Oct. 18, 1938. T. M. STEVENSEN 2,133,877

BOTTLE CARRIER

Filed Dec. 11, 1936

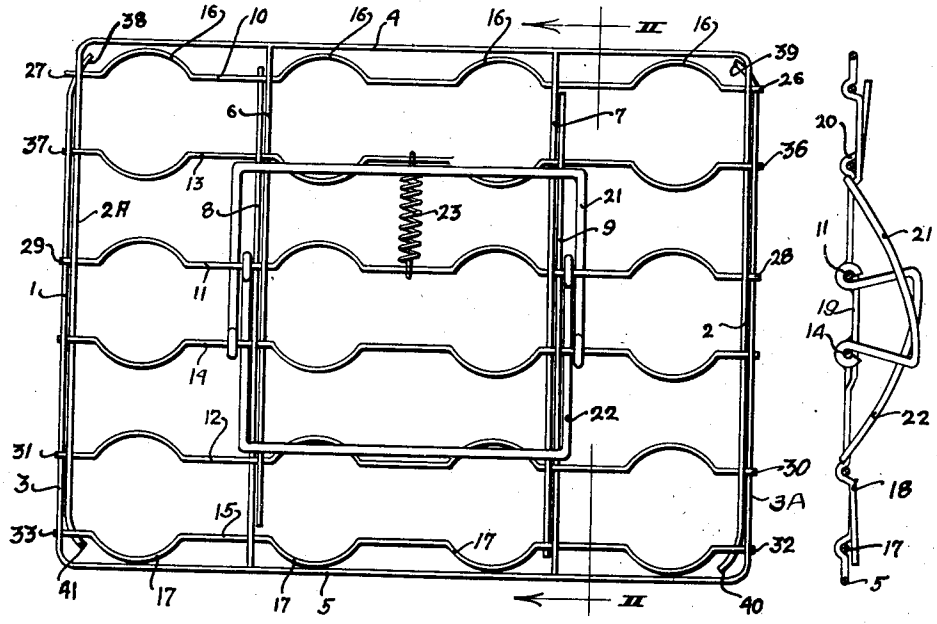


Fig. I

Fig. II

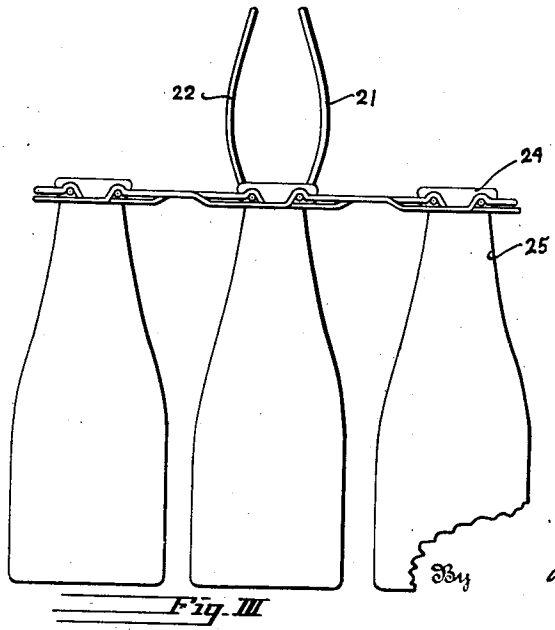


Fig. III

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Patented Oct. 18, 1938 2,133,877

UNITED STATES PATENT OFFICE

2,133,877

BOTTLE CARRIER

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Application December 11, 1936, Serial No. 115,325

3 Claims. (Cl. 294—87)

My invention is particularly useful for the handling of milk, beverage and kindred bottles both when full and when empty.

The primary purpose and object of my invention is to provide a simply constructed device that may be used in handling all of the bottles disposed in a case at one time so that the entire contents of bottles in the case may be removed from the case or placed within the case at one time without the individual handling of each of the bottles disposed within the case.

A further object of my invention consists in so constructing the device that it will be comprised of few parts, one that may be ruggedly made and one that will have a long and useful life with practical freedom from mechanical operating annoyances.

In the handling of milk and beverage bottles it is the general custom to place a number of the bottles in a partitioned case and to deliver the bottles in the case. This necessitates the delivery man carrying the cases one at a time into the place of business and returning the empty case to the delivery wagon or truck. This limits the delivery man to a single case at each delivery. It also requires the individual handling of the bottles to place the same within the case and to remove the same from the case.

Through the use of my new and improved device I place the same over the neck of the bottles and grasp the same firmly about the neck of the bottles and remove the entire number that are to be placed within the case or to be removed from the case at a single operation.

In the use of my device for the handling of the bottles and their contents, the entire contents of one case may be carried in each hand to thereby make it possible for the delivery man to carry two cases of filled or empty bottles at each delivery. This lessens the hazard of breaking the bottles from individual handling, saves time of delivery and cuts the number of cases required in half, where the method of handling and delivery of the bottles in cases is practised.

With these and incidental objects in view, the invention consists in certain novel features of construction and combination of parts, the essential elements of which are set forth in the appended claims, and a preferred form of embodiment of which is hereinafter shown with reference to the drawing which accompanies and forms a part of this specification.

In the drawing:

Fig. 1 is a plan view of the assembled device with the carrier shown open to facilitate the passing of the neck of the bottles therethrough.

Fig 2 is section on lines II—II of Figure 1 of the mechanism illustrated in Fig. 1.

Fig. 3 is an end view of the device shown in place upon the milk bottles.

Like reference characters refer to like parts throughout the several views.

While in the drawing I have shown my device as being made of round material I do not wish to be limited in the application of my device to round material, as it may be made, with slight modifications, of flat or sheet material.

I make each half of my device of U-shaped frames 1 and 2. Each U-shaped frame is comprised of end sections 3 and 4 and each of the U-shaped frames has a single side section 5. A pair of cross reinforcings 6 and 7 are secured to the side 4 and a pair of cross reinforcings 8 and 9 are secured to the side sections 5. These reinforce the U-shaped frames 1 and 2.

I have shown my device as being made for carrying twelve milk bottles, but it will be obvious that I do not wish to be limited to the device for carrying twelve milk bottles as it may be made to carry any number of bottles depending upon the size of the bottles and the fluid to be carried in the bottles, but for the purpose of this description I am confining the same to a carrier for the carrying of twelve quart bottles of milk.

In order to accommodate my device to the carrying of twelve bottles of milk I run three bars 10, 11, and 12 longitudinally of the U-shaped frame 1 and secure the same to the ends of the U-shaped frame and a like number of bars to U-shaped frame 2 as illustrated at 13, 14 and 15. The longitudinal bars 10, 11 and 12 are secured to the ends of one of the U-shaped frames and the longitudinal bars 13, 14 and 15 are secured to the ends of the other one of the U-shaped frames. Each of the bars 10, 11 and 12 has neck-engaging segments 16 and each of the longitudinal bars 13, 14 and 15 has neck engaging segments 17 disposed therein with the respective curved segments 16 and 17 being placed in registry alignment with each other. The longitudinal bars 10 to 15 inclusive are secured to the respective end walls of the U-shaped frame and to the cross bars 6, 7, 8 and 9 respectively by any suitable means as by being spot welded thereto.

Three depressions, as illustrated at 18, 19 and 20 are placed in the end portions of each of the U-shaped frames.

A pair of bails 21 and 22 are secured to the respective frame members. When the carrying

device is to be placed over the bottle necks or the bottle necks to be removed therefrom the bail is placed in the position as illustrated in Fig. 3.

When the bottles are to be carried the bails are placed in the position, as illustrated in Fig. 4. Each of the bails is made in the form of a bell crank. The bail 21 is hingedly secured at its ends to the longitudinal bar 14 and passes under the longitudinal bar 11. The bail 22 is hingedly secured upon its respective ends to the bar 11 and passes under the bar 14. When the bail members are forced down, as illustrated in Fig. 2, the respective cross bars 11 and 14 are out of registry engagement with the bail but when the bail is pulled up they engage the respective bars 11 and 14 and force the same toward each other to thereby forcibly grasp the necks of the bottles to be carried.

A reactance means as a coil spring 23 is secured upon its respective ends to the cross bars 11 and 13 respectively to thereby normally maintain the recesses spaced apart sufficiently to permit the head 24 disposed upon the neck 25 of the bottle to pass therethrough. By the grasping of the bail members in the hand of the milk carrier the respective side walls of each frame are pulled toward each other to thereby clamp the neck of the bottle immediately below the head to permit the carrying of the same safely by the milk carrier.

The respective pairs of frames are secured together by the ends 26, 27, 28, 29 and 30 and 31 passing over the ends 1 and 3A and the ends 32, 33, 34, 35, 36 and 37 passing under the end bars 1 and 3A, compensation being provided for this purpose by the offsets in the respective cross bars 6, 7, 8 and 9 and the respective end bars 1 and 3A and 2 and 2A.

It will be noted that the respective ends 38 and 39 of the frame 5 and the ends 40 and 41 of the frame 4 are inwardly bent to maintain the same beneath the respective cross bars 16 and 17 to insure the respective frames moving in registry with each other and to prevent their getting out of locking engagement with each other.

In the use of my device the same is made and dimensioned to fit the neck of a case of bottles when assembled within the shipping or storage case of the manufacturer so that the necks of a full case of bottles will precisely engage within the neck recesses of my device when the bails are retracted and the recesses are in open position and when the bails are grasped by the hand of the carrier of the bottles the walls of the recesses will engage the necks of the bottles to permit the removal of the entire case of bottles from the case in a single operation and permit the same being carried by the delivery man.

While I have shown my device as being used in conjunction with milk bottles I wish it to be distinctly understood that my device is applicable for the carrying of all kinds of bottles, as well as milk bottles.

While the form of mechanism herein shown and described is admirably adapted to fulfill the objects primarily stated, it is to be understood that it is not intended to confine the invention to the embodiment herein shown and described, as it is susceptible of embodiment in various forms, all coming within the scope of the claims which follow.

What I claim is:

1. In a device of the class described the combination of a pair of U-shaped frames, said U-shaped frames being comprised of a side member and two end members outwardly extending in the same direction from the side member, intermediate members secured to the side member and outwardly extending therefrom, said U-shaped members being adapted for being placed one above the other, and each of the members having longitudinal bars connected thereto and extending parallel with each other with bottle neck engaging segments formed integral with the longitudinal members, a carrying bail hingedly secured to one of the longitudinal members of each of the U-shaped frames, and a reactance means for normally maintaining the longitudinal members spaced apart.

2. In a device of the class described, the combination of a pair of like frame members with each frame having transverse and longitudinal rods arranged so that the frames will slide one above the other and be held in adjustable locked embrace, two carrying bails hingedly secured one to each of the frames, said bails being fashioned so as to move the frames toward each other when clasped by the hand of the carrier, a single coil spring for normally maintaining the bails in retracted position and the longitudinal rods of each frame spaced apart, a plurality of bottle neck engaging bends carried by each of the longitudinal frame members, said bends being in registry with like bends disposed in the longitudinal bars of the other one of the frames and the walls of said bends being sufficiently spaced to permit a bottle being placed therebetween when the frames are retracted and for clamping the bottle neck therein when the bails are clasped by the hand of the carrier.

3. In a device of the class described, the combination of a carrier for milk bottles comprised of a pair of analogous frame members, said frame members being secured together in slidable relationship with each frame carrying a plurality of longitudinal bars with the longitudinal bars of one frame having a plurality of bends formed in one direction and the longitudinal bars of the other frame having a like number of bends formed in the opposite direction to form a plurality of pairs of recesses, one half of each pair being disposed in each frame with said recesses being in registry alignment with each other, a coil spring for normally maintaining the frames retracted and the bends spaced apart to permit the neck of the milk bottle being placed therein, a carrying bail hingedly secured to each of the frames and said bails being arranged to close the bends about the bottle necks when the free ends of the bails are moved toward each other.

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