J. B. MILLER.

RECEPTACLE AND HANDLE THEREFOR.

APPLICATION FILED MAR. 22, 1915.

1,236,589.

Patented Aug. 14, 1917.

2 SHEETS—SHEET 1.

FIG. 1.

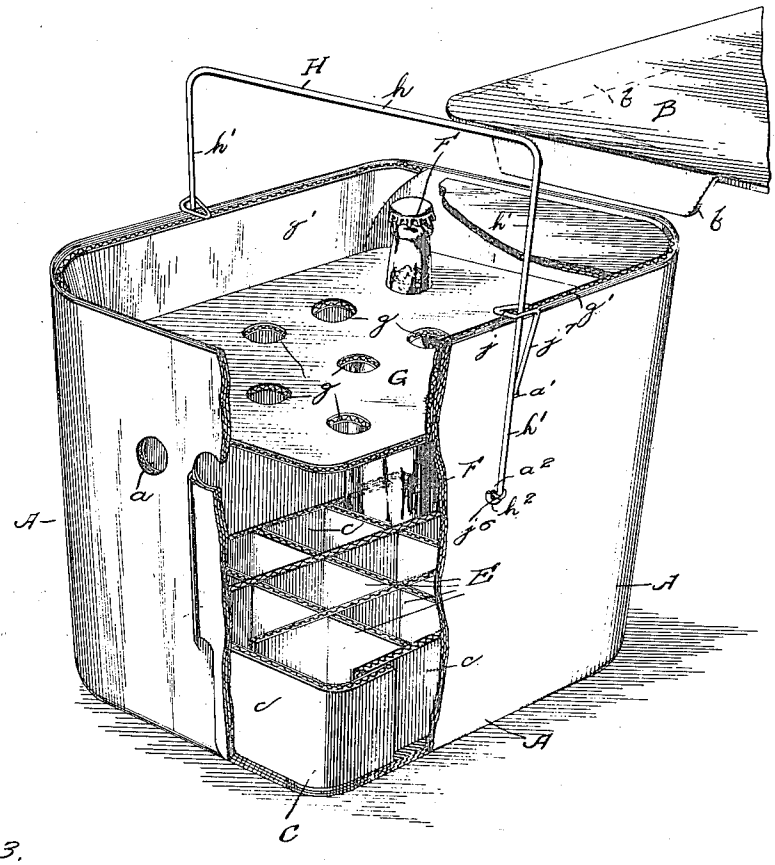
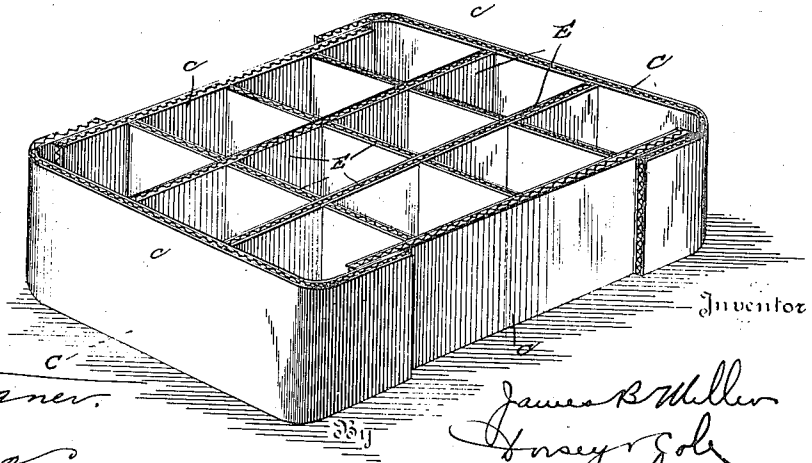


FIG. 3.



Witnesses

R. F. Trognen.

Albert L. Krey

James B. Miller

Dewey & Cole

Attorneys

J. B. MILLER.

RECEPTACLE AND HANDLE THEREFOR.

APPLICATION FILED MAR. 22, 1915.

1,236,589.

Patented Aug. 14, 1917.

2 SHEETS—SHEET 2.

FIG. 2.

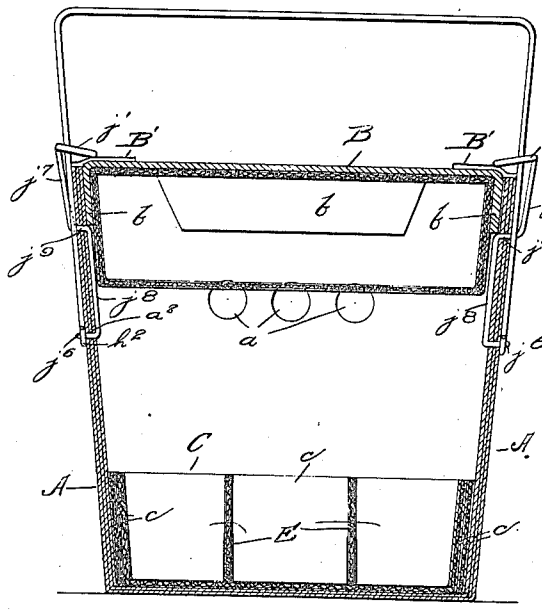


FIG. 5.

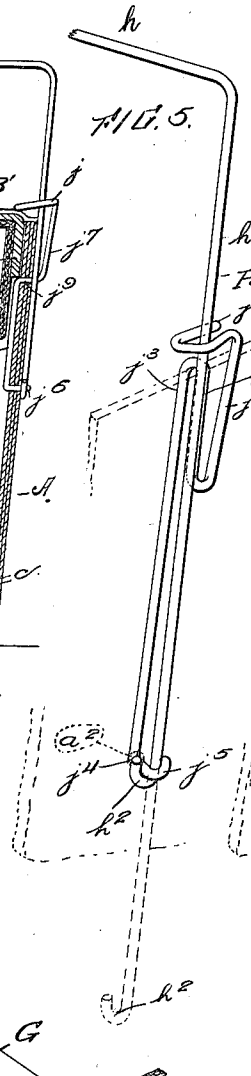


FIG. 6.

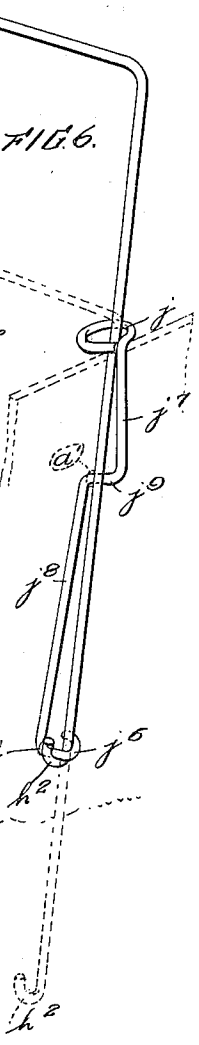
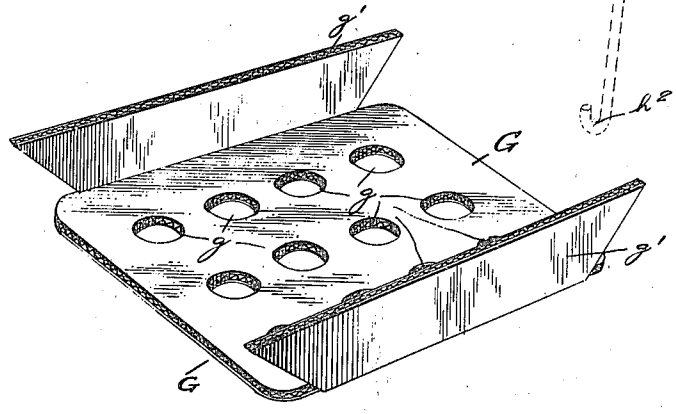


FIG. 4.



Witnesses

R. F. Troyner.

Albert L. Krug.

Inventor

James B. Miller

By Dewey & Cole

his Attorney

UNITED STATES PATENT OFFICE.

JAMES B. MILLER, OF ROCHESTER, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE FI-BO-PAK COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

RECEPTACLE AND HANDLE THEREFOR.

1,236,589. Specification of Letters Patent. Patented Aug. 14, 1917.

Application filed March 22, 1915. Serial No. 16,125.

To all whom it may concern:

Be it known that I, JAMES B. MILLER, a citizen of the United States of America, and a resident of Rochester, New York, have invented certain new and useful Improvements in Receptacles and Handles Therefor, of which the following is a specification.

One purpose of this invention is the construction of a receptacle, particularly adapted for the transportation of bottled goods, which has sufficient strength and rigidity to be accorded low transportation charges by the railroad and express companies, and which will properly protect the bottles against breakage, both by contact with each other and by external blows. This is accomplished by placing in the base of the receptacle a cushion and a cellular divider to steady the bottom of the bottles, and by supporting upon the neck of the bottles a spacing plate which holds the upper ends of such bottles apart, the bottles in turn, supporting the spacing plate which has upstanding edges to reinforce the top of the receptacle to prevent crushing, while above the head of the bottles and beneath the cover a pad may be placed to absorb direct shock.

Another object is the construction of a handle for a receptacle which, when in use, may be depressed and lay close upon the top, but which, when wanted, may be lifted therefrom for ready engagement, the handle and handle-retainers being so constructed that it may be readily applied to the receptacle without the use of tools.

With the objects above stated in view, the invention consists in the construction, arrangement, and combination of the several parts of which it is composed, as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings, in which corresponding parts are designated by corresponding marks of reference,—

Figure 1 is a perspective view of a receptacle constructed in accordance with this invention, parts of the outer wall being broken away for the purpose of better illustration.

Fig. 2 is a cross section thereof.

Fig. 3 is a perspective view of the base section and cellular divider.

Fig. 4 is a perspective view of the separating plate.

Fig. 5 is a fragmental view, illustrating the handle and showing it in its raised and lowered positions.

Fig. 6 is a similar view of another form thereof.

The receptacle A itself is preferably made of press or fiber board, and substantially rectangular in shape, the side and end walls being tapered outwardly toward the top in order to prevent the whole side or end walls of the receptacle contacting with the walls of other receptacles of like character, when closely packed for transportation. By this construction the jars and strains occasioned by shipping are transmitted to the upper part of the receptacle above its contents and where the walls are laterally supported by the cover and spacing plate as hereinafter described.

Within the base of the receptacle is located a bottom tray C, preferably made of cellular fiber-board, and provided with upstanding edges *c*. The bottom of this tray C acts to reinforce and stiffen the bottom of the receptacle against side pressure, and to distribute the weight of the contents over the bottom.

Located within the bottom tray C, is the cellular divider E, forming such tray into a number of compartments, each of which is adapted to receive the bottom of a bottle, as shown at F.

Supported on the necks of the bottles, is a spacing plate G, provided with perforations *g*, through which the necks of the bottles project, such perforations being of such size that they, by resting on the swell of the bottles, support the plate. The plate is of such size and shape as to fit snugly within and contact with the receptacle near the top thereof at the level at which it is supported by the bottles, and thus serves to reinforce the sides and ends of the receptacle against pressure which will bear at this point owing to the tapered walls. It is, by preference, made of corrugated fiber-board, and has upstanding side walls *g'* of such a height that when the container is supported by the bottles, the side walls will be substantially flush with the side walls of the receptacle, and thus serve to strengthen and support the cover B from crushing strains from above. By cutting the ends of the upstanding side walls *g'* at an angle, as shown in

Fig. 4, so that the outer edge is of greater length than the base of the wall at the point of junction with the plate G, I provide means for strengthening and supporting the rounded corners of the receptacle in that the upper ends of the upstanding side walls are caused to bend and conform with the curvature of the receptacle and contact with the other walls of the receptacle as shown in Fig. 1. It should be understood that the angle of the ends of the walls and its contact with the ends of the receptacle may be varied, as desired.

In assembling such a package, the side flaps b of the cover are inserted between the walls of the receptacle and the upstanding side walls g' of the plate, and if the use of the package requires it, the cover is then sealed by means of paper strips B′ or any suitable fastening means. These side flaps b not only serve to hold the cover in place, but act as a reinforcing means to prevent the lateral displacement of the side walls of the receptacle at the point where such walls are subjected to shock.

By preference holes a are formed in the ends of the receptacle to permit insertion of the fingers to carry the package.

The handle H is of wire, the part h thereof extending across the top of the container, being substantially straight, while the two ends h' depend downwardly substantially parallel with each other, such ends terminating in hooks h^2.

On each side of the receptacle and at the center thereof is secured a handle-retainer, shown in detail in Fig. 5, each retainer consisting of wire strips, the upper end of which is formed into an eye j, the shank j' of which projects downwardly and is then bent upwardly as at j^2, it being then again bent downwardly as at j^3 and then outwardly substantially at right angles as at j^4, after which it is bent sidewise, forming a hook as at j^5, in alinement with the eye j, but at the opposite end of the portion j^3. These handle-retainers are affixed to the receptacle by inserting the upper edge of the side of the receptacle between the portions j^2 and j^3 of the retainers with its edge against the bends connecting these portions, whereupon the hooks j^5 and the portions j^4 of the retainers are passed outwardly through apertures a^2 formed in the sides of the receptacle, so that the hooks now lie upon the outside of the receptacle with the ends of retainers forming such hooks against the outside of the receptacle. The ends h' of the handle are now passed through the corresponding eye j of each retainer, and are also passed within the corresponding hook j^5 at the lower end of each retainer, the hook being sprung for this purpose. When so assembled, the handle is capable of running up and down in the eyes and hooks of the retainers, its upward movement being limited by the engagement of the hooks h^2 of the handle with the hooks j^5 of the handle-retainers.

It will be noted that this manner of attaching the handles in no way interferes with the formation of the blank in the manner before described and that no tools are necessary at the time of applying the handles, the receptacle having been suitably perforated to receive the handle-retainers.

In Fig. 6, I have shown another form of handle-retainer, this comprising, as before, a wire having an eye j at one end, and a hook j^6 at the other end. In this form, the hook and eye are connected by two straight portions j^7 and j^8, between which is the off-set portion j^9. This form of retainer is applied to the receptacle by passing from the outside of the receptacle the hooked end of the retainer through an aperture a' formed in the side of the receptacle near the upper edge thereof, at the point at which the handle is to be fixed, until the off-set portion j^9 is located in such aperture, after which the hooked end is passed through the aperture a^2 of the receptacle as before.

In both forms of retainers shown herein, it will be noted that they comprise one portion, j^2 or j^7, located upon the exterior of the receptacle and substantially parallel to the side thereof, and another portion j^3 or j^8 located upon the inside of the receptacle and substantially parallel therewith. These portions require peculiar manipulation of the retainers to remove or replace them, and prevent them from falling out under the conditions met with in service. In both forms it will be noted that no special tools are required to insert the retainers, inasmuch as they are merely passed through a perforation or perforations preformed in the receptacle at the time of its assembly.

I have designated the parts j as eyes, to distinguish them from the opposite ends of the retainers which have been designated hooks. This is purely for convenience as it is not essential in any way that such parts j be completely closed, it only being necessary that they be of such a shape as to preclude the removal of the handle therefrom by sidewise movement.

By preference, the eyes j are located slightly above the top of the sides of the receptacle, to permit the cover being inserted beneath them, and to hold it down.

Having thus described my invention what I claim and desire to secure by Letters Patent is:—

1. The combination of a receptacle for bottles or like articles and a top therefor, of a tray located in the lower part thereof and comprising a bottom portion and side walls substantially fitting within the bottom of the receptacle and serving to strengthen

the same, a cell case located within the tray and serving to space the bottles, a perforated spacing plate surrounding and contacting with the bottles, and which substantially fits within the receptacle at the point at which it is supported, the plate having upstanding side walls extending substantially flush with the top of the sides of the receptacle and serving to strengthen the cover and also serving to hold the bottles against the bottom of the receptacle.

2. The combination with a receptacle for bottles or like articles, of a tray located in the lower part thereof and comprising a bottom portion and side walls substantially fitting within the bottom of the receptacle and serving to strengthen the same, a cell case located within the tray and serving to space the bottles, a perforated spacing plate surrounding and contacting with the bottles, and which substantially fits within the receptacle at the point at which it is supported, the plate having upstanding side walls extending substantially flush with the top of the sides of the receptacle, and a cover adapted to rest upon the said upstanding side walls, and having members adapted to engage the upstanding side walls and the receptacle, and means for connecting the cover and the receptacle.

3. The combination of a receptacle for bottles or the like articles, and a top therefor, of a tray located in the lower part thereof, and comprising a bottom portion and side walls substantially fitting within the bottom of the receptacle and serving to strengthen the same, a cell case located within the tray and serving to space the bottles, a perforated spacing plate surrounding and contacting with the bottles, and which substantially fits within the receptacle at the point at which it is supported, side walls formed on the plate and contacting with the sides of the case and extending upwardly substantially flush with the top of the sides of the receptacle and serving to strengthen the sides of the same and the cover and also serving to hold the bottles against the bottom of the receptacle.

4. A supporting plate for a receptacle comprising a perforated body and side walls perpendicular to said body, the edges of each of the walls being of greater length than its base.

5. The combination of a receptacle and a perforated plate having side walls formed thereon whose upper edges are of greater length than their base, and which are adapted to contact with more than one wall of the receptacle.

6. The combination of a receptacle having outwardly tapering walls, a cell case located within the bottom thereof, and a spacing plate within said receptacle and contacting with the walls thereof and above said cell case, said spacing plate having a plurality of upstanding side walls whose upper edges are of greater length than their base.

7. The combination of a receptacle having outwardly tapering walls, a cell case located within the bottom thereof, a spacing plate within said receptacle and contacting with the walls thereof and above said cell case, said spacing plate having a plurality of upstanding side walls whose upper edges are of greater length than their base and a cover having side flaps adapted to rest between the upstanding side walls of the spacing plate and the walls of the receptacle.

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

JAMES B. MILLER.

Witnesses:
L. PARDEE,
A. R. TURNER.