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Hutchinson et al.

[11] **3,808,766**

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[54] **MACHINE FOR COMPACTING AND PACKAGING WASTE MATERIAL**

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[52] **U.S. Cl.** ..... **53/24,** 53/124 B, 100/229 A, 100/250

[51] **Int. Cl.** **B65b 1/24**

[58] **Field of Search** ..... 53/24, 124 B, 124 C; 100/229 A, 250

[56] **References Cited**

UNITED STATES PATENTS

3,708,953	1/1973	Aluotto	53/124 B
3,633,329	1/1972	Nadler	53/124 B X
2,682,137	6/1954	Cox	53/124 B X
3,589,277	6/1971	Gray et al.	100/229 A X

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[57] **ABSTRACT**

This disclosure relates to a machine for compacting and packaging waste material including a compaction chamber internally of a housing adapted to receive a container into which the waste material is to be compacted, a compacting ram, means for reciprocating the compacting ram in a first direction to compact the waste material and also discharge the container and in an opposite direction to condition the housing for the receipt of another charge of waste material, support means externally of a door of the housing upon which the discharged container is deposited for further processing, and means for moving the support means to displace the container for further processing while another container is charged in the compacting machine.

14 Claims, 5 Drawing Figures

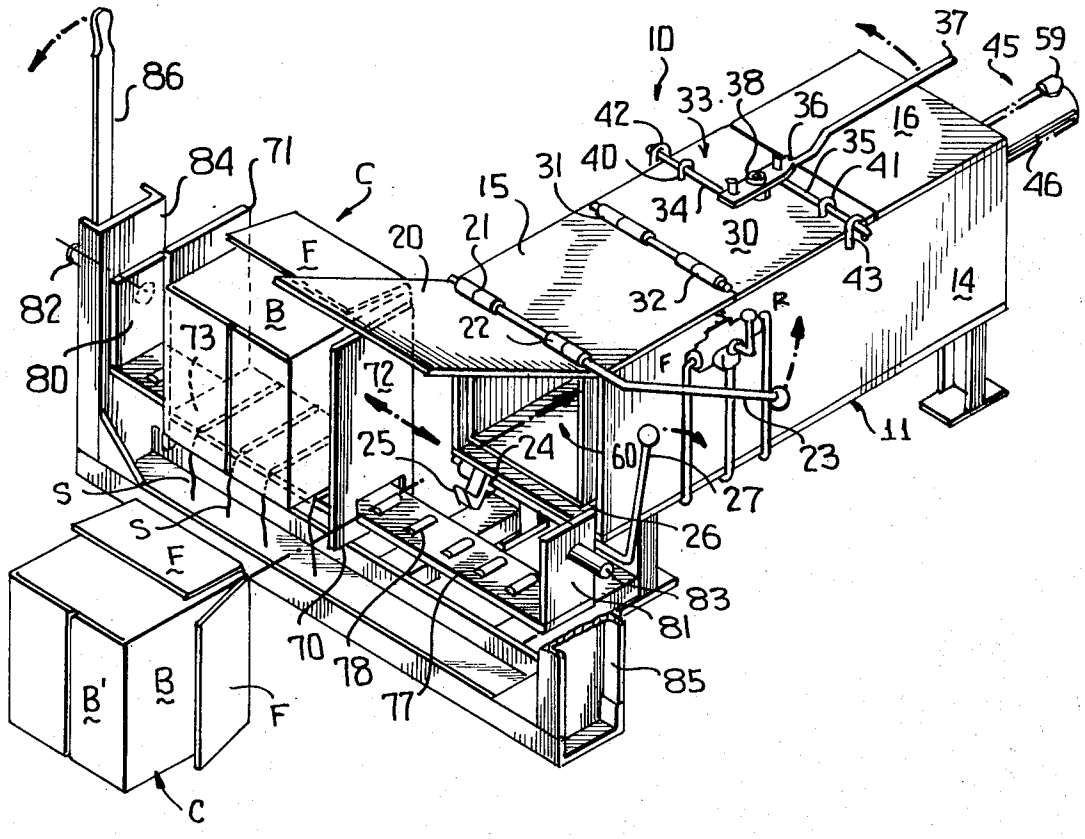


FIG. 1

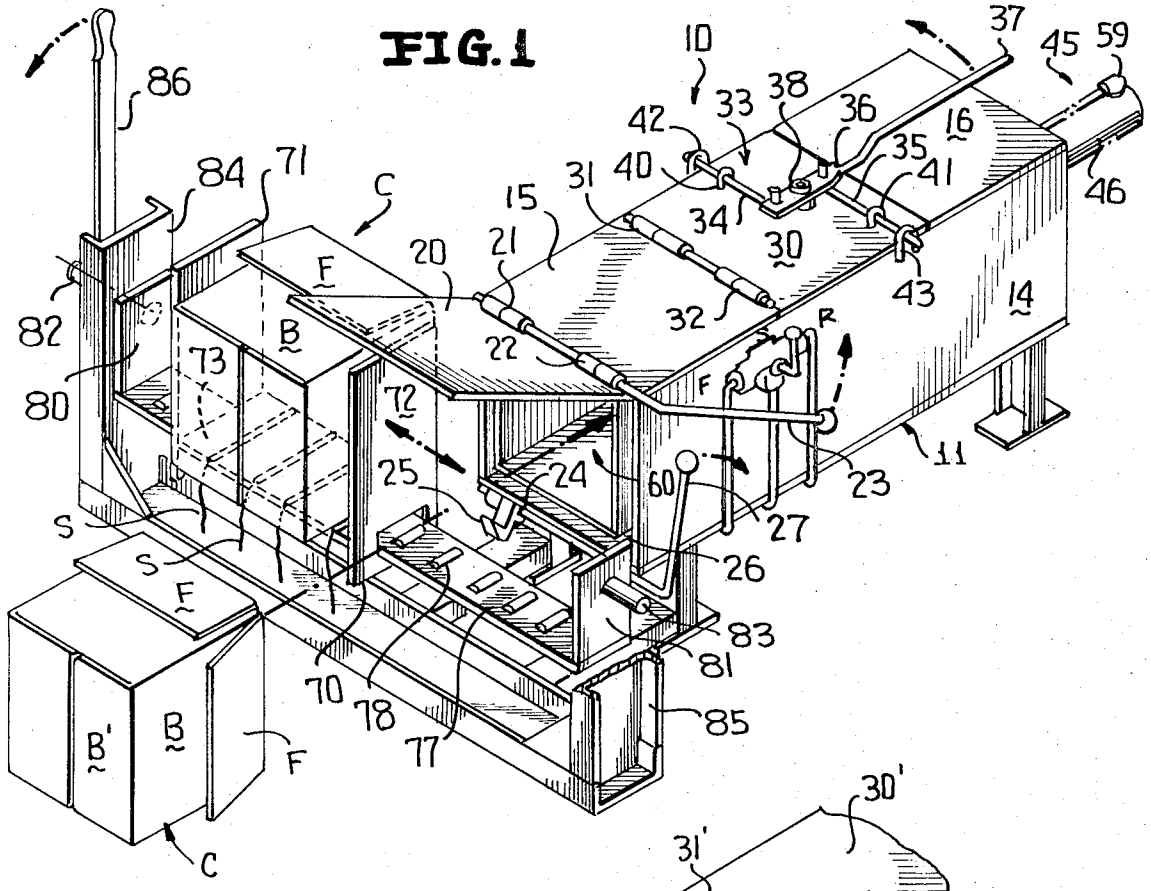

10
37
45
59
86
84
71
C
42
33
38
36
16
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41
46
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31
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34
30
43
14
F
20
21
32
82
B
22
R
80
73
72
F
25
24
60
23
11
27
S
S
26
F
83
81
70
78
77
85
B'
B
F
C

FIG. 5

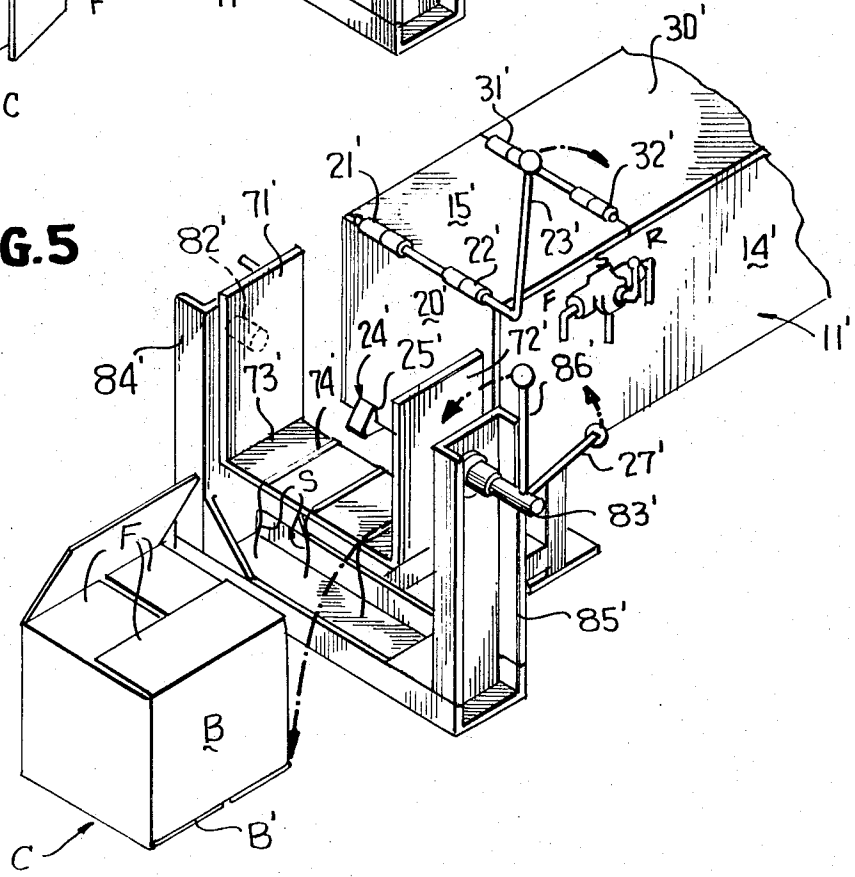

30'
31'
21'
32'
71'
15'
82'
23'
22'
R
14'
20'
F
24'
72'
11'
84'
73'
74'
25'
86'
27'
S
83'
F
85'
B
B'
C

FIG.3

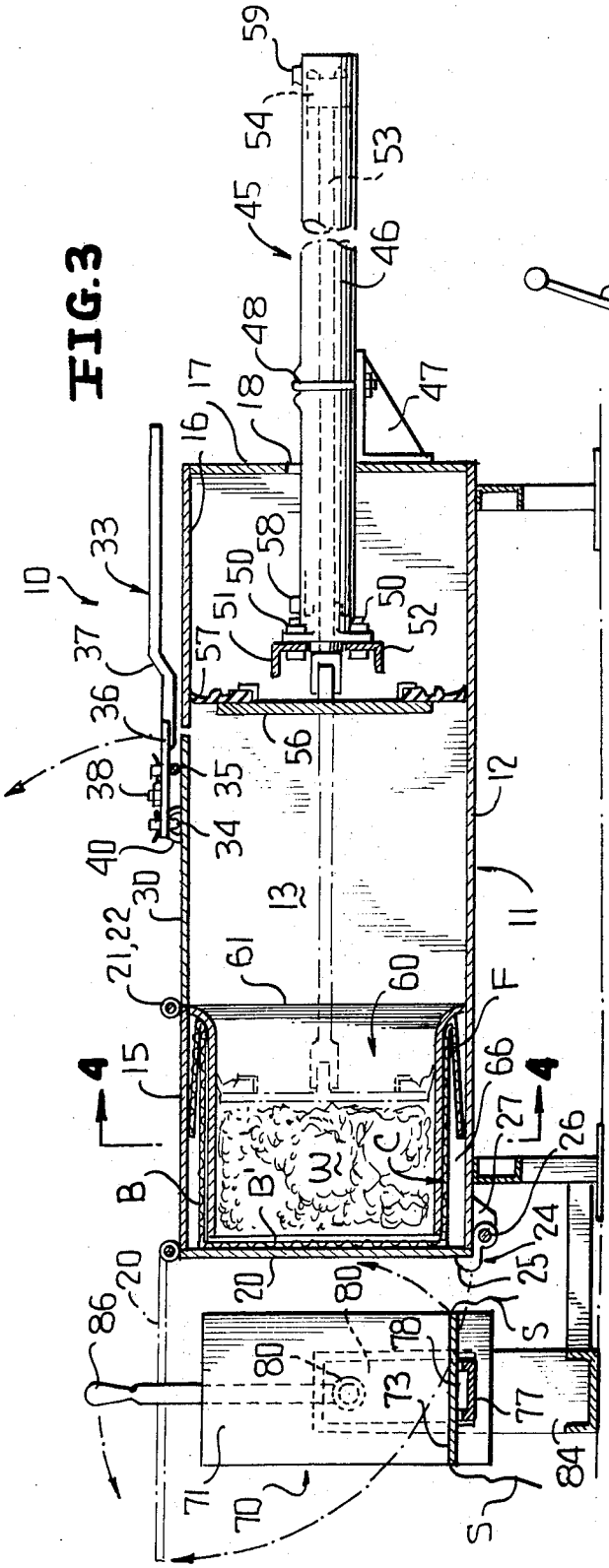


FIG.2

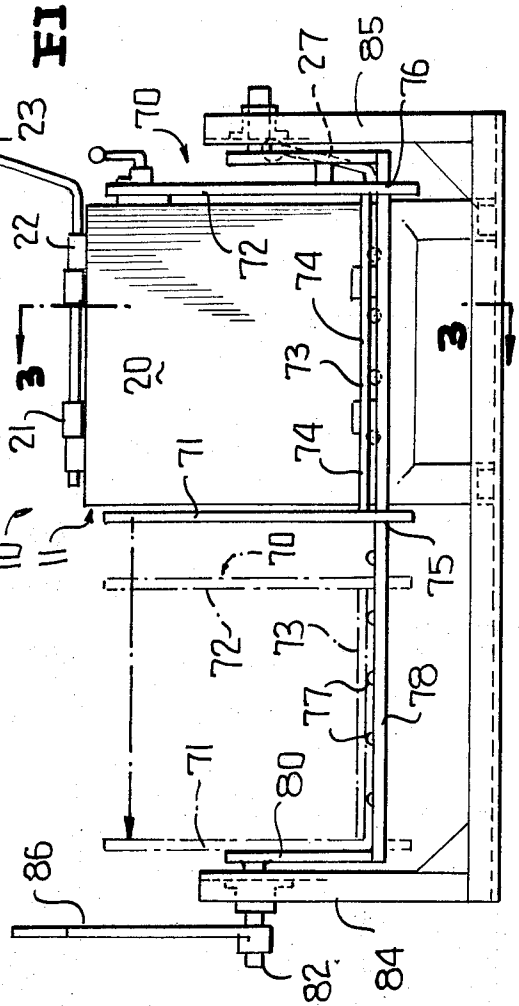
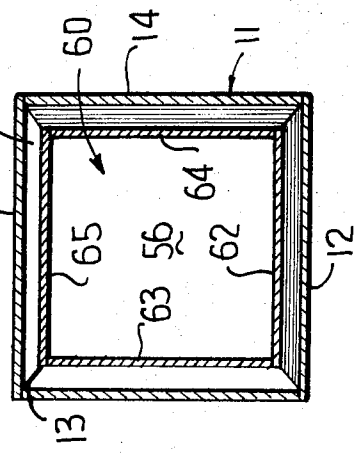


FIG.4



MACHINE FOR COMPACTING AND PACKAGING WASTE MATERIAL

The present invention relates generally to machines for compacting and packaging waste material, and more particularly to a machine which is economically manufactured, involves simplicity in use, and can operate faster than known compactors thereby expediting the disposal of waste material with an attendant saving in labor and costs.

At present it is known to dispose of waste material, rubbish, and the like by delivering it by truck or otherwise in bulk to an incinerator where it is burned, to land fill areas, or similar sites. Obviously, such practices propose numerous drawbacks, the most prevelant of which is serious air pollution in the case of incinerator burning and the use of excessive areas in land fill operations due to the bulky nature of the waste material.

In order to overcome the disadvantages heretofore mentioned as well as others which are apparent to persons skilled in the art, it is a primary object of this invention to compact or compress waste material into an extremely dense mass directly in a container which can be disposed of in a lesser volume than bulk practices, thereby overcoming the undesired air pollution heretofore noted in regard to incinerator operations and obviously lessening the volume in land fill operations.

In keeping with the foregoing the specifics of the machine for compacting and packaging waste material includes a housing having a compaction chamber which receives a container into which waste material is packaged by the movement of a compacting ram, a door being disposed such that at the end of compaction the container and the waste material therein can be discharged, and support means being provided externally of the door upon which the container is deposited for movement to a further processing station at which the container may be tied, banded, or otherwise treated during the time that a succeeding compacting operation takes place.

A further object of this invention is to provide a novel machine of the type heretofore set forth wherein the support means is mounted for pivotal movement about an axis transverse the direction of reciprocation of the compacting ram and/or is mounted for reciprocal movement transverse to the movement of the compacting ram and in both cases being operative for dispensing the finally packaged waste material with minimum effort and inconvenience.

Still another object of this invention is to provide a novel machine of the type heretofore set forth including venturi means in part defining the compaction chamber, the venturi being an open-ended tube having a first end enlarging in a direction away from the housing door, and a major portion of the tube being in spaced relationship to the housing whereby a container can be sandwiched between the housing and tube to receive the waste material during the compacting operation.

Yet another object of this invention is to provide a novel compacting and packaging machine in the manner aforesaid wherein a second end of the venturi tube is spaced from the housing door in the closed position of the latter whereby a bottom of the container is sandwiched between the door and the venturi tube second end.

Still another object of this invention is to provide a novel machine in the manner heretofore set forth wherein the support means includes a grooved support surface adapted to be traversed by twine or the like whereby the container may be securely tied for ease of subsequent handling.

Still another object of this invention is to provide a novel compacting and packaging machine wherein the container has closure flaps joined by a generally polygonal body wall along fold lines with the closure flaps being folded outboard of the body when in the housing, the machine further including means for automatically unfolding the closure flaps upon the discharge of the container from the compaction chamber.

A final object of this invention is to provide a novel method of compacting and packaging waste material by the use of the apparatus heretofore described or equivalents thereof, the prime feature of the invention being that of deflecting the closure flaps away from the bottom during the discharge of the container from the compaction chamber by imposing obstructions aligned with the closure flaps whereby the necessary discharge motion imparted to the container at least initiates the closing of the closure flaps.

With the above and other objects in view that will hereinafter appear, the nature of the invention will be more clearly understood by reference to the following detailed description, the appended claimed subject matter, and the several views illustrated in the accompanying drawings.

In the drawings:

FIG. 1 is a perspective view of the novel compacting and packaging machine of this invention, and illustrates the manner in which a container containing compacted waste material is discharged through an opening normally closed by a door of the housing and is transferred to the left for subsequent processing while another charge of waste material is compacted into another container within the machine.

FIG. 2 is a front elevational view looking from left-to-right in FIG. 3, and illustrates a support mounted for sliding movement between the solid outline position in alignment with the discharge door of the compacting machine housing, and a second position shown in phantom outline at which subsequent processing takes place during a following compacting operation.

FIG. 3 is a sectional view taken generally along the line 3—3 of FIG. 2, and illustrates two positions of the compacting ram and the manner in which the container is sandwiched between the venturi and the housing exterior.

FIG. 4 is a sectional view taken generally along the line 4—4 of FIG. 3, and illustrates details of the venturi and its spaced relationship to the machine housing.

FIG. 5 is a fragmentary sectional view of another embodiment of the invention similar to FIG. 1, and illustrates a support for receiving a charged container for subsequent treatment and discharge, absent the transverse reciprocation of the embodiment shown in FIG. 1.

A novel machine for compacting and packaging waste material is generally designated by the reference numeral **10** (FIGS. **1**, **2** and **3**) and includes a housing **11** defined by a bottom wall **12** (FIGS. **3** and **4**), a pair of side walls **13**, **14** (FIG. **4**) and a top wall formed by a pair of walls **15**, **16** (FIG. **1**). The last-mentioned walls **12** through **16** are preferably constructed from

one-quarter inch steel plate double welded to form the housing **11** of a length approximating 36 inches by a cross-sectional area of 14 square inches. The housing **11** is closed at one end by a back plate **17** (FIG. 3) having an opening **18** while at an end opposite thereto a door **20** is pivotally mounted by hinge means **21, 22** to the plate **15** and may be pivoted between the solid and phantom outline positions in FIGS. **1** and **3** by means of an appropriate manually operated handle **23.** The door **20** is closed by counter-clockwise movement of the handle **23,** as indicated by the unnumbered arrow associated therewith in FIG. **1,** while opposite motion closes the door **20.**

A clamp **24** (FIG. 3) having a nose **25** is fixed to a shaft **26** which is, in turn, pivoted by suitable brackets **27** welded to the underside of the bottom wall **12.** The shaft **26** terminates in a handle **27** which when moved clockwise as indicated by the unnumbered headed arrow associated therewith in FIG. **1** results in the clockwise rotation of the clamp **24,** as viewed in FIG. **3,** with the result that the nose **25** abuts the door **20** and prevents the opening thereof. Counter-clockwise motion imparted to the handle **27,** again as viewed in FIG. **1,** results in like motion imparted to the clamp **24** with the result that the door **20** can thereafter be opened.

Waste material is charged into the housing **11** through an opening (unnumbered) formed upon the counter-clockwise pivoting of a door **30** positioned between the plates **16, 15,** and conventionally pivotally attached to the latter by conventional pivot means **31, 32.** A latch, generally designated by the reference numeral **33** is carried by the door **30** and includes a pair of latch arms **34, 35** each pivotally mounted at one end to an end **36** of a handle **37.** The end **36** is, in turn, conventionally pivotally secured as at **38** to the door **30.** The arms **34, 35** are slidingly received in inverted U-bolts **40, 41** welded or otherwise conventionally fastened to the door **30.** The ends of the arms **34, 35** also pass through inverted I-bolts or U-bolts **42, 43,** respectively, secured to the respective side walls **13, 14.** In the position of the arms **34, 35** illustrated in FIG. **1** the door **30** cannot be opened since the ends of the arms are received in the eyes **42, 43.** However, upon movement imparted to the handle **37** in a counter-clockwise direction as indicated by the arrow associated therewith the arms **34, 35** are drawn in opposite directions outward of the eyes **42, 43,** and the door **30** may thereinafter open to charge waste material into the housing **11.**

A fluid motor, generally designated by the reference numeral **45,** is provided for effecting the compaction of the waste material and includes a cylinder **46** partially projecting through the aperture **18** into the housing **11** and being suitably supported by a bracket **47** and a clamp **48** in a generally horizontal plane. The end portion (unnumbered) of the cylinder **46** internally of the housing **11** may be secured by nuts and bolts **50** to a pair of angle bars **51, 52** spanning and secured to the side walls **13, 14.** The latter structure lends rigidity to the machine **10** in view of the high forces generated during a compacting operation which will be described more fully hereinafter. A piston rod **53** having a piston **54** is mounted for reciprocal motion relative to the cylinder **46,** and an exposed end **55** thereof is pivotally secured to the central portion of a compacting ram **56** of a generally rectangular configuration having secured conventionally to its periphery a seal **57.** Upon the introduction of liquid or gas under pressure into a port **58** the piston **54** will be retracted to the position shown in solid outline in FIG. **3** whereas like introduction through a port **59** results in the movement of the rod **53** along with the ram **56** to the left which is the direction of compaction in FIG. **3,** as shown in phantom out line thereat.

A compaction chamber within the housing **11** is generally designated by the reference numeral **60** and includes a flared entrance end portion **61** (FIG. **3**) flared in the form of a venturi to assist the introduction of the waste material W into the compaction chamber **60.** The chamber **60** includes walls **62** through **65** (FIG. **4**) which for the majority of the length thereof are spaced from the respective walls **12** through **15** thus forming a gap **66** in which is received a body B of a generally polygonal container C having a closed bottom B′ and an open top which can be closed by closure flaps F, one associated with each of the four side walls of the container body B. The leftmost container C shown in FIG. **1** is positioned in alignment with the opening (unnumbered) formed by an open door **20** incident to being positioned internally of the housing **11** in sandwiched relationship between the walls **62** through **65** and **12** through **15,** it being noted once again that the closure flaps F are outboard of the container body B and directed toward the bottom B′ thereof. From this position the container C is simply moved to the right in the direction of the unnumbered headed arrow associated therewith until fully housed in external surrounding relationship to the chamber **60,** as is best shown in FIG. **3,** after which the door **20** is closed and locked by the latch **24.** Assuming that waste material has been deposited in the area beneath the door **30** after the latter had been opened and thereafter latched, a compaction operation is initiated by energizing a suitable system (not shown) to move the compacting ram **56** to the left at which point the waste material W will be progressively introduced into and compressed or compacted in the container C. In this regard it will be noted that the bottom wall B′ of the container C is backed up by the latched door **20** and the flared portion or venturi **61** permits the material to be gradually or progressively inserted within the chamber **60** during which movement it will also be noted from the phantom outline position in FIG. **3** that the seal **57** flexes to assure that optimum amounts of the waste material are, in fact, forced into the chamber **60.** At this point it will be noted that though the compressive forces are extremely high no pressure is applied to the body B of the container C since it is in exterior relationship to the chamber walls **62** through **65.** Moreover, the pressure upon the bottom wall B′ is immaterial since it is backed up by the door **20.**

After maximum compaction of the waste material W has been achieved the pressure internally of the cylinder **46** is lessened or terminated sufficiently to permit the opening of the door **20** after which the reinstitution of pressure on the piston side of the cylinder **46** will cause continued movement of the compacting ram **56** to the left resulting in the removal of both the compacted waste W and the container C from within the housing **11** and the subsequent depositing thereof upon support means generally designated by the reference numeral **70** in FIGS. **1** through **3.**

The support means **70** is defined by a pair of spaced vertical plates **71, 72** and a horizontal plate **73** span-

ning and welded therebetween. The plate **73** has a plurality of parallel grooves **74** whereas the plates **71, 72** have guide apertures **75, 76,** respectively, which receive a guiding and conveying rail **77** carrying a plurality of antifriction elements, such as roller bearings **78.** Opposite ends of the rail **77** are secured to plates **80, 81** which, in turn, include respective trunnions **82, 83** suitably mounted for pivoting movement in upstanding legs **84, 85,** respectively, of a frame F. The trunnion **82** has secured thereto a handle **86** which functions in a manner to be described immediately hereinafter.

Assuming that the machine is in the solid outline position illustrated in FIG. **3** except that the material has been compacted to the condition shown on movement of the compacting ram **56** to its phantom outline position, the operation of the machine **10** continues as follows. Upon the unlatching of the latch **24** and the opening of the door **20** the movement of the compacting ram **56** to the left can be reinstituted by pressurizing the piston side of the cylinder **46** whereupon the waste material W which has been compacted along with the container C is moved leftward and outward of the housing with the bottommost wall (unnumbered) of the container C eventually contacting and moving along the plate **73** of the support means **70** when the latter is in the aligned position with the housing **11,** as shown in solid outline in FIG. **2.** During the progressive movement of the container C leftward a container is not only deposited upon the support means **70** but the flaps F are automatically urged from the folded condition toward their closed position by first being released from their confined positions in the groove **66.** Moreover, the edges (unnumbered) of the plates **71** through **73** are slightly outboard of the container body B but aligned such that they will contact the flaps F on all sides but the top to progressively begin the unfolding of the flaps as the container C is pushed further to the left on the support means **70.** Thereafter the support means **70** is shifted to the left as viewed in FIG. **2** to its phantom outline position at which position it may be subsequently processed by, for example, continuing the closing of the flaps F and banding or tying the same. The latter is achieved by the use of strings S, twine, bands or the like previously positioned in the grooves **74** prior to the discharge of the container C upon the support **70.** During the banding operation or at any time after the support **70** has reached the phantom outline position shown in FIG. **2** the door **20** may be closed, the latch **24** moved to the position shown in FIG. **3,** the ram **56** retracted, the door **30** opened, the housing recharged with waste material, the door **300** closed and latched, and another compacting operation initiated. During the performance of the latter events which may be done manually or automatically, in the case of the latter a worker could be performing the binding operation and at the conclusion thereof discharging the leftmost container of FIG. **1** by appropriately moving the handle **86** counterclockwise in the manner indicated by the arrow associated therewith at which point the rail **77** will tilt or pivot and the container will be appropriately discharged. Prior to the opening of the door **20** the support means **70** is reshifted from the phantom to the solid outline position in FIG. **2** to receive the next container from the compacting machine **10** upon the subsequent opening of the door **20.**

Details such as appropriate safety switches, power sources, etc. have not been illustrated since the use thereof is considered within the domain of a person skilled in the art. However, for purposes of the invention any safety system would incorporate suitable sensors or switches which would assure that the support **70** would be aligned with the door **20** prior to the latter being capable of being opened to insure that the container discharged from the housing **11** would be received upon the plate **73** and, of course, between the plates **71, 72.** Additionally, the system should include appropriate sensors which would not permit the door **30** to be opened until the ram **56** has been fully retracted to the solid outline position in FIG. **3** and, of course, movement of the latter to the left therefrom should not be permitted until the door **30** is not only closed but the latch **33** is in the position shown in FIG. **1.**

Referring now to FIG. **5,** illustrated therein is another compacting and packaging machine which bears refernce numeral **10'** since all elements are identical to those of the machine **10.** However, the machine **10'** is designed for areas of use at which there is insufficient room for transverse movement of the supporting means **70'.** Thus, in accordance with the machine **10'** after the container C has been deposited upon the support means **70'** the door **20'** remains open until the container C' has been bound and discharged by the pivoting of the support means **70'** and its subsequent return to the position illustrated in FIG. **5** after which the door **20'** may be closed and another compacting operation begun. The operation of the machine **10'** is thus slightly slower than that of the operation of the machine **10** since the banding operation must be completed prior to the recycling of the compacting operation begun by the closing of the door **20** after, of course, another container has been inserted into the housing **11'.**

While preferred forms and arrangements of parts have been shown in illustrating the invention, it is to be clearly understood that various changes in details and arrangement of parts may be made without departing from the spirit and scope of this invention.

We claim:

1. A machine for compacting and packaging waste material comprising a housing including a compaction chamber adapted to receive a container into which the waste material is to be packaged, a compacting ram, means for reciprocating said compacting ram whereby movement in a first direction results in the introduction and compaction of the waste material in a container adapted to be housed in said compaction chamber and movement in a second direction conditions the housing for receipt of another charge of waste material, a door disposed in opposed relationship to said compacting ram's movement in said first direction whereby upon the opening of said door after compaction movement of said compacting ram in said first direction discharges said container and the waste material therein from said compaction chamber, support means externally of said door upon which the discharged container is deposited for further processing, means for moving the support means to displace the further processed container, and said moving means includes the mounting of said support means for pivoting movement about an axis transverse to the direction of reciprocation of said compacting ram.

2. A machine for compacting and packaging waste material comprising a housing including a compaction chamber adapted to receive a container into which the

waste material is to be packaged, a compacting ram, means for reciprocating said compacting ram whereby movement in a first direction results in the introduction and compaction of the waste material in a container adapted to be housed in said compaction chamber and movement in a second direction conditions the housing for receipt of another charge of waste material, a door disposed in opposed relationship to said compacting ram's movement in said first direction whereby upon the opening of said door after compaction movement of said compacting ram in said first direction discharges said container and the waste material therein from said compaction chamber, support means externally of said door upon which the discharged container is deposited for further processing, means for moving the support means to displace the further processed container, and said moving means includes the mounting of said support means for reciprocal movement transverse to the directions of movement of said compacting ram.

3. A machine for compacting and packaging waste material comprising a housing including a compaction chamber adapted to receive a container into which the waste material is to be packaged, a compacting ram, means for reciprocating said compacting ram whereby movement in a first direction results in the introduction and compaction of the waste material in a container adapted to be housed in said compaction chamber and movement in a second direction conditions the housing for receipt of another charge of waste material, a door disposed in opposed relationship to said compacting ram's movement in said first direction whereby upon the opening of said door after compaction movement of said compacting ram in said first direction discharges said container and the waste material therein from said compaction chamber, support means externally of said door upon which the discharged container is deposited for further processing, means for moving the support means to displace the further processed container, said moving means includes the mounting of said support means for pivoting movement about an axis transverse to the direction of reciprocation of said compacting ram and also for reciprocal movement transverse to the directions of movement of said compacting ram.

4. A machine for compacting and packaging waste material comprising a housing including a compaction chamber adapted to receive a container into which the waste material is to be packaged, a compacting ram, means for reciprocating said compacting ram whereby movement in a first direction results in the introduction and compaction of the waste material in a container adapted to be housed in said compaction chamber and movement in a second direction conditions the housing for receipt of another charge of waste material, a door disposed in opposed relationship to said compacting ram's movement in said first direction whereby upon the opening of said door afer compaction movement of said compacting ram in said first direction discharges said container and the waste material therein from said compaction chamber, support means externally of said door upon which the discharged container is deposited for further processing, means for moving the support means to displace the further processed container, a venturi means in part defining said compaction chamber, said venturi means being an open ended tube having a first end enlarging in a direction away from said door, and a major portion of said tube being in spaced relationship to said housing whereby a container may be sandwiched between said housing and tube.

5. A machine for compacting and packaging waste material comprising a housing including a compaction chamber adapted to receive a container into which the waste material is to be packaged, a compacting ram, means for reciprocating said compacting ram whereby movement in a first direction results in the introduction and compaction of the waste material in a container adapted to be housed in said compaction chamber and movement in a second direction conditions the housing for receipt of another charge of waste material, a door disposed in opposed relationship to said compacting ram's movement in said first direction whereby upon the opening of said door after compaction movement of said compacting ram in said first direction discharges said container and the waste material therein from said compaction chamber, support means externally of said door upon which the discharged container is deposited for further processing, means for moving the support means to displace the further processed container and including a venturi means in part defining said compaction chamber, said venturi means being an open ended tube having a first end enlarging in a direction away from said door, a major portion of said tube being in spaced relationship to said housing whereby a container can be sandwiched between said housing and tube, and a second end of said tube is spaced from said door in the closed position of the latter.

6. A machine for compacting and packaging waste material comprising a housing including a compaction chamber adapted to receive a container into which the waste material is to be packaged, a compacting ram, means for reciprocating said compacting ram whereby movement in a first direction results in the introduction and compaction of the waste material in a container adapted to be housed in said compaction chamber and movement in a second direction conditions the housing for receipt of another charge of waste material, a door disposed in opposed relationship to said compacting ram's movement in said first direction whereby upon the opening of said door after compaction movement of said compacting ram in said first direction discharges said container and the waste material therein from said compaction chamber, support means externally of said door upon which the discharged container is deposited for further processing, means for moving the support means to displace the further processed container and said support means includes a grooved support surface adapted to be traversed by twine or the like whereby the container may be securely tied for ease of subsequent handling.

7. A machine for compacting and packaging waste material comprising a housing including a compaction chamber adapted to receive a container into which the waste material is to be packaged, a compacting ram, means for reciprocating said compacting ram whereby movement in a first direction results in the introduction and compaction of the waste material in a container adapted to be housed in said compaction chamber and movement in a second direction conditions the housing for receipt of another charge of waste material, a door disposed in opposed relationship to said compacting ram's movement in said first direction whereby upon the opening of said door after compaction movement of said compacting ram in said first direction discharges

said container and the waste material therein from said compaction chamber, support means externally of said door upon which the discharged container is deposited for further processing, means for moving the support means to displace the further processed container and said support means and housing are of like transverse cross-sectional configurations thereby enabling ease of transition of the container from said housing to said support means.

8. A machine for compacting and packaging waste material comprising a housing including a compaction chamber adapted to receive a container into which the waste material is to be packaged, a compacting ram, means for reciprocating said compacting ram whereby movement in a first direction results in the introduction and compaction of the waste material in a container adapted to be housed in said compaction chamber and movement in a second direction conditions the housing for receipt of another charge of waste material, a door disposed in opposed relationship to said compacting ram's movement in said first direction whereby upon the opening of said door after compaction movement of said compacting ram in said first direction discharges said container and the waste material therein from said compaction chamber, support means externally of said door upon which the discharged container is deposited for further processing, means for moving the support means to displace the further processed container, said container has closure flaps joined to a generally polygonal body wall along fold lines with the closure flaps being folded outboard of the bodyhen in said housing, and means for automatically unfolding at least one of said closure flaps upon the discharge of said container from the compaction chamber.

9. The compacting and packaging machine as defined in claim **2** including venturi means in part defining said compaction chamber, said venturi means being an open ended tube having a first end enlarging in a direction away from said door, a major portion of said tube being in spaced relationship to said housing whereby a container may be sandwiched between said housing and tube, and a second end of said tube is spaced from said door in the closed position of the latter.

10. The compacting and packaging machine are defined in claim **2** wherein said support means includes a grooved support surface adapted to be traversed by twine or the like whereby the container may be securely tied for ease of subsequent handling.

11. The compacting and packaging machine as defined in claim **2** wherein said container has closure flaps joined to a generally polygonal body wall along fold lines with the closure flaps being folded outboard of the body when in said housing, and means for automatically unfolding at least one of said closure flaps upon the discharge of said container from the compaction chamber.

12. The compacting and packaging machine as defined in claim **4** wherein said support means includes a grooved support surface adapted to be traversed by twine or the like whereby the container may be securely tied for ease of subsequent handling.

13. The compacting and packaging machine as defined in claim **4** wherein said container has closure flaps joined to a generally polygonal body wall along fold lines with the closure flaps being folded outboard of the body when in said housing, and means for automatically unfolding at least one of said closure flaps upon the discharge of said container from the compaction chamber.

14. A method of compacting and packaging waste material comprising the steps of providing a container having a generally polygonal body closed at one end by a bottom and having closure flaps joined thereto by fold lines at a second end, folding the closure flaps outboard of said body and directed toward said bottom, confining the thus folded closure flaps by a housing, compacting waste material in said container, removing the container from the housing by linear movement bottom first, and deflecting at least one of the closure flaps away from the bottom during the linear movement of the container by imposing obstructions aligned with the closure flaps.

* * * * *