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BARREL RUBBISH DISPOSAL UNIT

Filed May 12, 1960

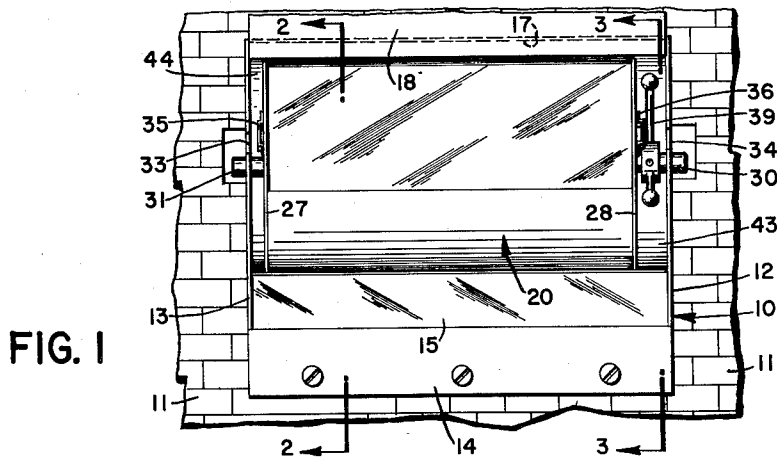


FIG. 1

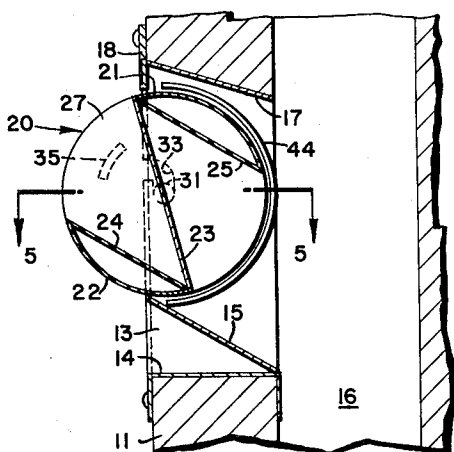


FIG. 2

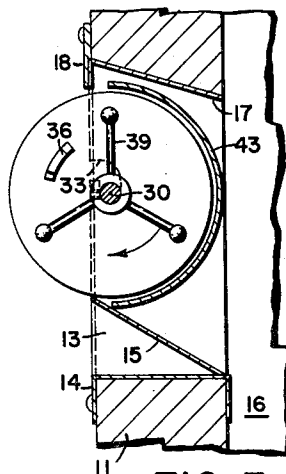


FIG. 3

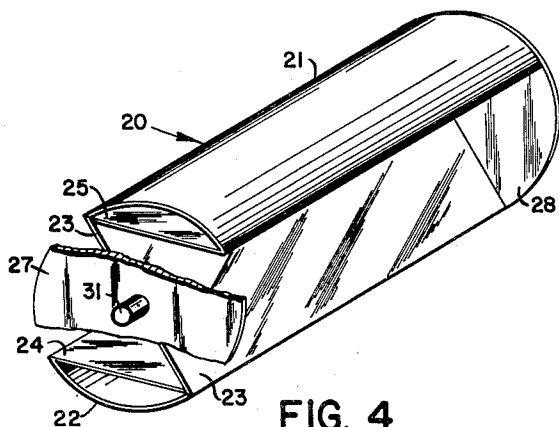


FIG. 4

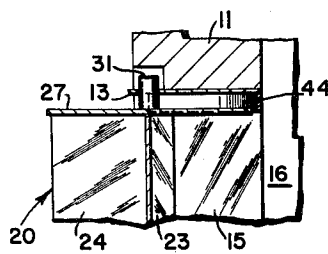


FIG. 5

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BARREL RUBBISH DISPOSAL UNIT

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5 Claims. (Cl. 232-44)

This invention relates to a self-closing opening for a rubbish chute and the like.

A need exists for an improved loading port for rubbish disposal chutes such as are employed, for example, in conjunction with incinerator devices in multi-story buildings. It is essential to provide means for preventing flash-back fires from the incinerator to the outside of the chute through the port. In general, openings have employed pivoted hoppers such as found in U.S. Government mail boxes and which prevent flash-back only in the fully opened and the fully closed positions. As the door of the conventional unit is opened, a plate moves upwardly to seal off the opening. As the door is closed, the plate serves as a chute and the door serves to close the opening. This prior type of receiving hopper is deficient in that in the intermediate position there is a continuous path from the loading position to the incinerator. Thus in the event of a flash-back or explosion, it is possible for the person dumping rubbish to be subjected to injury. The present construction eliminates this feature through the use of a rotating drum.

One feature of this invention is the provision of a rotating drum for receiving and dumping rubbish in a chute. Another feature of this invention is the provision of an entry for a chute which has a barrier between the loading side and the chute at all times.

Another feature of this invention is the provision of a rugged and durable device rubbish hopper.

Another feature of this invention is the provision of a simple, relatively inexpensive and readily serviced device.

Another feature of this invention is a device capable of handling large loads.

Still another feature of this invention is the provision of a deep receiving hopper.

Still other features and advantages of the present invention will be in part pointed out with particularity and will in part be obvious as the following description proceeds, taken in conjunction with the accompanying drawings wherein like numerals refer to like members.

FIG. 1 is a front elevation showing the apparatus mounted in a brick wall.

FIG. 2 is a vertical section taken along line 2-2 of FIG. 1.

FIG. 3 is a vertical section taken along line 3-3 of FIG. 1.

FIG. 4 is a perspective showing of a rotatable drum.

FIG. 5 is a horizontal section taken along lines 5-5 of FIG. 2.

In FIG. 1 there is shown a front view of the apparatus as installed in a brick wall. The device consists of a frame, or buck, 10 set into wall 11. The frame includes a pair of 1/4" steel side plates 12 and 13 and a steel member 14 which serves as a sill and rests on the brick wall. A steel plate 15 is welded between members 12 and 13 and to member 14, at its lower end. Plate 15 serves as a ramp to guide rubbish into the shaft 16. Upper steel plate 17, welded transversely between members 13 and 14, completes the buck assembly. It will be noted that the upper portion of the frame is capped by removable plate 18 which covers the gap above drum 20. The plate is removed for installation of the drum 20.

Drum 20 consists of a pair of circular arc members 21 and 22 which are joined by plate 23 along the diameter of the circle upon which members 21 and 22 lie. Members

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21, 22, 23, and chord members 24, 25 are welded between a pair of parallel plates 27 and 28. Extending from the plates 27 and 28 there are provided a pair of axles 30 and 31.

Assembly 20 is mounted in frame 10 by slipping the axles into slots 33 and 34. To facilitate removal and replacement of the drum 20, handles 35 and 36 are provided. A handle 39 is affixed to shaft 30 to permit rotation of the cylinder.

In lieu of handle 39, a pulley may be mounted on shaft 30 and a drum rotated by motor means coupled through a belt to the pulley.

A pair of semi-circular guard plates 43 and 44 are welded into walls 12 and 13 respectively. As will be appreciated by reference to the detail of FIG. 5, member 44 extends slightly beyond the drum 20 thus serving as a seal. Member 43 likewise seals the other end of drum 20.

An important feature of this invention is the deep recess formed by the junction of plate 23 and the chord members 24 and 25. This provides a deep recess which facilitates the dumping of rubbish therein without slopping onto the floor. This is particularly important when large loads are handled, for example, in commercial buildings, where the rubbish may be dumped from barrels.

It is to be appreciated that in the conventional type of rotating door the revolving cylinder is divided in quarters with the maximum depth being equal to the radius of the cylinder rather than as in this case where the depth is almost twice the radius.

Having thus disclosed my invention in accordance with the statutes, I wish it understood that various modifications and changes may be made without departing from the spirit of the invention.

What is claimed is:

1. A self-sealing chute opening apparatus comprising in combination: a frame for installation in the wall of a chute, a hopper member adapted for rotation about a horizontal axis, said hopper member being removably mounted in said frame, comprising, a barrier extending through said horizontal axis defining a cylinder when rotated about said axis, a first plate joining one end of said barrier at an acute angle to form an upwardly facing pocket and a second plate joining the other end of said barrier at an acute angle and on the opposite side thereof to form a downwardly facing pocket, a pair of plates affixed to opposite ends of said barrier transverse to said axis, and a pair of shaft members extending outwardly from said end plates and rotatably supported by said frame.

2. The apparatus of claim 1 wherein said frame includes an inclined member extending the width of said frame with its upper edge proximate to said rotatable hopper member and its lower edge proximate the said chute.

3. The apparatus of claim 1 wherein said frame includes vertical sidewalls and arcuate baffle members extending from said sidewalls proximate to said hopper member.

4. A receiving hopper for a chute comprising in combination: a rectangular frame adapted for insertion in the wall of the chute, comprising upper and lower horizontal members joined to a pair of spaced vertical members by said frame; a drum removably mounted in slots formed in said vertical members, with the axis of the drum in a horizontal position, said drum comprising a pair of end plates transverse to the axis of the drum; a plate joining said end plates and passing through said axis; a first plate extending between said end plates meeting said diameter member at an acute angle; a second plate extending between said end plates and joining the other end of the

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diameter member at an acute angle; a ramp member extending upwardly at an angle from the lower frame member meeting said drum member; a pair of arcuate members fixed to the vertical walls of said frame extending to said drum.

5. The hopper of claim 4 wherein said arcuate members extend inwardly from said vertical members en-

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closing the clearance space between said drum and said frame.

References Cited in the file of this patent**FOREIGN PATENTS**

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