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RETARDING MEANS FOR ROLL PAPER DISPENSERS

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Fig. 1

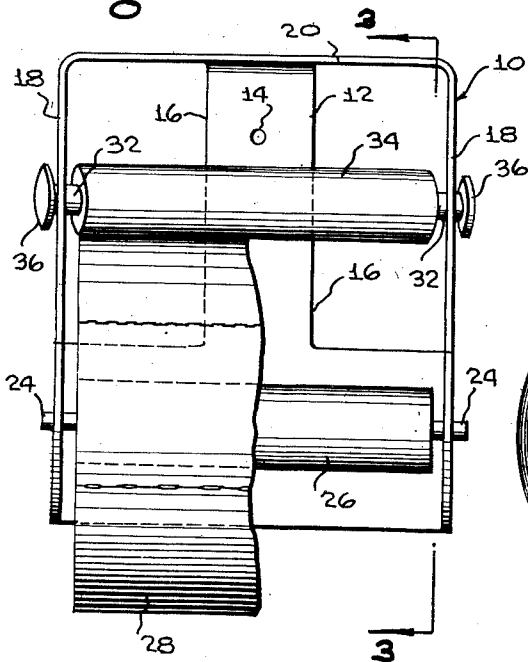


Fig. 3

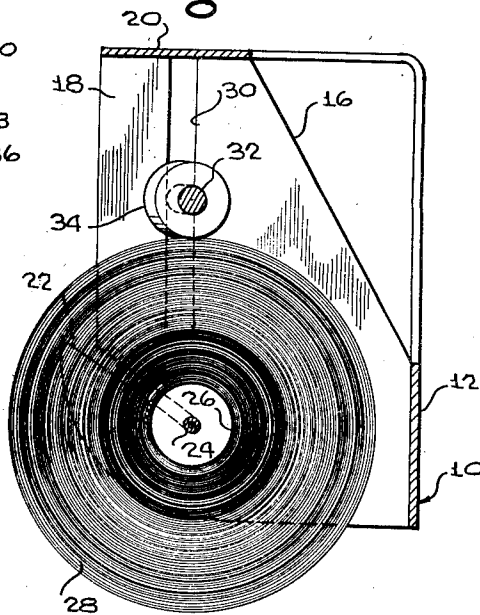


Fig. 2

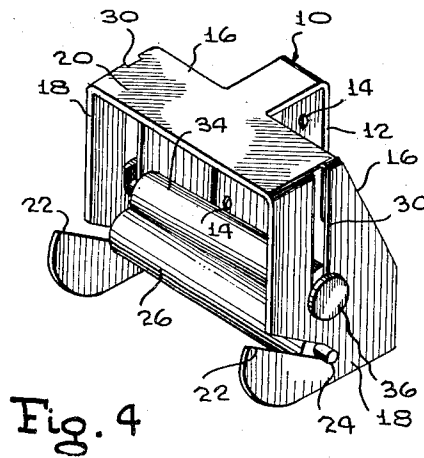
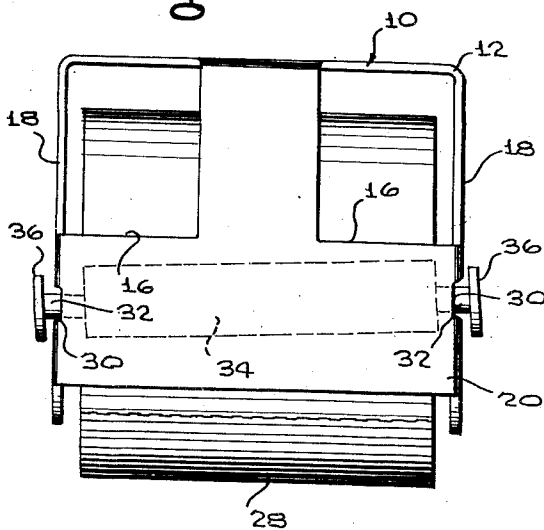


Fig. 4

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RETARDING MEANS FOR ROLL PAPER DISPENSERS

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3 Claims. (Cl. 242—55.2)

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This invention relates to dispensers such as are commonly used for the dispensing of toilet tissue or other paper from a roll thereof. More particularly, the invention has reference to a means to be incorporated in a dispenser of the character stated, and novelly designed to retard the rotation of the roll of paper during the dispensing operation, thereby to prevent wastage.

It is one important object of the present invention to provide a means of the character stated which can be incorporated in paper roll dispensers of generally conventional formation, without substantial modification in the construction of said dispensers.

Another important object is to provide a device of the character stated which will be inexpensive, efficient in operation, and will serve to retard substantially the speed of rotation of the paper roll, thus not only to prevent wastage of the paper, but also to cause the dispensing of the paper to be kept fully under control by the user.

Other objects will appear from the following description, the claims appended thereto, and from the annexed drawing, wherein like reference characters designate like parts throughout the several views, and in which:

Figure 1 is a front elevational view of a dispenser formed in accordance with the present invention, a paper roll supported therein being illustrated fragmentarily;

Figure 2 is a top plan view;

Figure 3 is a vertical sectional view taken substantially on line 3—3 of Figure 1; and

Figure 4 is a perspective view of the device on a reduced scale, the roll of paper not being shown.

Referring to the drawings in detail, at 10 I have illustrated a casing which can be formed of a single piece of flat metal material, stamped to shape, said casing including a vertical back wall 12 having a plurality of openings 14 adapted to receive screws or other fastening elements, not shown, thus to permit the casing to be mounted upon a supporting surface such as a wall of a room.

For the purpose of conserving material, the casing may be cut away at the back portion thereof, as at 16, if desired.

The side walls of the casing have been designated 18, and are disposed in spaced, parallel, vertical planes. The upper ends of the side and rear walls are integrally joined by a top wall 20, thus to impart to the casing a generally box-like configuration.

Formed in the respective side walls 18, and extending inwardly and downwardly at an incline

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from the front edges of said side walls, are transversely aligned slots 22, adapted to receive trunnions 24 projecting from opposite ends of a roller 26 which can be extended through the core of a roll of paper 28.

Also formed in the side walls 18 are vertical slots 30. These, however, are not aligned transversely of the casing. Rather, one slot 30 is disposed closer to the front edge of its associated side wall 18 than the other slot 30. Both slots, however, are disposed substantially above the inner ends of the slots 22.

Extending through the respective slots 30 are trunnions 32 provided upon the respective ends of a weighted retarding roller 34, said trunnions being provided with heads 36 to prevent removal of the roller 34 from the slots 30.

By reason of the location of the respective slots 30, the longitudinal axis of the roller 34 is arranged obliquely to the longitudinal axis of the paper-supporting roller 26.

In use, the roller 26 is removed from the slots 22. Thereafter, a roll of paper 28 is applied to the roller 26, and said roller is returned to proper position. In returning the roller 26 to a proper position, the weighted roller 34 is elevated within the slots 30. Thereafter the weighted roller 34 is released, and will gravitate to a position wherein it is in contact with the periphery of the roll of paper 28, as may be readily noted from Figures 1 or 3.

The arrangement is one which produces a beneficial effect, in retarding the speed of rotation of the roll of paper 28 when said paper is being dispensed from the roll-supporting device. Since the weighted roller 34 exerts downward pressure against the surface of the roll of paper 28, and since said weighted roller rotates upon an axis that is related angularly to the axis of rotation of the roll of paper, the weighted roller will tend to resist free rotation thereof by the rotating roll of paper, and will set up a frictional engagement between the roll of paper and the weight means disposed thereabove, tending to brake or retard the speed of rotation of the roll of paper.

In this way, wastage is effectively reduced to a minimum, since under no circumstances will the roll of paper 28 rotate freely after removal of a portion of the paper therefrom. Heretofore, it has been common for the paper roll to continue rotating, as a result of which too great a length of paper is unwound therefrom, with the end result of producing considerable wastage.

It will be noted that regardless of the thick-

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ness of the roll of paper 28, the weighted roller 34 will still impose its pressure thereagainst, and will retard the rate of rotation of the paper roll. In other words, as the diameter of the paper roll decreases concurrently with continued use of said roll, the weighted roller 34 will move downwardly within the slots 30, until the paper is completely exhausted from the roll 26.

Further, it may be noted that to replenish the paper, it is merely necessary that the weighted roller 34 be elevated within the vertical slots 30, and the roller 26 removed for insertion thereof through the core of a new roll of paper 28.

The invention, I believe, is one which is capable of being manufactured at relatively low cost, and is also possessed of the important characteristic of assuring free and efficient operation of the dispensing device at all times, while still holding wastage to a minimum.

It is believed clear that the invention is not necessarily confined to the specific use or uses thereof described above, since it may be utilized for any purpose to which it may be suited. Nor is the invention to be necessarily limited to the specific construction illustrated and described, since such construction is only intended to be illustrative of the principles of operation and the means presently devised to carry out said principles, it being considered that the invention comprehends any minor changes in construction that may be permitted within the scope of the appended claims.

What is claimed is:

1. In a dispenser for roll paper of the type having a retarding means incorporated therein, a casing; a roller mounted therein and adapted to support a roll of paper for rotation of said roll within the casing to dispense paper therefrom; and a second roller mounted rotatably in the casing above the first roller and adapted to gravitate into engagement with the surface of said roll of paper, the longitudinal axis of the second roller bearing an angular relation to the longitudinal axis of the first roller, so as to constitute a means effective to retard free rotation of said roll of paper.

2. In a dispenser for roll paper of the type having a retarding means incorporated therein, a casing having vertical slots formed in its respective side walls; a roller having its ends journaled in said side walls and adapted to support a roll of paper for rotation of said roll within the cas-

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ing to dispense paper therefrom, the respective slots being offset laterally of the respective ends of the roller different distances; and a second, weighted roller mounted rotatably in said vertical slots above the first roller and adapted to gravitate into engagement with the surface of said roll of paper, the longitudinal axis of said weighted roller being related angularly, by reason of the misalignment of said slots, to the longitudinal axis of said first roller so as to constitute a means effective to retard free rotation of said roll of paper within the casing.

3. In a dispenser for roll paper of the type having a retarding means incorporated therein, a casing having vertical and inclined slots formed in its respective side walls, said inclined slots opening inwardly from the front edges of the side walls and the vertical slots having their lower termini disposed above the inner ends of the respective inclined slots, the vertical slot of one side wall being offset a substantial distance laterally of the inner end of the inclined slot of the same side wall; a roller having its ends journaled in the inner ends of the inclined slots and adapted to support a roll of paper for rotation of said roll within the casing to dispense paper therefrom; and a second, weighted roller mounted rotatably in the vertical slots above the first roller and adapted to gravitate within said vertical slots into engagement with the surface of said roll of paper, said offsetting of one vertical slot being adapted to effect an angular relation between the longitudinal axis of the weighted roller and the longitudinal axis of the first roller, thus to constitute in the second roller a means effective to retard free rotation of said roll of paper within the casing.

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