Aug. 4, 1959 L. C. ROBEDEE 2,898,198

WASTE DISPOSAL DEVICE

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Fig. 2

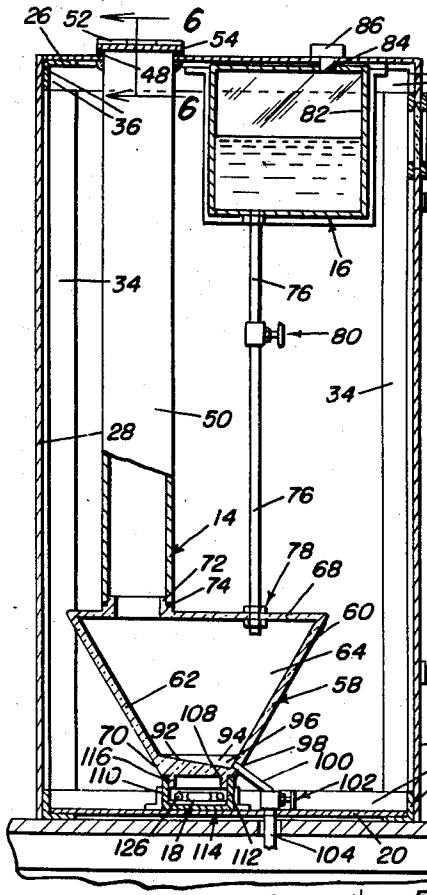


Fig. 5

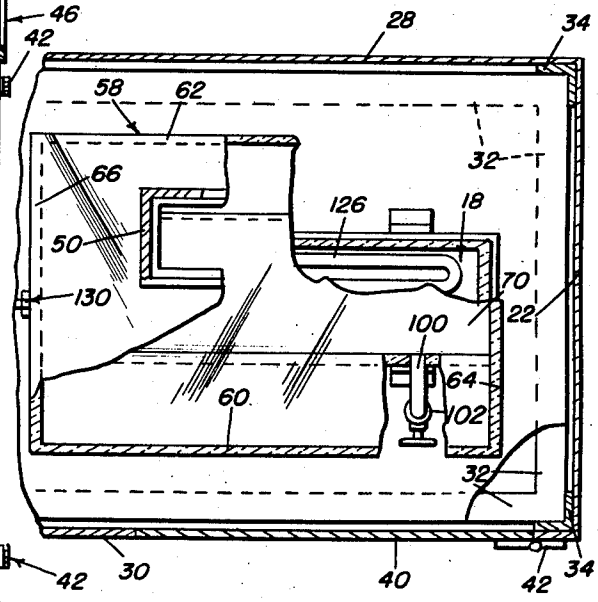


Fig. 6

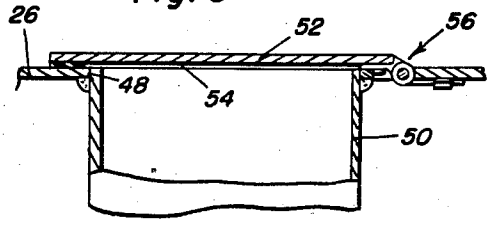


Fig. 1

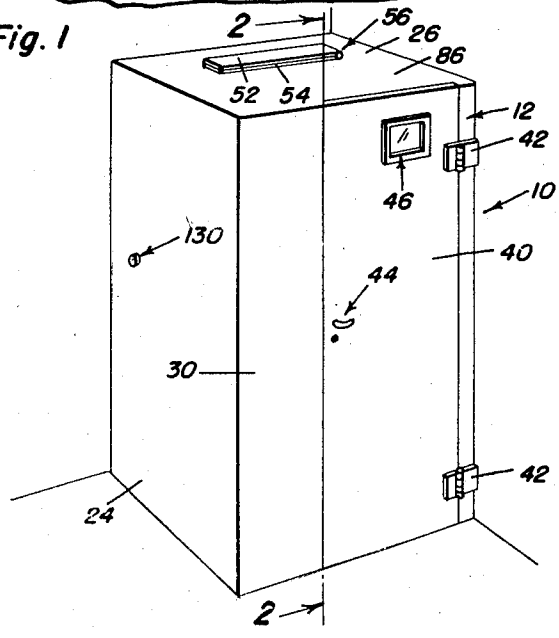
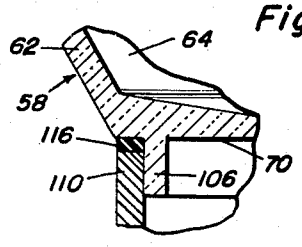


Fig. 7



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Fig. 3

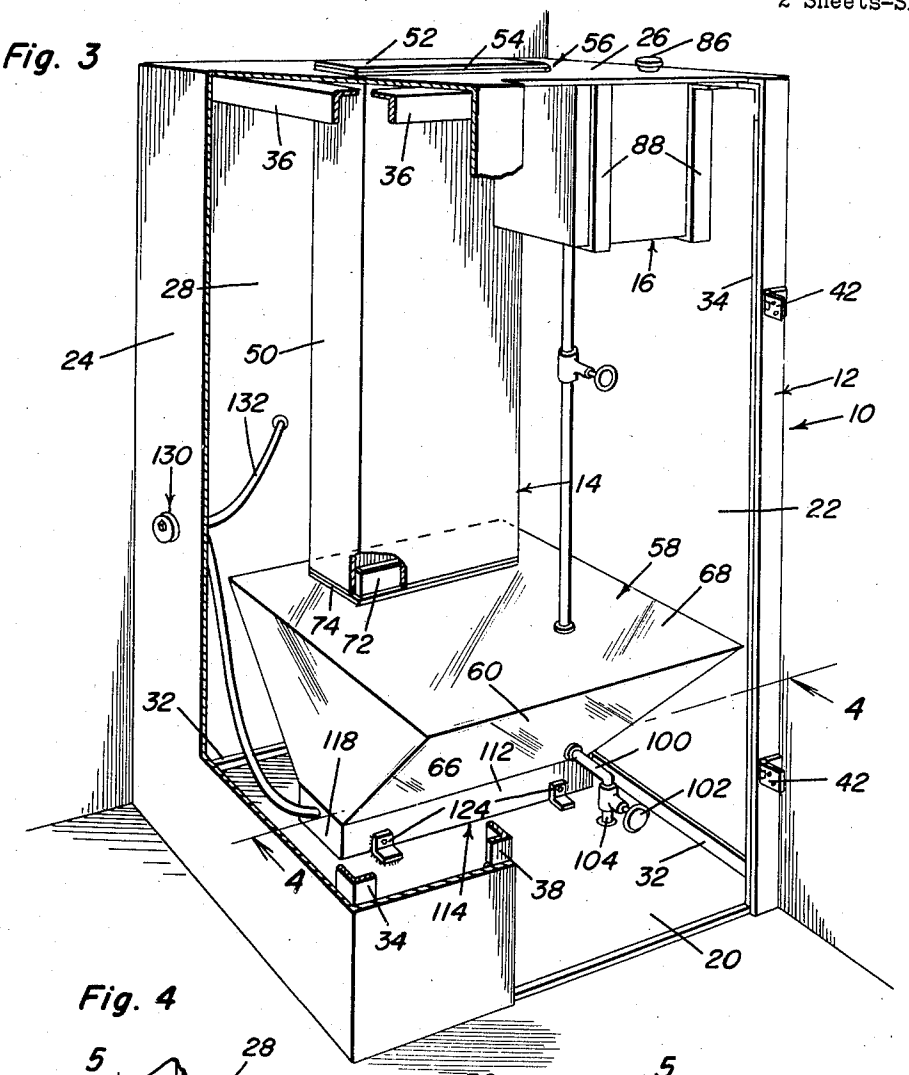
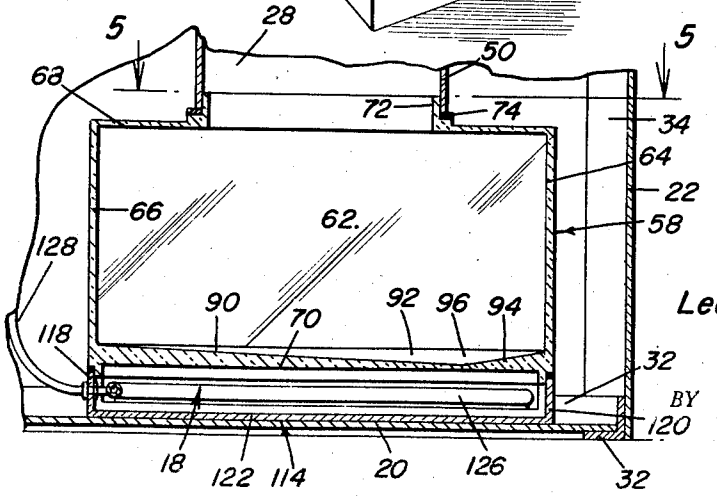


Fig. 4



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WASTE DISPOSAL DEVICE

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Application June 30, 1955, Serial No. 519,138

1 Claim. (Cl. 23—252)

This invention relates generally to waste disposal units and is more particularly concerned with a waste disposal unit which includes a disposal chute portion in communication with a heated disposal hopper operative to contain and dispose a disintegrating chemical whereby refuse is readily and expeditiously processed therein.

Accordingly, a primary object of the invention in conformance with that set forth above is to provide apparatus incorporating a convenient system of dissolving material such as sanitary napkins, surgical dressings, paper, etc., through the application of a disintegrating chemical such as heated sulphuric acid in a convenient transparent retort whereby the material is readily and sanitarily dissolved and disposed of.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of the other cabinet portion of the novel disposal unit;

Figure 2 is a sectional view taken substantially on line 2—2 of Figure 1 with portions broken away for clarity;

Figure 3 is an enlarged perspective view with portions broken away and in section for clarity;

Figure 4 is a sectional view taken substantially on line 4—4 of Figure 3;

Figure 5 is a sectional view taken substantially on line 5—5 of Figure 4 with portions broken away for clarity;

Figure 6 is an enlarged sectional view taken substantially on line 6—6 of Figure 2; and

Figure 7 is an enlargment of a portion of the sectional view of Figure 2.

Indicated generally at **10** is the novel waste disposal unit which includes a cabinet member **12**, a disposal chute and hopper assembly **14**, a disintegrating chemical supply reservoir **16**, and a heat control assembly indicated generally at **18**.

The cabinet **12** comprises a bottom member **20**, side walls **22** and **24**, a top member **26**, a back wall member **28**, and a front or forward wall portion **30**. The cabinet may be conveniently formed in any suitably manner, and may include lower structural elements such as lower angle members **32** which define the bottom member, and which have extending upwardly therefrom at the corner intersections thereof suitable corner angle members **34**, which have extending therebetween at the upper ends thereof suitable top frame members **36** which may also be structural angle members, see for example Figure 3. An additional vertically extending reinforcing member **38**, see Figure 3, extends between the angle members **32** and **36** for defining an access door portion, which includes a door element **40** secured by means of suitable hinges **42** on a corner frame element **34** which is respectively parallel to the member **38**, said door element **40** including a suitable latch structure indicated generally at **44**, and having therein an access window **46**, of any suitable character, through which the disintegrating fluid reservoir may be observed.

The cabinet may be made of any suitable chemical resistant material such as stainless steel, porcelainized material, etc., the purpose of which being to resist the chemical disintegrating material as well as providing a pleasing and sanitary appearing cabinet.

The top member **26** includes therein the suitable aperture portion **48** which has secured therein in any suitable manner the top end portion of a disposal conduit **50** which has access to the upper end thereof controlled by a spring urged cover element **52** which includes on the undersurface portion thereof secured in any suitable manner a sealing gasket element **54** for preventing fumes from the disposal hopper to be subsequently described from passing thereby, said cover element being hingedly secured at one of its edges, see Figure 6, by means of suitable spring urged spring assemblies indicated generally at **56**.

A disposal hopper of glass or any suitable transparent material is indicated generally at **58** which includes converging side wall portions **60** and **62** connected by end wall portions **64** and **66**, the side and end walls being connected to an integral top member **68**, and an integral bottom member **70**.

The top member **68** includes an integral collar portion **72** which extends within the lower end portion of the disposal conduit **50**, there being a suitable sealing gasket **74** interposed therebetween. The top member **68** has extending therethrough the lower end portion of a suitable disintegrating chemical conduit line **76**, there being suitable sealing washers **78** surrounding said lower end portion, the conduit **76** having interposed therein a suitable control valve **80**, and further being in communication with a transparent disintegrating chemical reservoir **82** which may be of glass or any other suitable material for containing sulphuric acid, or any other suitable disintegrating chemical, said reservoir having an upper filler aperture portion **84** which is controlled by a suitable filler cap **86** in the top member **26** of the cabinet, said reservoir being supported on the underside of the top member **26** by means of suitable strap elements **88** which extend therearound. Disintegrating chemical contained within the reservoir **82** is admitted into the hopper **58** by means of the control valve **80**, the level of the disintegrating chemical may be observed through the window portion **46** and the supply may be replenished by means of the filler cap **86**, while the material to be destroyed may be inserted in the disposal conduit **50** after pivoting the cover element **52** on the spring urged hinge assembly **56**, after which the cover element is urged into sealing engagement about the aperture portion **48** of the cover member **26**, and the material to be disintegrated and disposed of will be contained within the hopper **58** in the disintegrating chemical solution contained therein. As previously mentioned the hopper **58** is transparent and accordingly the access door **40** may be pivoted in order that the hopper **58** may be observed as to whether or not the contents contained therein have been completely destroyed and disintegrated.

The bottom member **70** of the hopper **58** includes within the hopper or inner portion of the hopper converging wall portions which comprise angularly related surfaces **90**, **92** and **94**, see Figure 4, which converge to a sump portion **96**, said hopper containing thereat a suitable aperture portion **98** in communication with an outlet conduit **100** in communication with a control valve **102** which is in communication with a conduit **104** connected to a sewage line (not shown). Thus after the material has been properly disintegrated the valve **102** may be opened whereby the chemical and disintegrated

material may be drained off and thereafter after the hopper has been properly flushed out a new supply of disintegrating chemical may be provided therein by means of the control valve **80**.

The bottom member **70** includes a pair of downwardly extending relatively parallel rib portions **106** and **108** which are received within a pair of oppositely disposed upwardly extending flange portions **110** and **112** of an upwardly opening recess element **114**, there being a suitable sealing material **116** being interposed between the flange portions **110** and **112** and the bottom member **70** of the hopper, the recess member **114** including suitable end members **118** and **120** which are engaged by the bottom member **70** of the hopper **58**, said recess member **114** including a bottom member **122**, suitable support angle elements **124** being secured between the flanges **110** and **112** in the bottom member **20** of the cabinet, said recess member **114** containing therein an electric thermostatically controlled heating coil **126**.

The heating coil **126** is connected to a suitable electrical conductor **128**, see Figure 4, which extends through the end wall **118** of the recess member **114**, said conductor **128** being connected to a suitable switch and thermostatic control element **130** which is connected to a conductor **132** extending out of the cabinet, see Figure 3, to a suitable source of electrical energy (not shown). Although it has been shown that heating has been done by means of an electrical heating element, it is believed readily apparent that gas or any other suitable medium may be utilized. The location of the heating element **126** in underlying relationship to the hopper **58** provides a suitable source for heating the disintegrating chemical contained in the hopper whereby the disintegration of material entering the hopper through the disposal chute is speeded up by the application of such heat.

Various positional directional terms such as "front," "top," "bottom," etc., utilized herein have only a relative connotation to aid in describing the device and are not intended to require any particular orientation with respect to any external elements.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

A waste treating and disposal unit comprising a disposal chute, a disposal hopper at the bottom of said chute, a gravity feed disintegrating chemical supply reservoir elevated above and in communication with said hopper, control means between said reservoir and hopper controlling the amount of disintegrating chemical contained therein, said hopper including a downwardly inclined bottom sump portion therein, a controlled outlet to which said sump portion inclines in communication therewith for directing dissolved refuse therefrom to a sewage outlet, and a controlled heat source in communication with said hopper for increasing the chemical reaction between a disintegrating chemical and the refuse contained in said hopper, including a recessed member below said bottom closed thereby and having a heating element enclosed therein.

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