Sept. 15, 1959 H. C. HICKS 2,904,274

MAGAZINE PAPER ROLL DISPENSING DEVICE

Filed Feb. 21, 1955

FIG. 1.

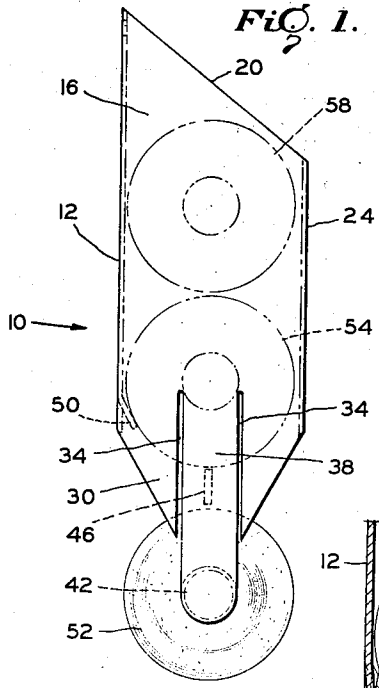


FIG. 2.

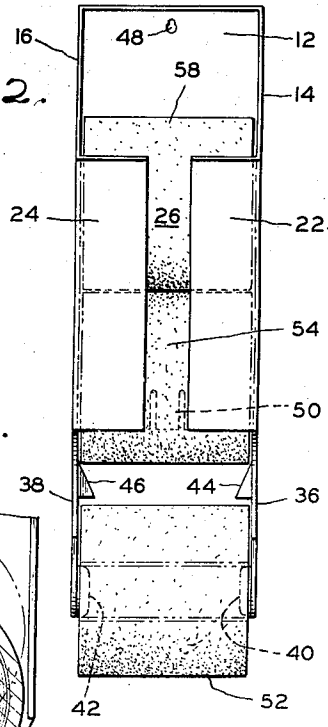


FIG. 5.

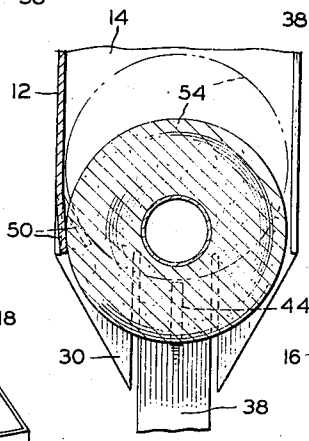
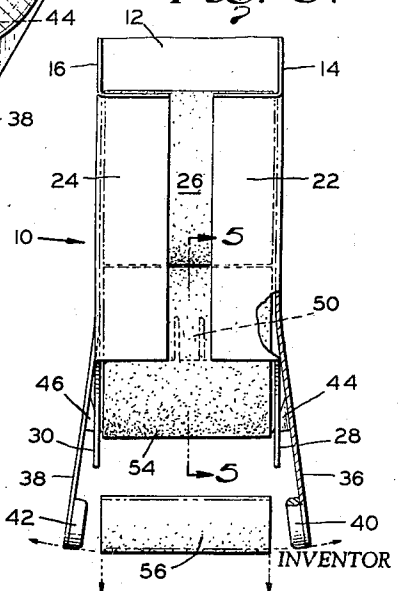


FIG. 3.



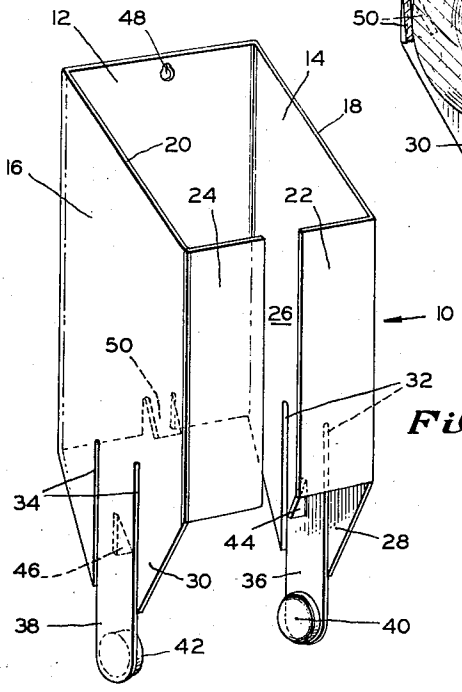


FIG. 4.

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MAGAZINE PAPER ROLL DISPENSING DEVICE

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1 Claim. (Cl. 242—55.3)

This invention relates to a paper roll dispensing device, and particularly relates to a dispensing device of the magazine-type wherein when one roll of paper is used up, the positioning of a fresh roll in dispensing position automatically eliminates the spool of the used-up roll.

Heretofore, rolls of paper such as paper toweling or toilet tissue have generally been provided on a single roll dispensing unit such as a wall bracket or the like, and when the roll had been used up, it was necessary to manually release the used-up roll and then manually insert a fresh roll. This was a time-consuming and bothersome chore. Furthermore, often it would be discovered that there were no further rolls immediately available. In order to overcome such difficulties, various attempts have previously been made to provide dispensing units both of the automatic and manually actuatable type wherein a plurality of rolls were provided in a magazine or hopper to be available for use when needed; but all such previous attempts have had various disadvantages such as either being too bulky, complex and expensive to have any real commercial significance, or were too flimsy and poorly constructed to advantageously serve the purpose.

It is, therefore, one object of the present invention to provide a paper roll disposing device which automatically replaces a used-up roll of paper with a fresh roll.

Another object of the present invention is to provide a paper roll dispensing device which is constructed to hold a plurality of paper rolls, each of which is in a position to replace an adjacent used-up roll.

Another object of the present invention is to provide a paper roll dispensing device which is light in weight, consists of relatively few parts, and is simple to operate.

Other objects of the present invention are to provide a paper roll dispensing device, of the character described, that is easily and economically produced, which is sturdy in construction, and which is highly efficient in operation.

With the above and related objects in view, this invention consists in the details of construction and combination of parts, as will be more fully understood from the following description when read in conjunction with the accompanying drawing in which:

Fig. 1 is a side elevational view of a dispensing device embodying the present invention.

Fig. 2 is a front elevational view of the device of Fig. 1, showing a roll of paper in dispensing position.

Fig. 3 is a view, similar to Fig. 2, but showing the automatic ejection of the spool of a used-up roll by a fresh roll as it comes into dispensing position.

Fig. 4 is a front perspective view of the device.

Fig. 5 is an enlarged, fragmentary, cross-sectional view taken on line 5—5 of Fig. 3.

Referring now in greater detail to the drawing wherein similar reference characters refer to similar parts, there is shown a dispensing device, generally designated **10**, which comprises a rear wall **12** and a pair of side walls **14** and **16**. The top edges of the side walls **14** and **16**

are downwardly inclined from the rear wall, as shown at **18** and **20**, and taper down to a pair of flanges **22** and **24** which extend laterally from the front edges of the side walls **14** and **16** respectively. These front flanges **22** and **24** are spaced from each other to provide a front vertical slot **26**.

The bottom portion of each of the side walls **14** and **16** are inclined downwardly and inwardly, as at **28** and **30**, and are each provided with a pair of spaced slits, as at **32**, on portion **28**, and as at **34** on portion **30**. The area between each pair of these spaced slits is provided with a depending portion extending below the level of the inclined bottom portion of the respective side wall so as to form an arm; these arms being indicated at **36** and **38**. Each of the arms is provided with an inwardly facing knob or spindle at the bottom end thereof, as at **40** and **42**. These spindles face toward each other to provide a lateral support for the spool of a paper roll. The entire unit is preferably formed of spring metal or the like, so that the arms **36** and **38** are actually spring arms biased toward the straight, vertical position such as shown in Figs. 2 and 4. A pair of downwardly inclined wedge cam portions **44** and **46** are provided centrally of the inner surfaces of the arms **36** and **38**.

At the upper, central portion of the rear wall **12** there is provided a hole **48** which is adapted to hold a nail, screw or the like for the purpose of hanging the device on a room wall or other support, while a downwardly inclined spring arm **50** extends from the inner surface of the lower end of the rear wall. This spring arm **50** is shown as cut out from the rear wall; however, such spring arm may also be a separate unit connected to the rear wall.

The device, as can be readily seen from the drawing, comprises two functional parts, the first being a hopper or magazine for the extra rolls of paper and consisting of the rear, side and vertically split front walls, and having an open top for insertion of the paper rolls, while the second consists of the dispensing unit proper which is formed by the two spring arms **36** and **38**.

As shown in Fig. 2, a roll of paper **52** having a hollow spool is kept in dispensing position between the spring arms by the spindles **40** and **42** which are inserted into either end of the spool, and are maintained in position by the inherent resilience of the arms. At this time, the spring arm **50** acts to maintain the lowest roll in the magazine in spaced position from the dispensing area. However, when the roll of paper is used up, the person using the device inserts his fingers through the slot **26** and pulls down on the next roll of paper **54**, this action being against the force of spring **50**. As the roll **54** is brought down, it acts against the edge portions **44** and **46** to force the spring arms **36** and **38** apart, as shown in Fig. 3. In this position, the empty spool **56** is released and drops away. Continued downward pressure on the roll **54** brings its spool into the dispensing position between the spindles **40** and **42** and permits the arms **36** and **38** to spring back into the locking position of Fig. 2 wherein they extend into either end of the spool. Meanwhile, the next roll **58** in the magazine comes into position upon the spring arm **50**. At this time, another roll of paper may be inserted through the open top of the hopper.

Although the hopper or magazine is shown as adapted to hold two rolls of paper, this is for illustration only, since the device may be constructed of any size desired to hold any number and size of rolls.

Although this invention has been described in considerable detail, such description is intended as being illustrative rather than limiting, since the invention may

be variously embodied, and the scope of the invention is to be determined as claimed.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

A paper roll dispensing device comprising a magazine hopper for supporting a plurality of paper rolls wound on spools, said hopper having a front and rear wall and two side walls formed from a single blank of spring sheet material, said front wall having an elongated vertical slot therein permitting access therethrough, said hopper also having an open top and an open bottom, a resilient arm integrally depending below said hopper from each of said side walls, a spindle on the inner surface of each of said arms for supporting a first roll, cam means on the inner surface of each of said arms for camming said spindles apart to drop the spool of said first roll supported thereon, said cam means being spaced vertically from said spindles, a resilient roll retaining means at the rear bottom portion of said hopper cooperating with said cam means for supporting a second roll whereby said second roll can be forced past said retaining means to operate said cams to discharge the spool held by said spindles, and then to pass between and be held by the opposed spindles, said cam means each comprising a downwardly and inwardly inclined wedge-shaped surface.

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