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[54] **TOILET TISSUE HOLDING AND DISPENSING APPARATUS**
2 Claims, 5 Drawing Figs.

[52] U.S. Cl..... **312/39, 242/55.3**
 [51] Int. Cl..... **B65h 19/00**
 [50] Field of Search..... **312/39; 242/55.3; 221/33**

ABSTRACT: A housing constructed to receive a plurality of rolls of toilet tissue in generally overlying relationship with cradle means for receiving a roll and maintaining it in a dispensing position, a portion thereof operable to reject the empty roll, and stop means operable to allow one roll at a time to be positioned in the cradle means, said cradle means and stop means operating simultaneously to renew the roll in the dispensing position.

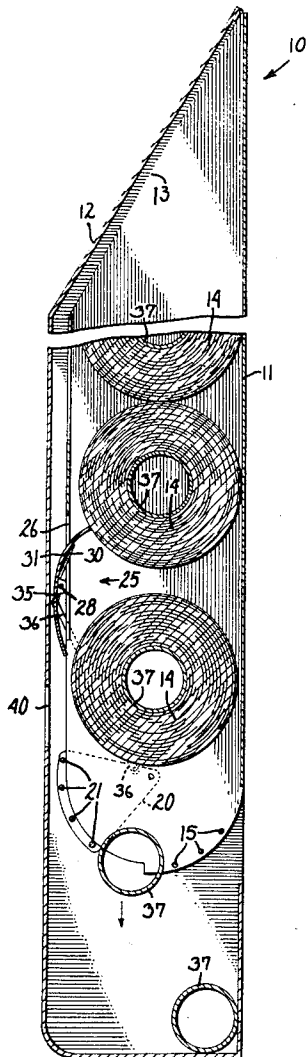


FIG. 3

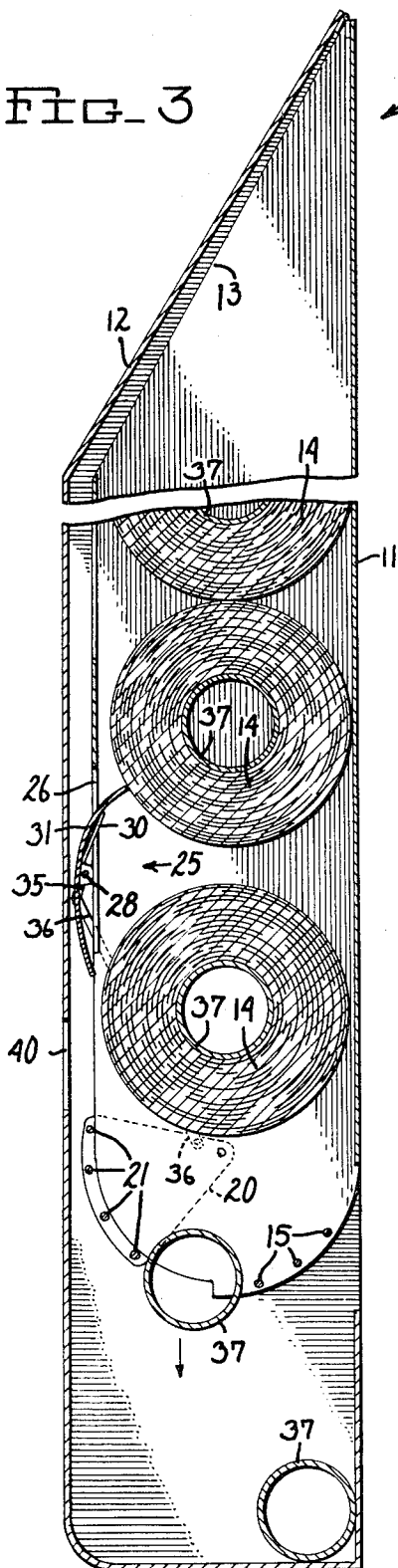


FIG. 1

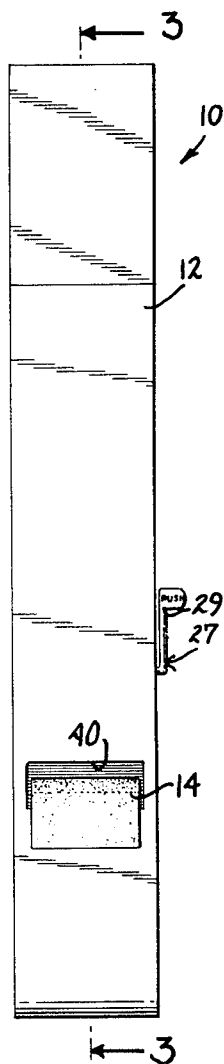
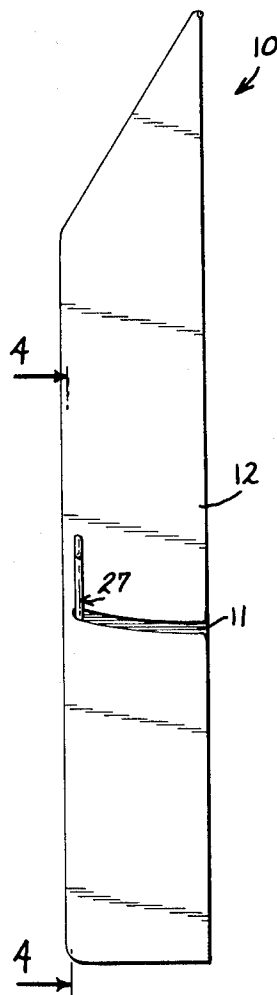


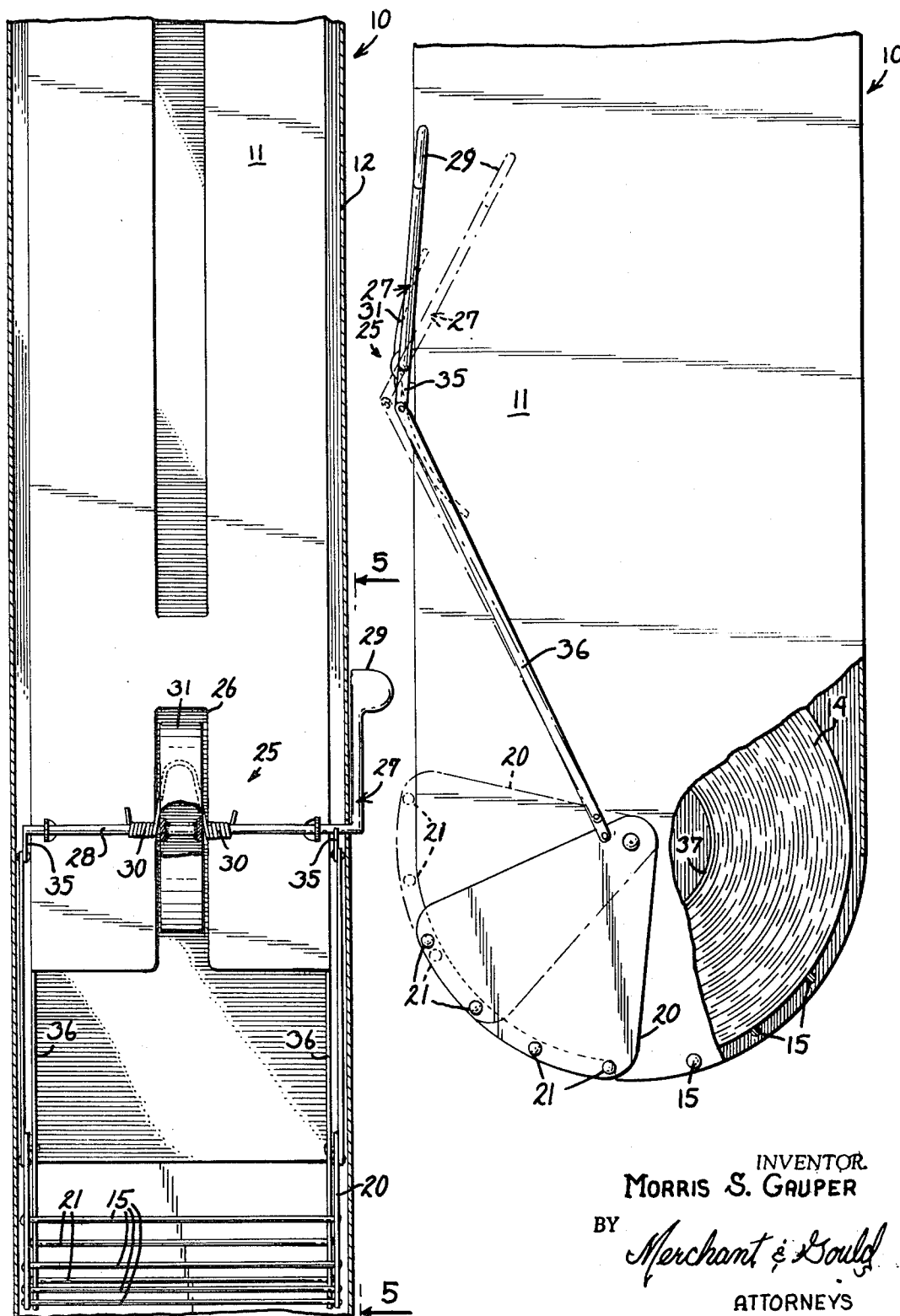
FIG. 2



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Fig. 5



TOILET TISSUE HOLDING AND DISPENSING APPARATUS

BACKGROUND OF THE INVENTION

1. Field of the Invention

In toilets, especially those located in public buildings and the like, where caretakers are only available during specified periods, generally daily and after working hours, it is often a problem to maintain sufficient toilet tissue. In these places it is necessary that rolls of tissue be readily available without the assistance of a caretaker but it is also imperative that these extra or stored rolls not be available to vandals and the like.

2. Description of the Prior Art

Many types of prior art devices have been constructed in an attempt to solve this problem, one such type being a toilet tissue dispenser in which two rolls are available simultaneously. This type of dispenser is unsatisfactory since both rolls are generally used alternately and, consequently, become empty at approximately the same time.

In another type of magazine and dispensing apparatus a plurality of rolls are positioned in overlying relationship with the bottom roll being in a dispensing position. However, in this type of apparatus the bottom roll, or the roll in the dispensing position, can be rejected before it is empty and each subsequent roll can also be rejected. It is undesirable to provide an operator with the capability of rejecting an unused or partially used roll of tissue, since through vandalism or negligence this will often occur.

SUMMARY OF THE INVENTION

The present invention pertains to toilet tissue holding and dispensing apparatus having a housing with cradle means for maintaining a roll in a dispensing position and a movable portion thereof providing a normally closed aperture therethrough, stop means for allowing a single roll of tissue to be received in said cradle means and actuating means connected to said cradle means and said stop means for rejecting empty rolls through the aperture and allowing a new roll to be received in said cradle means.

It is an object of the present invention to provide an improved toilet tissue holding and dispensing apparatus. It is a further object of the present invention to provide toilet tissue holding and dispensing apparatus having storage space for a plurality of rolls of toilet tissue, allowing a single roll to be positioned in a dispensing position and preventing the rejection of a roll until substantially all of the tissue is removed therefrom.

These and other objects of this invention will become apparent to those skilled in the art upon consideration of the accompanying specification, claims, and drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a view in front elevation of the present apparatus; FIG. 2 is a view in side elevation of the present apparatus; FIG. 3 is an enlarged sectional view as seen from the line 3-3 in FIG. 1;

FIG. 4 is an enlarged sectional view as seen from the line 4-4 in FIG. 2; and

FIG. 5 is an enlarged view as seen from the line 5-5 in FIG. 4, portions thereof broken away and shown in section and the cover removed, illustrating in dotted lines a different position of the various parts.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the figures the numeral 10 generally designates an elongated hollow housing including a body portion 11 and a cover portion 12. The body portion 11 is a hollow framework having a generally rectangular-shaped cross section with the rear surface thereof adapted to be affixed to a wall or other relatively solid structure. The upper end of the body portion 11 is truncated to provide an opening 13, which is directed generally upwardly and outwardly from the rear

wall of the body portion 11 to facilitate the insertion of a plurality of rolls of toilet tissue, designated 14. The lower ends of the sides of the body portion 11 are generally semicircular with a plurality of generally parallel spaced-apart rollers 15 extending therebetween. The rollers 15 (in the figures there are only three rollers 15) are positioned between the rear surface of the body portion 11 and a plane extending longitudinally through the approximate center of the sides of the body portion 11. The rollers 15 may be formed of any convenient material, such as plastic, wood, etc., and may be rotatably mounted or fixedly mounted as desired for ease in rotary movement of rolls of toilet tissue 14 when in contact therewith. It should be understood that the illustrated body portion 11 is only for exemplary purposes and many variations and modifications may be devised by those skilled in the art.

A generally pie-shaped sector 20 is pivotally affixed to each side of the body portion 11 generally coaxial with the semicircular bottom ends of the sides. A plurality of rollers 21 are affixed in parallel spaced-apart relationship between the sectors 20. The rollers 21 are generally similar to the rollers 15 and form a cradlelike support, in cooperation with the rollers 15, for one roll of toilet tissue 14. The sectors 20 and rollers 21 are pivotal in a direction generally away from the rollers 15 to provide an aperture between the rollers 21 and the rollers 15. The lower end of the front wall of the body portion 11 is spaced above the sectors 20 a sufficient distance to allow easy access to the roll of toilet tissue 14 positioned on the rollers 15 and 21.

Stop means, generally designated 25, are affixed to the front wall of the body portion 11 so as to engage the rolls of toilet tissue 14 through a longitudinally extending slot 26. The stop means 25 include an L-shaped handle 27 having one arm 28 extending across the front of the body portion 11 generally perpendicular to the longitudinal axis and a second arm 29 extending upwardly along one side generally parallel with the longitudinal axis of the body portion 11. The handle 27 is mounted for pivotal movements about the longitudinal axis of the arm 28 and is biased into the described position by means of a torsion spring 30. A generally arcuate-shaped member 31 is affixed to the arm 28 of the handle 27 so that the ends thereof extend through the slot 26 into the body portion 11. In the normal or described position the lower end of the arcuate member 31 partially underlies a roll of toilet tissue 14 and prevents downward vertical movement thereof. When the arm 29 is moved toward the rear of the body portion 11 the arm 28 and arcuate member 31 are pivoted so that the lower end of the arcuate member 31 is disengaged from the lower roll of stored toilet tissue 14 and the upper end engages the next roll of toilet tissue 14 to prevent downward vertical movement thereof (see FIG. 3). Upon releasing the arm 29 the spring 30 returns the arcuate member 31 and arm 28 to the described or normal position wherein the lower end of the arcuate member 31 underlies the next roll of toilet tissue 14 and the roll of tissue 14 previously stopped by the upper end of the member 31 moves downwardly into engagement with the lower end of the arcuate member 31.

Two radially outwardly extending levers 35 are affixed to the arm 28 of the handle 27 for rotation therewith. A pair of elongated links 36 are each pivotally affixed adjacent one end to a lever 35 and the other end is pivotally affixed concentrically to a sector 20. Thus, movement of the arm 29 causes rotation of the arm 28 in a direction to raise the levers 35 and attached links 36. When the links 36 raise the sectors 20 are rotated in a direction to provide an aperture between the rollers 21 and the rollers 15 for the rejection of an empty roll, designated 37. The links 36 are of a length to provide an aperture only large enough for the rejection of an approximately empty roll 37. The combination of the bias provided by the spring 30 and the gravitational bias provided by the pendulous mounting of the sectors 20 maintain the aperture normally closed. The actuation of the handle 27 moves the stop means 25 and the sectors 20 simultaneously so that the used roll 37 is rejected as a new roll of toilet tissue 14 drops into place.

The cover portion 12 is hinged adjacent the upper edge thereof to the upper edge of the back wall of the housing 10 and is formed to completely enclose the body portion 11. An opening 40 is provided in the cover portion 12 adjacent the pivotally mounted sectors 20 so that the tissue on the roll 14 situated on the rollers 15 and 21 is easily accessible. A receptacle 41 is formed in the lowermost part of the cover portion 12 and, when the cover portion 12 is in the correct position relative to the body portion 11, underlies the aperture between the rollers 21 and rollers 15 to receive rejected empty rollers 37. Means can be provided for locking the cover portion 12 to the body portion 11 to prevent tampering with the stored rolls of toilet tissue 14 and the described mechanism.

Thus, improved toilet tissue holding and dispensing apparatus is described which can be charged with a plurality of rolls of toilet tissue and the rolls can be manually positioned in a dispensing position one at a time. Further, unused or partially used rolls cannot be rejected and each roll must be substantially used before the next roll is available. In addition to the above advantages, empty rolls are rejected and stored in a receptacle simultaneous with the positioning of a new roll in a dispensing position. Many alterations and modifications may be devised by those skilled in the art and it should be understood that the embodiment illustrated and described is for exemplary purposes and is illustrated because of its simplicity and ease of manufacture.

What I claim is:

1. Toilet tissue holding and dispensing apparatus comprising:

- a. an elongated hollow housing having an opening therein for the insertion of a plurality of rolls of toilet tissue in generally parallel relationship;
- b. support means mounted within said housing for receiving one of the inserted rolls and maintaining the received roll in a dispensing position, said support means cooperating with an opening in said housing to make the paper on the received roll externally available, and said support means having a movable portion pendulously mounted and gravity biased for providing a normally closed aperture

through said support means which movable portion operates to reject empty rolls through the aperture upon proper movement of said movable portion;

- c. stop means mounted in said housing for normally preventing the plurality of rolls from reaching said support means and for allowing a single roll to be received in said support means upon proper movement thereof; and
- d. actuating means mounted on said housing and connected to said movable portion of said support means and said stop means for providing proper movements thereof upon actuation of said actuating means.

2. Toilet tissue holding and dispensing apparatus comprising:

- a. an elongated hollow housing including a tubular body member having a generally rectangular cross section with dimensions approximately equal to the dimensions of a full roll of toilet tissue and adapted to receive a plurality of rolls of toilet tissue in generally parallel relationship therein and a cover member pivotally affixed to the body member and normally positioned in enclosing orientation relative to the body member;
- b. support means mounted adjacent the lower end of the body member for receiving one of the inserted rolls and maintaining the received roll in a dispensing position, said support means cooperating with an opening in said body member and said cover means to make the paper on the received roll externally available, and said support means having a movable portion providing a normally closed aperture through said support means for rejecting empty rolls upon proper movement of said movable portion;
- c. stop means mounted in said housing for normally preventing the plurality of rolls from reaching said support means and for allowing a single roll to be received in said support means upon proper movement thereof; and
- d. actuating means mounted on said housing and connected to said movable portion of said support means and said stop means for providing proper movements thereof upon actuation of said actuating means.

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