United States Patent [19]

Stapf

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[45] **July 2, 1974**

[54] **REFUSE COMPACTOR**

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[21] Appl. No.: **306,145**

[52] **U.S. Cl.** ..... **100/179,** 53/124 B, 100/214, 100/229 A, 100/250

[51] **Int. Cl.** **B30b 1/08**

[58] **Field of Search**.... 100/214, 229 A, 250, 269 R, 100/218, 179, 249, 251, 103; 53/124 E, 124 B, 201

[56] **References Cited**

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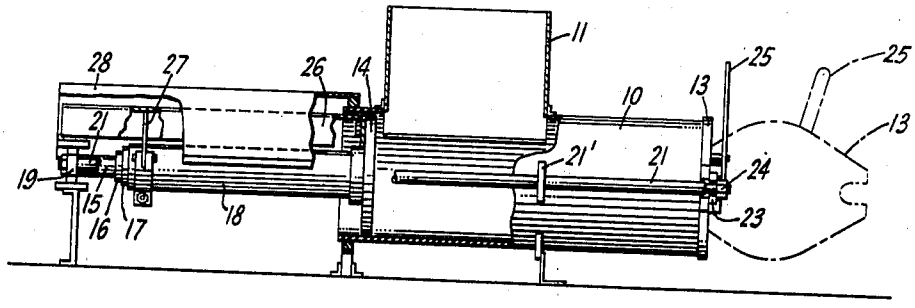
Primary Examiner—Billy J. Wilhite

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[57] **ABSTRACT**

A pair of tie bolts along opposite sides of the compacting cylinder are used to take up the compacting forces by mounting the cylinder door at one end of the bolts and the cylinder ram actuator at the other end of the bolts. The door is hinged to one of the bolts and locked to the other. Since the bolts are spaced from the cylinder a refuse bag can be slipped over the door end of the cylinder, and the door can be replaced with a refuse extruder.

1 Claim, 5 Drawing Figures



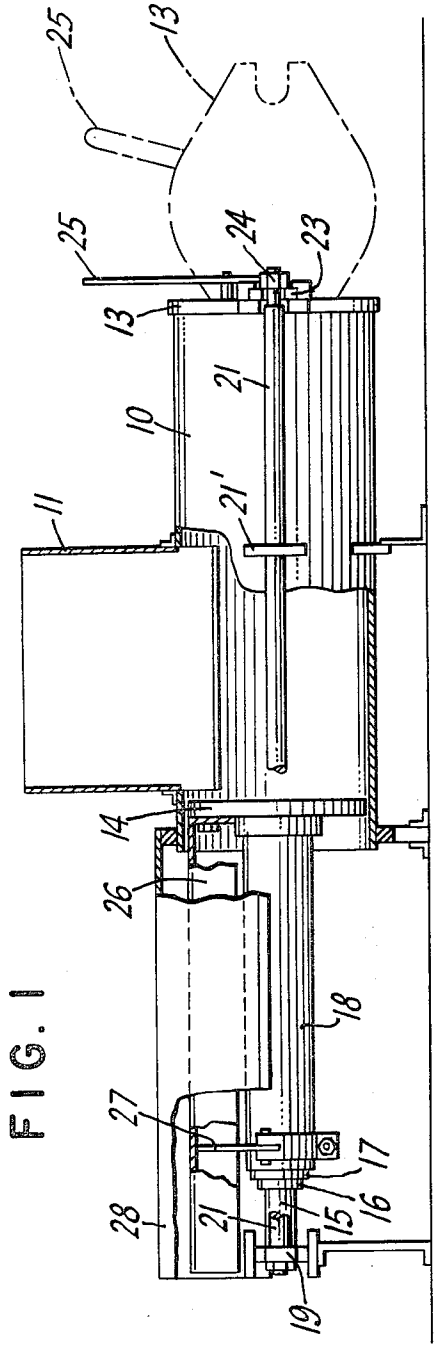


FIG. 1

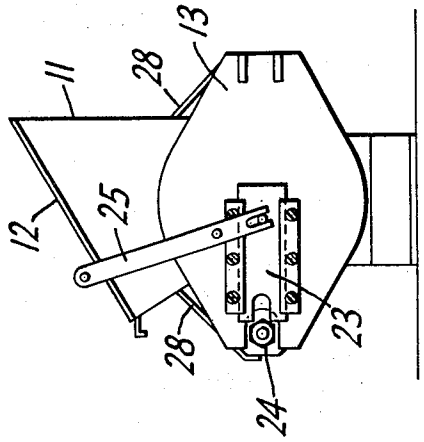


FIG. 3

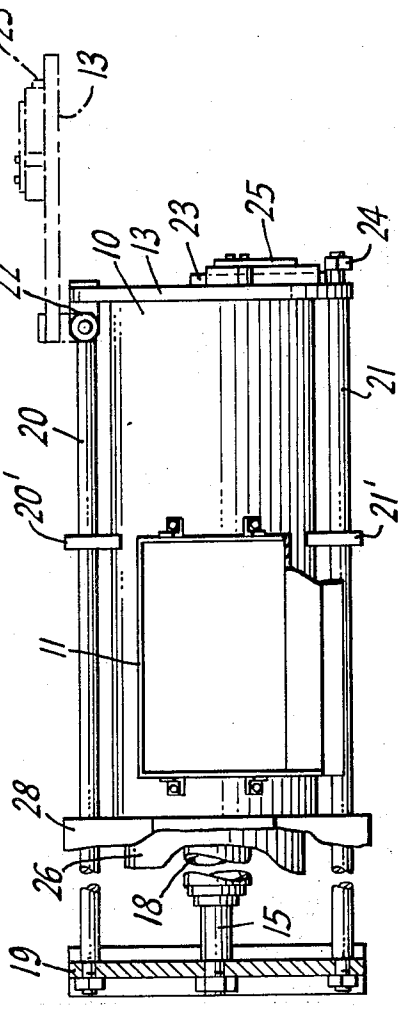


FIG. 2

FIG. 4

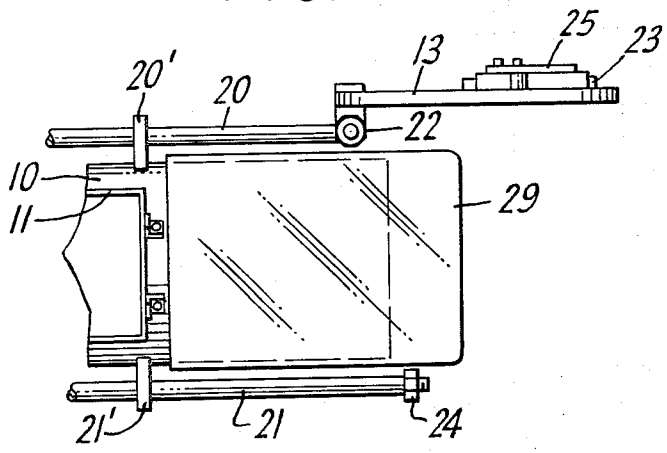
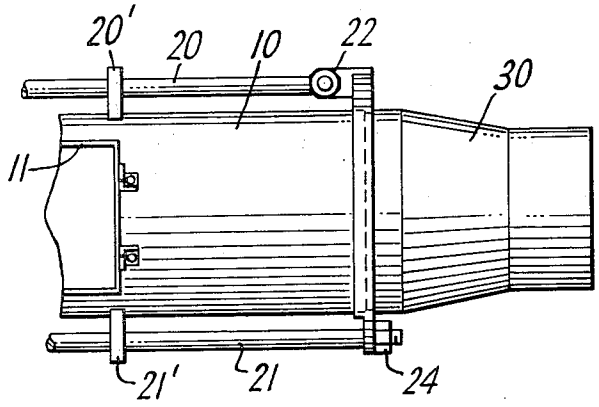


FIG. 5



REFUSE COMPACTOR

This invention relates to a refuse compactor, and more particularly, to an improved refuse compactor.

Briefly, in the invention two tie bolts extend along opposite sides of the compacting cylinder. The tie bolts are spaced from the compacting cylinder and at the front end of the cylinder the bolts are adapted to have a hinged door or a refuse extruder mounted thereon. Since tie bolts are spaced from the cylinder the door can be swung open and a refuse bag slipped over the front end of the cylinder to eject compacted refuse therein. When compacting the forces of compaction are taken up by the tie bolts.

In the attached drawings,

FIG. **1** is a broken away side elevation view of one form of the invention;

FIG. **2** is a broken away top plan view;

FIG. **3** is a front view;

FIG. **4** is a top plan view showing the refuse bag in place; and

FIG. **5** is a top plan view showing a refuse extruder substituted for the door.

Referring now particularly to FIGS. **1–3**, the refuse compacting cylinder **10** is loaded through its upper chute **11** which is adapted to be closed by a cover **12.** The front end of cylinder **10** is closed by a heavy compacting door **13.** Refuse is compacted in cylinder **10** against door **13** by a ram **14.** Ram **14** is mounted on the outer one **18** of a series of telescoped hydraulic cylinders **16–18.** The piston rod **15** for these cylinders is mounted on a tie plate **19.** A pair of tie bolts **20, 21** extend the length of the device along opposite sides of cylinder **10** and spaced therefrom. Along their center they are attached to cylinder **10** by brackets **20′, 21′.** Their rear ends are fixed to the tie plate **19** and their other ends terminate adjacent the front or door end of the cylinder **10.** The door **13** is mounted on the tie bolts **20, 21.** Since the piston rod **15** for cylinders **16–18** is mounted on the tie plate **19** this means that the forces of compaction are transmitted by the door **13** and tie plate **19** to the heavy tie bolts **20, 21.**

The door **13** is adapted to be hinged off the tie bolt **20** by a hinge **22,** and locked to the tie bolt **21** by a lock **23.** However, in the invention it is readily possible to have the door swing open in the opposite direction by reversing the tie bolts.

The lock **23** comprises a simple notched slide plate adapted to engage tie bolt **21** just behind a nut **24** on the outer end of tie bolt **21.** The lock is operated by a manual lever **25.**

A shroud **26** is mounted on the outer hydraulic cylinder **18** behind ram **14** to close off chute **11** when compacting. At its front end shroud **26** is fastened to the ram **14** and at its rear end supported by a bracket **27.** The hydraulic actuator **15–18** is covered by a shield **28.**

Since the tie bolts **20, 21** are spaced from the sides of cylinder **10** a refuse bag **29** can be slipped over the front end of the cylinder to have compacted refuse ejected therein, as shown in FIG. **4.**

In FIG. **5** the door **13** has been removed and a refuse extruder or funnel **30** mounted on the tie bolts **20, 21.** Thus, the device is versatile in that it can be adapted to compact, bag and extrude refuse.

I claim:

1. In a refuse compactor having a horizontal compacting cylinder, a door for closing the front end of said cylinder, a ram in the rear end of said cylinder for compacting refuse against said door, a ram actuator positioned behind said ram, a pair of tie bolts extending the length of said cylinder, the door and front end of said bolts being adapted to have said door hinged on one of the bolts and locked to the other of the bolts, a tie plate behind said ram actuator, said ram actuator being mounted to said tie plate and the rear ends of said bolts being connected to said tie plates whereby the forces of compaction are taken up by said tie bolts, said tie bolts being adapted to be reversed to have said door swing open in either direction, said tie bolts being spaced from the sides of said cylinder whereby said compactor is adapted to have a refuse collector bag slipped over the front end of said cylinder, said bolts and door being adapted for removal of said door, and a replacement refuse extruder for said door, said bolts and extruder being adapted to have said extruder mounted on said bolts in place of said door.

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