Sept. 2, 1952 E. C. MEDILL ET AL 2,609,227

BOTTLE CARRIER

Filed Jan. 25, 1950 2 SHEETS—SHEET 1

Fig. 1.

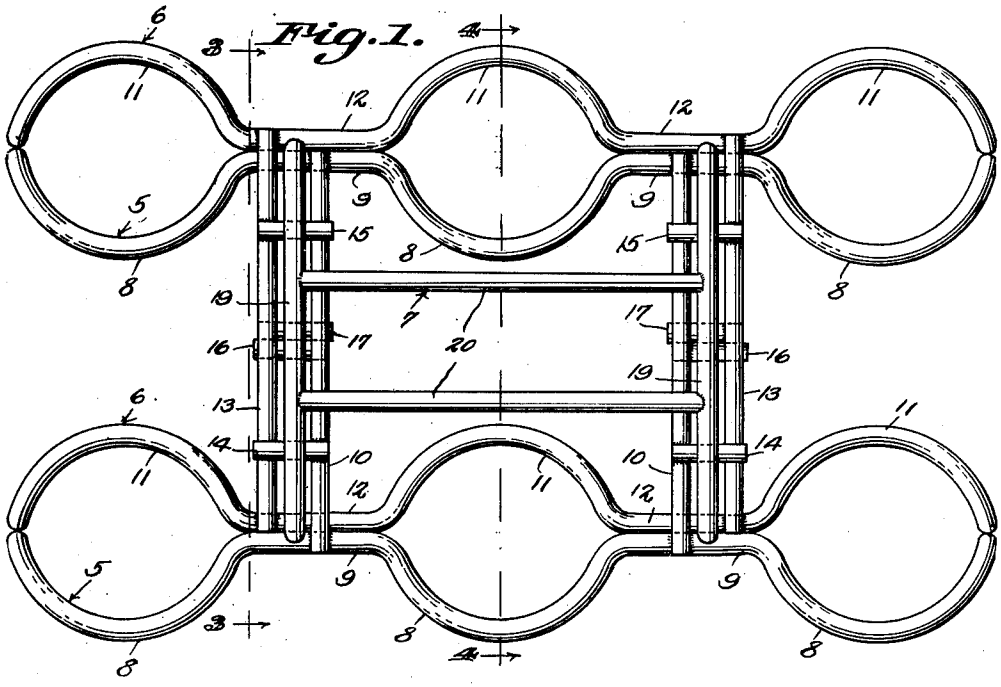
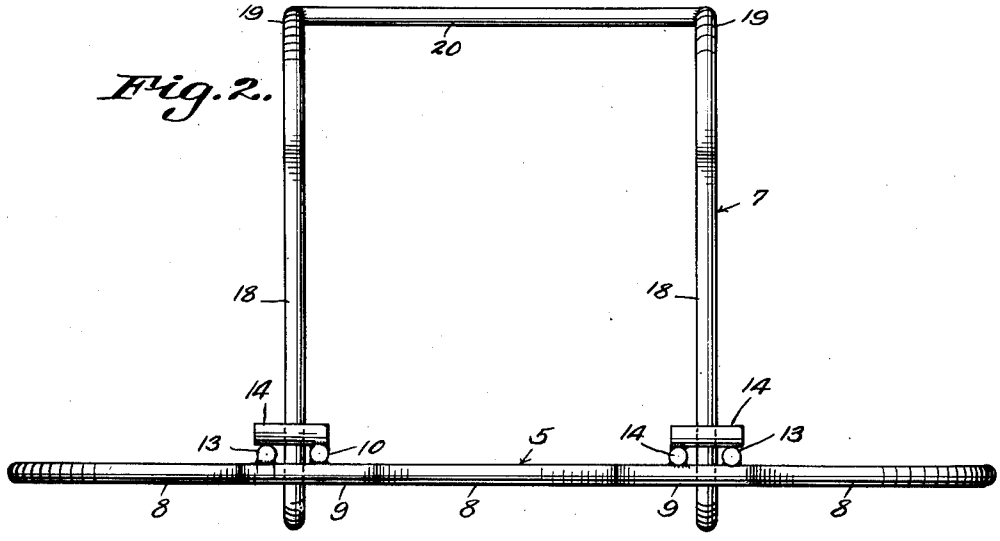


Fig. 2.



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Fig. 3.

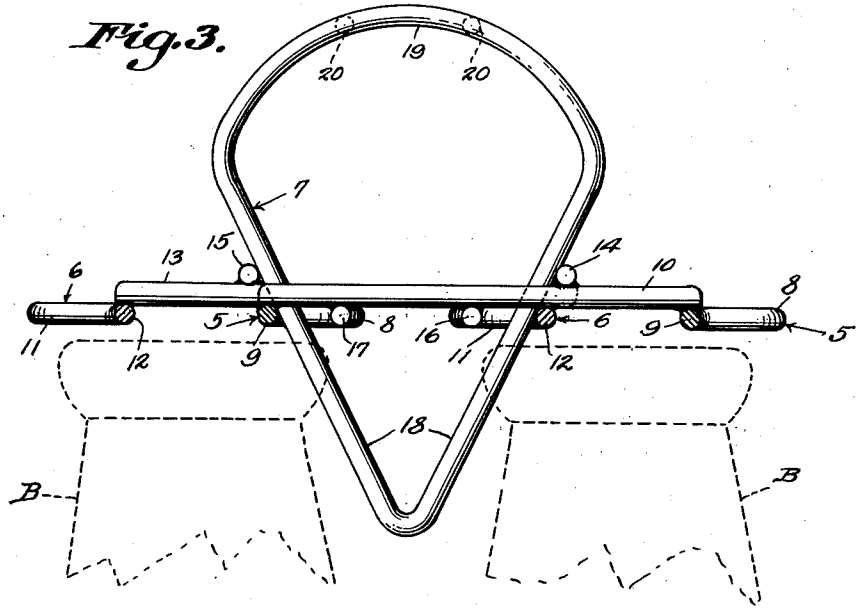
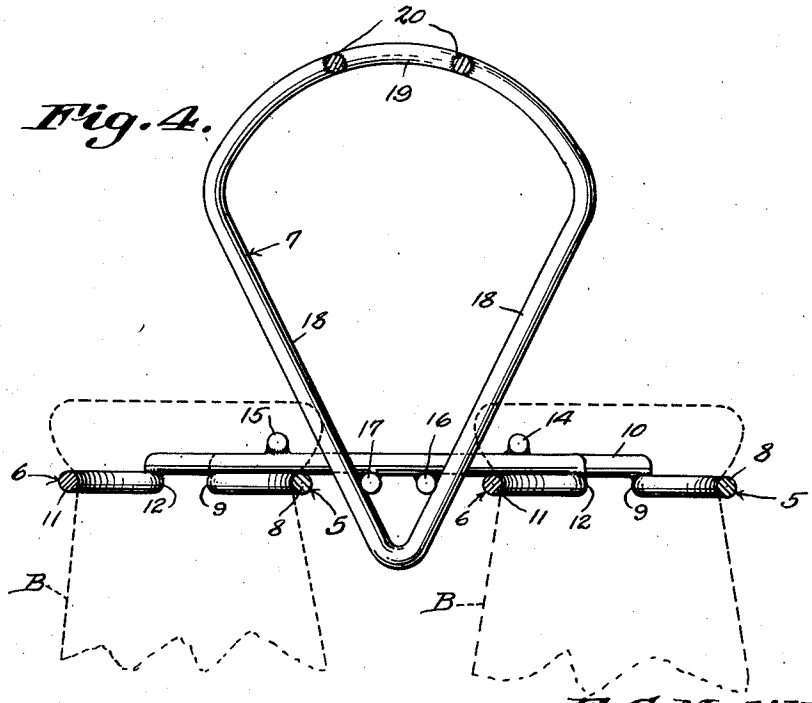


Fig. 4.



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BOTTLE CARRIER

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4 Claims. (Cl. 294—87.26)

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This invention relates to a bottle carrier, and more particularly, has reference to a bottle carrier for use by delivery men such as route men for dairies.

As is well known, considerable time is consumed by route men who, on their route, must make a great many stops, by reason of the necessity of removing individual bottles from a case in the truck or similar vehicle, transferring said bottles to a carrier, and subsequently removing the bottles from the carrier at the door of a house to which the delivery is made.

The main object of the present invention is to provide an improved type of carrier which will save the route man much time, and to this end, we have devised a carrier which, described briefly, is formed throughout of wire material and comprises a pair of frame sections which are spreadable, said frame sections being capable of being either spread or drawn together by downward pressure or upward pull, as the case may be, upon the carrier handle, the frame sections when spread apart releasing a plurality of bottles and when drawn together gripping said bottles. Thus, considered broadly, the carrier is one which grips a plurality of bottles simply by upward pull upon the handle, and releases said bottles upon the simple exertion of downward pressure upon said handle.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts, hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

Referring to the drawings:

Fig. 1 is a top plan view of a bottle carrier formed in accordance with the invention, the parts being in contracted or bottle-gripping position.

Fig. 2 is a side elevational view.

Fig. 3 is a section on line 3—3 of Fig. 1, the frame sections being spread apart preliminary to engagement of a plurality of bottles fragmentarily shown in dotted lines.

Fig. 4 is a section on line 4—4 of Fig. 1, the frame sections being contracted into bottle-gripping position.

Referring to the drawings in detail, basically the bottle carrier of the invention comprises three interengaged and relatively movable units or sections. These are a pair of spreadable

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bottle-gripping frame sections generally designated 5 and 6 that are slidably inter-engaged, and a wedge-shaped handle section 7 inter-engaged with said frame sections and having up or down movement, the handle section when moved downwardly exerting a cam action against the frame sections to bias them outwardly, and when pulled upwardly causing the sections to move toward each other to grip a plurality of bottles B.

The frame section 5 will be first described, and this includes a pair of spaced parallel rods each of which is formed, at intervals spaced longitudinally thereof, with bottle-engaging arcuate portions 8, formed integrally with and spaced apart by straight portions 9.

The parallel rods are rigidly connected in spaced parallel relation by transversely extending cross pieces 10 fixedly joined at their ends to the respective rods by welds or any other suitable means.

Considering now the frame section 6, this is formed like the frame section 5, but it is disposed oppositely to said frame section 5 so as to cooperate with said frame section 5 in gripping the bottles B. Accordingly, the frame section 6 comprises a pair of spaced parallel rods having the bottle-gripping arcuate portions 11 disposed oppositely to the bottle-gripping portions 8 of the frame section 5, said arcuate portions 11 being integral with and spaced apart by straight portions 12 having longitudinal contact with the straight portions 9. Cross pieces 13 parallel to and spaced closely from cross pieces 10 rigidly connect the bottle-engaging rods of the section 6.

Near one end of each cross piece 10 there is rigidly secured to said cross piece a laterally extending lug 14 secured to the upper surface of the cross piece 10 and extended laterally therefrom so as to overlie the adjacent cross piece 13. The cross pieces 13, near their other ends, are similarly provided with laterally extending lugs 15 overlying the cross pieces 10.

Rigidly secured to and extending laterally from the respective cross pieces 10 are the lugs 16 that underlie the cross pieces 13, the lugs 16 being disposed near or at the center of the cross pieces 10. Underlying lugs 17 are also secured to the cross pieces 13, and, like the lugs 16 are so secured near the center portions.

Considering now the handle section 7, this includes a pair of spaced apart vertically disposed wedge members formed with downwardly converging arms 18 that extend downwardly between each pair of cross pieces 10 and 13. The

arms 18 of each wedge member respectively extend between the lugs 14 and 16 of the cross piece 10 and the lugs 15 and 17 of the cross piece 13, and the spaced apart wedge members are rigidly joined by connecting rods 20 that constitute a hand grip.

Considering now the operation of the carrier, the carrier is positioned over a suitable number of bottles B while they are located in a case, and by the exertion of downward pressure upon the handle 7, the arms 18 of the wedge members exert a spreading or wedge action against the top lugs 14 and 15, so as to bias said lugs outwardly thus spreading the respective frame sections 5 and 6 apart to enlarge the space between the arcuate portions 8 and 11 thereof, and thus the carrier slips down over the necks of the bottles. At this time, the user simply pulls upwardly upon the handle section 7, and this causes the inner surfaces of the respective wedging arms 18 to engage the lugs 16 and 17 at the center of the device, forcing said lugs inwardly toward each other and accordingly biasing the frame sections 5 and 6 toward each other so as to cause them to grip the bottles B under the beads at the upper ends of the bottles. The bottles can now be lifted and carried wherever desired, and will be continuously gripped while being so carried because their weight will have the effect of holding the frame sections in tight engagement with the bottle necks.

When the route man is ready to release the bottles they are positioned upon a supporting surface and downward pressure is exerted against the handle section 7 spreading the frame sections apart and permitting the carrier to be lifted off the bottles.

The entire operation of gripping, lifting, carrying, and releasing the bottles will, as will be seen, be a very simple one requiring no more than downward or upward pressure upon the handle section at suitable times, eliminating the necessity of gripping the bottles, transferring them bodily from a case to a carrier, and removing them individually from said carrier.

What is claimed is:

1. A bottle carrier comprising co-planar frame sections spreadable in their common plane, said sections being proportioned to grip bottles between them when drawn together and to release the bottles when spread apart, and a rigid handle section having fixedly connected downwardly converging arms extending through said plane, the outer surfaces of said arms engaging the frame sections to bias them apart when the handle section is forced downwardly and inner surfaces of the arms biasing the frame sections toward each other to draw them together when the handle section is pulled upwardly.

2. A bottle carrier comprising a pair of co-operating co-planar frame sections slidably inter-engaged for movement in their common plane toward or away from each other, each frame section having a plurality of arcuate portions shaped to extend around a portion of a bottle, the arcuate portions of one frame section co-operating with the arcuate portions of the other frame section to grip or release a plurality of bottles, and a rigidly formed handle member

connected to the frame sections, said handle member having fixedly connected downwardly converging arms extending through said plane, the outer surfaces of said arms engaging the frame sections when pressed downwardly exerting a wedging action to spread the frame sections and the inner surfaces of said arms engaging the frame sections when pulled upwardly biasing the frame sections toward each other.

3. A bottle carrier formed throughout from rod material and comprising a pair of co-planar cooperating frame sections slidably inter-engaged for shifting toward and away from each other in their common plane, each frame section comprising a pair of spaced parallel rods, each rod having a plurality of arcuate bottle-engaging portions, each frame section including transversely extending cross pieces rigidly connecting the rods, laterally extending lugs on the respective cross pieces, and a rigid handle member formed with rigidly connected downwardly converging arms extending through said plane and having slidable contact with the respective lugs, the inner surfaces of said arms when the handle member is forced downwardly biasing the lugs and associated frame sections outwardly, the outer surfaces of said arms when the handle member is pulled upwardly biasing the lugs inwardly to contract the frame sections.

4. A bottle carrier comprising a pair of co-planar frame sections and a rigidly formed handle section, each frame section comprising spaced parallel rods each of which is formed with longitudinally spaced bottle-engaging arcuate portions, each frame section including transversely extending cross pieces rigidly connected at their ends to the rods of said frame section and an upper lug secured to each cross piece near one end thereof and a lower lug secured to the central part of each cross piece, the handle section including a pair of spaced rigidly connected wedge members extending downwardly through the plane of the frame sections and each of which is formed with a pair of downwardly converging arms the inner surfaces of which have contact with the lower lugs and the outer surfaces of which have contact with the upper lugs of the respective cross pieces, said downwardly converging arms being rigidly connected at their lower ends to hold the handle section and frame sections assembled, said handle section when pressed downwardly causing the arms to bias the upper lugs outwardly to spread the frame sections, said handle section when pulled upwardly causing the wedging arms to bias the lower lugs inwardly to contract said frame sections.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,007,064	Shipley	July 2, 1935
2,133,877	Stevenson	Oct. 18, 1938
2,472,237	Turner	June 7, 1949