

Feb. 20, 1934.

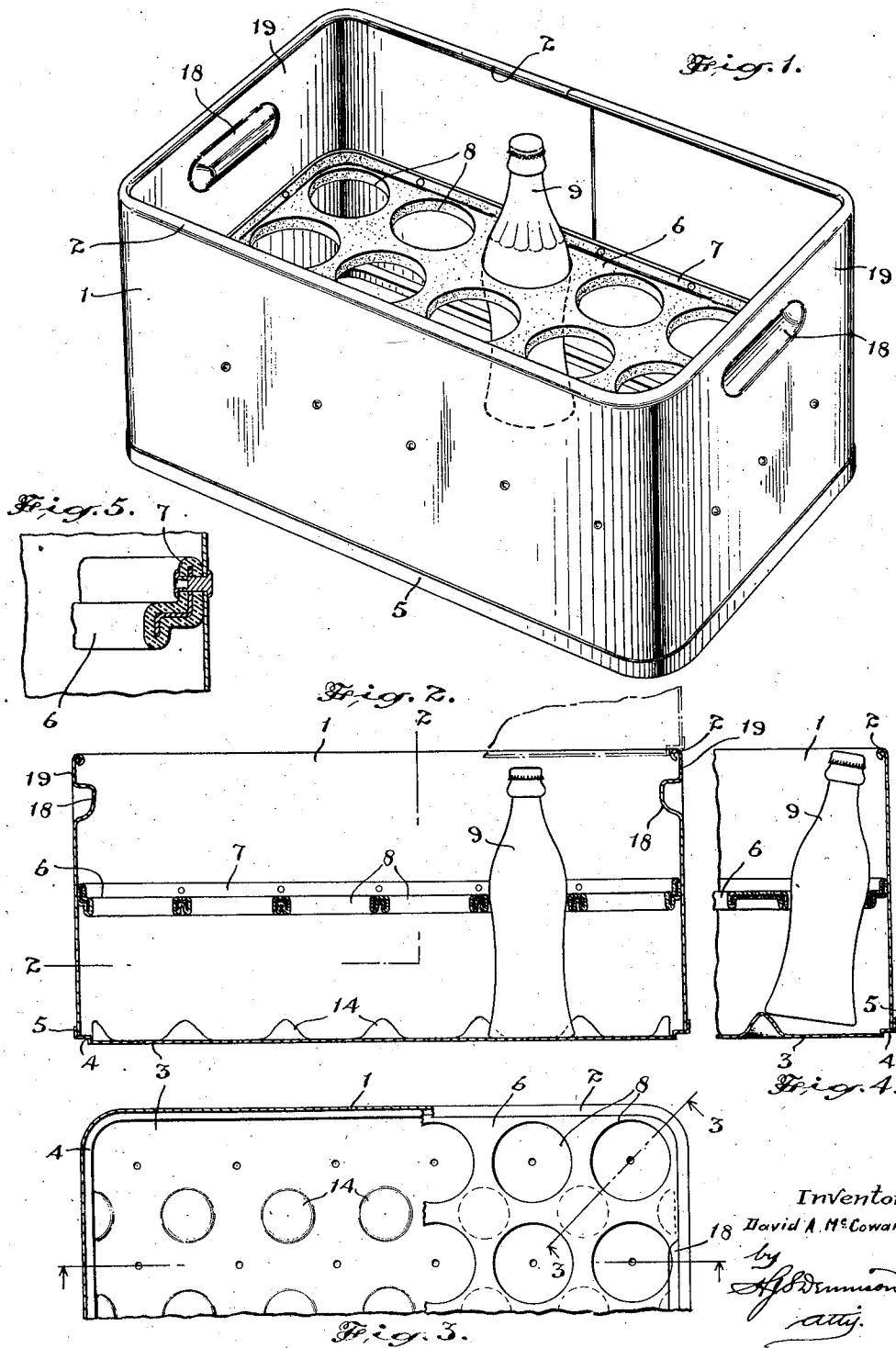
D. A. McCOWAN

1,948,041

BOTTLE CASE

Filed Nov. 9, 1931

2 Sheets-Sheet 1



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1,948,041

BOTTLE CASE

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2 Sheets-Sheet 2

Fig. 7.

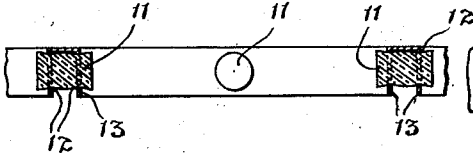


Fig. 6.

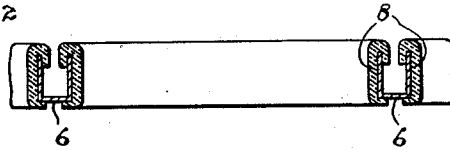


Fig. 8.

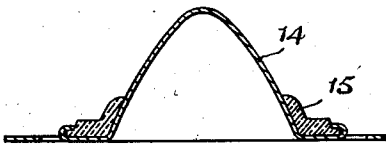


Fig. 9.

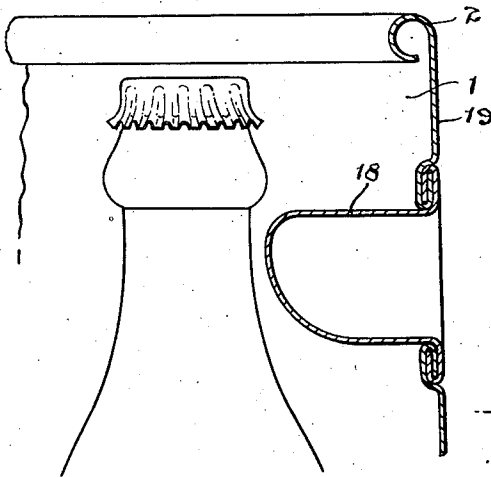
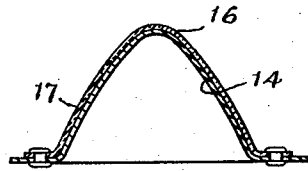


Fig. 10.

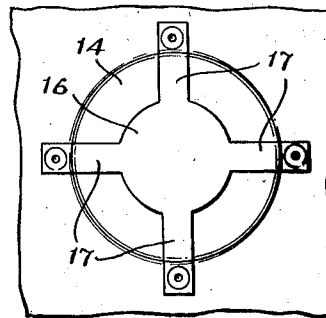


Fig. 11.

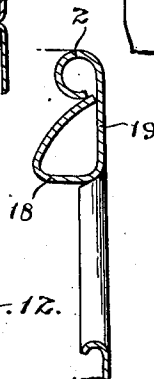


Fig. 12.

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UNITED STATES PATENT OFFICE

1,948,041

BOTTLE CASE

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Application November 9, 1931. Serial No. 573,885

4 Claims. (Cl. 220—21)

The principal objects of this invention are to devise a case particularly adapted for use in the service delivery of bottles such as used for soft drinks, milk, etc., which will be light in weight, easy to handle and will protect the bottles from breakage through rough and careless handling of the case.

Further objects are to form a case which will occupy the minimum of space and may be easily and safely stacked either for storage or transportation.

The principal features of the invention consist in the novel construction of a sheet metal receptacle provided with resilient means for effectively maintaining the bottles in spaced relation and from accidental displacement and consequent damage.

Further important features comprise the novel formation of the bottom and rim of the case whereby secure nesting is effected and also the construction of the socket handles for handling the case.

In the drawings Figure 1 is a perspective view of my improved case showing a bottle arranged therein.

Figure 2 is a longitudinal mid-sectional view showing a bottle in position therein and in dotted lines the corner of another case stacked thereon.

Figure 3 is a plan section of one half of the case taken on the line 2—2 of Figure 2.

Figure 4 is a vertical sectional view on the line 3—3 of Figure 3 showing a bottle in a tilted position with its bottom engaging one of the cone-shaped projections in the bottom.

Figure 5 is a full size cross sectional detail through a portion of the bottle-holding partition and case showing the means for fastening the same.

Figure 6 is an enlarged sectional view through the partition showing a modified arrangement of friction surfacing for holding the bottles in place.

Figure 7 is a view similar to Figure 6 showing a further modification of friction means for holding the bottles from displacement.

Figure 8 is an enlarged sectional view illustrating the construction of one of the raised protuberances in the bottom and means for cushioning the bottle.

Figure 9 is a view similar to Figure 8 showing a modified means of sound deadening.

Figure 10 is a plan view of the structure shown in Figure 9.

Figures 11 and 12 are sectional views showing the handhold structure in modified form.

It is common practice to provide bottle-carry-

ing cases with partitions for separating the bottles one from the other, particularly where the case is turned up on its end, so that the bottles will be held in place when the case is being carried in one hand.

Such cases have been mostly made of wood on account of cheapness of manufacture and when they are stacked upon a truck there is great danger of the cases slipping and falling one from the other resulting in the breakage of the bottles and loss of their contents.

When the type of case referred to is being carried on end by one hand, or if it is placed on end the partitions will not positively retain the bottles in their proper position in the case and the liability of the bottles shifting and dropping from the case lessens the efficiency of the carrier.

The present invention contemplates the elimination of these objectionable features and in the form shown the side wall 1 of the case, preferably of a non-ferrous metal, is formed into a rectangular shape having an inwardly turned beaded top edge 2.

The bottom 3 is formed from a metal sheet having a stepped flange 4 formed with an upright edge 5 adapted to closely engage the side wall and to be soldered, brazed or welded thereto. The stepped flange provides a depressed centre for the bottom which fits within the bead 2 of the upper edge of another case when they are stacked one upon the other.

A horizontal partition 6 is arranged about midway of the height of the side walls and is formed of a metal sheet. This sheet is formed with a surrounding flange 7 which is secured to the inner wall of the case 1 and a plurality of openings 8 are formed in the sheet preferably arranged in rows and the perimeter of the openings is slightly larger than the bottles 9 that are to be arranged therein.

In forming the partition 6, the metal is flanged around the openings 8 and friction contact surfaces are provided on said flanges to engage the bottles.

In the form illustrated in Figures 2, 4 and 5, the metal plate including the flanges is completely covered with a surfacing of resilient friction material, preferably rubber, deposited by a deposition process over the entire area.

A partition formed in this manner is extremely desirable, as it provides resilient contact surfaces around the bottles to prevent their rattling and the friction surfaces of the flanges grip the bottles upon their turning slightly so that they

will not fall out, even though the case may be dropped, thrown down, or turned partially over toward the horizontal position upside down.

The process of coating metals with a rubber deposit is a well-known one, but the application of such covered material as herein defined is entirely new.

It may be found desirable to insert rubber gaskets or rings such as are shown in Figure 6. These rings are flanged to lap around and grip the edges of the flanged rims of the openings 8 in the partition 6. These rings perform the same service as the rubber-coated sheet in their friction and anti-rattling qualities.

Another modification of the friction contact and anti-rattler feature is illustrated in Figure 7 in which rubber plugs 11 are inserted through holes 12 in the flanges 13.

It is extremely desirable that the bottles when placed in the cases assume a vertical position and that this vertical position shall be substantially maintained. In order to ensure the positioning of the bottles, the bottom 3 is stamped with rounded conical protuberances 14. These are spaced in alignment between the longitudinal and transverse rows of bottles so that a bottle when inserted through one of the openings 8 will drop against the rounded surface of one of these protuberances and be guided into a centralized position.

It may be found desirable to cushion the bottom of the bottles in contact with the bottom of the case and in Figure 8 flanged rubber rings 15 are secured in position surrounding the conical members 14. These are so placed that the bottoms of the bottles will rest upon the rings while the edges will engage the flanges and thus the rattling of glass upon metal will be avoided.

In the form shown in Figs. 9 and 10 a cap 16 of rubber or other suitable material provided with a plurality of radial strips 17 is secured over the protuberance 14 and the radial strips form an anti-rattle and cushioning element for the bottles.

Hand holes 18 are formed in the ends 19 of the case and these may be formed by pressing the metal of the case inwardly as shown in Figures 1 and 2 or they may be made as shown in detail in Figure 11 where a separate piece of metal is seamed into the end of the case. In both instances the metal of the hand hole extends inwardly in a substantially horizontal position from the top and curves outwardly and downwardly therefrom. This straight horizontal arrangement in the top provides an exceptionally good hold or grip for the fingers, particularly when handling boxes that are stacked rather high or in lifting them from a replacing them on a truck.

It may be found desirable to leave the hand hole open and to form the metal stamped out to curl upwardly as shown in Figure 12 to form a hand grip and incidentally reinforce the metal end.

It will be readily understood that a box constructed in the manner described will be extremely rugged, the sheet metal sides of the case are supported intermediate of their height by the central partition, the size of the case is restricted to its minimum to contain the desired number of bottles, there is no lost space in transportation and no excessive bulk, and what is most important, is that the gross weight of the container is considerably less than the cheapest form of boxes or cases and this is a very important item in present-day conditions of transportation.

What I claim as my invention is:—

1. A bottle case having sheet metal walls and a bottom, a sheet metal partition secured intermediate of the height of said walls and having flanged openings, said sheet metal partition having its outer edges turned upwardly in a flange to extend parallel to the walls of said case and having the flanges of said openings turned downwardly, the entire body of said flanged sheet being covered on both sides with a thickness of rubber, to act as a frictional cushioning and sound-deadening agent, the side flanges being securely riveted to the walls of the case and insulated therefrom by the thickness of said rubber covering.

2. In a bottle case having sheet metal walls, a partition secured intermediate of the height of said walls and having flanged openings therein arranged in rows, resilient friction material surrounding said flanged openings to engage the bottles in cushioning and frictional contact, a bottom secured to the walls of said case and having a plurality of raised protuberances presenting inclined surfaces and arranged in alignment between the openings in said partition, and means arranged on said bottom to form a cushioning contact for the bottoms of the bottles.

3. In a bottle case having sheet metal walls, a partition secured intermediate of the height of said walls and having flanged openings therein arranged in rows, resilient friction material surrounding said flanged openings to engage the bottles in cushioning and frictional contact, a bottom secured to the walls of said case and having a plurality of raised protuberances presenting inclined surfaces and arranged in alignment between the openings in said partition, and rubber cushioning members secured to said bottom between said protuberances and adapted to engage the bottom side and peripheral edges of the bottoms of the bottles.

4. A bottle case having a sheet metal wall, a partition secured intermediate of the height of said wall and having flanged openings, the flanges of said openings having a plurality of circumferentially spaced openings therein, and sections of resilient cushioning material fitting in said openings and presenting frictional contact with the bottles.

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