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2,957,738

DISPENSING DEVICE FOR ROLL MATERIAL

Filed Oct. 14, 1957

FIG. 1

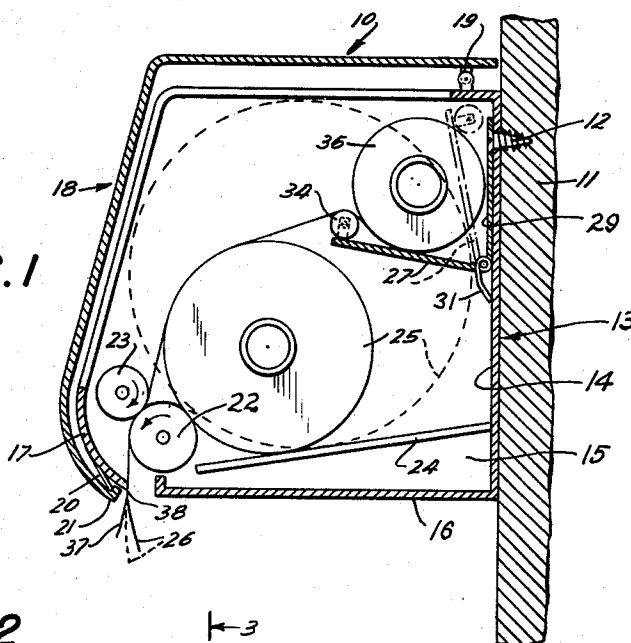


FIG. 2

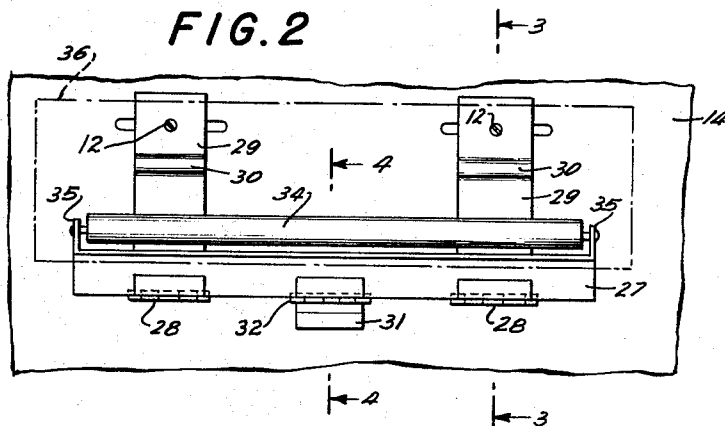


FIG. 3

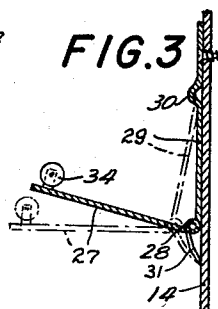


FIG. 4

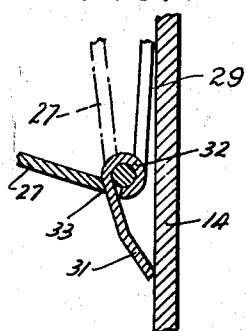
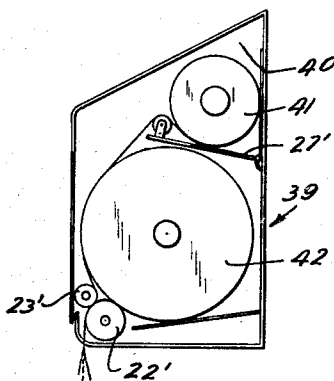


FIG. 5



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DISPENSING DEVICE FOR ROLL MATERIAL

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9 Claims. (Cl. 312—39)

This invention relates to dispensing devices for roll material, such for example, as roll paper towels wherein means is provided for selectively and interchangeably dispensing paper towels from a single large roll, and from two smaller rollers within a unitary cabinet. More particularly, the invention relates to a retractible roll support device having swinging movement from a protruding, roll support position, to a retracted or inoperative position.

In the dispensing of paper towels, and the like, particularly in rest rooms of office buildings, and public places where rest rooms are extensively in use, various types and kinds of paper towel dispensers have been employed. One such type of dispenser is a wall cabinet device adapted to receive a paper towel roll of substantial diameter with the paper being fed outwardly from the lower front edge of the device in a position to permit easy severance of a desired amount of paper so discharged. The use of a relatively large paper towel roll permits such devices when refilled, to be left unattended for extended periods of time, depending upon normal activity in a particular rest room, with assurance that towels will not normally be exhausted between regular or periodic refilling of such devices. It is found, however, that frequently when periodic rounds are made to refill such devices, the quantity of paper left on the roll in use will be known to be insufficient to last until the next periodic check. The tendency has been in such instances to remove the partially consumed roll, and replace it with a new full roll of paper. This practice, however, results in an accumulation of partially consumed paper rolls of differing sizes which cannot be efficiently used in dispensing apparatus, and which to a considerable extent, are wasted or at least lost to their intended purpose.

An object of the present invention is to provide means for eliminating this waste, as well as the inconvenience of having to store or handle partially used paper rolls by employing a supplemental paper roll support retractibly mounted within a dispensing device which permits selective use of the device as a dispenser for the single paper roll, or for two paper rolls simultaneously feeding a double layer of toweling. A further object of the invention is to provide a supplemental roll towel support in the form of a complete or self-contained unit which can be readily mounted on the inner rear wall of various types of roll towel dispensers.

These and other objects of the invention will be more readily apparent from a consideration of the following description taken together with the accompanying drawing in which preferred adaptations of the invention have been illustrated with various parts thereof identified by suitable reference characters in each of the views, and in which:

Fig. 1 is a vertical sectional view of a typical roll towel dispenser looking along the axis of the towel roll therein, and illustrating my supplemental towel roll support in operative position;

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Fig. 2 is a front elevation view of the supplemental towel support as shown in Fig. 1;

Fig. 3 is a sectional view taken substantially on the line 3—3 of Fig. 2;

Fig. 4 is a partial sectional view substantially on the line 4—4 of Fig. 2; and

Fig. 5 is a diagrammatic view similar to Fig. 1 showing my supplemental towel support associated with a slightly different type of towel dispenser.

I have shown in Fig. 1 of the drawing a typical dispenser 10 for roll paper towels adapted for mounting on a wall or other vertical support 11 by suitable fastening means as indicated by the screws 12. The dispenser 10 comprises an inner casing part 13 having a rear wall 14, side walls 15, bottom wall 16, and a lower front wall portion 17; and an outer casing part 18 pivotally coupled to the inner casing part 13 by hinge means 19. The front wall portion 17 of the inner casing part carries a spring lock member 20 engaging the lower edge 21 of the outer casing part for securing same in closed position; and upon releasing of the lock means 20, it will be understood that the outer casing part 18 swings upwardly about the pivot 19 to permit access to the interior of the device.

Extending transversely of the inner casing part 13, and adjacent the front wall portion 17 thereof, are a pair of feed rollers comprising a driven roller 22 preferably having a roughened outer surface, and an idling roller 23 supported in close engagement with the roller 22. The particular means for driving the roller 22 forms no part of the present invention, but the arrows on the rollers 22 and 23 indicate the direction of rotation thereof in the feed of toweling therebetween.

The inner casing part is also provided with inclined flanges 24 protruding from the side walls 15, providing support for a paper roll 25. For purpose of illustration, I have shown in dotted lines a large paper roll substantially filling the inner casing 13, and feeding between the rollers 22, 23, a single sheet of toweling 26 as seen in dotted lines. As the roll 25 is consumed, it will assume a smaller size as indicated by the full line showing 25 at which time the roll 25 occupies only a small portion of the available space within the inner casing 13. It is to provide more efficient use of the space within the casing 13 when the paper rolls are partially consumed, that I am providing a supplemental and retractible paper roll support which forms the subject matter of the present invention.

The supplemental paper roll support as shown in Figs. 1 to 4 of the drawing comprises a movable shelf member 27 pivotally secured as by the hinges 28 to mounting means 29 normally in abutting relation to the rear wall 14 of the inner casing part, and suitably secured in position by the screws or fasteners 12 by which the dispenser device is mounted on a wall or vertical support.

The mounting means 29 may be in the form of separate straps or strips of moderately resilient steel, or the like, in order to provide slight outward flexure of the hinge portions 28 from the wall 14 in the manner hereinafter described. In this connection, the spring action can be enhanced while eliminating strain adjacent the fasteners 12 by providing a slight bead or offset 30 as seen in Figs. 2 and 3.

Intermediate the hinges 28 is a small downwardly extending stop member 31 movably coupled to the shelf 27 by a hinge 32. When the shelf 27 is in the vertical position shown in dotted lines in Figs. 1 and 4, the stop member 31 hangs freely against the rear wall 14 of the inner casing. When the shelf 27 drops to operative position, as shown in full lines, however, shoulder portions on the shelf 27 and stop member 31 come into engagement, as seen at 33 in Fig. 4 of the drawing, to restrict downward

movement of the shelf 27. Thereafter, however, as weight is applied to the shelf 27, a limited further downward movement is provided by outward flexure of the mounting means 29, as seen in dotted lines in Fig. 3 of the drawing. Such movement is accompanied by an upward sliding movement of the stop member 31 with respect to the wall 14 as will be apparent.

The forward edge of the shelf 27 is provided with a roller 34 supported by end brackets 35 which, as seen in Fig. 2 of the drawing, do not extend to the surface of the roller 34, thereby permitting a paper roll 36 placed on the shelf 27 to protrude beyond the ends thereof, as seen in Fig. 2. Paper can readily be drawn from the bottom of the roll 36, over the roller 34, past the small roll 25, and fed outwardly between the feed rollers 22, 23 as a second towel feed 37. In this connection, it will be noted that the resilient mounting of the retractable shelf 27 compensates in part for the weight of different sized small paper rolls 36 which may be placed on the shelf.

In operation of the device, whether feeding a single sheet of toweling (the dotted line showing 26 in Fig. 1), or a double sheet of toweling 26, 27 as seen in full lines in Fig. 1, the desired amount of paper is fed from the device, and then severed by pulling against the roller tear edge 38 of the front wall part 17.

It will be evident that with the retractable shelf 27 in the dispensing device 10, as shown in Fig. 1, a unique flexibility is provided in the use of the dispensing device. The attendant, in checking dispensers of this type to replace towel supplies, can insert a single full roll of paper, can leave a partially consumed roll in place and add on the shelf 27 a small towel roll previously removed from a dispenser, or if the single roll being used is quite small, he can move this to the shelf 27, and place a larger partially consumed roll in the lower position of the device. In this way, when periodically checking dispensers, the attendant can be sure of providing an adequate supply of towels while at the same time completely utilizing partially spent rolls which heretofore have accounted for considerable nuisance and waste.

In Fig. 5 of the drawing, there is diagrammatically illustrated a modified adaptation of my invention in which the casing 39 has an upwardly extending rear portion 40 providing space within the casing to receive a small paper roll 41 supported on a retractable shelf 27' in the manner previously described. With this modified type of casing, it will be evident that a large roll 42 of toweling can always be inserted in the device by the attendant when refilling towel dispensers. In many instances, the partially spent roll at the time of refilling will be of a size to be placed on the shelf 27 as the small roll 41, thus minimizing the amount of handling of small paper rolls, while at the same time permitting complete utilization of partially spent rolls.

As described in connection with Fig. 1, the device as shown in Fig. 5 readily discharges between feed rollers 22', 23', either a single sheet, or a double sheet of toweling. In this connection, it will be apparent that an attendant can be guided in part by external examination of dispensers when checking the same for towel supply. When two sheets of toweling are being discharged in operation of a dispenser, it can be assumed that a reasonable amount of toweling is still present in the dispenser. On the other hand, when a single sheet of toweling is being dispensed, this indicates that refilling, or rearrangement of towel rolls within the device may be advisable.

While my supplemental retractable shelf means has been described in conjunction with a particular type of towel dispenser, it is to be understood that the device will be suitable for use with many types and kinds of roll towel dispensers. It will further be evident that the retractable shelf constitutes a separate unit or attachment which can readily be installed in existing dispensing de-

vices. Accordingly, it is considered that novelty in my invention resides both in the retractable shelf unit per se, and in the association thereof with dispensers for roll type sheet material, such as paper toweling, and the like.

Various changes and modifications in the device as herein disclosed may occur to those skilled in the art, and to the extent that such changes and modifications are embraced by the appended claims, it is to be understood that they constitute part of my invention.

I claim:

1. A supporting device for roll material to be dispensed, said device comprising vertically elongated mounting means having means at the upper portion thereof for securing the same to a vertical support, a shelf member pivotally secured to the lower portion of said mounting means and having swinging movement from an upright inoperative position to an outwardly protruding shelf forming position, an independent stop member pivoted to said shelf member at the inner pivotally supported edge thereof, said stop member having bearing engagement with said vertical support below said shelf member and providing means limiting downward swinging movement of said shelf member, and the outer edge of said shelf member carrying a roller extending through substantially its entire length, the surface of said roller protruding above the upper surface of said shelf member and facilitating withdrawal of sheet material from a roll thereof supported on said shelf member.

2. A supporting device for roll material as defined in claim 1 wherein the mounting means extends along a vertical support a vertical distance substantially equivalent to the distance which the shelf member protrudes from said support, said mounting means being sufficiently resilient to permit outward flexure of the lower portion thereof in compensating for different weights of roll material placed on said shelf member.

3. A supporting device for roll material as defined in claim 1 wherein the mounting means comprise a pair of spaced resilient members extending a substantial vertical distance along said vertical support, whereby lower portions of said resilient members can flex outwardly from said support providing variable orientation of said shelf member as different weights of roll material are supported thereon.

4. A supporting device for roll material as defined in claim 3 wherein said resilient members adjacent the upper mounting end portions thereof are provided with transverse offsets contributing to the resilient properties thereof.

5. In combination with a cabinet device for dispensing sheet material from a storage roll, said device being adapted for mounting on a vertical support and having means at the lower forward portion thereof for discharging sheet material from a roll stored within the device, an auxiliary support for roll material in the upper rear portion of said cabinet, said auxiliary support comprising a pivoted shelf part mounted on the rear wall of said cabinet to swing from an upright inoperative position to an outwardly protruding shelf forming position, the outer edge of said shelf part carrying a roller extending throughout substantially the length of said outer edge, and said auxiliary support providing means for retaining within the cabinet a second roll of sheet material in a position to be discharged from the cabinet in superimposed relation to sheet material discharged from said first stored roll.

6. The combination of a dispenser for roll sheet material and auxiliary means for supporting a second roll of sheet material therein as defined in claim 5, wherein the storage chamber of the device is of a size to be substantially filled by a full roll of sheet material, and the auxiliary support is disposed in upright inoperative position until the first stored roll of sheet material has been partially consumed.

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7. The combination of a dispenser for roll sheet material and auxiliary means for supporting a second roll of sheet material therein as defined in claim 5, wherein the storage chamber of the device is sufficiently elongated vertically to receive a full roll of sheet material as the first stored roll and a partially spent roll on said auxiliary support above said first stored roll.

8. In a wall dispenser for roll paper towels having means for supporting a towel roll in the lower portion thereof and discharge means for toweling at the lower front portion thereof, the improvement that comprises an auxiliary support above and rearwardly of said first named supporting means adapted to receive a partially spent towel roll and to support the same in position to facilitate simultaneous discharge of toweling from two towel rolls within the dispenser, said auxiliary support having a shelf part pivotally mounted to swing from an upright inoperative position to an outwardly protruding shelf forming position, and the outer edge of said shelf part carrying a roller extending throughout substantially the length of its outer edge.

9. In a wall dispenser for roll paper towels having means for supporting a towel roll in the lower portion thereof and discharge means for toweling at the lower front portion thereof, the improvement that comprises an auxiliary support above and rearwardly of said first

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named supporting means adapted to receive a partially spent towel roll and to support the same in position to facilitate simultaneous discharge of toweling from two towel rolls within the dispenser, said auxiliary support having a shelf part pivotally mounted to swing from an upright inoperative position to an outwardly protruding shelf forming position, the outer edge of said shelf part carrying a roller extending throughout substantially the length of its outer edge, and said shelf part, in its outwardly protruding position having resilient stop means adapting the same to receive partially spent towel rolls of different size and weight.

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