April 29, 1941. G. R. DEMPSTER 2,239,671

TRANSPORTING AND DUMPING CONTAINER

Filed June 27, 1940 3 Sheets-Sheet 1

Fig. 1.

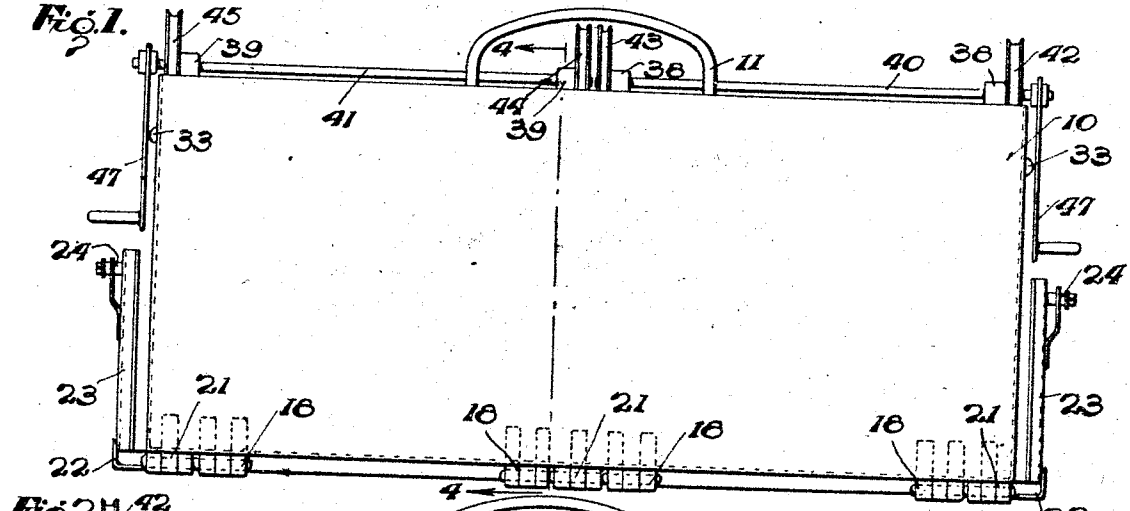


Fig. 2.

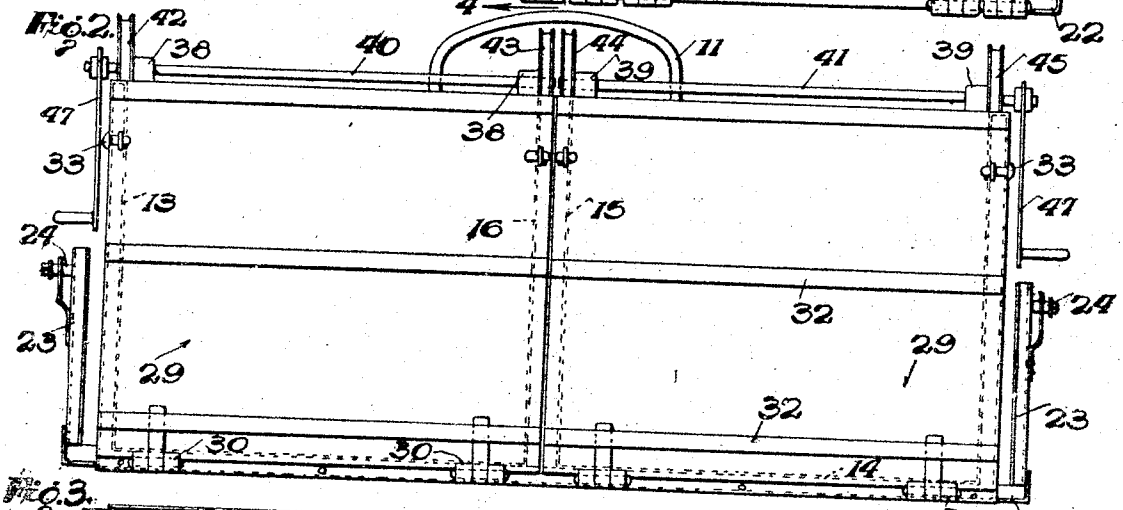
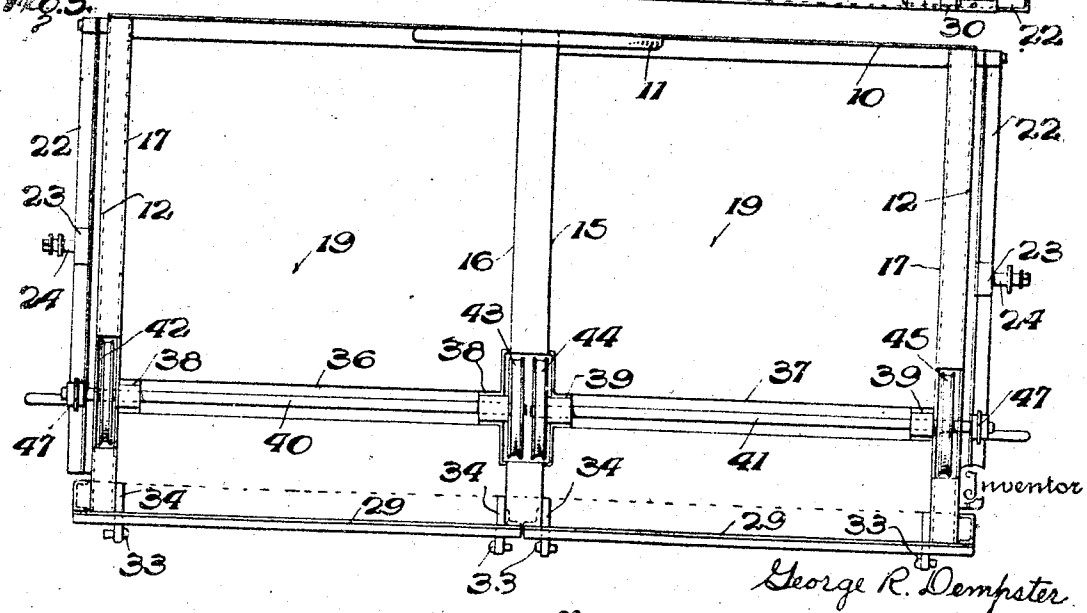


Fig. 3.



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TRANSPORTING AND DUMPING CONTAINER

Filed June 27, 1940 3 Sheets-Sheet 2

Fig. 4.

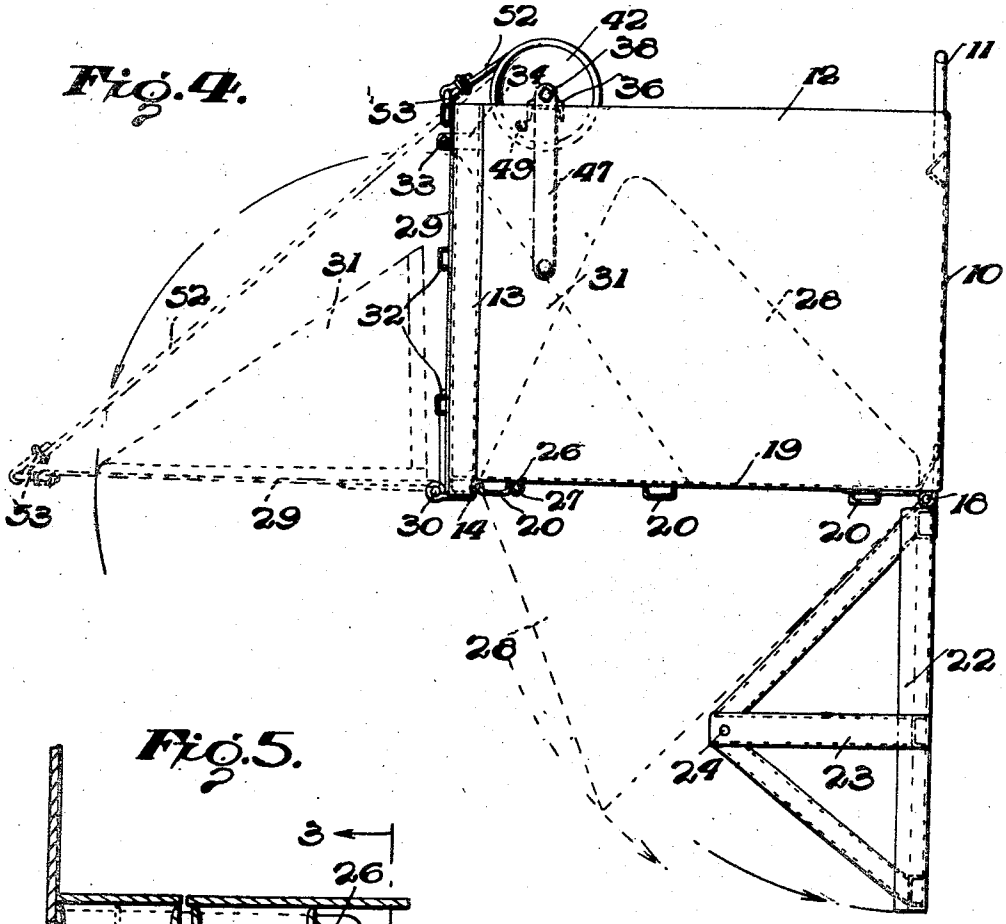


Fig. 5.

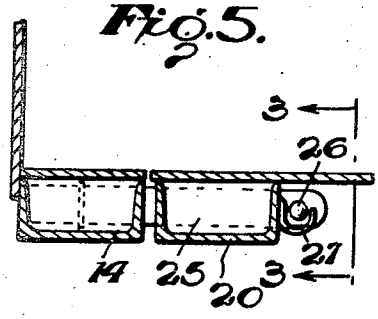


Fig. 6.

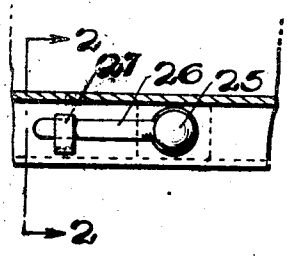
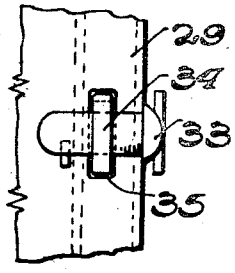


Fig. 7.



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TRANSPORTING AND DUMPING CONTAINER

Filed June 27, 1940 3 Sheets-Sheet 3

Fig. 8.

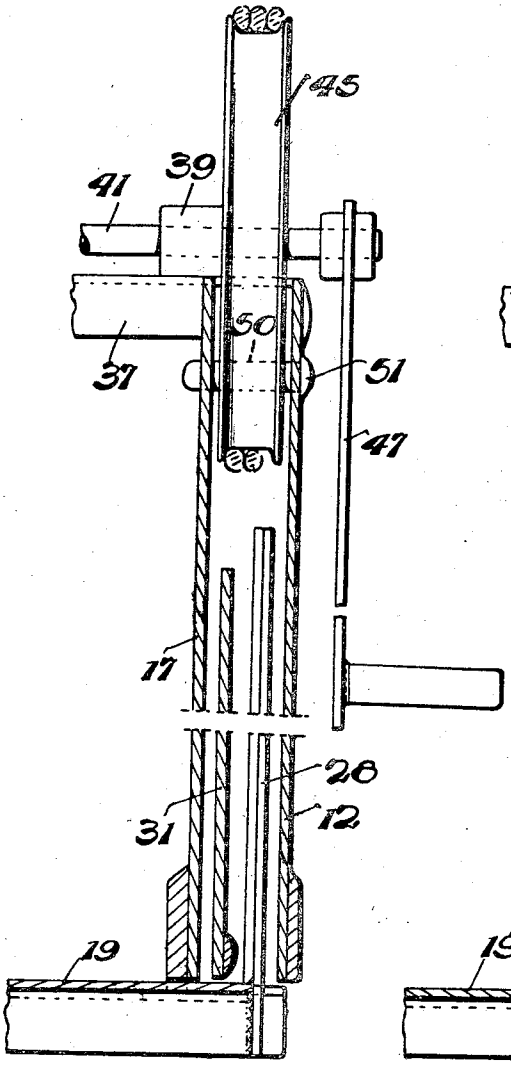
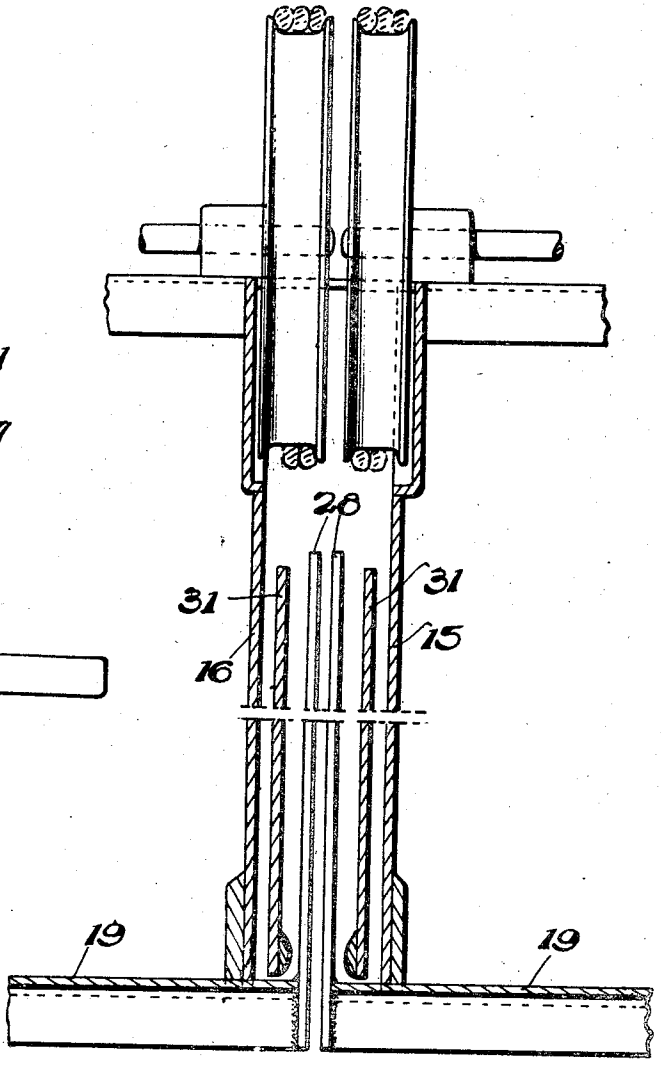


Fig. 9.



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2,239,671

UNITED STATES PATENT OFFICE

2,239,671

TRANSPORTING AND DUMPING CONTAINER

George R. Dempster, Knoxville, Tenn.

Application June 27, 1940, Serial No. 342,791

11 Claims. (Cl. 294—69)

This invention relates to containers and more particularly to containers for use with transporting and dumping devices such as those disclosed in my prior patents. More particularly still this invention relates to transporting and dumping containers having a plurality of compartments adapted to be dumped either through the front, through the bottom, or through both front and bottom of each compartment.

It is the object of the present invention to provide a novel transporting and dumping container having a plurality of compartments which can be dumped either through the front, through the bottom, or through both front and bottom of each compartment.

Other and further objects of the present invention will appear as the description thereof proceeds.

An illustrative embodiment of the present invention is shown in the accompanying drawings but it is to be expressly understood that this embodiment is shown in the drawings and described hereafter for the purposes of illustration only. To determine the scope of the present invention reference should be had to the appended claims.

In the accompanying drawings,

Fig. 1 is a rear view of an illustrative embodiment of the novel container of the present invention;

Fig. 2 is a front view of the novel container of Fig. 1;

Fig. 3 is a top view of the novel container of Fig. 1;

Fig. 4 is a cross-sectional view of the novel container of Fig. 1 on the line 4—4 with the cradle swung down and the front members swung outwardly as shown in dotted lines;

Fig. 5 is an enlarged detail of a portion of the novel container of Fig. 1 showing in detail the locking device for the bottom members;

Fig. 6 is another view of the enlarged detail of Fig. 5;

Fig. 7 is an enlarged detail of a portion of the novel container of Fig. 1 showing the locking device for the front members;

Fig. 8 is an enlarged detail of a portion of the novel container of Fig. 1 showing a part of the hollow end walls and the lifting mechanism for the front members; and

Fig. 9 is an enlarged detail of a portion of the novel container of Fig. 1 showing a part of the hollow center partition and the lifting mechanism for the front members.

In the accompanying drawings, in which like reference characters indicate similar parts, a novel container is there shown having a rear wall 10 to which is suitably secured a bail 11 adapted to be engaged by the automatic hook or catch of the transporting and dumping device. Secured to rear wall 10 are suitable side walls 12 terminating in reinforcing strips 13. A reinforcing member 14 connects side walls 12 at their lower front edge. Secured to the middle of rear wall 10 and extending forwardly are a pair of plates 15 and 16 adapted to form a hollow center partition dividing the container into two separate compartments. Side walls 12 are provided with suitable plates 17 spaced therefrom and parallel thereto to form hollow side walls for the container.

Suitably hinged to rear wall 10, as by hinges 18, are bottom forming members 19, one for each compartment, bottom members 19 being suitably reinforced as by channel members 20. Likewise, hinged to rear wall 10, as at 21, is a cradle 22 (Fig. 4) carrying upstanding members 23 provided with suitable pins 24 to receive the chains of the transporting and dumping device. Bottom members 19 are designed to rest upon cradle 22 and may be opened or closed by the rotation of cradle 22 about its hinges 21.

Bottom members 19 are locked in closed position by suitable pins 25 passing through the front reinforcing member 20 of each bottom member 19 and through member 14 (Figs. 5 and 6). Each pin 25 is provided with an arm 26, to facilitate the removal of the pin and each arm 26 engages a suitable clip 27 mounted on member 20 to secure and lock arm 26 and pin 25 in place. Each bottom member 19 is provided with upstanding side members 28 one adapted to enter the appropriate hollow end wall and the other the hollow center partition when bottom members 19 are closed. Upstanding members 28 swing out of the hollow end walls and the center partition to form chutes for directing the flow of discharged material when bottom members 19 are opened.

Hinged to member 14 are front forming members 29, one for each compartment, each member 29 being provided with suitable hinges 30. Each front member 29 is provided with upstanding side members 31 one adapted to enter the appropriate hollow end wall and the other the hollow center partition when front members 29 are closed. Front members 29 are provided with suitable reinforcing members 32 and are locked in closed position by suitable bolts 33 (Fig. 7). Bolts 33 pass through tongues 34 which are secured to the center partition and the side walls

of the container and pass through suitable openings 35 formed in the front members 29. Bolts 33 are adapted for ready removal.

Secured to the side walls and the center partition and passing across the top of the container are suitable reinforcing members 36 and 37 which have mounted thereon suitable bearings 38 and 39. Rotatably mounted in bearings 38 is a shaft 40. Rotatably mounted in bearings 39 is a shaft 41. Secured to shaft 40 are suitable sheaves 42 and 43, sheave 42 extending into its appropriate hollow end wall and sheave 43 extending into the hollow center partition. Secured to shaft 41 are suitable sheaves 44 and 45, sheave 44 extending into the hollow center partition and sheave 45 extending into its appropriate hollow end wall. Shafts 40 and 41 are suitably machined to receive a hand crank 47. Sheave 42 is bored at 49 to receive a suitable locking pin to lock it against rotation. Sheave 45 is likewise bored as at 50 to receive a suitable pin 51 passing through openings in end wall 12 and plate 17 to lock sheave 45 against rotation (Fig. 8). Each of sheaves 42, 43, 44 and 45 is provided with a suitable cable 52 which is secured at one end to the sheave and at the other end to the upper edge of one of front members 29, as at 53.

With the novel container of the present invention constructed as above described when it is desired to transport material therein the compartments are filled, the chains of the transporting and dumping device attached to pins 24 of cradle 22 and the container raised from the ground and transported to the dumping position. When dumping position is reached the container is elevated until bail 11 engages the automatic hook or catch. If it is desired to dump the contents of the compartments through the bottom of each compartment, pins 25 are withdrawn and the chains of the transporting device lowered, allowing cradle 22 to swing about its hinges 21. Bottom members 19 rotate about their hinges 18 and members 28 withdraw from the hollow end walls and the center partition and the material in the compartments is dumped. It is obvious that if it is desired to dump one of the compartments only, then only the pins 25 for the appropriate bottom member 19 are withdrawn and when cradle 22 is rotated about its hinges only the bottom member 19 for that compartment will open.

If it is desired to dump the compartments through their fronts then the bolts 33 are withdrawn. Thereafter bolts 49 and 50 are withdrawn and the weight of the material pressing against front member 29 will rotate them upon their hinges 30 withdrawing members 31 from the hollow end walls and the center partition, sheaves 43, 43, 44 and 45 rotating shafts 40 and 41 and the material will be dumped. Thereafter hand crank 47 is engaged in turn with each of shafts 40 and 41 and shaft 40 and 41 manually rotated to wind cables 52 upon the sheaves 42, 43; 44 and 45 to swing the front members 29 back to closed position after which bolts 33, 49 and 50 are replaced. It is apparent that either compartment can be dumped by the removal of the appropriate bolts 33, 49 or 50. It is also apparent that the compartments can be dumped both through the front and the bottom at the same time or that one can be dumped through the front and the other through the bottom as may be desired.

It is now apparent that the present invention provides a novel transporting and dumping container having a plurality of compartments which can be dumped either through the front, through the bottom or through both front and bottom of each compartment.

Changes to or modifications of the above described illustrative embodiment of the present invention may now be suggested to those skilled in the art without departing from the inventive concept of the present invention. For instance, more than two compartments may be provided by the use of additional partitions.

To determine the scope of the present invention reference should be had to the appended claims.

What is claimed is:

1. In a transporting and dumping container having a plurality of compartments formed by at least one partition extending parallel to the side walls of the container, bottom members for each compartment hinged to the lower edge of the rear wall of the container and a cradle hinged to the lower edge of the rear wall of the container upon which said bottom members rest and to which the chains of the transporting and dumping device are attached.

2. In a transporting and dumping container having a plurality of compartments formed by at least one partition extending parallel to the side walls of the container, bottom members for each compartment hinged to the lower edge of the rear wall of the container, manually operable locking means for each bottom member to lock each bottom member in closed position and a cradle hinged to the lower edge of the rear wall of the container upon which said bottom members rest and to which the chains of the transporting and dumping device are attached.

3. In a transporting and dumping container having hollow side walls and a plurality of compartments formed by at least one hollow partition extending parallel to the side walls of the container, bottom members for each compartment hinged to the lower edge of the rear wall of the container, upstanding side members for each of said bottom members entering the hollow side walls and partitions of the container when said bottom members are in closed position and a cradle hinged to the lower edge of the rear wall of the container upon which said bottom members rest and to which the chains of the transporting and dumping device are attached.

4. In a transporting and dumping container having a plurality of compartments formed by at least one partition extending parallel to the side walls of the container, bottom members for each compartment hinged to the lower edge of the rear wall of the container, front members for each compartment hinged to the container at their lower edges, manually operable locking means for each of said bottom members and said front members locking said bottom members and said front members in closed position and a cradle hinged to the lower edge of the rear wall of the container upon which said bottom members rest and to which the chains of the transporting and dumping device are attached.

5. In a transporting and dumping container having hollow side walls and a plurality of compartments formed by at least one hollow partition extending parallel to the side walls of the container, bottom members for each compartment hinged to the lower edge of the rear wall of the container, upstanding side members for each bottom member entering the hollow side walls and partitions when said bottom members are

in closed position, front members for each compartment hinged to the container at their lower edges, upstanding side members for each of said front members entering the hollow side walls and partitions when said front members are in closed position and a cradle hinged to the lower edge of the rear wall of container upon which said bottom members rest and to which the chains of the transporting and dumping device are attached.

6. In a transporting and dumping container having a plurality of compartments formed by at least one partition extending parallel to the side walls of the container, bottom members for each compartment hinged to the lower edge of the rear wall of the container, front members for each compartment hinged to the container at their lower edges, manually operable means for returning each front member to its closed position.

7. In a transporting and dumping container having a plurality of compartments formed by at least one partition extending parallel to the side walls of the container, bottom members for each compartment hinged to the lower edge of the rear wall of the container, front members for each compartment hinged at their lower edges to the container, manually operable means for returning each front member to its closed position, and manually operable means for locking said returning means when each of said front members are in closed position.

8. In a transporting and dumping container having hollow side walls and a plurality of compartments formed by at least one hollow partition extending parallel to the side walls of the container, bottom members for each compartment hinged to the lower edge of the rear wall of the container, upstanding side members for each of said bottom members entering the hollow side walls and partitions when said bottom members are in closed position, manually operable means locking each of said bottom members in closed position, front members for each compartment hinged at their lower edges to the container, upstanding side members for each of said front members entering said hollow side walls and partitions when said front members are in closed position, manually operable locking means for each of said front members to lock them in closed position, manually operable means for returning each front member to closed position, a bail secured to the rear wall of the container to engage the automatic hook or catch of the transporting and dumping device and a cradle hinged to the lower edge of the rear wall of the container upon which said bottom members rest and to which the chains and the transporting and dumping device are attached.

9. In a transporting and dumping container having a plurality of compartments formed by at least one partition extending parallel to the side walls of the container, bottom members for each compartment hinged to the lower edge of the rear wall of the container, front members for each compartment hinged to the container at their lower edges, and manually operable locking means for each of said bottom members and said front members to separately lock each of said bottom members and each of said front members in closed position.

10. In a transporting and dumping container having hollow side walls and a plurality of compartments formed by at least one hollow partition extending parallel to the side walls of the container, bottom members for each compartment hinged to the lower edge of the rear wall of the container, upstanding side members for each bottom member entering the hollow side walls and partitions when said bottom members are in closed position, front members for each compartment hinged to the container at their lower edges, and upstanding side members for each of said front members entering the hollow side walls and partitions when said front members are in closed position.

11. In a transporting and dumping container having a plurality of compartments formed by at least one partition extending parallel to the side walls of the container, front members for each compartment hinged to the container at their lower edges, and manually operable locking means for locking each of said front members separately when said front members are in closed position.

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