Oct. 20, 1931. L. W. HASSENSALL 1,828,412

CARRIER

Filed July 12, 1929 3 Sheets-Sheet 1

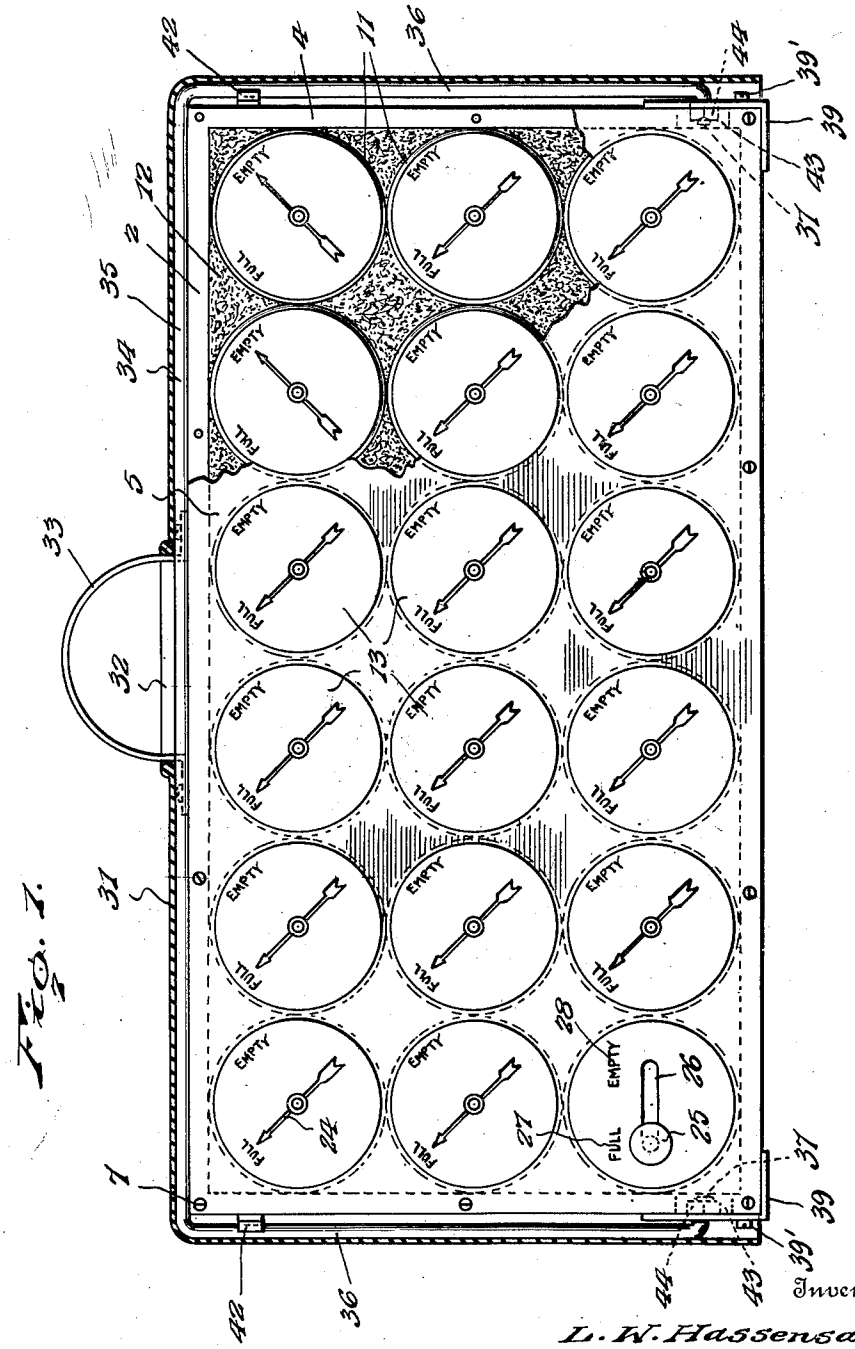


Fig. 1.

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Fig. 3.

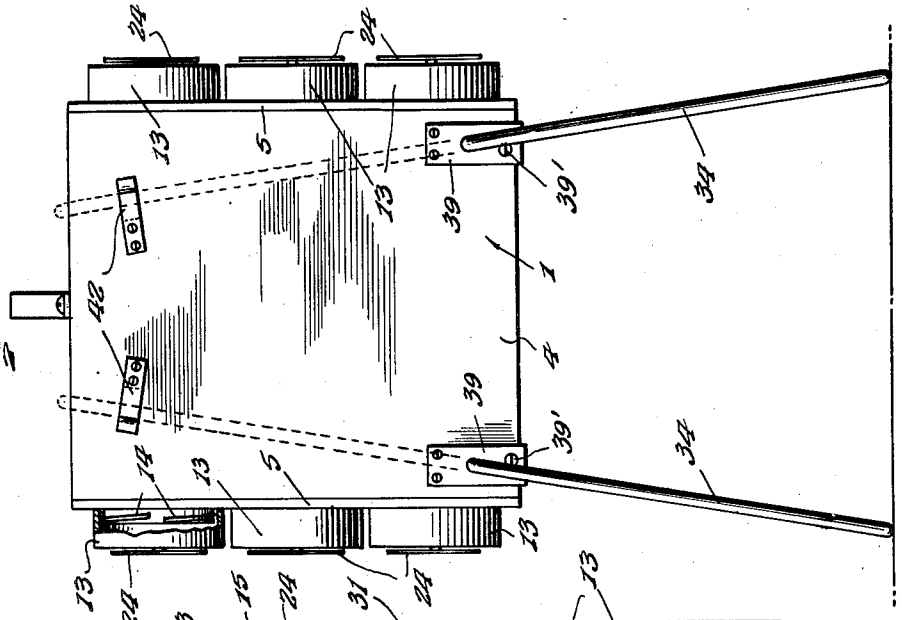
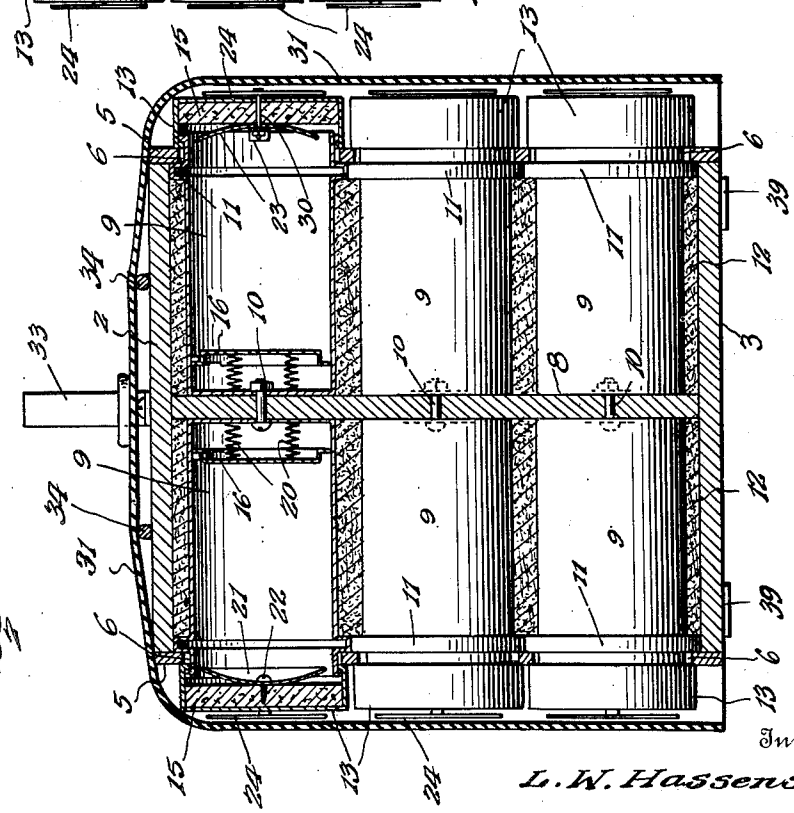


Fig. 2.



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Fig. 4.

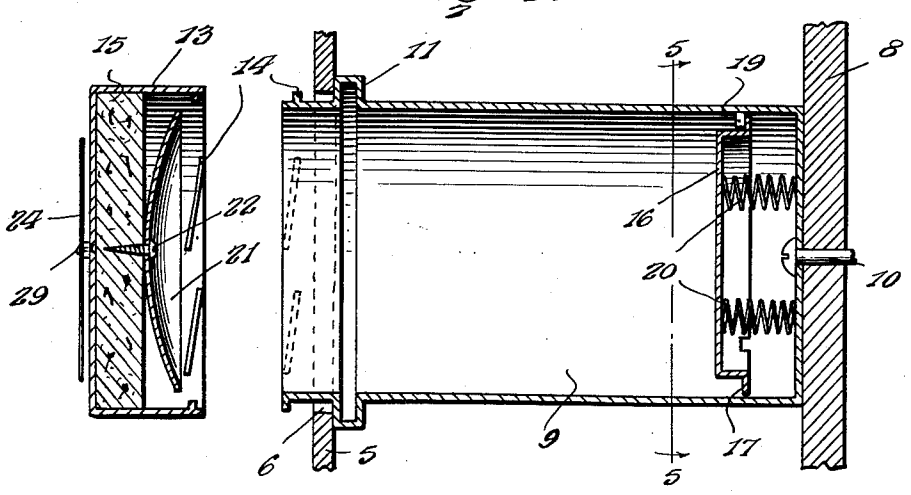


Fig. 5.

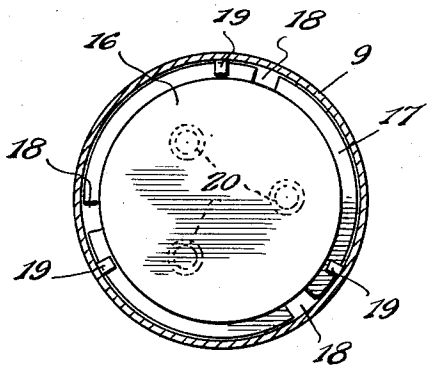


Fig. 6.

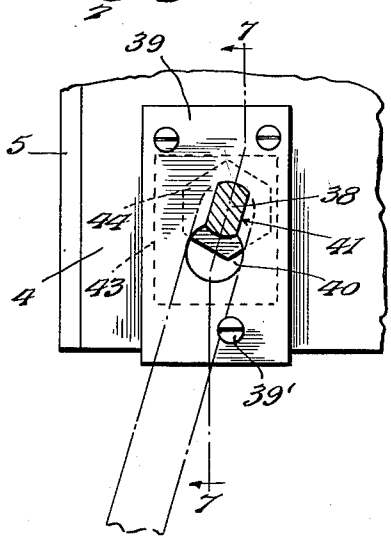
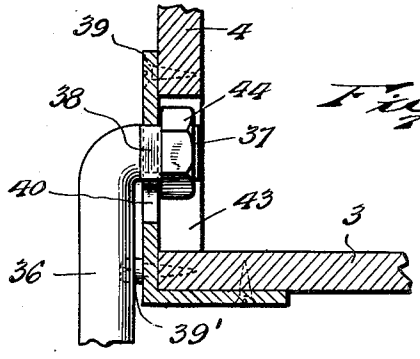


Fig. 7.



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Patented Oct. 20, 1931 1,828,412

UNITED STATES PATENT OFFICE

LOUIS W. HASSENSALL, OF TOLEDO, OHIO

CARRIER

Application filed July 12, 1929. Serial No. 377,784.

This invention relates to special receptacles and more particularly to a carrier by means of which packages containing carbonic acid snow may be easily transported.

One object of the invention is to provide a carrier adapted to receive a relatively large number of packages of carbonic acid snow and through the medium of which they may be very easily transported from one place to another and empty receptacles returned to a plant for refilling.

Another object of the invention is to allow the receptacles containing carbonic acid snow to be kept separate from each other and insulated against heat so that return of the carbonic acid snow to a gaseous state will be retarded.

Another object of the invention is to provide the carrier with individual containers for the carbonic acid snow receptacles thereby allowing them to be individually removed without disturbing others or exposing them to warm air when one is removed.

Another object of the invention is to prevent carbonic acid snow receptacles from sliding in their containers and causing rattling noises and also to provide caps for the outer ends of the receptacle containers with indicators by means of which it can be easily determined which containers in a carrier hold filled receptacles and which contain empty ones.

Another object of the invention is to provide the carrier with supporting legs capable of being folded about the body of the carrier where they will be out of the way and further to so form and mount the supporting legs that they may be easily swung downwardly to a position for use and secured in the operative position.

The invention is illustrated in the accompanying drawings, wherein

Figure 1 is a view showing the improved carrier in side elevation with its cover or jacket in longitudinal section,

Fig. 2 is a transverse sectional view through the carrier,

Fig. 3 is a view showing the carrier in end elevation with the legs swung downwardly into position for use.

Fig. 4 is an enlarged longitudinal sectional view through one of the containers,

Fig. 5 is a transverse sectional view through the container taken on the line 5—5 of Fig. 4,

Fig. 6 is an enlarged fragmentary view showing the manner in which the supporting legs are pivotally mounted, and

Fig. 7 is a sectional view taken on the line 7—7 of Fig. 6.

The body portion 1 of this carrier is in the form of a box having upper and lower walls 2 and 3, end walls 4 and side walls 5 each of which is formed with a number of openings 6 and secured by screws or equivalent fasteners 7. A partition 8 extends vertically in the body longitudinally thereof and divides the body into side compartments, and in these side compartments are disposed cylindrical containers 9, the inner ends of which bear against opposite faces of the partition in opposed relation to each other where they are secured by bolts 10 passed through the partition, as shown in Fig. 2. These containers are preferably arranged in the compartments, as shown in Figs. 1 and 2, and have their open outer ends projecting through the openings 6 in the side walls 5 which constitute outer walls for the two compartments and adjacent their outer ends the walls of the containers are formed with outstanding beads 11 which bear against the inner faces of the side walls about the openings and also contact with each other, as shown in Fig. 1, so that the containers will be in proper relation to each other. Heat insulating material 12, such as ground cork, is packed into the compartments about the containers before the side walls 5 are applied and serves to prevent carbonic acid snow stored in the containers from being affected by the warmth of the atmosphere and thereby retards conversion of the carbonic acid snow into gas. In order to close the outer ends of the containers, there has been provided caps 13 which are fitted upon the projecting outer ends of the containers and securely but releasably held thereon by interrupted threads 14 and within these caps are placed blocks of heat insulating material 15 which

assists the packing 12 in shielding the contents of the containers from the warmth of the atmosphere. The caps are not air-tight and, therefore, gas may escape.

It is desired to prevent receptacles holding carbonic acid gas and placed in the containers from sliding longitudinally therein and causing rattling when carried and, therefore, each of the containers is equipped with a false bottom 16 formed of sheet metal and provided with an outstanding annular flange 17 notched, as shown at 18, so that lugs 19 which project from the side walls of the container may pass through these notches and the false bottom then turned to the position shown in Fig. 5 so that the lugs will extend across the flange and limit outward movement of the false bottom. Springs 20 are provided between the false bottom and the inner end of the container and serve to hold the false bottom in the position shown in Fig. 4 and yieldably resist inward movement of the false bottom. The cap is also provided with a pressure device which may be a concaved disk 21 formed of resilient metal and secured to the block 15 by a screw or other fastener 22 or strips 23 curved longitudinally and similarly secured to the block. By referring to Fig. 2, it will be seen that when the caps are applied, the pressure devices carried thereby will bear against the outer ends of receptacles containing carbonic acid snow and disposed within the containers and force the receptacles inwardly so that they engage the false bottoms and press these false bottoms inwardly against the action of the springs 20. Therefore, the carbonic acid snow receptacles will be yieldably held between the false bottoms and pressure-applying devices of the caps and prevented from having movement longitudinally in the containers. This will eliminate rattling noises when carrying the device and prevent crumpling of the carbonic acid snow due to shaking. It is also desired to permit the operator to easily determine which of the containers hold filled receptacles and, therefore, each cap is equipped with an indicator which may be an arrow 24 pivoted to the outer face of the cap or a button 25 slidably mounted in a slot 26 formed in the head of the cap. The words "Full" and "Empty" are marked upon the caps, as shown at 27 and 28, and the arrows or buttons may be moved to the proper positions to indicate whether the containers carry filled carbonic acid receptacles or empty ones. When an arrow is employed as an indicator, it may be pivoted to the cap by a rivet or other equivalent fastener 29 or a bolt or the like 30 may be used as a common fastener for the arrow and pressure-applying device fixed to the insulating block.

This device is to be carried from a filling plant where receptacles are filled with carbonic acid snow to different places where the carbonic acid snow is to be used, and in order to shield the carrier from the heat of the atmosphere and also protect it from dust, there has been provided a cover 31 formed of flexible material, such as oilcloth. This cover is of the proper size and shape to fit about the body, as shown in Figs. 1 and 2, and is formed with an opening 32 so that the handle 33 by means of which the carrier is to be grasped and lifted may extend upwardly through the cover. It is desired to have the carrier supported at about the height of a chair when receptacles filled with carbonic acid snow are removed from the containers and empty receptacles placed within the containers, and in order to support it at this elevation where it can be easily reached, there has been provided legs 34. These legs are formed of metal rod and each is of a U-shaped construction and provided with a bridge 35 of the proper length to extend longitudinally upon the upper wall 2 of the body and arms 36 extending from the ends of the bridge and terminating in inturned end portions forming pintles 37 which are threaded, as shown in Fig. 7, and near the arms flattened, as shown at 38 in Fig. 6. Bearing plates or brackets 39 are secured against the end walls 4 near opposite sides thereof with portions extending beneath the body and secured against the bottom 3, and these bearing plates are formed with circular openings 40 from which lead slots 41 projecting diagonally upwardly therefrom, as shown in Fig. 6. By this arrangement the supporting legs may be swung downwardly from the folded position where they are releasably held by clips 42 secured against the end walls or upon the upper wall and after they have been swung downwardly to the position shown in Fig. 3 are moved upwardly a slight amount to dispose the flattened portions 38 in the slots 41 and firmly retain the legs in the lowered position. By referring to Fig. 3 and Fig. 6, it will be seen that the legs diverge downwardly when in a supporting position and, therefore, will serve to very firmly support the body. Recesses 43 are formed in the end walls so that securing nuts 44 may be applied to the pintles, as shown in Fig. 7, and turned with the same. The heads of the screws 39′ are extended to limit downward swinging movement of the legs.

When this carrier is in use, the caps are removed and after a receptacle filled with carbonic acid has been filled in each container, the caps are replaced. As previously explained, the false bottoms will be moved inwardly when the caps are set in place and secured and, therefore, the receptacles will be prevented from moving longitudinally in the containers and rattling. The cover is put in place and the carrier can then be grasped by its handle and easily lifted and

carried from one place to another. When one or more receptacles filled with carbonic acid snow is to be removed from the carrier, the cover is first removed and the supporting legs then swung downwardly to the operative position so that they may rest upon the floor and support the carrier at such a height that the operator may have easy access to the same. By observing the indicators the operator can easily determine which containers hold filled receptacles. Therefore, it is not necessary to open a number of containers in order to find a filled receptacle. After a filled receptacle is removed and put in use, the empty receptacle which it replaces is thrust into the container and the cap then again put in place and the indicator moved to the empty position. The carrier is grasped by its handle and lifted sufficiently to allow the flattened portions of the pintles to move downwardly into the circular openings and the legs can then be swung upwardly to the folded position after which the cover will be again set in place.

Having thus described the invention, I claim:

1. A carrier comprising a body, a partition in said body dividing the same into compartments, walls for the body constituting outer walls for the compartments and being formed with openings communicating therewith, containers in said compartments having their inner ends secured against said partition and having open outer ends projecting through the openings, and removable closures for the outer ends of said containers.

2. A carrier comprising a body, a partition in said body dividing the same into compartments, walls for the body constituting outer walls for the compartments and formed with openings communicating therewith, containers in said compartments having closed inner ends abutting the partition in opposed relation to each other and open outer ends extending through the openings in said walls, fasteners passed through said partition and the inner ends of opposed containers to secure the containers, and removable closures for the outer ends of said containers.

3. A carrier comprising a body, a partition in said body dividing the same into compartments, containers in said compartments secured at their inner ends against said partition and having open outer ends exposed at the sides of said body, false bottoms in said containers adjacent their inner ends, resilient means urging said false bottoms outwardly, and removable caps for the open outer ends of said containers.

4. A carrier comprising a body, a partition in said body dividing the same into compartments, containers in said compartments secured at their inner ends against said partition and having open outer ends exposed at the sides of said body, false bottoms in said containers adjacent their inner ends, resilient means urging said false bottoms outwardly, removable caps for the open outer ends of said containers, and yieldable means carried by said caps for extending into said containers and forcing contents of the containers inwardly against the false bottoms.

5. A carrier comprising a body, a partition in said body dividing the same into compartments, containers in said compartments secured at their inner ends against said partition and having open outer ends exposed at the sides of said body, false bottoms in said containers adjacent their inner ends having annular flanges formed with circumferentially spaced notches, lugs extending from the walls of said containers for passing through said notches and engaging across the flanges to limit outward movement of the false bottoms, springs urging the false bottoms outwardly, and removable caps for the open outer ends of said containers.

6. A carrier comprising a body, a partition in said body dividing the same into compartments, containers in said compartments secured at their inner ends against said partition and having open outer ends exposed at the sides of said body, false bottoms in said containers adjacent their inner ends having annular flanges formed with circumferentially spaced notches, lugs extending from the walls of said containers for passing through said notches and engaging across the flanges to limit outward movement of the false bottoms, springs urging the false bottoms outwardly, packing in said compartments about said containers, removable caps for the outer ends of said containers, blocks of insulation in said caps, and resilient elements secured against said blocks and extending into said containers to urge articles placed therein against the false bottoms and compress the springs thereof.

7. A carrier comprising a body, a partition in said body dividing the same into compartments, containers in said compartments secured at their inner ends against said partition and having open outer ends exposed at the sides of said body, false bottoms in said containers adjacent their inner ends having annular flanges formed with circumferentially spaced notches, lugs extending from the walls of said containers for passing through said notches and engaging across the flanges to limit outward movement of the false bottoms, springs urging the false bottoms outwardly, removable caps for the open outer ends of said containers, and indicators carried by said caps against the outer faces thereof to indicate whether the containers are full or empty.

8. A carrier comprising a body, a partition in said body dividing the same into compartments, walls for said body constituting outer walls for the compartments and formed with

openings, containers in said compartments having their inner ends secured against said partition and having open outer ends projecting through the openings in said walls, said containers being provided with abutments engaging the inner faces of the walls about the openings, insulation packed in the compartments between said containers, and removable closures for the open outer ends of said containers.

9. A carrier comprising a body, a partition in said body dividing the same into compartments, walls for said body constituting outer walls for the compartments and formed with openings, containers in said compartments having closed inner ends secured against said partition and having open outer ends projecting through the openings in said walls, said containers being provided with abutments engaging the inner faces of the walls about the openings to prevent outward movement of the containers, and removable caps for the outer ends of said containers.

10. A carrier comprising a body, a partition in said body dividing the same into compartments, walls for said body constituting outer walls for the compartments and formed with openings, containers in said compartments having open outer ends projecting through the openings in said walls and provided with abutments engaging the inner faces of the walls about the openings, insulation packed in the compartments between said containers, and caps threaded upon the outer ends of said containers and engaging the outer faces of said walls about the walls when in place.

11. A carrier comprising a body, a partition in said body dividing the same into compartments, walls for said body constituting outer walls for the compartments and formed with openings, containers in said compartments having open outer ends projecting through the openings in said walls and provided with abutments engaging the inner faces of the walls about the openings, insulation packed in the compartments between said containers, caps threaded upon the outer ends of said containers and engaging the outer faces of said walls about the walls when in place, and blocks of insulation in said caps.

12. A carrier comprising a body, a partition in said body dividing the same into compartments, walls for said body constituting outer walls for the compartments and formed with openings, containers in said compartments having open outer ends projecting through the openings in said walls and provided with abutments engaging the inner faces of the walls about the openings, insulation packed in the compartments between said containers, caps threaded upon the outer ends of said containers and engaging the outer faces of said walls about the walls when in place, blocks of insulation in said caps, pressure applying elements secured against said blocks and extending into said containers when the caps are in place, and false bottoms for said containers yieldably urged outwardly.

13. A carrier comprising a body, a partition in said body dividing the same into compartments, walls for said body constituting outer walls for the compartments and formed with openings, containers in said compartments having open outer ends projecting through the openings in said walls and provided with abutments engaging the inner faces of the walls about the openings, removable caps for the outer ends of said containers, a handle for said body, and supporting legs for said body movable into and out of depending relation thereto.

14. A carrier comprising a body, a partition in said body dividing the same into compartments, side walls for said body constituting outer walls for the compartments and formed with openings, containers in said compartments having open outer ends projecting through the openings in said walls and provided with abutments engaging the inner faces of the walls about the openings, removable caps for the outer ends of said containers, bearings carried by end walls of the body near opposite sides thereof and formed with openings having slots leading therefrom, and U-shaped supporting legs adapted to straddle the body when folded and having their arms formed with pintles engaged in the openings of said bearings to pivotally mount the legs for movement to a depending operative position, the pintles being flattened and engageable in the slots to secure the legs in depending supporting relation to the body.

15. A carrier comprising a body, side walls of said body being formed with openings, containers in said body having open outer ends projecting through the openings in said walls, removable caps for the outer ends of said containers, bearings carried by end walls of the body near opposite sides thereof and formed with openings having slots leading therefrom, and U-shaped supporting legs adapted to straddle the body when folded and having their arms formed with pintles engaged in the openings of said bearings to pivotally mount the legs for movement to a depending operative position, the pintles being flattened and engageable in the slots to secure the legs in depending supporting relation to the body.

In testimony whereof I affix my signature.

LOUIS WM. HASSENSALL. [L. S.]