

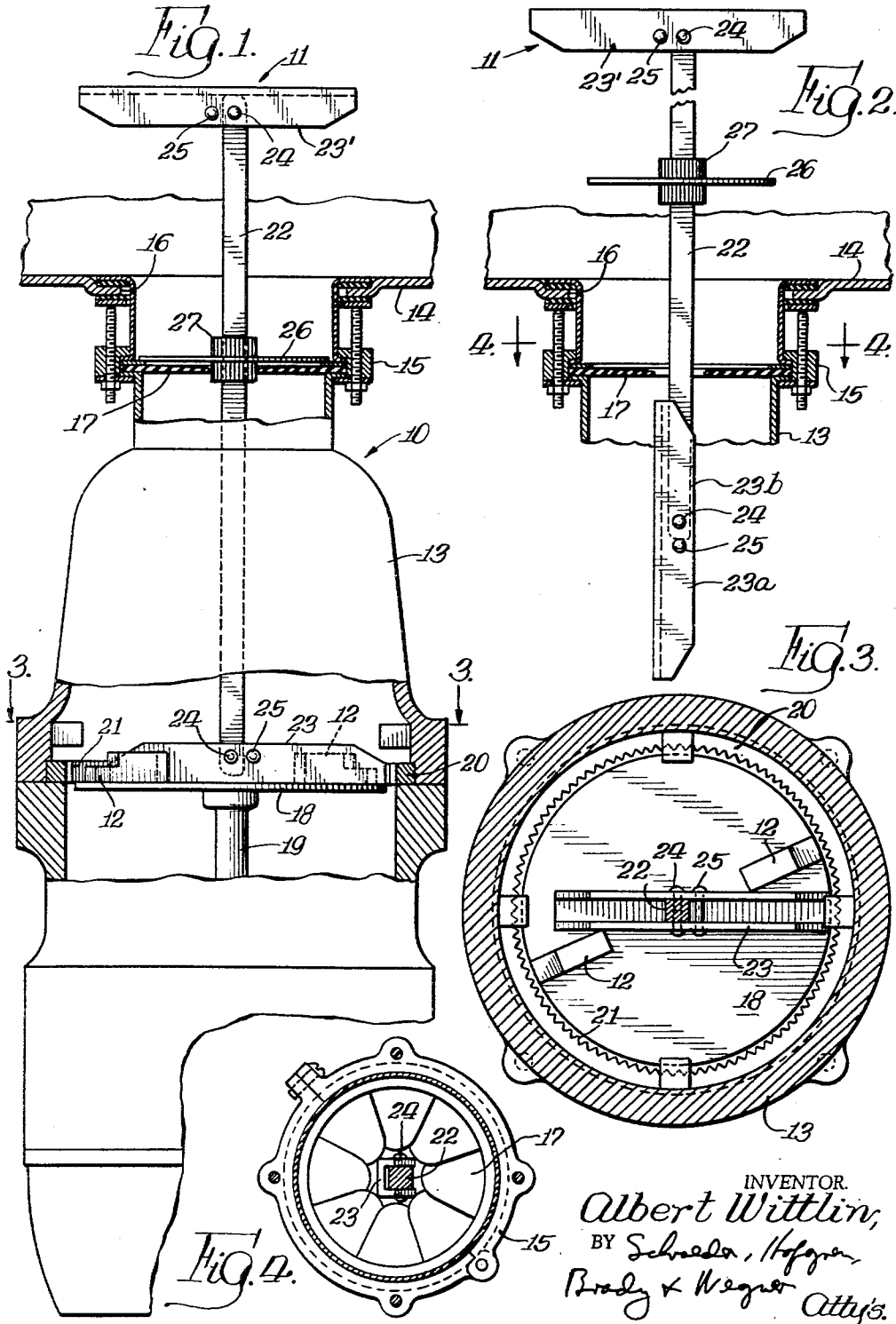
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DEVICE FOR UNJAMMING A GARBAGE DISPOSAL DEVICE

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DEVICE FOR UNJAMMING A GARBAGE DISPOSAL DEVICE

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2 Claims. (Cl. 81—90)

This invention relates to apparatus for unjamming a garbage disposal device.

In the conventional garbage disposal device, means for comminuting the garbage comprise a pair of grinding elements diametrically opposed relative to an axis of rotation. The grinding elements co-operate with a fixed cutter ring circumjacent the path of movement of the grinding elements. Because of the relatively close spacing between the grinding elements and the cutter ring, foreign material such as string or cloth and such difficultly comminutable material as artichoke leaves, corn husks and pieces of bone tend to jam between the grinding elements and the cutter ring.

Heretofore, it has been necessary to unjam the device by inserting a means such as a broom handle or metal bar into the device to bear against one side of a grinding element. The handle was then forced to move the grinding element in a reverse direction thereby releasing the jam causing material. This method is awkward and inconvenient and, further, tends to destroy the symmetrical arrangement of the grinding elements because of the force application to only a single one of a pair of such elements. Further, such handles are conventionally provided with rounded ends permitting slippage from engagement with the grinding element tending to cause injury to the operator and/or the disposal device.

The principal feature of this invention is to provide a new and improved device for unjamming a garbage disposal unit.

Another feature of the invention is to provide such a device arranged to provide balanced unjamming forces to the unit.

A further feature is to provide such a means arranged for substantially positive engagement with the grinding elements to assure a proper unjamming operation.

Other features and advantages of the invention will be apparent from the following description taken in connection with the accompanying drawing, wherein:

Fig. 1 is a fragmentary elevation of a garbage disposal device, with portions thereof broken away and shown in section, and with a means for unjamming the device embodying the invention shown in an unjamming arrangement therein;

Fig. 2 is a broken elevation of the unjamming means shown in an inserting arrangement as during insertion thereof through an upper portion of the garbage disposal device;

Fig. 3 is a transverse section taken approximately along the line 3—3 of Fig. 1; and

Fig. 4 is a transverse section taken along the line 4—4 of Fig. 2.

In the exemplary embodiment of the invention, as disclosed in the drawing, a means for unjamming a garbage disposal unit 10 comprises a tool 11 adapted to be inserted into the disposal unit to engage the grinding means 12 thereof. Thus inserted, the tool 11 is manipulated to force the grinding means 12 in an unjamming direction. The tool is then withdrawn from the disposal unit, the

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unjammed material or object removed therefrom, and the disposal unit is then ready for subsequent operation.

To illustrate the invention, tool 11 is shown in operative association with a garbage disposal unit 10 of conventional construction. More specifically, the disposal unit comprises a housing 13 secured to a sink bottom 14 by an adaptor means 15 to extend coaxially of a drain opening 16 in the sink bottom 14. Extending transversely across the interior of adaptor 15 is a yieldable closure 17 which prevents backsplash from the interior of the disposal unit and muffles sound emanating therefrom.

The means for comminuting the garbage within disposal unit 10 includes a pair of grinding elements 12 which, as best seen in Figs. 1 and 3, comprise diametrically opposed blocks peripherally secured to a disc 18 fixedly carried on the end of a motor drive shaft 19. A cutter ring 20 is fixed to housing 13 circumjacent the path of movement of grinding elements 12 about the axis of motor shaft 19. As best seen in Fig. 3, the cutter surface 21 of the cutter ring is serrated for improved comminuting action with the grinding elements.

Tool 11 comprises an elongated rod 22 having a length substantially greater than the distance between disc 18 and drain opening 16 to permit the rod to extend partially from drain opening 16 during an unjamming operation. At each of the opposite ends of rod 22 are pivotally secured bars 23 and 23' having a length greater than the diametrical spacing between grinding elements 12. Herein, bars 23 and 23' comprise U-section channel elements opening toward bar 22 permitting the bars to be swung to an inserting position, as seen in Fig. 2, wherein the channel-shaped bars embrace the rod to extend longitudinally parallel thereto. Each bar is pivotally connected to the rod 22 by a pin 24 which passes through the bar at one side of the longitudinal center thereof. Thus, one portion 23a of the bar extending from pin 24 is substantially longer than the other portion 23b extending in the opposite direction from the pin. The resulting excess in weight of portion 23a compared to portion 23b causes the bar to swing to a substantially vertical position, as seen in Fig. 2, when rod 22 is arranged in a vertical position, as during an inserting or withdrawing operation. To provide improved rigidity to the U-section bar, a reinforcing pin 25 is extended thereacross.

When tool 11 is inserted into the disposal unit sufficiently to contact lower portion 23a of bar 23 with disc 18, the bar is pivoted by this engagement about pin 24 to the transverse, unjamming position of Fig. 1. It is desirable to arrange rod 22 substantially coaxially of disposal unit 10 and drain opening 16 at this time to permit proper rotative manipulation of bar 23 against grinding elements 12. For this purpose, a circular centering plate 26 having a diameter slightly smaller than the internal diameter of adaptor 15 is slidably mounted on rod 22 by a collar 27. Thus, when the plate 26 is dropped through opening 16, to overlie closure 17, it retains the rod 22 in the desired coaxial relationship.

Rotative manipulation of rod 22 is effected by manipulation of the bar 23' carried on the projecting end of rod 22. Each of bars 23 and 23' is mounted on rod 22 in exactly the same manner so that either end may be utilized for engaging the grinding elements 12 or for serving as the manipulating handle means.

To effect an unjamming operation with tool 11, one end of the tool is inserted through drain opening 16, past closure 17 and into the unjamming arrangement of Fig. 1 wherein bar 23 extends transversely to rod 22 and across disc 18. Centering plate 26 is disposed within adaptor 15 and the outer bar 23 is pivoted to the transverse position. The operator may now effect rotation of

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tool 11 about the axis of rod 22 by grasping and turning the outer, handle-forming bar 23' until inner bar 23 abuts the grinding elements 12 as seen in Fig. 3. An unjamming force may now be applied to the grinding elements by forcible manipulation of the outer bar 23' until suitable movement of the grinding elements 12 occurs to unjam the disposal unit.

Tool 11 may now be readily withdrawn from the disposal unit simply by urging rod 22 outwardly through drain opening 16. As the inner end of the rod moves upwardly, the bar 23 is removed from engagement with the disc 18 and, because of its unbalanced pivotal mounting on pin 24, automatically swings to the aligned relationship with rod 22, as shown in Fig. 2. This permits the inner end of the tool to be withdrawn in a continuous longitudinal movement of rod 22 as bar 23 passes readily upwardly through closure 17 without catching engagement therewith. The jamming material within disposal unit 10 may now be removed as desired.

While I have shown and described certain embodiments of my invention, it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made without departing from the spirit and scope of the invention as defined in the appended claims.

I claim:

1. A device for unjamming a garbage disposal unit, comprising: an elongated rod; and a pair of bars pivotally secured at a point spaced from the center of gravity of each to opposite ends of the rod to swing about an axis transverse to the rod whereby the rod may be disposed vertically with either end uppermost, the lowermost bar being movable between an inserting position wherein said lowermost bar is aligned adjacent the rod

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by the action of gravity and an unjamming position wherein said lowermost bar is arranged substantially transversely to the rod, the uppermost bar being movable between a position wherein it is aligned adjacent the rod and an operating position wherein it is arranged substantially transversely to the rod, each bar being provided with a stop limiting the pivotal movement thereof whereby the bar in the uppermost disposition automatically pivots to a preselected transverse arrangement.

2. A device for unjamming a garbage disposal unit, comprising: an elongated rod; a pair of bars pivotally secured at a point spaced from the center of gravity of each to opposite ends of the rod to swing about an axis transverse to the rod whereby the rod may be disposed vertically with either end uppermost, the lowermost bar being movable between an inserting position wherein said lowermost bar is aligned adjacent the rod by the action of gravity and an unjamming position wherein said lowermost bar is arranged substantially transversely to the rod, the uppermost bar being movable between a position wherein it is aligned adjacent the rod and an operating position wherein it is arranged substantially transversely to the rod, each bar being provided with a stop limiting the pivotal movement thereof whereby the bar in the uppermost disposition automatically pivots to a preselected transverse arrangement; and a centering disc slidably mounted on the rod to center the longitudinal axis of the rod in the disposal unit.

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