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PAPER ROLL DISPENSER

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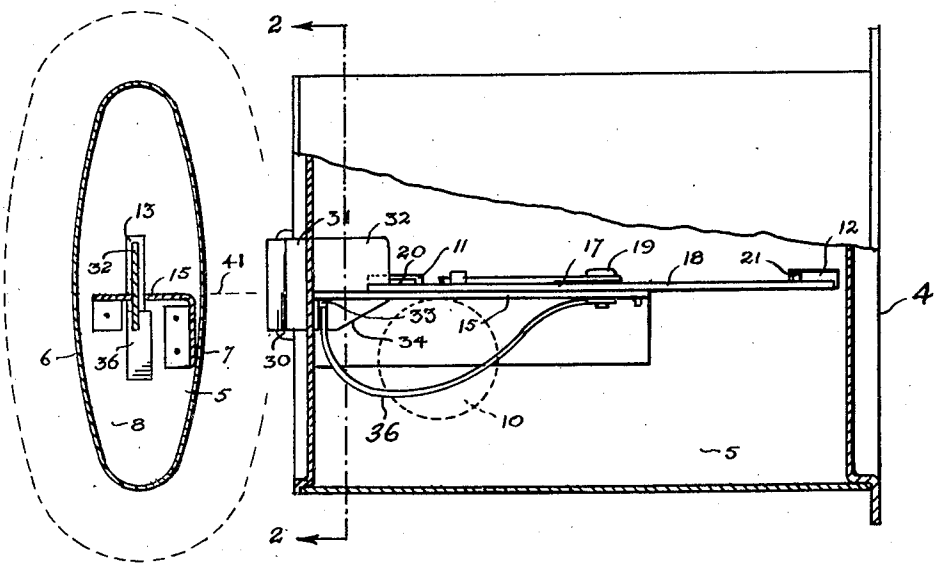

Fig. 2.

Fig. 1.

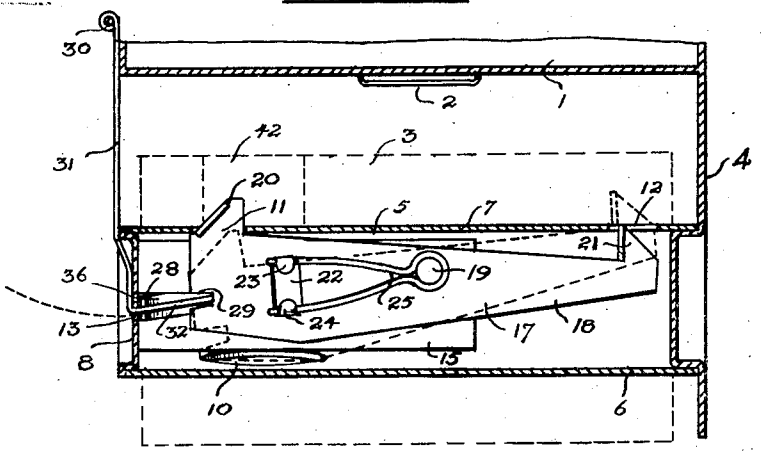

Fig. 3.

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PAPER ROLL DISPENSER

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4 Claims. (Cl. 242—55.2)

My invention relates to improvements in paper roll dispensers. The invention is particularly adapted for use in dispensers of toilet tissue where a jet of air is relied upon to throw the free end of the paper strip over the roll to dispose it in a convenient position for gripping and severance.

The objects of the invention are to provide means to prevent the removal of the paper roll as a unit from the mandrel of the dispenser; to prevent the fitting of a roll of paper to the dispenser, which is different from that provided therefor, and to provide means for locking the roll in position upon the mandrel which will not interfere with the efficient functioning of the dispenser to throw the free end of the paper over the roll.

Fig. 1 is a longitudinal view of the invention with a part of the front wall of the mandrel removed.

Fig. 2 is a transverse sectional view taken on the line 2—2 of Figure 1.

Fig. 3 is a plan view looking down upon the paper roll locking mechanism.

In the drawing like characters of reference indicate corresponding parts in each figure.

The numeral 1 indicates generally a support, see Figure 3, which is adapted for attachment to a wall and is provided with an air jet 2 through which is forced a stream of air for displacing the free end of a paper strip from the paper roll 3 indicated in dotted line in Figures 2 and 3.

Extending from the support 1 is a plate or bracket 4 upon which an oval shaped hollow mandrel 5 is carried. The mandrel is provided with front and rear walls 6 and 7 respectively and a free end wall 8. The front wall 6 is provided with a finger opening 10, see Figure 3, and shown also in dotted line in Figure 1. The back wall 7 is provided with horizontal slots 11 and 12 and the free end wall 8 is provided with a tongue slot 13.

The free end wall 8 has mounted upon it a shelf 15 which supports a paper roll lock mechanism generally indicated by the numeral 17, which consists of a rocker 18 mounted upon a pivot pin 19. The rocker 18 is provided with a latch bolt 20 at one end and a stop 21 at its opposite end. Intermediate the length of the rocker 18 an aperture 22 is formed at one end of which a clip 23 is struck from a portion of the rocker material. A clip 24 which is preferably struck from the material of the shelf 15 projects upwards through the aperture 22 to the same height and facing in the opposite direction to the clip 23. These two clips 23 and 24 are engaged by the free ends of a hairpin spring 25 which is held in position by the pivot pin 19, so that the spring serves to urge the latch bolt 20 through the rear wall 7 and to retract the stop 21 into the body of the mandrel 5, as shown in full line in Figure 3.

The shelf 15 is slotted as at 28 and the rocker 18 is provided with a corresponding end slot 29, both of which slots are in register when the rocker is in normal position as shown.

Hingedly mounted on a pivot 30 from the support 1 is a clasp 31 having an inturned tongue 32 which is provided on its under edge with a slot 33 and is bevelled at its inner end as at 34. The bevel 34 of the tongue serves to depress a curved latch spring 36 when the tongue enters the slots 28 and 29 and allow its free end to enter the slot 33 and prevent the withdrawal of the tongue and the removal of the clasp 31 from engagement with the free end of the mandrel 5.

The paper roll 3 shown in Figures 2 and 3 entirely in dotted line is perforated in the usual manner along the line 41, see Figure 2, to provide for easy severance into strips and is provided with a horizontal slot as at 42, see Figure 3, to receive the latch bolt 20. When one roll of paper has been used, the cardboard core, not shown, upon which such paper is wound is torn off the mandrel 5, thus giving access to the finger opening 10. By thrusting a finger through the opening 10 and depressing the spring 36 to release the tongue 32 the clasp 31 may be swung away from the free end wall 8 of the mandrel for the mounting of a new roll. When applying a new roll, it is fitted over the end of the mandrel and thrust endwise into engagement with the bevel of the latch bolt 20, thus swinging the rocker 18 about its pivot to the position shown in dotted line in Figure 3 and thrusting the latch bolt inwardly through the slot 11. Simultaneously with the entry of the latch bolt 20 into the mandrel, the stop 21 will be projected outwardly through the slot 12. If the paper roll is provided with a slot 42 disposed as shown, as soon as the entering end of the roll reaches the stop 21 the latch bolt 20 will be free to enter the paper slot 42, since the inner end of said slot will then be in register with the latch bolt. When the paper roll is properly disposed as shown the clasp may be returned to position with its tongue 32 extending through the end wall slot 13 and into the slots 28 and

29, thus locking the clasp against withdrawal and the rocker 18 against movement from its normal position.

The paper roll prevents access to the spring 36 by covering the finger opening 10, thus preventing both the removal of the clasp or the removal of the paper roll.

Should an attempt be made to fit an improperly slotted paper roll to the device, it will be prevented by the stop 21 from being thrust to the inner end of the mandrel and since the slots 28 and 29 will be out of register due to the rocker 18 being in the dotted line position, the clasp 31 cannot be closed or latched in normal position.

It will be obvious that if it is desired to dispense with the clasp 31 the spring 36 would be extended to enter the slot 29 and so lock the latch bolt 20 in extended position.

What I claim as my invention is:

1. A paper roll dispenser comprising a support, a hollow mandrel adapted to receive a roll of paper, a bracket extending from the support to one end of the mandrel to carry it, a retractile latch bolt mounted within the mandrel and adapted to extend outwardly therefrom, and means hingedly connected with the support for locking the latch bolt in extended position and for preventing the endwise movement of the paper roll.

2. A paper roll dispenser comprising a support, a hollow mandrel adapted to receive a roll of paper, a bracket extending from the support to one end of the mandrel, a rocker pivotally mounted intermediate its length within the mandrel, said rocker having a retractile latch bolt adjacent one end and a retractile stop adjacent the other, one of which is adapted to extend outwardly from the mandrel when the other is within the mandrel and means for locking the rocker with its latch bolt in extended position when a paper roll is fitted upon the mandrel.

3. A paper roll dispenser comprising a support, a hollow mandrel adapted to receive a roll of paper, a bracket extending from the support to one end of the mandrel, a rocker pivotally mounted intermediate its length within the mandrel, said rocker having a retractile latch bolt adjacent one end and a retractile stop adjacent the other, one of which is adapted to extend outwardly from the mandrel when the other is within the mandrel, and spring means for urging the latch bolt outwardly from the mandrel.

4. A paper roll dispenser comprising a support, a hollow mandrel adapted to receive a roll of paper, a bracket extending from the support to one end of the mandrel, a rocker pivotally mounted intermediate its length within the mandrel, said rocker having a retractile latch bolt adjacent one end and a retractile stop adjacent the other, one of which is adapted to extend outwardly from the mandrel when the other is within the mandrel, said rocker having an end slot, a clasp hingedly connected to the support having a tongue adapted to enter one end of the mandrel and the rocker slot, and means for locking the tongue within the slot.

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