

[54] COVER ASSEMBLY

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211/83, 84, 82; 16/84, 51, 66

[56] References Cited

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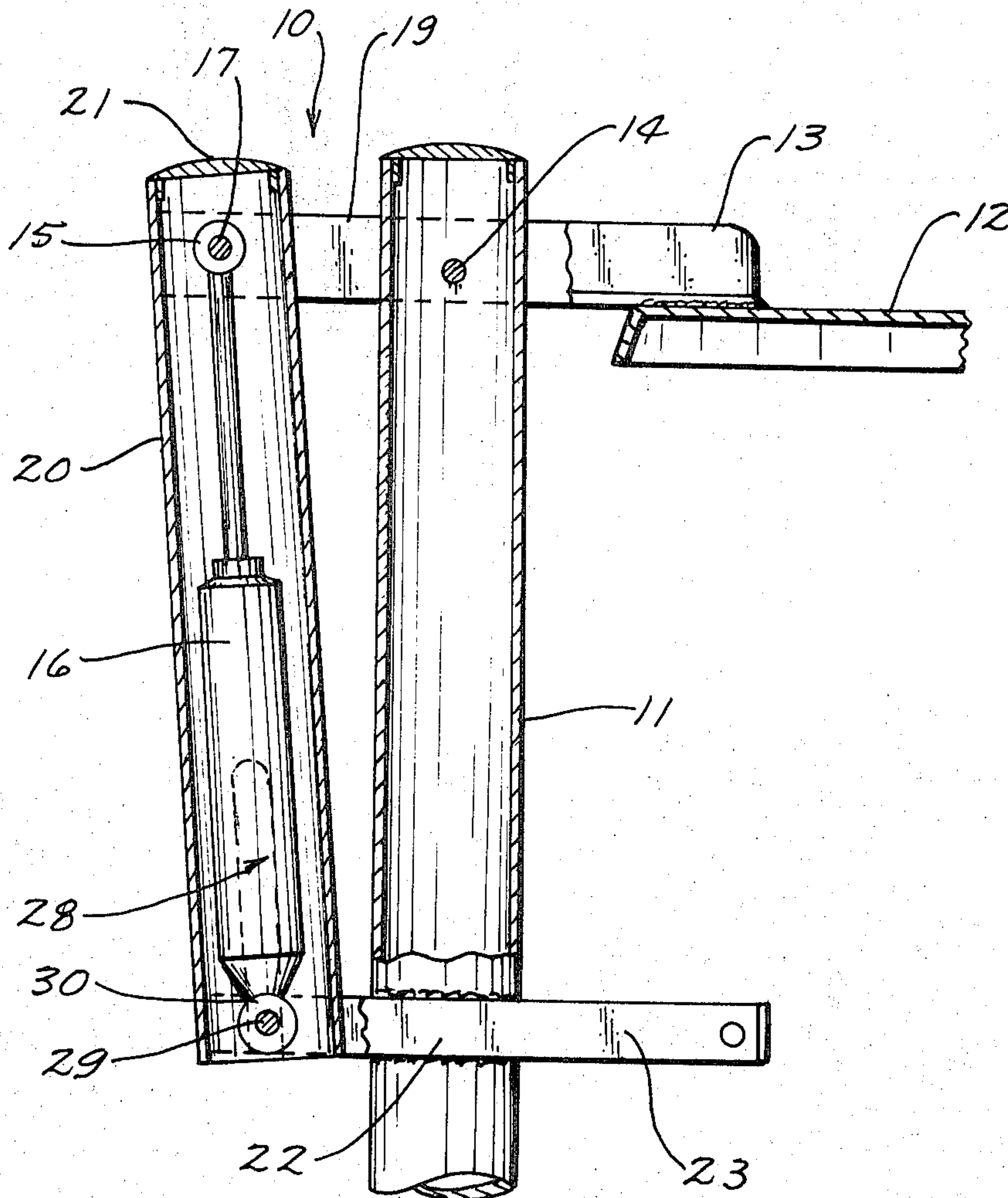
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[57]

ABSTRACT

A cover assembly for refuse containers or the like including dampening means adapted to allow the cover to close slowly and automatically from any open position. The cover and dampening device (preferably a telescoping hydraulic cylinder) are connected by pivot means to a post which may be fixed in concrete or ground or may be attached to a base plate.

1 Claim, 5 Drawing Figures



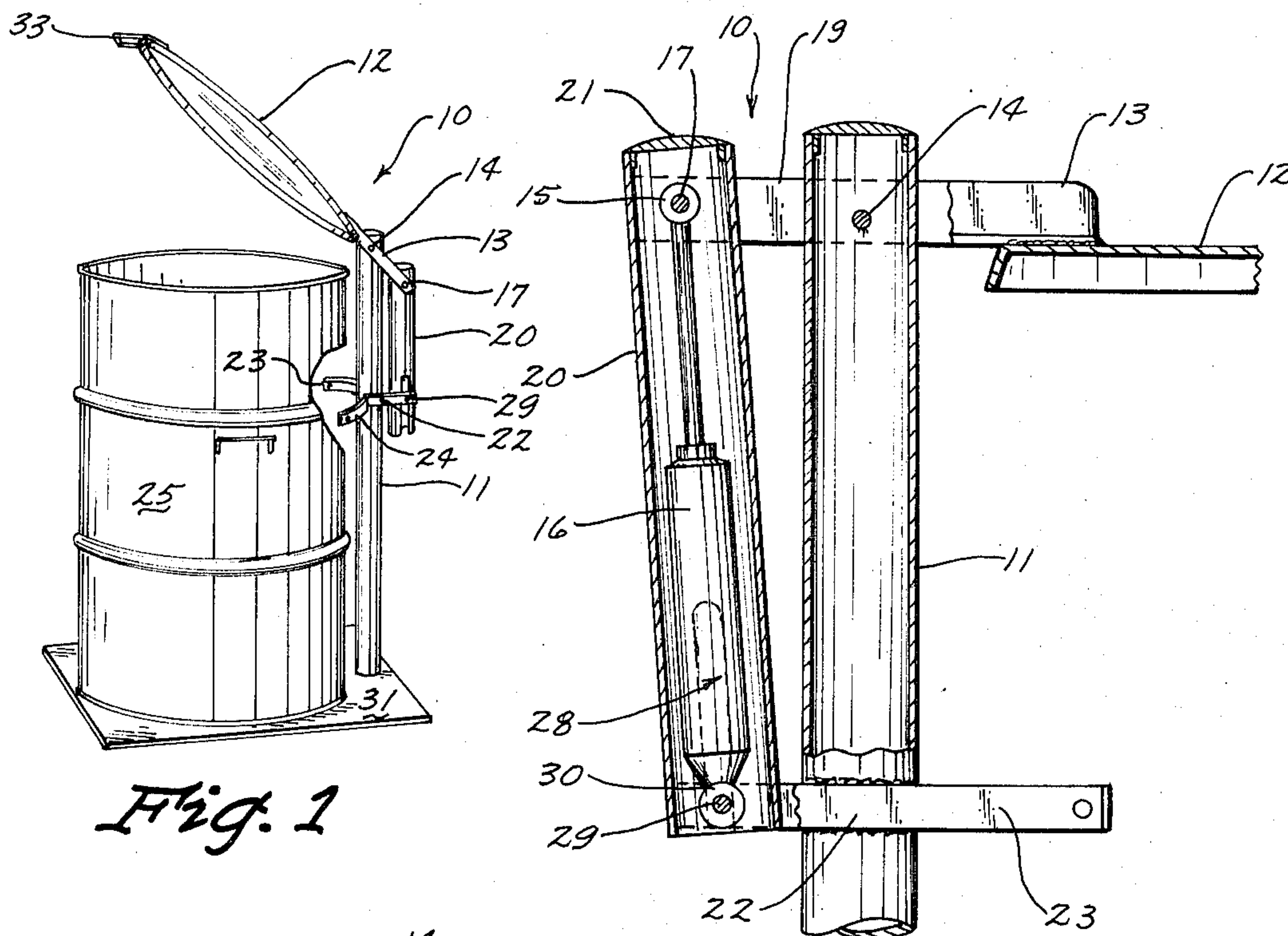


Fig. 1

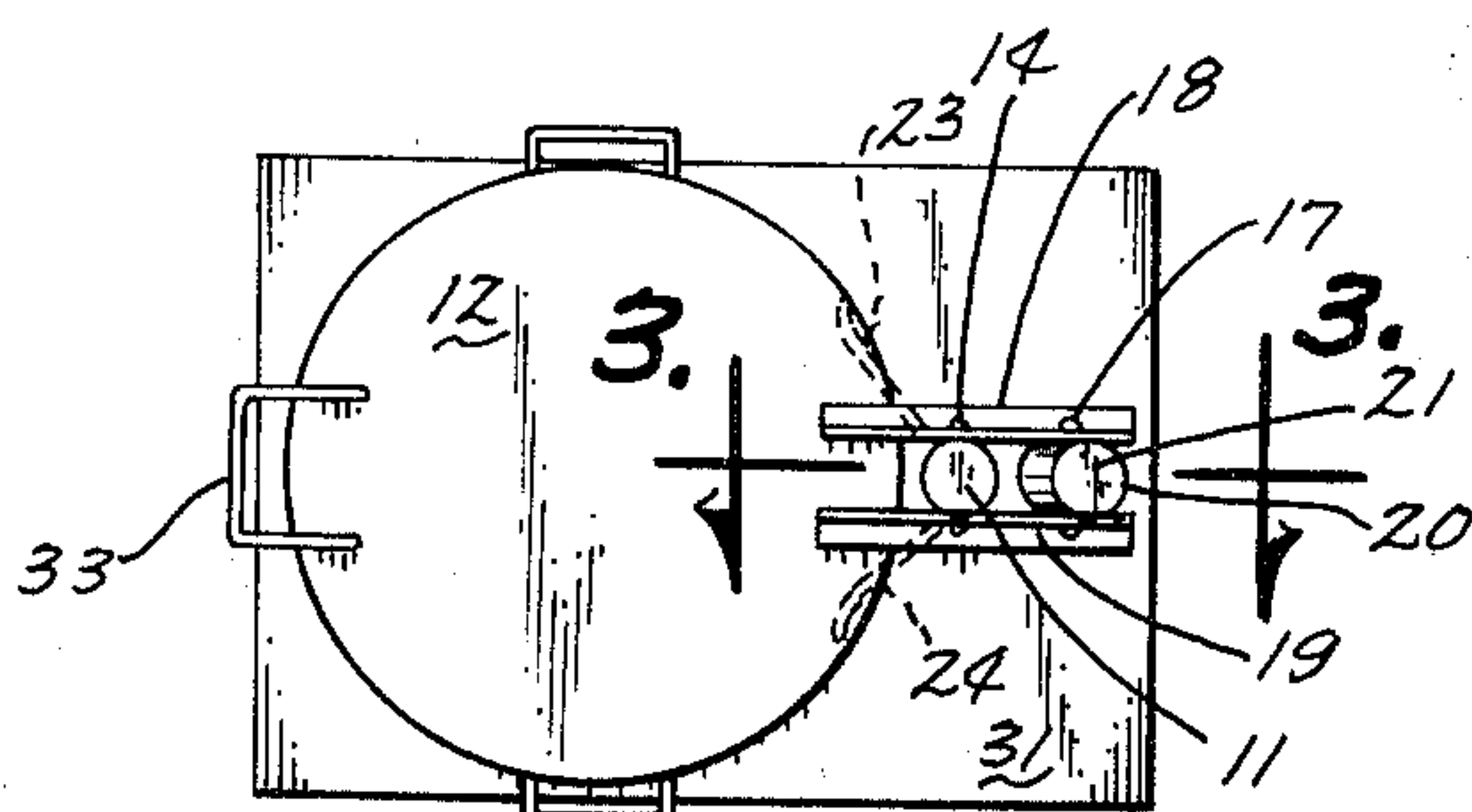


Fig. 2

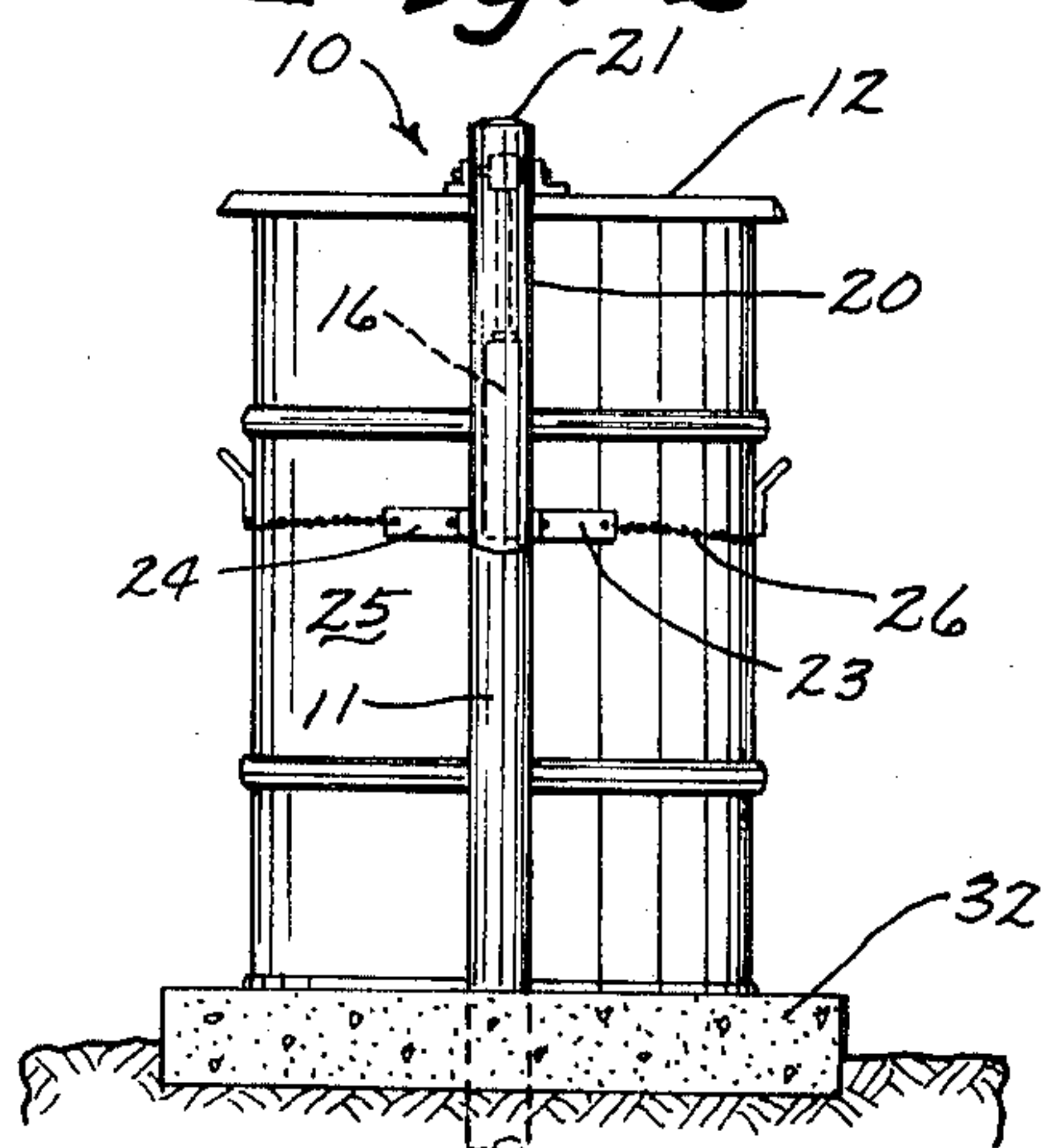


Fig: 4

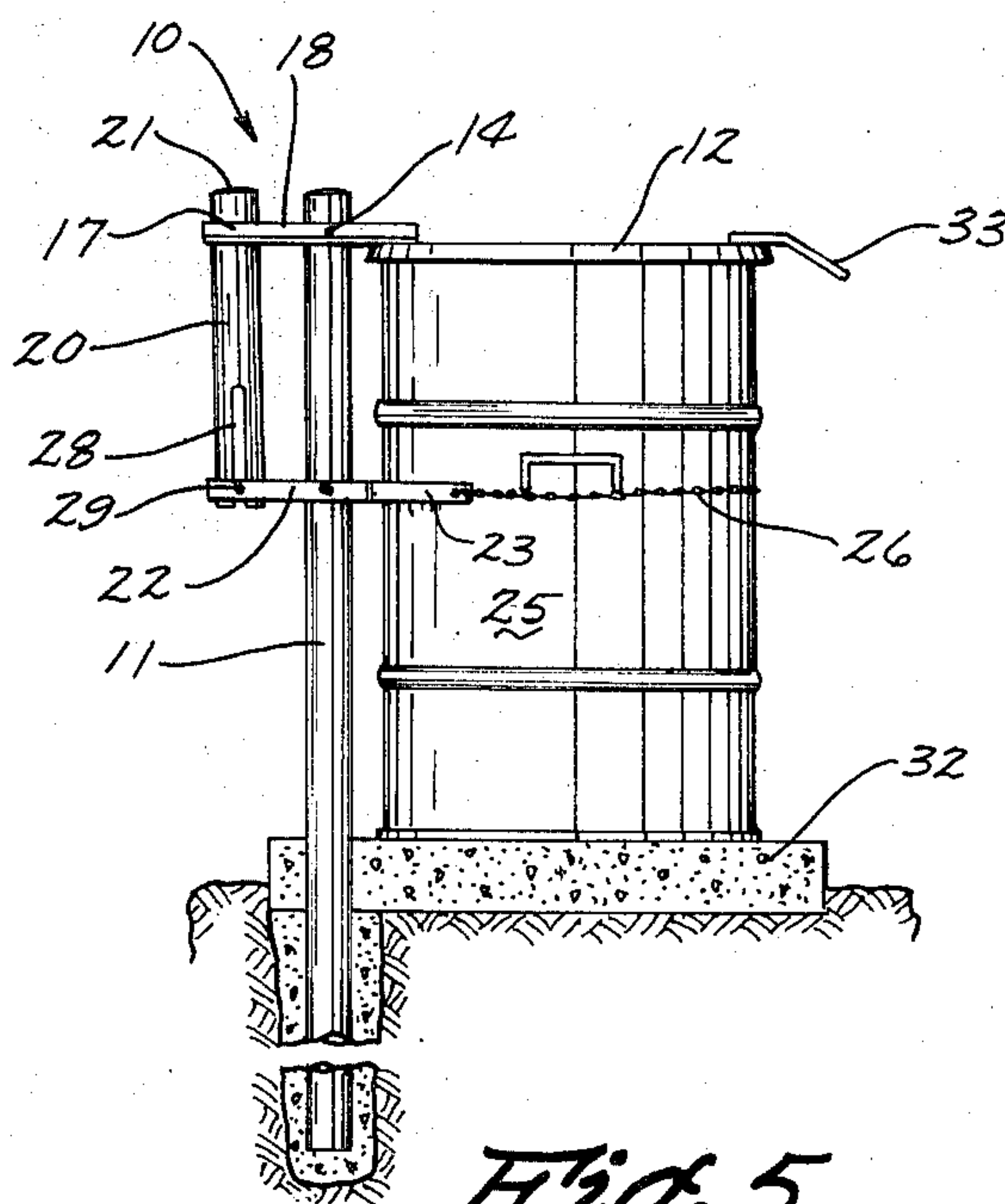


Fig. 5



## COVER ASSEMBLY

## BACKGROUND OF THE INVENTION

This invention relates to a cover assembly for a refuse container or the like. More specifically, this invention relates to a cover assembly which will always close automatically and quietly after being opened.

Many versions of cover holders and racks are presently available for refuse containers. Examples of cover assemblies are described in U.S. Pat. Nos. 2,295,909; 2,513,630 and 2,690,893. Additionally, a container with a foot-operated lid opener is described in U.S. Pat. No. 498,920, and a lid assembly having an "over-center" connection is described in U.S. Pat. No. 3,558,088. All of the above-mentioned patents describe arrangements for container covers that are successful to varying degrees. No. 498,920 further provides an "automatic closing" feature such that the lid cannot be inadvertently left open.

However, in spite of the considerable prior art in this area, prior to this invention there has been no satisfactory cover assembly available that would close quietly as well as automatically. The automatic closing feature is important particularly in outdoor park areas to prevent refuse from being scattered about by the wind or by prowling animals.

Therefore, a need exists for a refuse container cover assembly suitable for use in park and playground areas which will automatically close to prevent scattering of refuse, which will close quietly and dependably, and which is simple, effective and reliable. Such an assembly is provided by this invention.

## SUMMARY OF THE INVENTION

According to this invention, a cover assembly is provided which will automatically and quietly close over a container. The assembly includes a post member with the cover pivotally connected to the upper end of the post. A dampener is connected to the post and the cover by suitable linkages such that the cover when open will close automatically against the resistance of the dampener to provide effective and quiet operation.

It is an object of the invention to provide a cover assembly for a container that will close quietly and automatically over the container after being opened.

It is another object to provide a cover assembly that is gravity-biased toward a closed position throughout its normal range of operation.

It is still another object of the invention to provide a cover assembly that closes against the resistance of a dampening means such as a telescoping hydraulic cylinder.

Additional objects and advantages of the invention will become apparent upon study of the following detailed description of the preferred embodiments.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view showing a cover assembly in accordance with the invention in an open position.

FIG. 2 is a top plan view of the cover assembly shown in FIG. 1.

FIG. 3 is an enlarged cross sectional view taken along the line 3—3 in FIG. 2.

FIG. 4 is a rear elevational view showing the cover assembly of the invention in the closed position with the post member mounted in a concrete pad.

FIG. 5 is a side elevational view of the cover assembly of the invention in the closed position over a refuse container.

## DESCRIPTION OF THE PREFERRED EMBODIMENTS

The preferred embodiments of the invention will now be described by reference to the several views of the drawings.

The cover assembly is illustrated generally at 10 in FIG. 1, and includes an upright post member 11, a cover 12, an extension means 13 extending from the cover 12 and connected to the upper end of post 11 by a first pivot 14 and to the upper end 15 of dampening means 16 by a second pivot connection 17. The extension means 13 is shown in FIG. 2 as two lengths of angle iron 18 and 19 attached such as by welding to the back of the cover 12 and connected to post 11 by pivot 14 and to the upper end 15 of dampener 16 by pivot 17. Pivot connection 17 also extends through a tubular housing 20 having an end cap 21 and covering dampener 16.

The lower end of dampener 16 is pivotally affixed to the rear of a bracket 22 which in turn is affixed to the post 11. Bracket 22 includes arms 23 and 24 adapted to center a container 25 under cover 12. Additionally, an elastic strap 26 may be connected to bracket arms 23 and 24 to hold container 25 in position. Instead of an elastic strap, a chain or lockable means could be used if desired.

The cover 12 has a depending rim (FIG. 3) extending about its periphery. The rim fits over the top edge of container 25 as is apparent. The container 25 is illustrated as a metal 55 gallon drum, which provides excellent service and is substantially rain, odor and animal proof. It will be apparent that other closed containers, or even wire basket containers, might be utilized with the invention.

The construction of the cover assembly of the invention will be seen (FIG. 1) to provide a gravity-bias toward closing throughout its range of operation. This is important because otherwise a person might raise the lid, dump refuse in the container, and then go off without closing the lid, thereby losing many of the benefits of the invention.

The dampening means 16 (FIG. 3) is preferably a telescoping hydraulic cylinder. Also, the telescoping hydraulic cylinder is preferably of the type, well known in the art, which resists movement in one direction much more than in the other. In this invention, the dampener preferably provides very slight resistance against opening of the cover, and provides considerably more resistance against closing, such that the closing is slow and quiet.

The protective housing 20 over dampener 16 has a pair of opposed slots 28 which allow guided movement of the housing 20 over the pivot pin 29 extending through post bracket 22 and lower end 30 of dampener 16. It can be seen that as cover 12 is opened, the housing 20 moves downwardly relative to pivot pin 29 that is held in a fixed position by bracket 22.

In FIGS. 1 and 2, a plate 31 is attached to the bottom of post 11. This embodiment is utilized when a portable unit is desired. When a permanent installation is called



for, the post 11 may extend through a concrete pad 32 as shown in FIGS. 4 and 5.

The above description is directed toward an assembly useful for parks and the like, but it will be apparent that the invention has general utility in any environment 5 where a covered container for material is useful. The invention is adaptable for use in picnic areas, schools, factories, highway rest areas, city sidewalks, apartment developments or any number of other situations.

The operation of the invention is quite apparent from the above description, but will nevertheless be briefly described now. The normal closed position of the assembly is illustrated in FIGS. 4 and 5. When it is desired to place material in the container 25, the handle 33 of cover 12 is raised. This causes the pivot 17 connecting 10 the extension 13 to the top 15 of dampener 16 to be depressed, resulting in contraction of the dampener 16. The dampener 16 is constructed to provide very little resistance against contraction, such that the cover 12 is easily lifted. After placing the material in the container 25, the handle 33 of cover 12 is released, and the 15 weight of the cover 12 causes a slow closing against the resistance of dampener 16.

The above description of preferred embodiments of the invention is exemplary, and numerous modifica- 20 tions and variations within the scope of the invention may be made.

I claim:

1. A cover assembly for a container comprising:

- a post member;
- a cover member;
- a first extension member affixed at one end to said cover member, said extension member being pivotally connected at its center to said post member at a first pivot position, said cover member and extension member being gravity-biased toward a closed position throughout the normal range of movement about said first pivot position;
- a second extension member affixed to said post member, said second extension member having a pin member positioned below said first extension member;
- a telescoping hydraulic cylinder pivotally affixed at one end to said first extension member at a second pivot position and at the opposite end to said second extension member, said hydraulic cylinder being more resistive of lowering movement of said cover member than of rising movement, said cover member being silently lowered onto the container thereby; and
- a shield member enclosing said hydraulic cylinder, said shield member being pivotally affixed to said first extension member at said second pivot position, said shield member having slots formed therein, said slots accommodating said pin member during movement of said shield member, whereby said hydraulic cylinder is continuously protected.

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