May 18, 1948. W. A. MORSE 2,441,834

BOTTLE CARRIER

Filed March 25, 1946

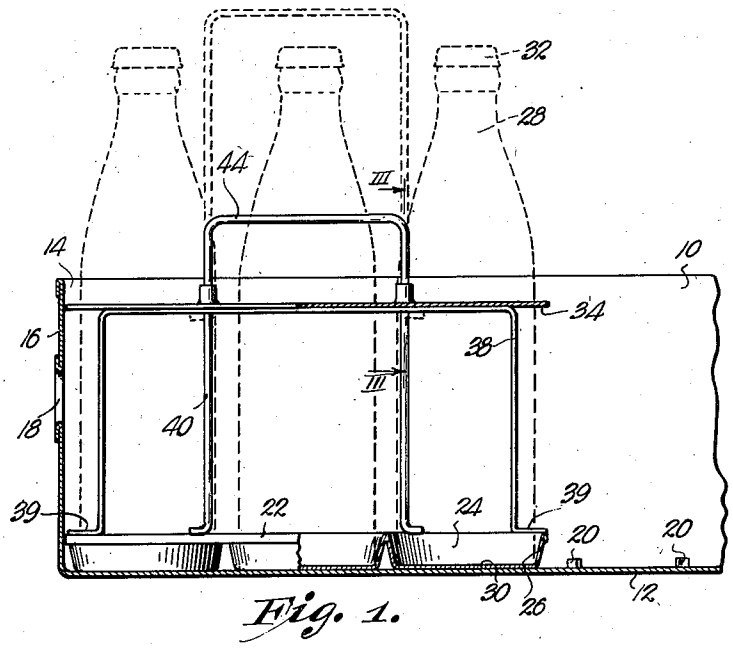


Fig. 1.

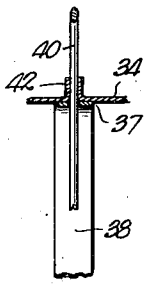


Fig. 3.

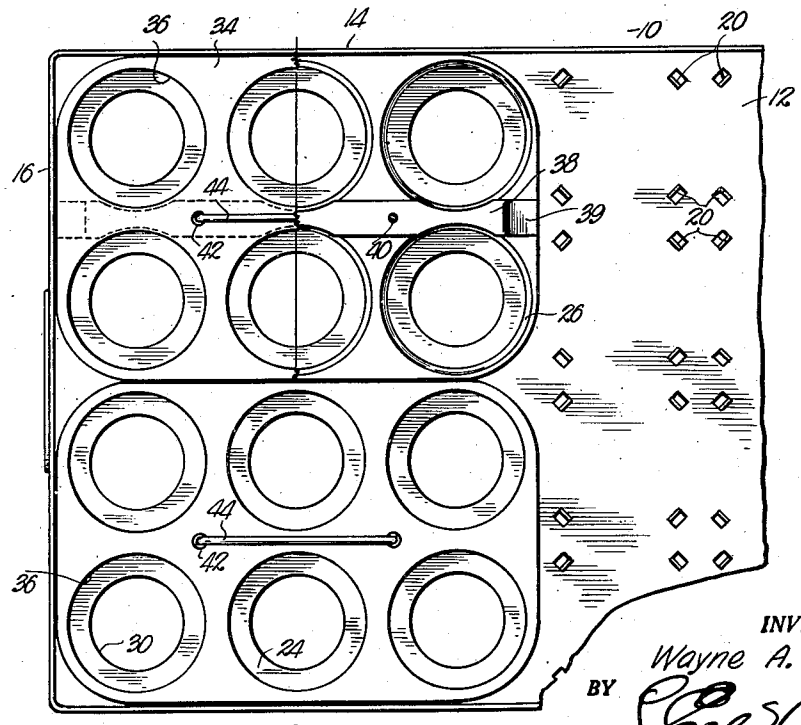


Fig. 2.

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BOTTLE CARRIER

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2 Claims. (Cl. 224—48)

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This invention relates to bottle carriers of the type employed to hold a number of bottles as they are transported from bottling plant to retail store and further as the bottles are carried from the retail store to the point of ultimate use.

One of the primary aims of this invention is the provision of a bottle carrier comprising a main case designed to receive a number of racks, the case and each rack being formed to present interengaging parts adapted to prevent lateral displacement of the racks in the case even though the case contains a fewer number of racks than its full capacity.

Further objects of the invention are to provide a bottle carrier having a tray for receiving the bottoms of the bottles and for maintaining the bottles against movement toward or from each other as they are transported in the rack; to provide a carrier for bottles that may be stacked when filled and maintain the racks against accidental displacement due to an interlocking feature forming a part of the rack structure and to provide a carrier with a number of separate individual stalls, each capable of supporting a bottle against lateral displacement and tipping.

Other aims of the invention will appear during the course of the following specification referring to the accompanying drawing, wherein:

Fig. 1 is a fragmentary sectional view through a part of the bottle carrier assembly.

Fig. 2 is a fragmentary top plan view of the bottle carrier, and

Fig. 3 is a fragmentary detailed sectional view taken on line III—III of Fig. 1.

The handling of bottle cartons or racks wherein relatively few bottles are packaged, has been difficult due to the inability of the retail store to stack the carriers and to the failure of the racks or carriers to maintain the bottles therein in an upright condition. The majority of the carriers must be completely filled to capacity before the several bottles will positively and constantly assume an upright position. Transportation of the carriers when filled with six bottles has also been a problem because jarring caused the bottles to tip and stacking could not be accomplished due to the form of the bottom of the racks.

The bottle carrier assembly made in accordance with this invention answers a major portion of the problems that have heretofore arisen with respect to presenting a half dozen bottles to the purchaser without expensive handling costs between the bottling plant and the point of purchase.

The case 10 comprising one element of the carrier assembly may be made of sheet metal or such material as found economical and desirable and its tray-like form presents a bottom wall 12 and

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side and end walls 14 and 16 respectively. A hand opening 18 provided in the end wall 16 is analogous to the conventional opening now employed in bottle cases where the latter is divided into stalls by complicated and expensive partitions.

A number of detents 20 struck upwardly from bottom wall 12 of case 10 are patterned as illustrated in Fig. 2 to cooperate with the hereinafter described tray of the racks which hold six bottles. It is this capacity of rack or carrier that is most desirable for presentation to the purchasing public but which is extremely undesirable from the standpoint of the bottler and retail merchant.

When case 10 is constructed, its size is such as to receive four racks and therefore, a case having 24 bottle capacity is transportable as a unit. Each rack for six bottles comprises a tray 22 wherein is formed a number of cups 24, the annular side walls 26 whereof are downwardly and inwardly inclined to receive the bottom of a bottle 28. The bottoms of cups 24 have an opening 30 slightly larger in diameter than the conventional caps 32 and when the racks are not in case 10, stacking is possible because caps 32 of the several bottles 28 project into openings 30 and against the bottoms of bottles 28 in the overlying rack.

The flare of caps 32 prevents the rack from dropping down over the underlying group of bottles 28 and a tight separable interconnection is created. A plate 34 held in spaced relation above tray 22 is perforated as at 36 to present an opening in alignment with each cup 24. This plate 34 is maintained in rigid connection and supported by tray 22 through the medium of yoke 38. This yoke 38 is U-shaped in form and has the free ends of its two legs laterally extended as at 39 for engagement with tray 22. The bight of yoke 38 lies along the lower face of plate 34 and is welded or otherwise secured as at 37 to hold the plate in place.

A U-shaped handle 40 is mounted on yoke 38 for shifting to and from the position shown in full lines of Fig. 1. The legs of handle 40 are slidable through openings provided in yoke 38 and bearings 42 of plate 34 and when the bight 44 of handle 40 is gripped, this handle slides to a point where laterally extended lengths 46 at the ends of the legs of handle 40 will strike yoke 38 and prevent further upward movement. The position then assumed by handle 40 is illustrated in dotted lines of Fig. 1. In such condition sufficient clearance is provided between the upper ends of bottles 28 and grip 44 of handle 40 for the purchaser to lift rack from case 10 and carry the same to a point of use.

Detents 20 embrace cups 24 and hold the rack against lateral displacement in the tray. These detents will not prevent lifting of the rack how-

ever, when handle **44** is moved to the operative position from between the two rows of bottles and even after one or more racks have been taken from tray **10**, the remaining rack or racks will not slide about in the tray if the same should be shifted for any reason.

It is notable that the manner of mounting handle **40** with respect to yoke **38** requires that the handle, through yoke **38**, carry the entire weight without imparting a strain to plate **34**. This plate **34** serves as a guide or centering element for bottles **28** when they are passed into the cups of tray **22**. The form of these several cups **24** is such as to maintain the bottles in spaced relation and since the perforations **36** of plate **34** and cups **24** of tray **22** are arranged in alignment, bottles **28** will not tip nor slide out of position even though some of the bottles have been removed from the rack.

The structure above described is desirable because of the objects attained as above set down and also because the bottles are protected against breakage due to interengagement during the time they are being transported in the rack. It is possible to construct bottle carriers having physical characteristics different from those specified and shown and therefore, it is desired to be limited only by the spirit of the invention and scope of the appended claims.

Having thus described the invention what I claim as new and desire to secure by Letters Patent is:

1. In a bottle carrier, a tray having a number of cups formed therein to receive the bottoms of the bottles; a plate, having perforations therein, spaced above the tray; a yoke holding the plate and tray in operative position, said cups having downwardly and inwardly inclined side walls disposed to center the bottles in the cups and in the perforations of the plate; and a handle, having a grip slidably mounted on the yoke for movement to and from a position where the grip is disposed above the tops of the bottles in the carrier, said yoke serving to mount the plate on the tray.

2. In a bottle carrier, a tray for receiving the bottles in an upright position thereon; a plate spaced from said tray and having a number of perforations therein for receiving the bottles intermediate the ends thereof; a yoke interconnecting the plate and the tray; and a handle slidably mounted in the yoke and the plate, said handle having stops engageable with the yoke when the handle is shifted to one end of its path of travel.

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