ROLL PAPER DISPENSING DEVICE

Inventor:

George R. Brooks,

Jas. Hutchinson

Attorney.
This invention relates to paper holders and more particularly to holders for rolls of paper such as toilet paper or the like, and while I have shown a construction which is particularly adapted for holding dispensing paper towels, I wish it clearly understood that the same construction modified in unessential respects may be readily adapted for dispensing other paper in roll form.

In the majority of paper roll holders now on the market it is not a difficult matter for the user to pull off as much paper as desired, and frequently a great deal more paper or a larger number of towels are pulled off the roll than are actually required, thus causing considerable unnecessary waste. It is therefore the principal object of this invention to provide a device which in a normal operation of the same will permit a removal of a predetermined quantity or a predetermined number of towels and then automatically lock so that it is necessary for the user of the towels to repeat the operation in order to remove a further quantity or a further number of towels from the roll.

Another object of the invention is to provide a machine for dispensing rolled paper in which the feed roll is normally locked and can be released to permit the operator to remove a quantity of the paper only upon a certain specified movement of the parts which automatically lock after a predetermined quantity of paper has been drawn off the roll.

Still another object of the invention is to provide a dispensing device for paper rolls employing a feed roll and a gravity activated lock lever which acts to automatically lock the feed roll after each complete revolution thereof, and to be raised out of locking position by specified act on the part of the user in withdrawing the paper from the roll.

Further objects of the invention will appear as the following specific description is read in connection with the accompanying drawings which form a part of this application, and in which:

Figure 1 is a side elevation showing in dotted lines the position of parts when the feed roll has about completed its cycle of movement.

Figure 2 is a front elevation with a portion of the case broken away.

Figure 3 is a vertical sectional view taken on the line 3—3 of Figure 2.

Figure 4 is a horizontal sectional view taken on the line 4—4 of Figure 3 looking in the direction of the arrows.

Figure 5 is a perspective view of the locking lever, associated yoke and a portion of one of the end disks of the feed roll, removed from the case.

Referring more particularly to the drawings, 1 represents a casing or housing of metal or any other suitable material which is substantially rectangular in outline, having sides 2, ends 3 and 4 and a back 5. The front of the housing is closed by a cover 6 hinged at 7 to the lower end or bottom 3. The upper end of the cover 6 is provided with a hasp 8 which coacts with a staple 9 on the top or end 4 which staple is adapted to receive a pad-lock if desired. The front of the casing as shown is provided with a transverse opening 10 the upper margin of which, formed of the metal of the cover, is rolled as shown at 11 to provide a smooth-edged guide for the paper when it is initially started out of the casing. The lower edge of the opening has mounted therein a curved table 12 the purpose of which will be hereinafter described.

In the lower portion of the casing 1 there is secured to the side members 2 suitable bearings 13 upon which are journalled the pintles 14 of the supply roll core 15. Immediately above the bearings 13 there are other bearings 16 in which the ends of the shaft 17 of the feed roll 18 are journalled. Both bearings 13 and 16 are of the open socket type so that either the supply roll or the feed roll can be removed from the case when desired.

The feed roll 18 is relatively large in diameter and has secured to and projecting from its periphery at quartering intervals a longitudinal series of perforating pins 19 which enter or pass through the paper sheet.
as it is drawn over the feed roll and prevent slipping of the paper with respect to said feed roll.

Mounted upon each end of the feed roll 18 are substantially cam shaped disks 20, each of which is provided with a substantially radially extending shoulder 21 arranged to engage a transverse locking bar 22 secured to and moving with the levers 23. These levers are pivoted as shown in Figures 3 and 4 at 24 to opposite sides 2 of the housing or casing. The forward ends of the levers extend considerably beyond the front ends of the case into and adjacent the face of the cover 6 as clearly shown in Figures 1 and 3. There they have pivoted to their front ends the opposite legs 25 of a yoke 26 whose bridge member 27 is sufficiently wide to close the opening 10 when the shoulders 21 are in engagement with the locking bar. In this position of the bridge member 27 it is supported by the table 12 and serves to hold the intervening sheet of paper against retrograde movement and thereby insures a projecting end which can be grasped to unlock the feed roll and pull the paper off of the supply roll.

Secured to the outer surface of each disk 20 and projecting beyond the periphery thereof just forward of the locking shoulders 21, are locking arms 28 each of which is notched at 29, for a purpose to be hereinafter described. These arms are adapted to cooperate with stop lugs 30 secured to and projecting laterally from the outer face of each lever 23 (Fig. 5), and each have inwardly projecting fingers 31 adapted to engage said lugs 30 as will be more fully described hereinafter.

As shown in Figure 2 I have provided the cover with a plurality of sight holes 32 which permit ready inspection of the supply roll to determine the amount of paper therein, thus eliminating the necessity of opening the casing to determine when it is necessary to replenish.

In the operation of the device the casing is mounted at a suitable height upon a wall or other support, and in order to remove paper from the supply roll the operator grasps the protruding end of the paper and lifts the same against the weight of the levers 23 and yoke 26 thus raising the yoke and levers and carrying the locking bar 22 out of the path of the shoulders 21. When the feed roll is thus released a pull on the paper will carry the shoulders 21 beyond the locking bar 22. The user can then lower his hand and pull the paper across the table 12. As the paper is thus withdrawn passing over the feed roll the locking bar 22 rests upon the periphery of the disks 20 which gradually decrease in diameter as shown so that when the shoulders again reach a point in position to contact with the locking bar 22 the bridge member 27 is pressing the paper against the table 12.

When the shoulders 21 contact with the locking bar 22 the rotation of the feed roll 18 is stopped and the paper removed can be torn off at the line of perforation closest to the opening 10. The spacing of the lines of perforations is such that after a sheet of paper 70 has been removed and torn off as just described, there still remains a protruding end sufficiently long to enable the next user to grasp the same and repeat the operation.

Should the user attempt to withdraw more than one sheet by holding the locking levers in elevated position by continuously lifting the sheet while withdrawing the same, the lugs 30 will then be arranged in the path of movement of the fingers 31 and when the feed roll has completed its cycle of movement, will be engaged by said fingers which will stop the rotation of said feed roll. If the yoke is then lowered the locking bar 22 will engage the peripheries of the disks 20 forward of the shoulders 21 and be engaged by said shoulders upon further forward movement of the feed roll in which the notches 29 permit the passage of the lugs 30. At this time the lugs 30 will be in the rear of the fingers 31 so that when the yoke 26 is again raised to release the locking bar 22 from the shoulders 21, the lugs will not interfere with the complete rotation of the feed roll.

In the use of the device the average user will obey instructions and lift the paper only a sufficient length of time to release the locking bar from the shoulders 21 and will then lower his hand to pull off the amount of paper permitted with one operation. Following this order, a single revolution of the feed roll will bring the shoulders 21 into contact with the locking bars 22. It will be seen therefore that with the parts arranged and cooperating as above described that it is impossible to withdraw more than a single length of paper at one operation. If more paper is desired it will be necessary to repeat the above operation.

What I claim is:—

1. In a dispensing device for roll paper, a casing adapted to hold a supply roll and having an opening therein through which the supply from the supply roll passes, a member normally closing said opening, and means controlled in the opening movement of said member for determining the amount of paper removed through the opening.

2. In a roll paper dispensing device an open casing, a cover closing the opening in said casing and having an opening therein through which the supply from a supply roll passes, a member normally closing said opening, and means controlled in the opening movement of said member for determining the amount of paper removed through the opening.

3. In a roll paper dispensing device, a casing having an opening therein, supply and
feed rolls journaled in the casing, said casing having an opening through which the paper from the feed roll passes, means acting to lock the feed roll after a predetermined movement of the same, and means actuated by the paper passing through the opening for releasing the locking means.

4. In a roll paper dispensing device, a casing having an opening therein, a cover closing said opening, supply and feed rolls journaled in the casing, said cover having an opening through which the paper from the feed roll passes, means acting to lock the feed roll after a predetermined movement of the same, and means extending across the opening and actuated by an upward lift of the paper for releasing the locking means.

5. In a roll paper dispensing device, a casing having an opening therein, a cover closing said opening, supply and feed rolls journaled in the casing, said cover having an opening through which the paper from the feed roll passes, means extending across the opening and actuated by an upward lift of the paper for releasing the locking means.

6. In a roll paper dispensing device, a casing, supply and feed rolls journaled in the casing, said casing having an opening through which the paper from the feed roll passes, means acting to lock the feed roll after a predetermined movement of the same, means controlled in the operation of removing the paper from the device for releasing the locking means, said means serving to hold the paper against retrograde movement when the device is at rest.

7. In a roll paper dispensing device, a casing, supply and feed rolls journaled in the casing, said casing having an opening through which the paper from the feed roll passes, means for closing the opening and preventing retrograde movement of the paper when the device is at rest.

8. In a roll paper dispensing device, a casing having an opening therein through which the paper is dispensed, a cam flange carried by the ends of said roll, a pair of pivoted levers acting to lock the paper sheet passing through the opening, and coacting elements on the lever.

9. In a roll paper dispensing device, a casing having an opening therein through which the paper is dispensed, a cam flange carried by the ends of said roll, a pair of pivoted levers acting to lock the paper sheet passing through the opening, and coacting elements on the lever.

10. In a roll paper dispensing device, a casing having an opening therein through which the paper is dispensed, a cam flange carried by the ends of said roll, a pair of pivoted levers acting to lock the paper sheet passing through the opening, and coacting elements on the lever.

11. In a roll paper dispensing device, a casing having an opening therein through which the paper is dispensed, a cam flange carried by the ends of said roll, a pair of pivoted levers acting to lock the paper sheet passing through the opening, and coacting elements on the lever.

12. In a roll paper dispensing device, a casing having an opening therein through which the paper is dispensed, a cam flange carried by the ends of said roll, a pair of pivoted levers acting to lock the paper sheet passing through the opening, and coacting elements on the lever.

13. In a roll paper dispensing device, a casing having an opening therein through which the paper is dispensed, a cam flange carried by the ends of said roll, a pair of pivoted levers acting to lock the paper sheet passing through the opening, and coacting elements on the lever.

14. In a roll paper dispensing device, a casing having an opening therein through which the paper is dispensed, a cam flange carried by the ends of said roll, a pair of pivoted levers acting to lock the paper sheet passing through the opening, and coacting elements on the lever.

15. In a dispensing device for roll paper, a casing adapted to hold a supply roll and hav-
ing an opening therein through which the paper from the supply roll passes, a gravity actuated member normally closing said opening, and means controlled in the movement of said member for determining the amount of paper removed through the opening.

16. In a roll paper dispensing device, a casing having an opening therein, through which paper is dispensed, a feed roll jour- nalled in the casing, a gravity actuated lever pivoted in the casing and adapted to be ac-

"tuated by shifting the paper sheet passing through the opening and coacting elements on the lever and said roll for stopping rotation of said roll after each cycle of movement thereof, said lever having a part coacting with the casing to close the opening and prevent retrograde movement of the paper when the device is at rest.

In testimony whereof I affix my signature.

GEORGE R. BROOKS.