United States Patent [19]

Kolling

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[54] **RUBBISH COMPACTOR-CONTAINER WITH LOAD RELEASE**

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[52] **U.S. Cl.**..... **232/43.1,** 100/229 A, 100/218

[51] **Int. Cl.**..... **B30b 15/32**

[58] **Field of Search**..... 232/1 R, 43.1, 43.3; 100/229 A, 218; 294/69 R

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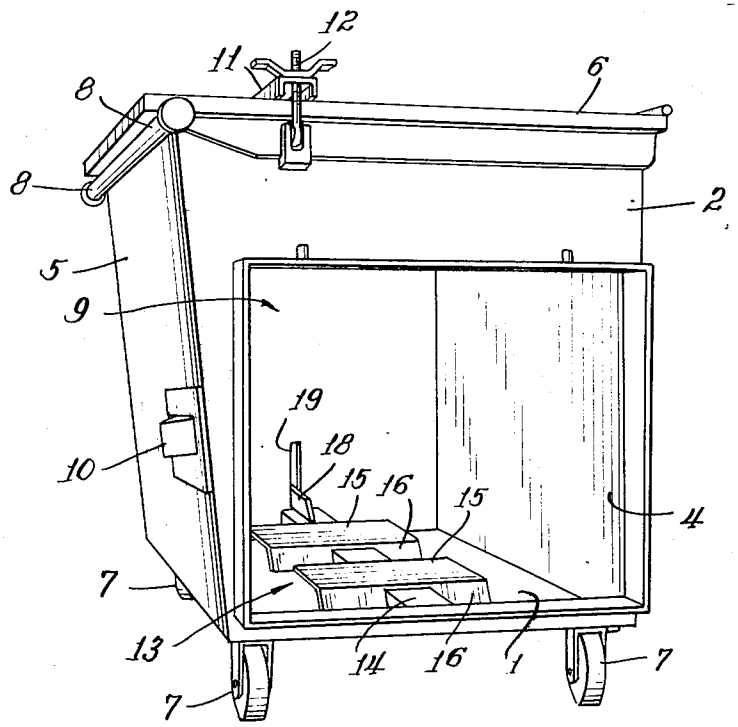
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[57] **ABSTRACT**

A dumpable container into which rubbish is fed and compacted and which has a flaring side wall is equipped with a built-in lift normally resting on the floor of the container and means for forcing the lift upwardly to elevate the compacted load slightly and thereby loosen it from the side walls to avoid sticking on dumping.

7 Claims, 4 Drawing Figures



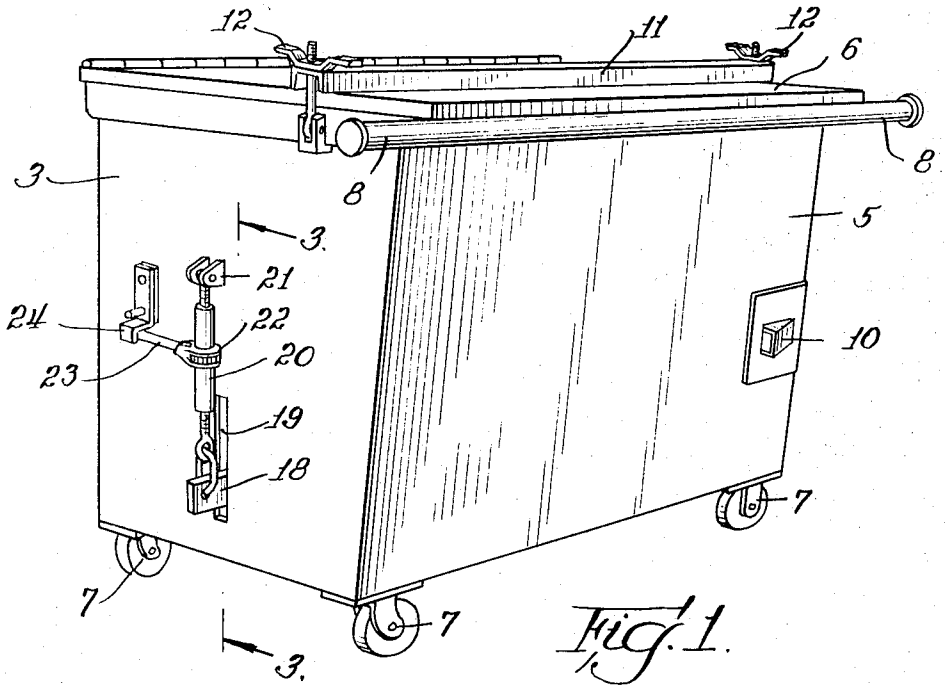

12
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Fig. 1.

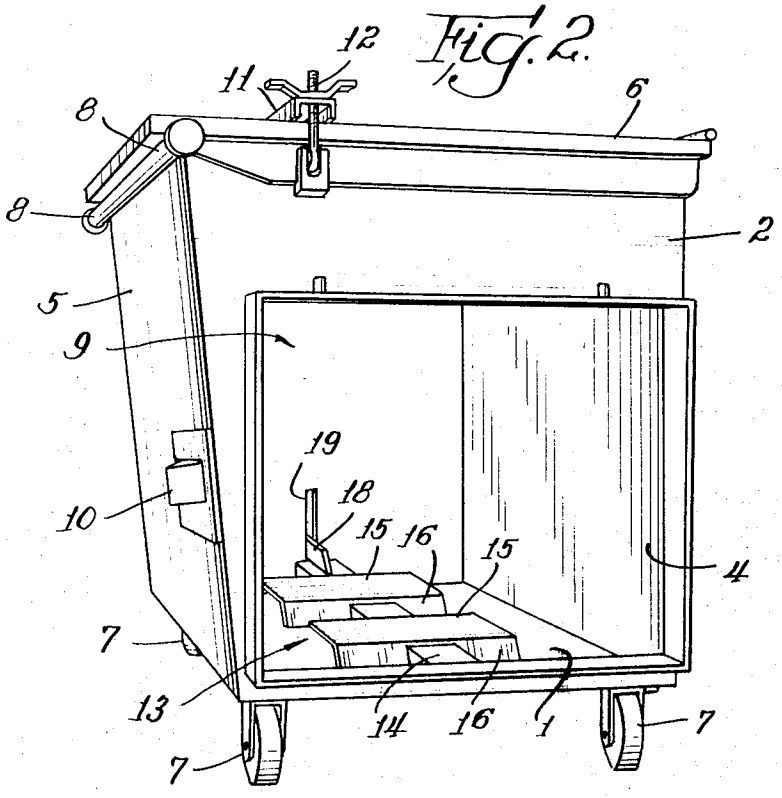

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Fig. 2.

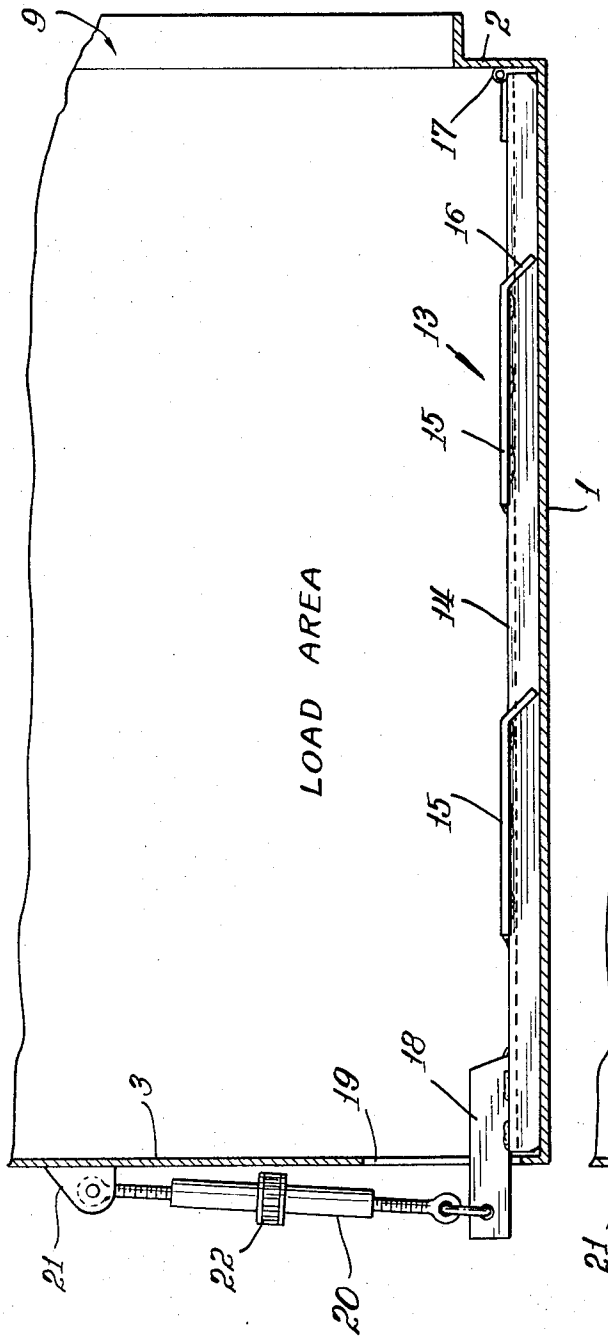

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LOAD AREA
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22
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Fig. 3.

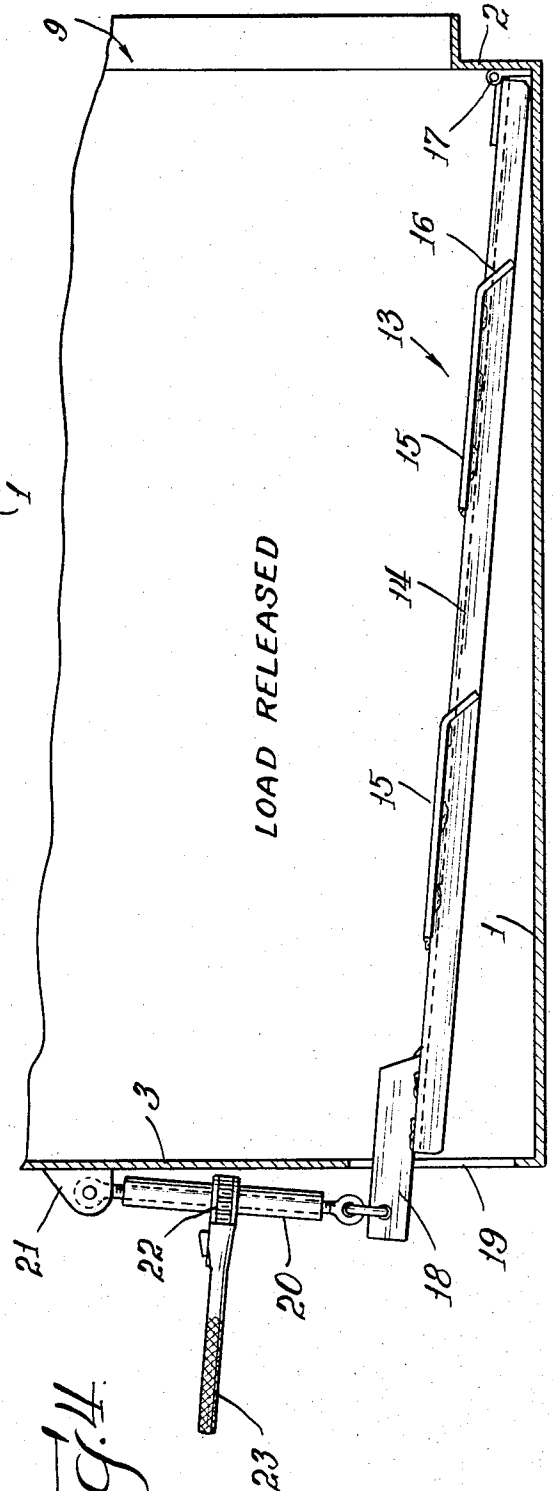

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LOAD RELEASED
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Fig. 4.

RUBBISH COMPACTOR-CONTAINER WITH LOAD RELEASE

BACKGROUND AND SUMMARY OF THE INVENTION

Containers open at their tops with hinged or otherwise openable covers and provided with trunnions or other appropriate means for hoisting and dumping them into packer or other truck have to some extent been employed as compactor receptacles in that the refuse is forced into them by mechanical means rather than merely dumped into the containers through their open tops. Such containers have usually been provided with one or more flaring side walls so that the contents is more readily released when the containers are dumped. It has been found, however, that the compaction of the rubbish within a compactor-container results in pressure engagement of the compacted body of rubbish with the inside surfaces of the container, causing the load to stick under normal dumping procedures requiring manual loosening of the load by the operator to empty the compactor-container. This is a difficult operation which increases substantially the cost of collecting the rubbish.

The principal object of this invention is to provide built-in means for releasing compacted loads of rubbish from compactor-containers for dumping purposes. More specifically, the object is to provide a simple lift at the bottom of the container which can be operated to elevate the compacted load slightly to thus ease it away from the confining surfaces so that it will fall out of the container upon dumping.

A further object is to provide such a load-releasing lift with its own manually operable means for elevating the lift and thus the load.

DESCRIPTION OF THE DRAWINGS

In the accompanying drawings,

FIG. **1** is a perspective view of a compactor-container which is equipped with a load-releasing lift;

FIG. **2** is a perspective view showing the interior of the compactor-container through the loading opening;

FIG. **3** is a cross-sectional view taken at the line **3** — **3** of FIG. **1** showing the lift in normal retracted position, and

FIG. **4** is a cross-sectional view siimilar to that of FIG. **3** and showing the lift in elevated position.

DESCRIPTION OF SPECIFIC EMBODIMENT

The general shape and construction of the container-compactor is essentially the same as has been employed for dumpable rubbish containers. It comprises a floor **1,** end walls **2** and **3,** rear wall **4** and a flaring front wall **5.** The container is provided with a cover **6** hinged to the top edge of rear wall **4.** The container is supported upon the usual castors **7** and trunnions **8** are provided for dumping the container.

To adapt the container for use as a compactor receptable, a suitably framed opening **9** is provided in end wall **2** and appropriate fittings **10** are welded to the front and rear walls for locking the compactor-container to the rubbish feeding and compacting mechanism, not shown. A cover (not shown) is provided to close opening **9** when the compactor-container has been fully loaded and detached from the compacting mechanism ready for dumping into a truck.

To reinforce the container cover **6** and hold it securely in closed position while being loaded, a channel bar **11** spans the length of the cover and suitable fastening means **12** are provided to hold the cover tightly closed.

In accordance with the invention, a lift **13** is built into the bottom of the compactor-container, normally resting on or near floor **1.** Preferably, the area of the lifting surfaces is considerably less than the area of the floor of the container so that the volume which the lift requires is kept at a minimum. The lift illustrated comprises a channel **14** which extends from end to end of the container along the median of the floor and a pair of spaced plates **15** welded to and supported by the channel. Ramps **16** lead up to the edges of the respective plates which face opening **4.** The end of channel **14** nearest the loading opening **4** is pivotally mounted to the container structure as by a hinge **17,** and a lever bar **18,** welded to the other end of channel **14,** extends through a slot **19** in end wall **3** to outside the container.

A leverage mechanism for hauling up on the protruding end of bar **18** to elevate the lift is mounted upon end wall **3.** It comprises a turnbuckle **20** connected between an anchorage **21** and the end of lift bar bar **18** with means for operating the turnbuckle in either direction comprising a ratchet **22** including handle **23** which may be held against the container wall when not in use by a suitable catch **24.**

Rubbish fed into the container by a compacting press to which it is locked moves into the container over the upper surfaces of channel **14** and plates **15** to the far end of the container. Ramps **16** prevent packing of the rubbish under plate **15,** guiding it, instead, upwardly as it is forced into the container as it is fed and compacted therein. When fully loaded with compacted rubbish, the compactor-container is detached from the feeding press and a cover is fastened over opening **9** for storage and eventual dumping.

When the loaded compactor-container is to be dumped, bar **11** is removed leaving cover **6** free to open. The more or less integrated body of rubbish is loosened from the confining walls of the container by operating ratchet **22** to pull lift **13** upwardly through lift bar **18.** Relatively little movement of the body of rubbish is required since front wall **5** (at least) of the compactor-container is flared outwardly and the bond between the body of rubbish and the surfaces of the container is broken. The container may then be dumped in the usual way by tipping it around trunnions **8** into a receiving truck.

I claim:

1. A rubbish compactor-container comprising a container having side and end walls and a floor and a cover adapted to close the otherwise open top thereof, at least one of said walls flaring outwardly toward the top, one of said end walls having an opening therein for feeding rubbish into said container and compacting the rubbish within said container, a lift normally resting in the bottom of the container and having load-engaging top surfaces adapted to support a body of compacted rubbish throughout the bottom thereof and elevate said body within said container, and means for elevating said lift sufficiently to loosen a body of compacted rubbish to dump the same from said container.

2. A compactor-container in accordance with claim **1** wherein the lift comprises a stiff load-bearing struc-

ture extending from end to end of the container, one end of said lift structure being pivotally mounted to the compactor-container structure, the other end of said lift structure having a lever arm extending through a vertical slot in the adjacent end wall outside of the compactor-container, the means for elevating said lift being operatively connected with the protruding end of said lever arm.

3. A compactor-container in accordance with claim 1 wherein the load-engaging top surfaces of the lift comprise a plurality of spaced plates having a total area substantially less than the area of the floor of the container.

4. A compactor-container in accordance with claim 3 wherein the lift includes a structural channel extending from end to end of the container and the spaced plates overlie and are secured to said channel, and ramps extending from the edges of said plates nearest the feeding opening toward the floor of the container to prevent the entry of rubbish to the spaces under said plates.

5. A compactor-container in accordance with claim 1 wherein the lift extends from end to end of the container and has a lever arm extending through a slot in end wall thereof opposite the feed opening and the lift elevating lever mechanism comprises a turnbuckle anchored at one end to said end wall of said container and connected at the other end to said lever arm, and means for operating said turnbuckle.

6. A compactor-container in accordance with claim 5 wherein the means for operating the turnbuckle comprises a double-acting ratchet attached to said turnbuckle and having a lever for turning said turnbuckle through said ratchet.

7. A rubbish compactor-container comprising a container having side and end walls and a floor and a cover adapted to close the otherwise open top thereof, at least one of said walls flaring outwardly toward the top, one of said end walls having an opening therein for feeding rubbish into said container and compacting the rubbish in situ, a lift extending from end to end in the bottom of said container and having load bearing top surfaces adapted to support a body of compacted rubbish thereon, one end of said lift being hingedly fastened to the container structure at the bottom of said end wall, the other end of said lift having a lever arm extending through a slot in the other end wall to outside said container, a turnbuckle having one end thereof anchored to said other end wall and the other end thereof connected with the protruding end of said lever arm, and ratchet means including a handle operatively secured to said turnbuckle to turn the same in either direction to elevate said lift and return the same to its normal location at the bottom of said container.

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