

Jan. 12, 1932.

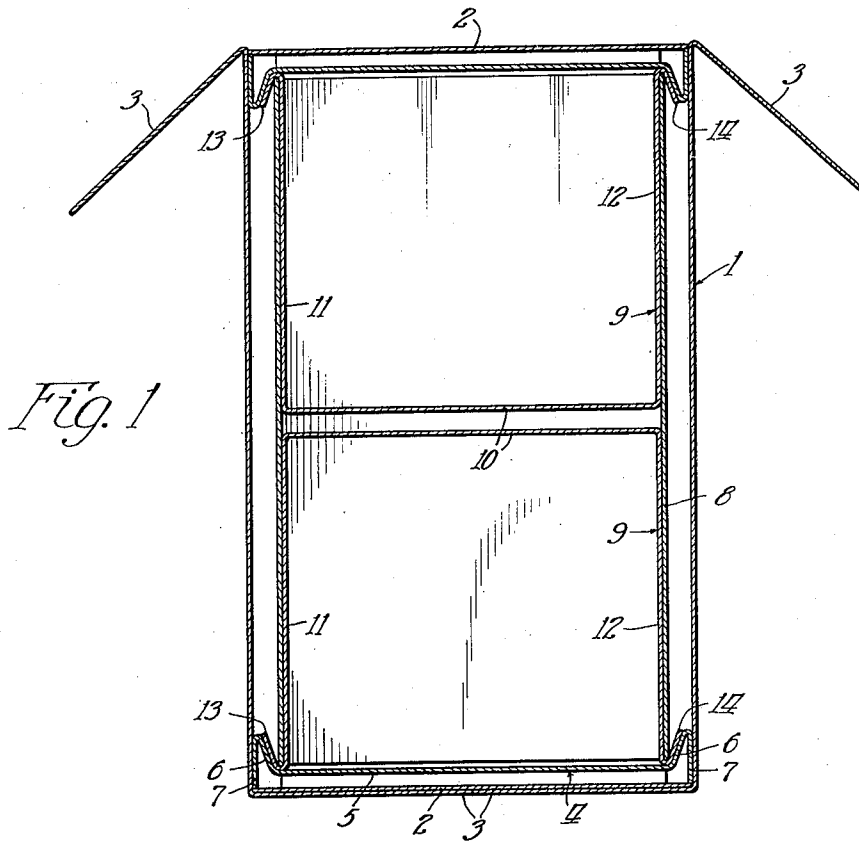
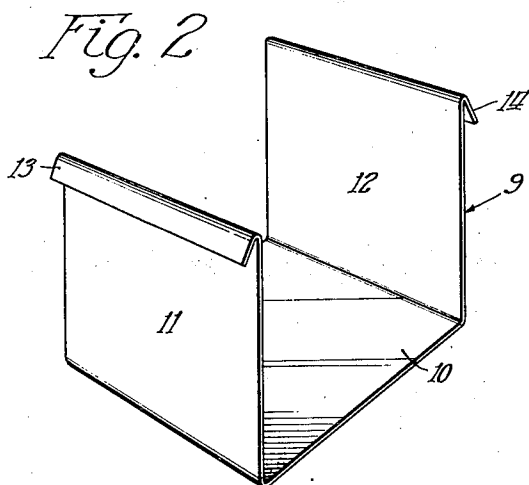
P. W. MIESSLER

1,840,677

CONTAINER

Filed May 2, 1930

2 Sheets-Sheet 1



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Fig. 4

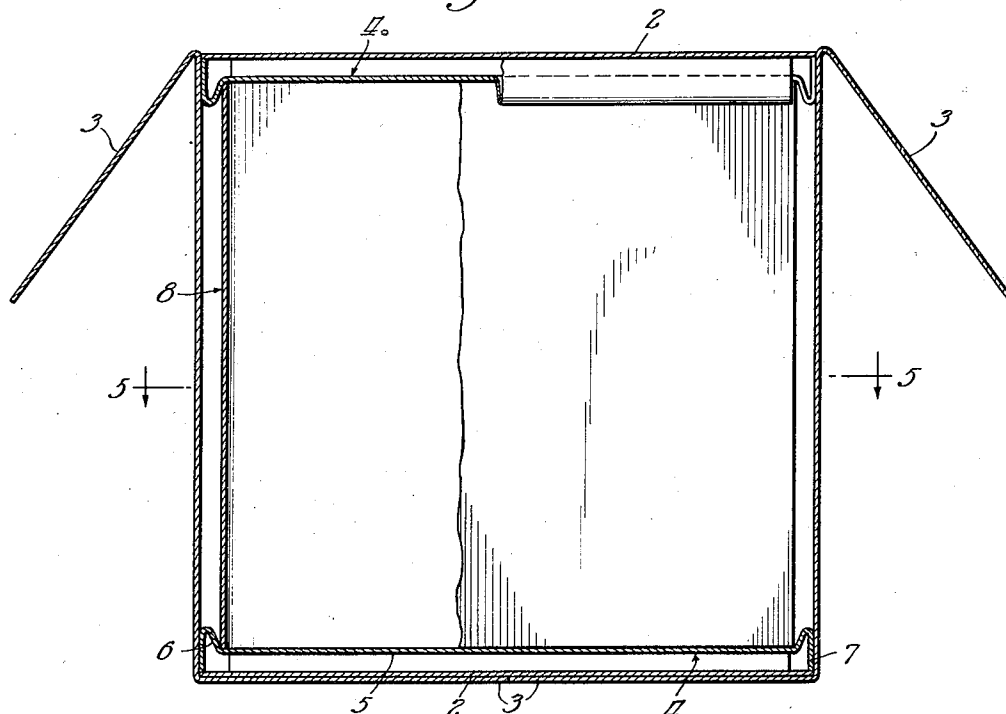


Fig. 3

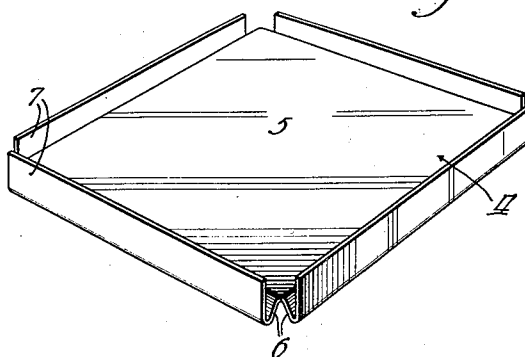
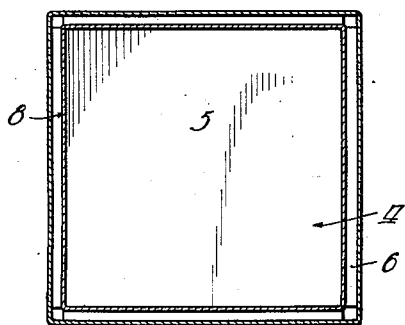


Fig. 5



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UNITED STATES PATENT OFFICE

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CONTAINER

Application filed May 2, 1930. Serial No. 449,145.

This invention relates to containers, and more particularly to shipping boxes made of fragile material such as corrugated paper board and the like.

5 Corrugated paper containers provided for shipping purposes have been used for a number of years, and such containers have to a large extent replaced the strong wooden shipping crates and boxes which were formerly
10 used almost exclusively because of the ability thereof to withstand rough usage and handling without effecting the destruction or injury of the material being shipped. The replacement of wooden and other strong con-
15 tainers by the more or less fragile paper containers has largely occurred when material to be shipped is of such strength as to itself eliminate the necessity for protection. When used in the shipping of such material it is
20 only necessary that the container be sufficiently strong to retain the goods in the packed condition and this is particularly so when the material is light and resistant to breakage or when the goods themselves are
25 individually packed in a can or the like as the can in effect reinforces the container against crushing. However, it has been found that when the goods to be shipped are of such a character as to require protection,
30 the fragile containers have not in the past proved to be entirely satisfactory. Damage resulting from the use of fragile containers has been particularly noticeable in the shipment of glass articles, as the mere shock or jar
35 of the container or the slight crushing of its wall has in some instances resulted in the total destruction of the article or articles contained therein.

It is contemplated by the present invention
40 to overcome the difficulties encountered in the use of corrugated paper or similar containers, in which glassware and other easily destructible articles are shipped, and a particular object of the invention is to construct such a
45 container with spaced double walls which will afford protection for the inner walls thereof, and as a result will protect the article or articles contained therein even in the event that the container is dropped or roughly
50 handled.

Another object of the invention is to provide a container having a double wall along the entire exterior portion thereof, and having a shell forming the inner side walls of the double wall portion, which shell is totally dis-
55 connected from the outer wall except by inner end members which constitute means for supporting the shell in spaced relation.

The invention further contemplates the provision of means for supporting the inner
60 shell of the container, which means comprise angularly disposed connecting webs for effecting shock absorbing supports tending to take up the jarring action to which the outer wall of the container might be subjected.
65

It is a further object of the invention that the container be formed into separate compartments, each of which is maintained in spaced relation to the outer wall of the container and to each other, and it is also con-
70 templated by the invention that the compartments be maintained in this manner entirely by the inner end members.

Other objects and advantages will be apparent from the following detailed description
75 when considered in connection with the accompanying drawings wherein;

Fig. 1 is a vertical sectional view through one form of my invention illustrating separate compartments fully spaced and securely
80 maintained in position,

Fig. 2 is a perspective view of one of the partition members used to form the container into separate compartments,

Fig. 3 is a perspective view of one inner
85 end member which constitutes the supporting means for the inner shell,

Fig. 4 is a vertical sectional view through a modified form of the invention illustrating a single compartment container, and showing
90 the upper inner end member and shell partly in elevation, and

Fig. 5 is a transverse sectional view taken on line 5—5 of Fig. 4.

Now referring to the drawings in detail,
95 the numeral 1 designates the outer wall of a container provided with flaps 2 and 3 respectively for closing each end thereof. Arranged within the container is an inner end member 4 which when the container is in the
100

position illustrated in either Fig. 1 or Fig. 4 is shown adjacent the bottom upon the folded flaps. The member 4 has a flat inner portion 5 and angularly disposed webs 6 extending upwardly and outwardly therefrom. The webs 6 are disconnected from each other as illustrated in Fig. 3, and have extending webs or legs 7 folded backwardly with respect thereto which assume a position perpendicular to the portion 5 when in position in the container and have their free ends extending to a point beyond the said portion 5. As the legs 7 extend materially beyond the flat portion 5 this portion is maintained in spaced relation to the closed flaps 2 and 3 therefore forming an inner end wall.

A shell 8 preferably of the same general formation as the outer wall of the container is positioned upon the member 4 and is adapted to engage with the same adjacent the point of connection between the flat portion 5 and the webs 6. When the container is to be in the form illustrated in Fig. 1 a partition member 9 is provided, which member is formed with a transverse portion 10 and supporting walls or webs 11 and 12, the webs being folded upon themselves at 13 and 14 respectively. The folded portions 13 and 14 engage around the ends of opposite walls of the shell 8 and are snugly held thereagainst by the corresponding webs 6 of the inner end member 4.

As the shell 8 is materially shorter than the outer walls of the container its upper end terminates in a position short of the ends of the outer walls. The supporting webs 11 and 12 of the partition member 9 are of such length that the transverse portion 10 is arranged at a point below the center of the shell 8 and therefore the construction permits the opposite or upper end of the container, as shown, to be formed exactly as the lower end thereof, so that when the partition member 9 is applied at the upper end of the shell 8 its transverse portion 10 will be spaced from the portion 10 of the lower partition member. The upper partition member 9 is maintained in position by the corresponding upper end member 4 in the same manner as the lower partition member, and after the flaps 2 and 3 at the upper end are closed the container forms a compact and safe construction in which glass articles, such as globes, might be securely maintained in the separate compartments in a protected position out of contact with the outer walls of the container and with each other.

In the form illustrated in Fig. 4, the partition members are dispensed with and the container is of a shortened length so as to form a single compartment. Except for the shortening of the container and the elimination of the partition members the construction is otherwise the same and the article maintained in the compartment is protected similarly to

the articles maintained in the construction as illustrated in Fig. 1.

In packing the material for shipment and referring first to the structure illustrated in Fig. 4 it is only necessary that the flaps 2 and 3 of the end illustrated as the lower end be folded as shown, and the lower inner end member 4 be inserted in position. Of course, the lower end member 4 may be inserted from the lower end before the flaps 2 and 3 are folded. The inner shell 8 is then applied in position with its ends engaging the point of connection between the flat portion 5 and the webs 6 of the inner end member 4, after which the article is inserted into the shell from the upper end. If the article is of such size as to closely engage the walls of the shell it is not necessary to pack additional shock absorbing or packing material thereabout. The upper inner end member 4 is thereafter placed in position as illustrated and the flaps 2 and 3 folded, after which all of the flaps may be sealed or otherwise fixed in the closed position.

In using the container illustrated in the Fig. 1 it is intended that both partition members 9 be placed in position from the respective ends of the container, and that the respective inner end members 4 be applied thereafter to the article to be packed in the particular compartment is in position, so that the inner end members will securely engage the respective folded portions 13 and 14 of the partition members 9 to bind them upon the ends of the walls of the shell 8 after which the flaps for the respective ends are closed and secured in position.

By the construction illustrated it will be seen that the shell 8 and the flat portions 5 of the inner end members 4 are always maintained out of contact with the outer walls of the container and the flaps at the respective ends, and that the angular disposition of the webs 6 will tend to permit the slight movement of the shell within the outer wall to effect the absorption of shock upon the jarring of the container.

While the present description sets forth a preferred embodiment of the invention, numerous changes may be made in the construction without departing from the spirit of the invention, and it is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

What I claim is:

1. A container comprising an outer wall forming an enclosure, an inner shell arranged within the outer wall, said outer wall being provided with flaps at both ends adapted to be overlapped for closing the ends of the enclosure, said shell being spaced from the wall and having its ends terminated short of the

ends of the wall, and means at each end of the inner shell for maintaining the inner shell in the position spaced from the wall, each of which means is formed with a cupped portion
 5 for engaging with the end of the shell and with portions for maintaining the base of the cupped portion in spaced relation to the flaps when closed, so that the inner shell will be maintained in spaced relation to the wall
 10 with its ends maintained in spaced relation to the closed flaps.

2. A container comprising an outer wall forming an enclosure, an inner shell arranged within the outer wall, said outer wall being
 15 provided with flaps at at least one end adapted to be overlapped for closing said end of the enclosure, said shell being spaced from the wall and having at least its end adjacent the said end of the wall terminated short of
 20 the wall end, and means arranged at said end of the shell for maintaining the shell in the position spaced from the wall, said means having a flat central portion and webs extending from the outer edges thereof, the flat central
 25 portion being adapted to engage against the end of the shell with the webs overlying a part thereof and the webs being folded upon themselves with their free ends extending beyond the plane of the flat portion for engaging
 30 against the flaps when folded, whereby the shell is maintained in the spaced relation to the wall and the end of the shell is maintained in spaced relation to the folded flaps.

3. A container comprising an outer wall forming an enclosure, a shell arranged within the outer wall in spaced relation thereto, said
 35 wall having flaps at both ends which are adapted to be overlapped for closing the respective ends of the enclosure, said shell being terminated short of the ends of the wall, a partition member supported from each end
 40 of the shell with the partitioning portions thereof being arranged adjacent but spaced from each other, and an end member engaging against each end of the shell for maintaining the respective partition member in
 45 position within the shell and the shell spaced from the outer wall, each of said end members being formed with a flat portion for closing the respective end of the shell and with leg portions for maintaining the flat
 50 portion in spaced relation to the respective flaps when closed.

4. A container comprising an outer wall forming an enclosure, a shell arranged within the outer wall in spaced relation thereto, said
 55 wall being provided with flaps at each end thereof adapted to be overlapped for closing the respective end of the enclosure, said shell
 60 being terminated short of the ends of the wall, and an end member arranged at each end of the shell, each of which members is formed with a cupped portion having a base which closes the end of the shell and web por-

tions extending over adjacent portions of the shell, said web portions being folded upon themselves with the folded portion lying in close contact with a portion of the outer wall
 70 and having the free edges thereof engaging against the adjacent flaps when folded, the web portions between the base and the folded portions being angularly disposed, whereby the inner shell is entirely maintained in position by the respective end members.
 75

5. A box construction comprising an outer container providing a bottom, side walls and a closure, an inner tubular shell disposed within the outer container in spaced relation
 80 to the walls thereof and having an open end terminating short of the closure, and an end member closing the open end of the inner shell and providing web portions engaging respectively the end edges of the inner shell and the side extremities thereof, said end member also
 85 including leg portions engaging the closure of the outer container, whereby the inner shell is maintained spaced from the side walls and closure of the outer container.

6. A box construction comprising an outer
 90 container providing a bottom, side walls and a closure, an inner tubular shell disposed within the outer container in spaced relation to the walls thereof and having an open end terminating short of the closure, a partition
 95 member for the inner shell, said partition including portions extending along opposite inner faces of the shell and terminating in bent-over edge portions hooked over the end of the shell, and an end member closing the open
 100 end of the inner shell and providing portions engaging respectively the end and lateral surfaces of the bent-over edge portions of the partition member, said end member also including leg portions engaging the closure of
 105 the outer container, whereby the inner shell is maintained spaced from the side walls and closure of the outer container and the partition member is maintained in fixed relation to the inner shell.
 110

Signed at Cleveland, Ohio, this 25th day of April, 1930.

PAUL W. MIESSLER.