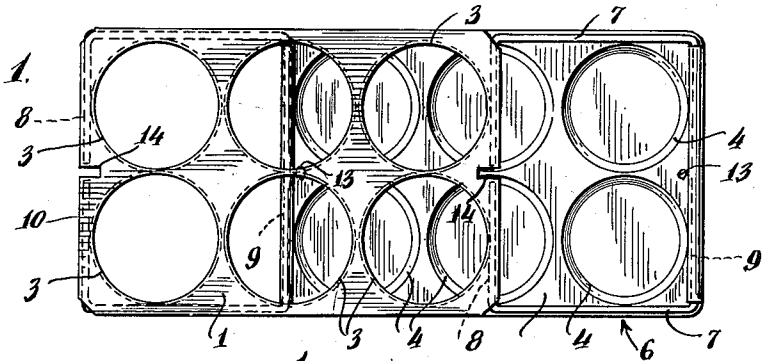
Feb. 5, 1952 E. N. CASTLE 2,584,787

COLLAPSIBLE SHEET METAL BOTTLE CARRIER

Filed Jan. 10, 1950

Fig. 1.



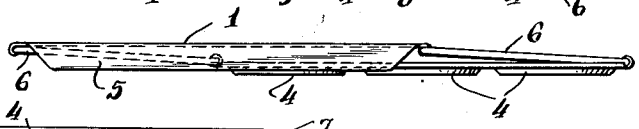


Fig. 2.

Fig. 3.

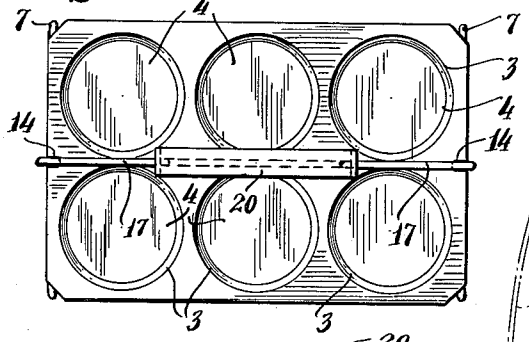
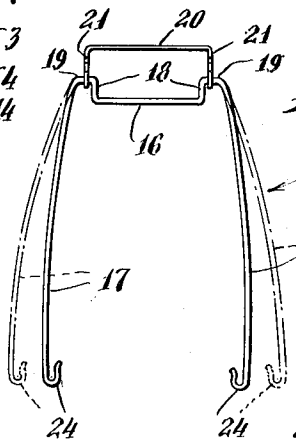


Fig. 6.



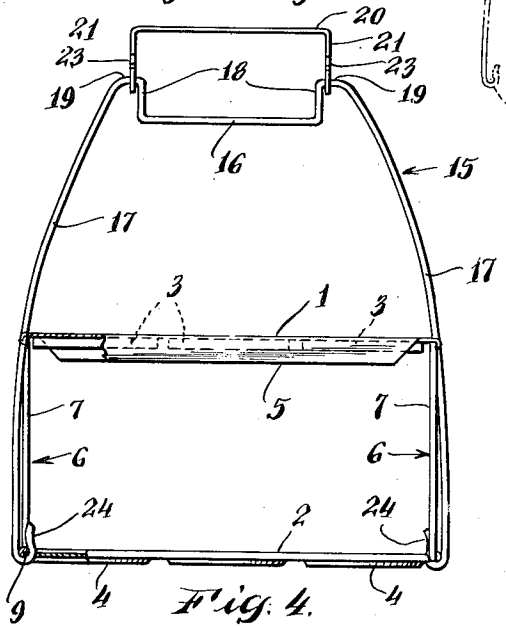
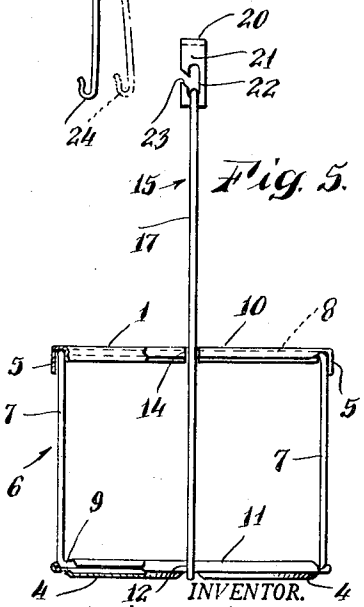


Fig. 4.

Fig. 5.



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Patented Feb. 5, 1952

2,584,787

UNITED STATES PATENT OFFICE

2,584,787

COLLAPSIBLE SHEET METAL BOTTLE CARRIER

Eli N. Castle, South Orange, N. J.

Application January 10, 1950, Serial No. 137,812

5 Claims. (Cl. 224—48)

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This invention relates to a bottle carrier and it is one object of the invention to provide a bottle carrier which is formed of metal and is formed of elements easily and quickly movable to a collapsed position or an extended position for use, there being a detachable handle which, when applied, securely holds the carrier in its extended position as well as allowing the carrier to be conveniently held and transported from one place to another.

Another object of the invention is to provide a bottle carrier having upper and lower sheet metal walls pivoted to end frames and thereby shiftable longitudinally and vertically from a collapsed position disposing the walls in face to face engagement with each other to an extended position in vertical spaced relation to each other where they are held by a detachable handle.

Another object of the invention is to provide a bottle carrier of this character wherein the lower plate or bottom of the carrier is formed with sockets to receive bottoms of bottles and the upper plate is formed with openings which are aligned with companion sockets and through which upper portions of the bottles pass when placed in the carrier.

Another object of the invention is to provide a carrier wherein the handle is formed of resilient wire and has arms which are detachably hooked to lower cross bars of the end frames and engage in notches formed at ends of the upper plate so that the handle will be held against transverse movement and thus prevent tilting of the carrier when lifted for transportation from one place to another.

Another object of the invention is to provide a carrier which is simple in construction and may be manufactured at low cost.

The invention is illustrated in the accompanying drawings wherein:

Figure 1 is a top plan view of the collapsed carrier;

Figure 2 is a side view of the collapsed carrier;

Figure 3 is a top plan view of the carrier in its extended position for use;

Figure 4 is a side elevation of the carrier ready for use;

Figure 5 is an end view of the carrier; and

Figure 6 is a side elevation of the handle, adjusted positions of its arms being indicated by dotted lines.

This improved bottle carrier has an upper plate or top 1 and a lower plate or bottom 2 which are both formed of stiff sheet metal, the upper plate having openings 3 formed therein and the lower plate being formed with depressions constituting sockets 4. Six openings 3 have been shown in the upper plate or top 1 which are arranged in rows and spaced from each other longitudinally and transversely of the plate and a corresponding number of sockets 4 formed in the lower plate or bottom 2 with which the openings 3 are aligned when the top is in its raised or extended position, but it will be understood that any number of companion openings and sockets may be provided according to the size and predetermined capacity of the carrier. Along its opposite sides, the top is formed with depending flanges 5 which are of such depth that when the carrier is collapsed, the bottom 2 will fit between these flanges and the two plates prevented from having movement transversely of each other.

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In order to connect the upper and lower plates and allow movement of the upper plate from a lowered or collapsed position against the lower plate to a raised or extended position, there have been provided end frames 6. These end frames are formed of stiff were and are of rectangular shape. While they have been shown square, they could be oblong. Each frame has side bars 7 and upper and lower cross bars 8 and 9, and in order to pivotally connect the frames with the upper and lower plates, the upper plate has its ends rolled to form sleeves 10 through which the upper bars pass and the lower plate has its ends rolled to form sleeves 11 through which the lower bars pass. It will thus be seen that the end frames may have vertical swinging or tilting movement from the lowered or collapsed position shown in Figures 1 and 2 to the raised or extended position shown in Figures 4 and 5 and in which the upper plate is parallel in relation to the lower plate and its openings 3 aligned with the companion sockets 4 of the lower plate. A notch or recess 12 is formed in each of the lower sleeves 11 midway its length and each end of the lower plate or bottom is formed midway its width with an opening 13 disposed inwardly of and in close proximity to the companion notch 12. The upper plate or top has its ends formed midway its width with slots or recesses 14 which extend longitudinally of the top through the sleeves 10 and are disposed directly over the recesses 12 and the openings 13 when the top is in its raised position.

In order that the carrier may be lifted and conveniently transported from one place to another, there has been provided a handle 15 which is formed of resilient wire. The strand of wire

from which the handle is formed is bent in spaced relation to its opposite ends to form a bridge 16 and arms 17 extending from ends thereof. Referring to Figures 4 and 6, it will be seen that the bridge has its end portions 18 bent upwardly, so that it will be downwardly offset, and then outwardly to form fingers 19 from which the arms 17 extend. A hand grip 20 which is formed from a strip of stiff sheet metal is carried by the handle and has its end portions bent downwardly to form arms 21 in which are formed longitudinally extending slots 22 having entrances or throats 23 which extend from the slots at an upward incline, as shown in Figure 5. Since the entrances are disposed at an incline and spaced from upper and lower ends of the slots, the fingers 19 may be easily passed through them into the slots where they will be disposed at lower ends of the slots and not liable to accidently move outwardly through the entrances.

When this carrier is in use, the upper wall or top 1 is grasped and drawn upwardly to its extended or raised position and bottles then passed through the openings 3 with their bottoms resting in the sockets or depressions 4. The arms 17 of the handle are then grasped and spread away from each other so that they may be thrust downwardly along outer faces of the end walls and the hooks at lower ends of the arms passed upwardly through the openings 13 in the bottom or lower plate. The lower end portions of the arms will then be disposed in the recesses 12 and these hooks 24 engaged about the portions of the lower bars 9 of the end frames exposed through these recesses. When the arms are seated in the slots 14, the handle will be maintained longitudinally of the carrier in a vertical position midway the width thereof and the handle will hold the carrier extended while the handle will be prevented from tilting transversely of the carrier. The hand grip 20 may then be grasped and the carrier lifted and transported from one place to another. When the carrier is empty, the handle is removed and the upper plate depressed to its lowered or collapsed position in which it rests upon the lower plate and the empty carriers may be conveniently carried in a person's hand or stacked upon a shelf in a store.

From the foregoing description of the construction of my improved device, the operation thereof and the method of assembly will be readily understood, and it will be seen that I have provided a comparatively simple, inexpensive and efficient means for carrying out the various objects of the invention.

While I have particularly described the elements best adapted to perform the functions set forth, it is apparent that various changes in form, proportion and in the minor details of construction may be resorted to, without departing from the spirit or sacrificing any of the principles of the invention.

Having thus described the invention, what is claimed is:

1. A carrier comprising a top formed with bottle-receiving openings, a bottom formed with bottle-receiving sockets companion to the openings of the top, end members extending between the top and the bottom and having upper and lower portions pivoted to ends of the top and the bottom for vertical tilting movement whereby the top may be swung from a lowered position adjacent the bottom to a raised position in vertical spaced relation to the bottom, there being recesses at ends of the top, and a handle disposed longitudinally of the carrier in straddling relation thereto and having arms detachably connected with the bottom and removably engaged in the recesses of ends of the top to prevent movement of the top and the end members to a lowered position and also prevent movement of the handle transversely of the carrier.

2. A carrier comprising a lower plate formed with sockets, an upper plate formed with bottle receiving openings companion to the sockets of the lower plate, end frames having upper and lower cross bars, said plates having ends formed with sleeves through which the upper and lower bars pass to pivotally connect the end frames with the plates for vertical tilting movement and thereby allow the upper plate to be shifted upwardly from a lowered position at rest upon the lower plate to a raised position in vertically spaced parallel relation to the lower plate, the lower plate having each end formed with a recess midway its width and an opening spaced inwardly from its recess, the upper plate having each end formed with a slot midway its width extending across its sleeve, and a handle disposed longitudinally of the carrier and having a bridge and resilient arms extending downwardly therefrom and straddling the carrier with lower portions of the arms extending downwardly through the slots of the upper plate and provided at their lower ends with inwardly extending hooks seated in the recesses of the lower plate and having their bills passing upwardly through the openings in the lower plate and detachably holding the handle in place.

3. A carrier comprising an upper plate formed with openings and having transversely extending sleeves across opposite ends and depending flanges along opposite sides, a lower plate formed with sockets companion to the openings of the upper plate and having transversely extending sleeves across its opposite ends, the upper plate having seats midway the width of its ends and the lower plate being formed with openings midway the width of its ends, end frames having upper and lower cross bars passing through the sleeves and pivotally connecting the end frames with the upper and lower plates whereby the upper plate may be shifted from a lowered position in which the lower plate fits between its side flanges to a raised position disposing its openings in alignment with the sockets of the lower plate, and a handle disposed over the upper plate and having resilient arms straddling the carrier and having portions engaged in the seats and hooks at their lower ends passing upwardly through the openings in the lower plate.

4. A carrier comprising a top formed with container-receiving openings, a bottom constituting a support for containers, end members having upper and lower ends pivoted to ends of the top and the bottom and mounting the top for vertical movement from a lowered position to a raised position, and a handle disposed vertically over the top and having resilient arms having gripping engagement with opposite edge portions of the top and formed at lower ends with hooks removably passing through openings in the bottom and detachably holding the handle in place.

5. A carrier comprising a top formed with container-receiving openings, a bottom constituting a support for the containers, members having upper and lower ends pivoted to the top and the bottom and mounting the top for movement from a lowered position to a raised position, the bottom being formed with openings near its ends, and a handle consisting of a strand of resilient wire

bent to form a bridge and arms extending downwardly from opposite ends of the bridge, said bridge having end portions bent to provide a downwardly offset bridge having fingers at its ends from which the arms extend, and a hand grip consisting of a strip of stiff metal having end portions bent downwardly and forming arms formed with longitudinally extending slots having entrances spaced from their lower ends and extending from the slots at an upward incline, the fingers being fitted into the slots through the entrances and resting at the lower ends of the slots and pivotally mounting the hand grip for swinging movement from a lowered position to a raised position, and the arms of said handle being disposed in straddling relation to the carrier with portions gripping the top at opposite edges thereof, lower ends of the arms being formed with hooks removably passing through

the said openings in the bottom and detachably mounting the handle.

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