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COMBINATION WASTE DISPOSAL AND STEP STOOL DEVICE

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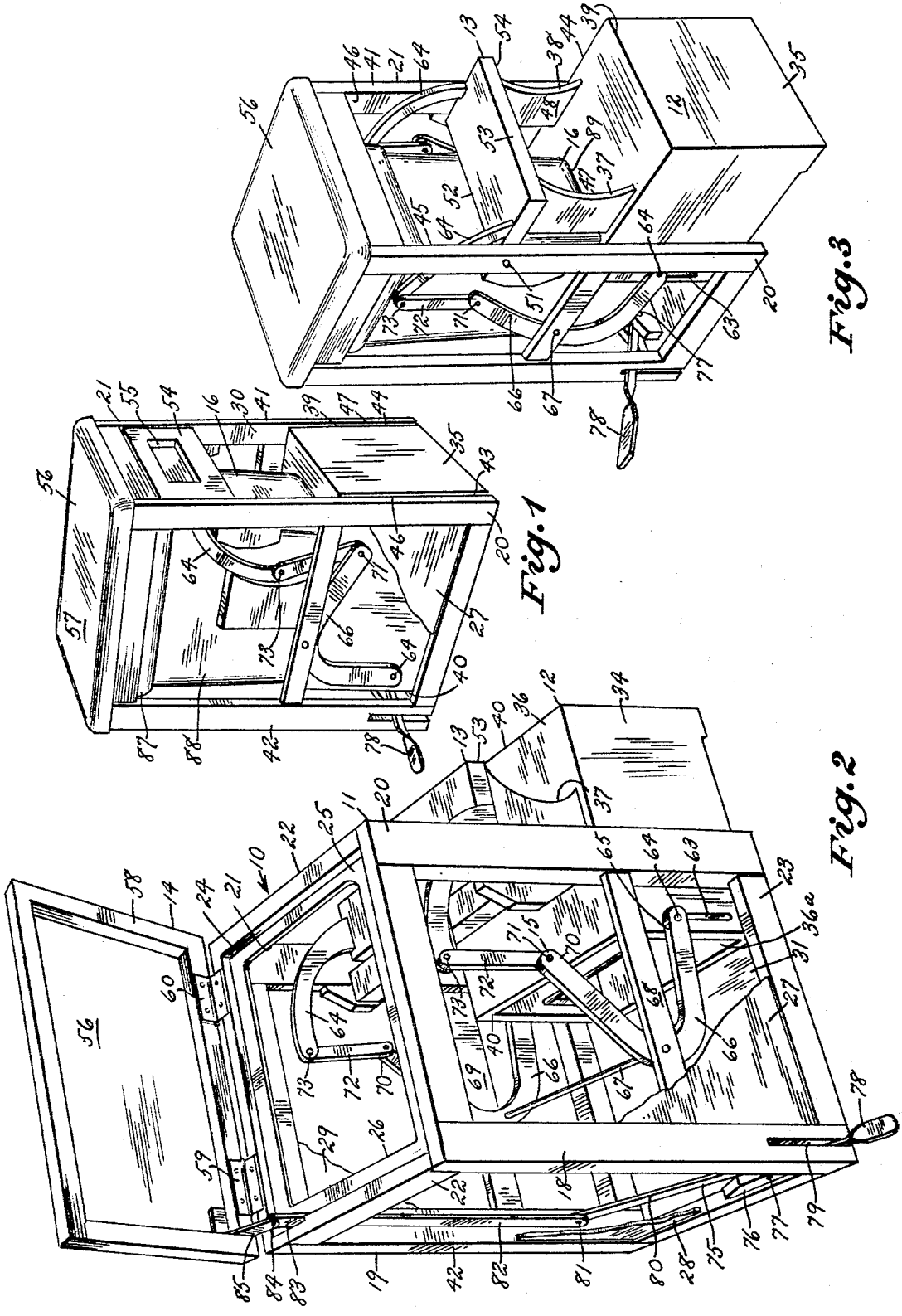


Fig. 3

Fig. 1

Fig. 2

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COMBINATION WASTE DISPOSAL AND STEP STOOL DEVICE

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ABSTRACT OF THE DISCLOSURE

A combination waste disposal and step stool including a generally rectangular frame, and a step element mounted for rectilinear movement into and out of said frame, a waste disposal unit positioned within said frame, said step element being clear of contact with said waste disposal element when moved within said frame to occupy an inoperative position.

This invention relates generally to the field of kitchen appliances, and more particularly to an improved combination waste disposal and step stool device, permitting the convenience of having both functions at a common location, while occupying a minimum of space.

It is among the principal objects of the present invention to provide improved construction of this type which may, when not in use, be of generally rectangular, vertically-oriented configuration, so as to occupy a mininum of floor space.

Another object of the invention lies in the provision of an improved combination waste disposal and step stool construction in which the retractable step elements, when in inactive position are positioned within the confines of a hollow rectilinear frame element in such manner as to avoid interference with a waste receptacle also disposed at least partially within said frame element.

A further object of the invention lies in the provision of an improved combination waste disposal and step stool device, in which the cost of fabrication may be of a reasonably low order, with consequent wide sale, distribution and use.

Yet another object of the invention lies in the provision of an improved device of the class described incorporating a plurality of step elements, one of which is slidably arranged with respect to the frame element, and another of which is pivotally arranged with respect thereto, together with means interconnecting the step elements so that movement of the first step element will automatically result in corresponding movement of the second step element.

A further object of the invention lies in the provision of first and second step elements having the above-described movement, and linkage means, which are so constructed that the positioning of the first step element in operative position serves to support the second step element in similar position.

Yet another object of the invention lies in the provision of improved combination waste disposal and step stool construction which may be conveniently operated by those possessing only ordinary skill and strength, with a minimum of effort.

A feature of the invention lies in the provision of independent linkage means for opening and closing the waste disposal component of the device in conventional fashion.

Another feature of the invention lies in the unusually attractive appearance of the disclosed embodiment.

A further feature of the invention lies in the fact that substantially all of the space disposed within the hollow

frame element which encloses the operative components thereof is utilized to the fullest extent.

These objects and features, as well as other incidental ends and advantages, will more fully appear in the progress of the following disclosure, and be pointed out in the appended claims.

In the drawing, to which reference will be made in the specification, similar reference characters have been employed to designate corresponding parts throughout the several views.

FIGURE 1 is a view in perspective, partially broken away to show detail, of an embodiment of the invention.

FIGURE 2 is a similar view in perspective, on a somewhat enlarged scale, showing the device in fully opened condition.

FIGURE 3 is a similar view in perspective, with certain of the component parts removed to show detail, corresponding to that seen in FIGURE 2, showing the waste disposal means in relatively closed condition.

In accordance with the invention, the device, generally indicated by reference character **10**, comprises broadly: a frame element **11**, a first step element **12**, a second step element **13**, a third step element **14**, operating linkage means **15**, and a waste disposal element **16**.

The frame element **11** may be suitably constructed of wood, metal, or other material possessing sufficient strength, and includes four vertical support members, **18**, **19**, **20** and **21**, disposed at the corresponding four corners thereof. The members **18–21**, inclusive, are interconnected by laterally extending members **22**, and longitudinally extending members **23**, to form a rectangular solid defining a hollow interior, in which the elements **12**, **13**, **14** and **16**, and the means **15**, are selectably disposable.

The frame element **11** defines an opening **24** at the upper portion thereof, which is fitted with a mounting board **25** having a rectangular opening **26** therein for supporting the upper periphery of the waste disposal element **16**. Side panel members **27**, **28** and **29** are fitted to three of the four sides of the frame element, leaving an opening **30** on the fourth side thereof to accommodate movement of the first and second step elements **12** and **13**. A floor panel **31** provides means for supporting the first step element **12** during movement, and preventing contact of the same with the floor supporting the device (not shown).

As best seen in FIGURES 2 and 3 in the drawing, the first step element **12** is of generally rectangular configuration, and includes a pair of side walls, one of which is indicated by reference character **34**, a front wall **35**, an upper wall **36**, a lower wall **36***a*, and vertical support members **37** and **38** which extend upwardly from the upper surface of the wall **36**. The forward and rearward edges **39** and **40**, respectively, of the element **13** are spaced apart a distance substantially less than the forward and rearward edges **41** and **42**, respectively, of the frame element **12**, thus permitting the element **12** to be positioned completely within the frame element when in inoperative position (see FIGURE 1). In like manner, the side edges **43** and **44** are spaced apart a distance less than the inner edges **45** and **46** of the vertical members **20** and **21**, respectively, for the same purpose. As will more fully appear, the inner surfaces **47** and **48** of the support **37** and **38**, respectively, are spaced apart a distance sufficient to clear the waste disposal element **16** when the first step element **12** is in inoperative position.

The second step element **13** is of generally rectangular configuration, and it is mounted for rotation about a pivotal axis **51** between the vertical members **20** and **21**. The axis **51** is located parallel to and adjacent the inner edge **52**, and the outer edge **53** thereof extends outwardly,

as seen in FIGURES 2 and 3, to permit the undersurface **54** to contact the upper edges of the vertical supports **37** and **38** when the elements **12** and **13** are in operative position.

The third step element **14** forms a lid for the waste disposal element **16** positioned therebeneath, and is pivotally mounted upon the upper periphery of the frame element **11**. It includes a planar member **56**, the upper surface **57** of which may be suitably covered for appearance, the planar member **56** being mounted upon a peripheral frame **58** having hinge means **59** and **60** to permit pivotal movement with respect to the frame element **11**.

The operating linkage means **15** is provided for the purpose of coupling movement between the first and second step elements **12** and **13**, and includes a pair of vertically disposed slots **63** in the side walls **34** of the first step element **12**. The slots **63** engage pins **64** on the ends **65** of curvilinear links **66** mounted for rotation on a shaft **67** interconnecting a pair of brace members **68** and **69** extending between vertical members **18**, **20**, and **19**, **21**. The opposite ends **70** of the links **66** are interconnected by means of pins **71** to rectilinear links **72**, in turn connected by pins **73** to curvilinear links **64** on the second step element **13**. From a comparison of FIGURE 1 with FIGURES 2 and 3, it will be apparent that when the second step element **13** is swung downward and forward, by pulling the hand hold **55**, from an inoperative position, the links **66** will rotate about the shaft **67** to transmit their outward rotational movement to the first step element **12**, thereby projecting element **12** from the closed position of FIGURE 1 to the outward operative position as seen in FIGURES 2 and 3. Returning the second step element **13** to its inoperative position will result in opposite rotational movement of the levers or links **66** and the first step element **12** will be returned to its inner position putting the device **10** in the condition shown in FIGURE 1.

Referring again to FIGURES 2 and 3, a pair of trunnions **76** support a pintle **77** and lever **75** for pivotal movement. The free end **78** of lever **75** extends outwardly away from of the vertical member **18**, being disposed within a slot **79** therein, while the inner end **80** is provided with a pin **81** interconnecting the same with a vertically arranged link **82**. The link **82** includes an upper end **83** having a pin **84** interconnecting to a short link **85**, the opposite end of which is secured to the under surface of the planar member **56**. Pedal pressure upon the free end **78** will result in upward movement of the third step element **14**, and upon release of the pedal pressure the member **56** will return, under the attraction of gravity, to a closed position shown in FIGURE 1.

Waste disposal element **16** is preferably in the form of a large synthetic resinous molding, including an upper peripheral flange **87** adapted to be engaged within the rectangular opening **26**, as well as downwardly extending

side walls **88** and a lower wall **89** positioned above the upper surface of the upper wall **36**, so as to clear the same when the first step element is moved to inoperative position.

Owing to the fact that the first step element is of unusually strong and solid construction, the second step element is adequately supported by a force which is transmitted directly to the floor upon which the device is supported, thereby eliminating all possible tendency for the device to tip when stood upon by a user.

I wish it to be understood that I do not consider the invention limited to the precise details of structure shown and set forth in this specification, for obvious modifications will occur to those skilled in the art to which the invention pertains.

I claim:

1. A combination waste disposal and step stool device comprising: a generally rectangular frame element, at least one step element mounted upon and arranged for rectilinear movement between operative and inoperative positions with respect to said frame element, said step element in inoperative position being at least partially disposed within said frame element, and in operative position extending through a vertically arranged opening therein, said frame element having a horizontally arranged opening and waste disposal means having a principal vertical axis disposed therein, said step element in inoperative position being free of contact with said waste receptacle means.

2. Structure in accordance with claim **1** including a second step element pivotally mounted upon said frame element above said first step element, and movable between operative and inoperative positions with respect thereto, said second step element in inoperative position lying in a vertical plane adjacent said waste receptacle means.

3. Structure as in claim **2** in which said first-mentioned step element in operative position contacts and supports said second step element upon contacting the under surface thereof.

4. Structure as set forth in claim **3** further characterized in the provision of linkage means interconnecting said first-mentioned and second step elements for simultaneous movement.

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