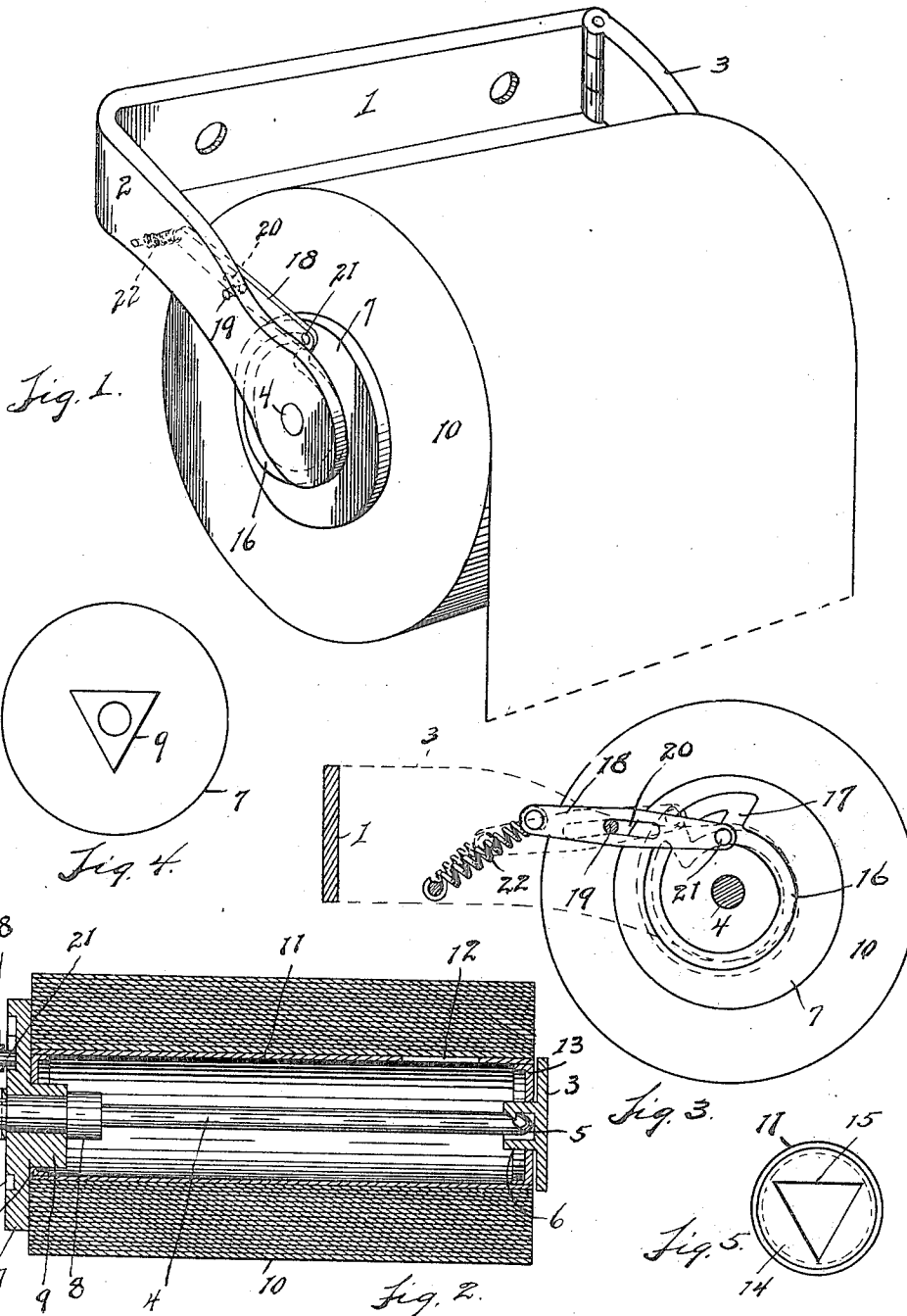


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PAPER ROLL HOLDER.
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WITNESSES
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PAPER-ROLL HOLDER.

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To all whom it may concern:

Be it known that I, OTIS C. CURRIE, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Paper-Roll Holders, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to paper roll holders and its object is a simple and efficient device for retaining rolls of paper-towels, toilet-paper, or the like in which the paper is in a continuous length and perforated at regular intervals, preferably crosswise of the strip to facilitate removal of a part of the strip for use.

A further object of the invention resides in the means whereby the roll may be periodically checked in its forward rotation to allow the unwound portion to be severed from the roll, the arrangement being such that the roll is rotated by drawing on the end of the strip and the sudden checking of its rotation tending to separate the strip from the roll along a perforated line. The control parts are automatically set for successive operations upon the severance of the strip from the roll.

An additional object of the invention is a device of the character stated that is compact in form and neat in appearance, and in which the roll may not be removed from the holder except by unwinding in the manner above stated thus preventing a loss of the rolls by theft.

These and further objects and the novel features of construction by which they may be attained are shown in the accompanying drawings in which—

Figure 1 is a perspective view of a paper roll holder embodying my invention. Fig. 2 is a longitudinal section of the roll in position on its support. Fig. 3 is an end view of the roll showing the control device. Fig. 4 is an elevation of the rear side of the control cam. Fig. 5 is an end view of the

roll core and metal plate therein adapted to fit over the hub of the control cam.

Similar characters refer to similar parts throughout the drawing and specification.

The device consists of a bracket 1 adapted to be attached to a wall or other convenient place and provided with a fixed arm 2 and pivoted arm 3. Secured to the end of the fixed arm 2 is a non-rotatable shaft 4 pinned to the said arm 2, the opposite end being notched at 5 and adapted to engage in a socket 6 in the pivoted arm 3, which socket is provided with a lug adapted to engage in the notch when the parts are assembled as shown in Fig. 2.

Adjacent the fixed arm 2 is a control member 7 rotatable on the shaft and held in position by a collar 8 formed on or secured to the shaft. The control member 7 is provided with a triangular hub 9. The paper roll 10 is provided with the usual paper core 11 having an aperture 12 adjacent the free end of the shaft 4 when the parts are assembled. In each end of the core is positioned a sheet metal plate 13 and 14 respectively. The plate 13 is apertured to engage over the socket 6 formed in the end of the arm 3 and the metal plate 14 is provided with a triangular aperture 15 adapted to fit over the triangular hub 9 of the control member whereby rotation of the roll and core rotates the control member. The aperture in the core is provided to enable the operator to remove the core from the shaft when the paper has been unwound from the core which is accomplished by inserting the thumb or finger through the aperture and springing the shaft 4 to a sufficient extent to disengage the notched end from the lug in the socket whereupon the arm 3 may be swung to one side and the core removed from the device and a new roll inserted thereon. When the new roll is in position engaging the hub of the controller, the arm 3 is again swung to the position shown in Fig. 2 locking the roll on the bracket.

The control member 7 is provided with a cam groove 16 in the outer face thereof adjacent the fixed arm which groove has sub-

stantially the shape of an involute curve as indicated in Fig. 3, the two ends of the groove being connected by an angular portion 17. A lever 18 is pivotally supported on the fixed arm by means of a pin 19 riding in a slot 20 provided in the lever and one end of the lever has a pin 21 riding in the cam groove. To the opposite end of the lever is secured a coiled spring 22 having one end attached to the bracket and the other to the lever and extending on an angle as shown particularly in Fig. 3. The action of the spring draws the lever backward toward the rear side of the bracket, the normal position being indicated by dotted lines in Fig. 3. The normal position of the cam is also shown by dotted lines in said figure, and the spring also tends to raise the pin 21 upward at all times. The free end of the paper usually hangs in the position shown in Figs. 1 and 3, and on grasping this free end and pulling on the roll the pin 21 travels freely in the cam groove until the pin strikes the angular portion 17 of the groove, whereupon the lever 18 is drawn forward and stopped by the pin 19 in the slot 20 which checks forward rotation of the roll and enables the operator to sever the unwound portion therefrom. As the roll is then released from strain the spring 22 draws the lever backward on the pin 19 and thus turns the roll backward a short distance until the portion 17 is practically vertical whereupon the spring 22 raises the pin 21 into the portion of the cam groove of longer radius whereupon the parts are in position for a succeeding operation.

In practice it has been found that a separation of the strip from the roll usually takes place on the upper half of the roll and upon release of the roll and consequent backward rotation for a short distance as described, the end of the strip falls to the position shown more particularly in Fig. 1 in position to be readily grasped by the hand of the user. This arrangement also allows somewhat more than a single revolution of the roll which is desirable particularly when the roll has been nearly used and enables the operator to secure a sufficient length of the strip at all times for use.

From the foregoing description it becomes evident that the device is compact and neat in appearance having but few parts which are inexpensive to manufacture and that do not readily become displaced in operation.

Having thus briefly described my invention, its utility and mode of operation, what I claim and desire to secure by Letters Patent of the United States is—

1. A paper roll holder comprising a bracket having a fixed and a pivoted arm, a non-rotatable shaft having one end secured to the fixed arm and adapted to support the

paper roll, the opposite end of the shaft being adapted to be releasably secured to the pivoted arm, a controller freely rotatable on the shaft by rotation of the roll, said controller having a cam groove substantially of the form of an involute curve with connected ends forming a continuous channel, an automatic stop traveling in said groove, adapted to periodically check forward rotation of the controller upon engaging said connecting portion of the groove, and a spring adapted to automatically force the stop out of said connecting portion of the groove.

2. A paper roll holder comprising a bracket having a fixed and a pivoted arm, a non-rotatable shaft adapted to support the paper roll and having one end secured to the fixed arm, the opposite end of the shaft being adapted to be releasably secured to the pivoted arm, a controller free to rotate by rotation of the roll, said controller having a cam groove substantially of the form of an involute curve, the ends of which are connected with a straight portion providing a continuous channel, a lever pivotally supported on the bracket, said lever being slotted to allow movement thereof relative to the pivot point, a spring tending to draw the lever backward on the pivot and also tending to force the pin to follow the groove during rotation of the controller.

3. In a paper roll holder, means for controlling rotation of the roll comprising a control member provided with a cam groove having substantially the form of an involute curve, the ends of which are connected by a substantially straight portion, a pivotally supported lever having a cam engaging portion, and a spring tending to force the cam engaging portion to follow the groove, the said straight portion providing a means to periodically check the forward rotation of the controller and enabling a portion of the paper roll to be severed therefrom.

4. In a paper roll holder, means for controlling rotation of the roll comprising a rotatable cam member having a high and low part, the rise between the two parts being substantially on a straight line, and a spring controlled cam engaging member adapted to check the forward rotation of the cam member upon engaging said rise to allow a strip to be severed from the roll.

5. In a paper roll holder, means for controlling rotation of the roll comprising a rotatable cam member having a high and low part, the rise between the two parts being substantially on a straight line, a pivotally supported lever having a portion engaging the cam and being adapted to move longitudinally upon engaging the said rise between the high and low parts, and a spring

adapted to return the lever to normal position and continuously hold the cam engaging portion in engagement with the cam.

5 6. In a paper roll holder, a bracket adapted to rotatably support a paper roll, a controller rotatable by rotation of the roll, the roll and controller being adapted for continuous rotation in a forward direction, a stop device adapted to suddenly stop for-

ward rotation of the roll whereby a strip 10 may be severed therefrom, and automatic means for releasing the stop to again allow forward rotation of the controller.

In testimony whereof, I sign this specification in the presence of a witness.

OTIS C. CURRIE.

Witness:

EMENS B. WISNER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."