shown in Fig. 1, the outer or box portion is of strawboard or similar material having a square bottom 1, rectangular side walls 2 and an integral top flap 3 at the upper edge of each side wall. These flaps 3 are of a width approximately one-half that of the bottom 1 so that the free edges of the flaps on opposite walls meet when they are folded inwardly. One pair of oppositely folded flaps will of course overlie the other pair.

The inner case portion or shell is in the form of a rectangular tube 4 of substantially less dimensions than the rectangular outer or box portion and having integral flanges 5 at both ends of each side wall 6. The side walls are of a length when the flanges are turned outwardly, as shown in Fig. 1, to correspond with the interior height of the outer box and the flanges 5 are of a width to impinge at their outer edges upon the side walls 2 of the box so that they serve to hold the rectangular tube definitely spaced from the box walls, in addition to providing definite support against deformation of the side walls 6 and reinforcement for the top and bottom corners of the outer box. The braced side walls 6, on account of their spanning the space between top and bottom of the outer box, afford substantial support

thereto against any force tending to press them inwardly.

The side walls 6 of the inner shell have openings 7 die cut therein so that the article 8 to be packed therein may project slightly therethrough when assembled. The shape of the openings 7 will of course vary according to the shape of the article 8, but as shown in Fig. 1 they are made half moon shape with the straight portion engaged by the lower edge of the article, while the arched portion bears tangentially against the rounded portion of the article.

In order to assemble the article 8 in the inner shell, the latter in blank form is folded about the article and the terminal edges of the side walls pasted together forming a corner, or it may be completely formed and then the flanges 5 turned into alignment with the respective side walls 6 so that the latter may readily bow outwardly as the article 8 is forced between them, and upon the entering of the edge of the article 8 into the openings 7, the side walls spring back to their original shape and thereby securely grip the article on all four sides. The flanges 5 at both ends are turned outwardly and the inner shell with the assembled article 8 inserted in the outer box, as shown in Fig. 1, and if desired the flanges are pasted on their outer surfaces to adhere to the top and bottom walls of the outer casing. The box flaps 3 are closed over and pasted or otherwise fastened in closed position.

The inner shell, in addition to serving as a very effective reinforcement to the outer box, supports the article 8 very securely and centrally of the box with clear spaces between the top, bottom and sides of the box and any points on the article so that the latter can become injured only by breaking in of the box walls.

In the arrangement shown in Fig. 1, only one article is provided for, but the inner shell may be made longer and any number of articles provided for by cutting a corresponding number of sets of opening 7' in its side walls, as shown in Fig. 2. To provide additional rigidity to the rectangular tube 4' and also better bearings for the edges of the articles 8, I introduce stiffening chafe plates 9, as shown in Fig. 4, into each set of openings 7'. These plates serve also as partitions between any two articles so

that in the case of one article becoming broken its parts will be prevented from falling into contact with the other articles.

Instead of removing the material of the openings 7, it may be bent outwardly (see Fig. 5) as a flap 10 to provide additional bearing for the article 8 and to stiffen the side wall.

In certain forms of transportation, as in marine shipping, where strawboard outer casings or boxes are not approved, I have found it practical to employ therefor an ordinary wooden barrel 11, as shown in Fig. 3, and adapt the inner shell of Fig. 2 thereto by cutting the outer edges of the flanges 5' circular to fit the curved inner surface of the barrel adjacent the heads 12.

The articles may be removed one at a time as needed from the casing by merely slitting the side walls 4' above two openings 7'. Moreover, on account of the entire absence of litter, it is practical for a storekeeper to retain the articles in their packing case until individually passed over the counter.

While I have shown and described the best embodiment of the invention known to me, I do not desire to be restricted thereto.

What I claim as new and desire to secure by Letters Patent of the United States, is,—

1. A packing case comprising an inner case member and an outer case member, said inner case member consisting of a polygonal tube with its side walls provided with article engaging apertures and integral end flanges.

2. A packing case comprising an outer case member and an inner case member, said inner case member consisting of a polygonal tube of substantially less transverse dimensions than said outer member and of a length corresponding to the internal height of said outer member and having its side walls provided with article engaging apertures and outturned end flanges adapted to engage at their outer edges with the side walls of said outer case member.

3. A packing case comprising an outer case member and an inner case member, said inner case member consisting of a polygonal tube with the side walls thereof provided with sets of article holding apertures and outturned end flanges adapted to engage at their outer edges with the side walls of the outer case member, and transverse partition plates disposed in the respective sets of openings.

In witness whereof, I have hereunto set my hand this 29th day of October, 1923.

HARRY N. KNOWLTON.