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SALVAGING DEVICE FOR GARBAGE DISPOSAL UNITS

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Fig. 2

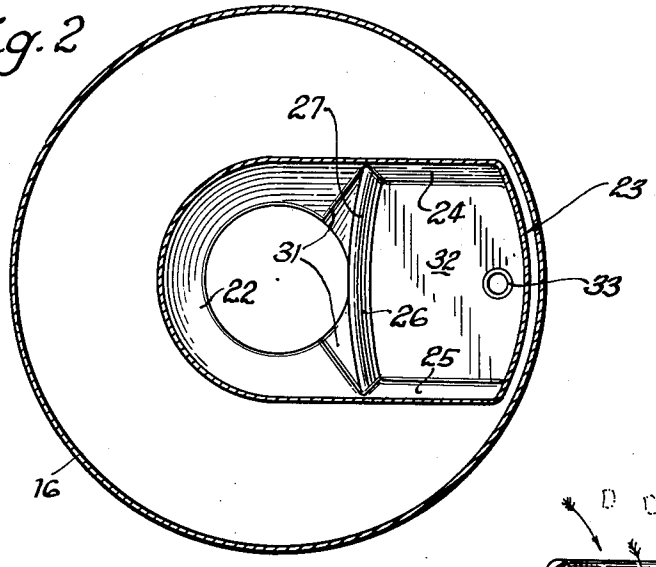
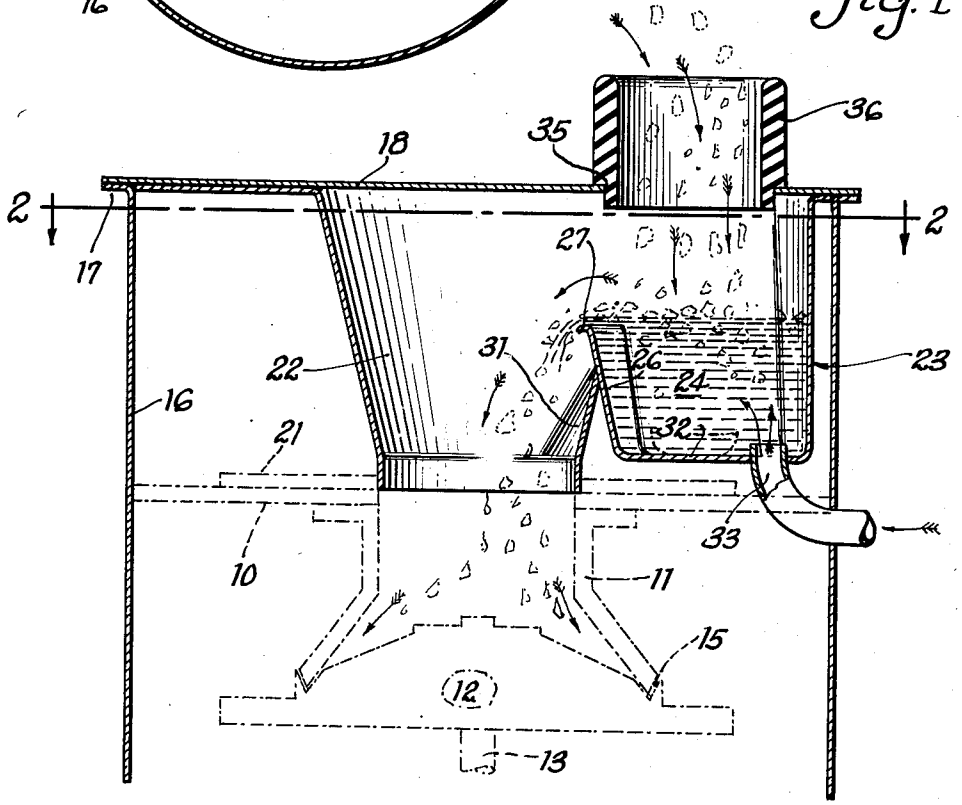


Fig. 1



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SALVAGING DEVICE FOR GARBAGE DISPOSAL UNITS

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5 Claims. (Cl. 209—155)

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This invention relates to garbage disposing equipment, and specifically to an adjunct capable of adaptation to garbage disposing units of various types to prevent silverware, crockery and the like from being inadvertently passed into the pulverizing mechanism.

While the instant invention will be described with reference to an industrial type of disposal unit, it is not intended that the same be limited thereto, reference to a particular form of unit being by way of example only.

For use in restaurants and eating establishments generally a garbage disposing unit of the comminuting or macerating type is usually installed below a work table adjacent the dishwashing machine or sink, and the waste material is scraped from the plates into a swill block or equivalent entry to the disposal unit. Prior devices have been so constructed that the garbage falls directly into the grinding heads with the consequence that, unless the operator is extremely watchful, silverware, butter chips and similar small objects may be swept into the grinding unit. Articles thus accidentally dropped into the mechanism are not only themselves destroyed, but serious damage to the mechanism may result. Moreover, articles such as silverware may clog the discharge opening of the grinding unit with obviously serious consequences. As a matter of fact it is this hazard in particular which has seriously discouraged the adoption of industrial models of garbage grinding units, and largely because dishwashing employees are generally of low mental caliber, and hence not likely to exercise proper caution in preventing delivery of silverware and crockery to the disposal unit.

Accordingly one of the principal objects of this invention is to provide means for segregating the garbage from other objects notwithstanding inadvertent deposit of such objects into the entry of the disposal unit.

Another object is to provide such segregating means which shall be automatic but not dependent on mechanical means.

A further object is to provide segregating means as aforesaid which shall be readily accessible for recovery of salvaged objects from time to time and with minimum interference with the garbage disposal operation.

Still another object is to provide segregating means as stated from which the valuable articles may be recovered without the necessity of shutting down the machine, and with no danger of injury to the operator.

An additional aim is to provide such segregating means so constructed and arranged as to be adaptable, with perhaps only minor dimensional alterations, to a variety of disposal units.

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Other objects will appear as the description proceeds.

Generally considered, the invention comprises a compartment or basin through which water is continually circulated and vigorously agitated. Assuming that the dishes have been inspected cursorily for silverware and small articles of chinaware and are emptied of their garbage into a rubber swill block or the like, all of material and objects will fall into the compartment. Agitation of the body of water in the compartment will flush the relatively lighter garabage over a spillway formed by one wall of the compartment, while silverware, et cetera will drop to the bottom of the compartment, and there remain until removed by hand. Adjacent the spillway is arranged a funnel-like member for directing the flushed-over garabage toward the grinding mechanism.

Referring to the drawing which shows one form the invention may take in practice:

Fig. 1 is a cross-sectional view taken on a vertical plane through the axis of the adjunct constituting my invention; and

Fig. 2 is a cross-sectional view taken on the line 2—2 of Fig. 1.

As indicated heretofore, the invention structure is adaptable to garbage disposal units of practically every presently known form, all of which include a relatively fixed member and a relatively rotatable member so arranged as to pulverize the waste material and intimately to mix the same with running water for passage through the drains and sewer pipes. By way of example, there is indicated in Fig. 1 a framework 10 supporting a fixed grinding member 11, disposed in operative relation with a rotatable member 12 driven by an electric motor (not shown) through a shaft 13. The working faces of the members 11 and 12 may be provided with elongated serrations or saw teeth for macerating the material which, being mixed intimately with running water, will be thrown out through the space 15 to a drain connected to the sewer piping, all as is well understood in this art.

A cylindrical housing 16 may surround the mechanism aforesaid, and includes a flange 17 for mounting of a circular cover plate 18 by screws (not shown). Preferably carried by the flange 17 by any convenient means is the principal part of the invention now to be described.

Fitted loosely within a collar 21 carried on the

frame 10 is the lower end of a substantially frusto-conical funnel member 22 of sheet metal, the lower circular opening of the member being in register with the interior of the fixed grinding member 11. Arranged to one side of the funnel member 22 and somewhat below the plate 18 is a sheet metal compartment or basin 23 of substantially rectangular configuration, having an outer wall 23 substantially following the contour of the housing 16, inwardly tapered side walls 24 and 25, and an arcuate, outwardly tapered inner wall 26. This latter is so arranged that the upper edge thereof protrudes into the funnel member 22 and is slightly rolled over to form a weir or edge 27, the entire wall 26 constituting what may be termed a spillway, and the edge 27 being spaced from the plate 18 a predetermined amount sufficient to allow unobstructed passage of the waste material from the compartment 23 to the funnel member 22. In effect walls 24 are a continuation of the side walls of the funnel member 22, providing for the latter at its upper region a substantially U-shaped contour. Panels 31—31 may be interposed between the funnel member 22 and wall 26 to avoid undesirable pockets therebetween.

Projecting through or into the floor 32 of the basin 24 is a water supply nozzle 33, which may take the form of a jet, through which water under a pre-set pressure is permitted to flow.

Usually a rubber swill block of conventional form is supported within a circular aperture 35 in the plate 18, and through which the garbage is passed for delivery to the pulverizing unit. Block 36, having a resilient surface, obviates chipping of chinaware, as in understood, and is so positioned that its interior is in alignment with basin 23.

In operation water is admitted to nozzle 33 and fills the basin 23. Due to the pressure existing considerable turbulence is imparted to the body of water, and particularly that region thereof adjacent the upper surface. Accordingly waste material delivered through the block 36 and falling into the water in the basin 23 is immediately flushed over the edge 27 of the spillway 26, into the funnel member 22, and thence to the grinding members 11 and 12 for disposal as described.

It will be comprehended that almost all garbage material is relatively light and therefore easily flushed over by the turbulence of the water at or near the surface thereof. Even bones are disposed of in like manner. However, articles of value, such as chinaware, small enough to pass through the block 36, and silverware, are sufficiently massive to sink to the floor 32 of basin 23, there to remain until retrieved through the block 36, this latter ordinarily being large enough to pass the operator's hand and arm for such purpose. Furthermore, it will be apparent that due to the disposition of the parts, it is impossible for the operator, in recovering such articles of value, to thrust his hand into the pulverizing mechanism. Should heavy bones fail to be flushed out of the basin 23, it is a simple matter for the operative, when periodically inspecting the basin for recoverable articles, to throw such bones over the edge 27 for proper disposal.

By inwardly inclining the wall 26 flow of water and waste material toward the funnel member 22 is facilitated. Lip 27 provides a spout-like action to carry the material well toward the center of the grinding unit, and consequent uniform distribution thereof over the whole available pulverizing surface.

Moreover by positioning the nozzle 33 toward the outside of the basin 23, it has been found that maximum turbulence is afforded, and in a direction toward the lip 27. Obviously it is desirable to so dimension the upper periphery of basin 23 as to permit proper retention of the maximum length of object intended to be salvaged, e. g. a table knife. Furthermore nozzle 33 may be covered with a screen or perforated plate to prevent solid objects of any kind from entering therein. If desired, the nozzle may enter the basin 23 at a position other than that shown.

While I have shown a particular embodiment of my invention, it will be understood, of course, that I do not wish to be limited thereto, since many modifications may be made, and I therefore contemplate by the appended claims to cover any such modifications as fall within the true spirit and scope of my invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. An adjunct for a garbage disposal unit of the type wherein the material is fed substantially vertically toward the macerating mechanism comprising a passage for guiding the material to the mechanism, and a compartment adjacent said passage for reception of the material, said compartment having at least a portion of one wall adjacent said passage and a floor, and said one wall forming a spillway, means for introducing water under pressure into said compartment for flushing the material over said spillway into said passage, said means comprising a water inlet pipe, entering said floor at a point opposite said one wall.

2. An adjunct for a garbage disposal unit of the type wherein the material is fed substantially vertically toward the macerating mechanism comprising a supporting plate; an inverted frusto-conical funnel member for delivery of material to the mechanism carried by said supporting plate, an open-top material-receiving compartment adjacent said funnel member and having an inwardly disposed wall substantially coextensive with a portion of the wall of said member and a floor, a chute for directing the material into the compartment having its opening substantially coextensive with the transverse cross sectional area of said compartment, a water-delivering nozzle opening into said floor, said inwardly disposed compartment wall forming a spillway whereby water entering said nozzle flushes disposable material over said spillway and into said funnel member and non-disposable objects are retained in said compartment, said nozzle entering said floor at a point displaced to one side of said chute opening.

3. An adjunct for a garbage disposal unit wherein the material is fed substantially vertically toward the macerating mechanism comprising a supporting plate, a material receiving chute carried by said plate and displaced to one side of the mechanism, a funnel-like member suspended from said plate and having a discharge opening disposed over the entrance to the mechanism, said member having a pocket in one wall for reception of material deposited through said chute, said pocket having a floor substantially coextensive with the opening in said chute and transverse thereto, said pocket and funnel having a common dividing wall, said wall terminating at its upper edge below said plate to define a

passage between said pocket and member, and said floor having an opening therein for delivery of water to said pocket.

4. An adjunct as recited in claim 3 in which the opening is positioned at a point remote from said dividing wall and beyond the principal zone of delivery of material to the pocket.

5. An adjunct for a garbage disposal unit of the type wherein the material is fed substantially vertically toward the macerating mechanism, comprising a funnel-like member in communication with the mechanism, a compartment adjacent said member for receiving material to be macerated, said compartment having a floor, said member and compartment having a common wall portion, said portion having an opening, a chute for delivery of material into the compartment over substantially the central area thereof, said compartment having a fluid entrance in said floor for delivery of water under pressure to said compartment, said entrance being displaced to one side of said area away from said opening, whereby relatively lighter macerable material is flushed out of said compartment through said opening into said funnel-like member, and relatively heavier objects interspersed with said material are retained in the compartment.

ALEX JANOWS.

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