

Sept. 3, 1957

W. I. FANNING
ROLL PAPER DISPENSER

2,805,029

Filed Feb. 11, 1955

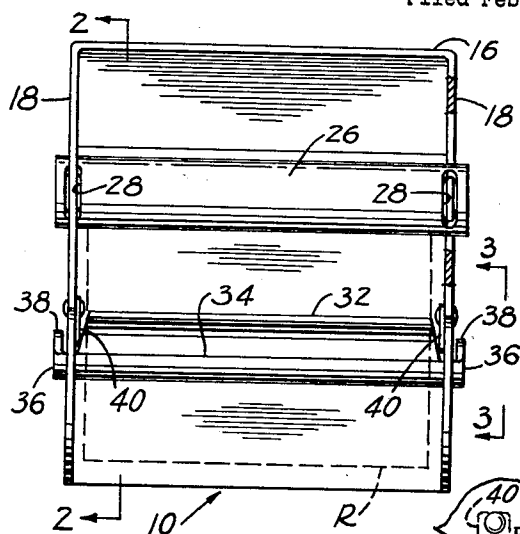


FIG. 1

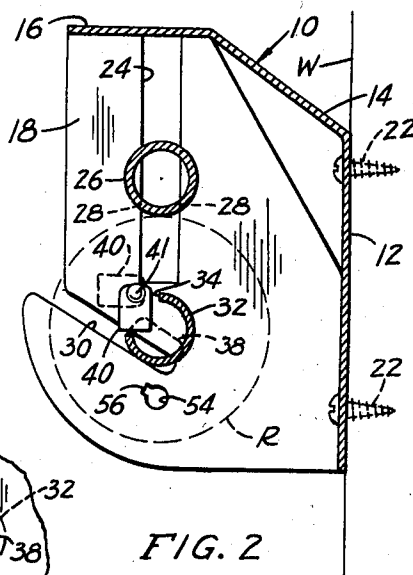


FIG. 2

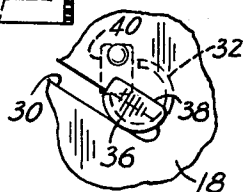


FIG. 3

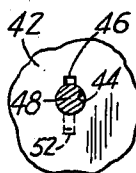


FIG. 6

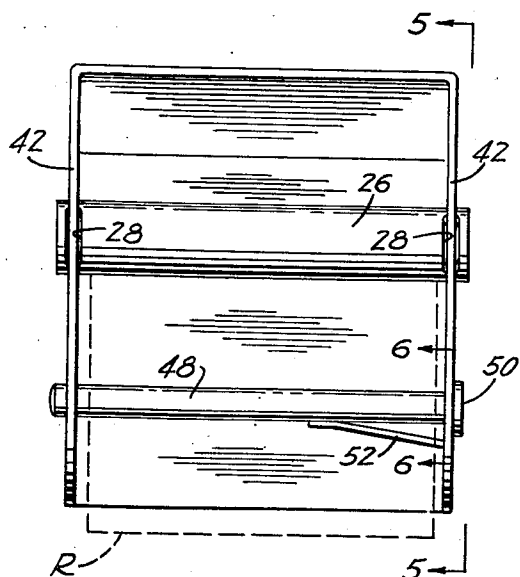


FIG. 4

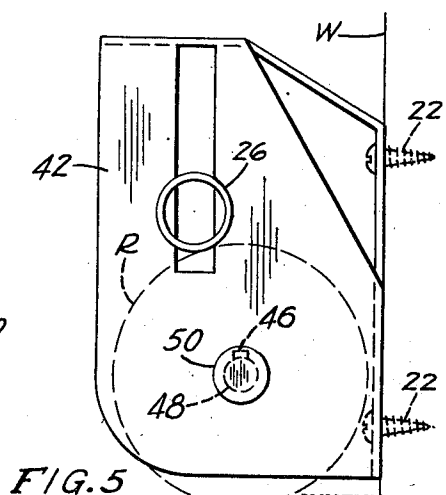


FIG. 5

INVENTOR.
WILLIAM I. FANNING
BY

McMorrow, Berman & Davidson
ATTORNEYS

1

2,805,029

ROLL PAPER DISPENSER

William I. Fanning, Storm Lake, Iowa

Application February 11, 1955, Serial No. 487,591

2 Claims. (Cl. 242—55.53)

This invention relates to an improved dispenser for roll paper, such as toilet tissue. More particularly, the invention is an improvement over the dispenser shown in U. S. Patent #2,650,773, issued to me on September 1, 1953.

In the dispenser shown in the above mentioned patent, there is provided means for retarding the free rotation of the roll of tissue, in the form of a weighted roller mounted for gravitational movement into engagement with the surface of the roll, and having its axis angularly related to the axis of rotation of the roll.

In accordance with the present invention, an improved means for supporting the roll of tissue for rotational movement is provided, which is particularly adapted to resist efforts on the part of unauthorized individuals to remove the roll of tissue bodily from the associated casing before said tissue has been fully consumed.

Another object of importance is to provide an improved means for retarding free rotational movement of the roll of tissue, in the form of a tubular element mounted in the dispenser casing for gravitational movement into engagement with the surface of the roll of tissue, and so designed as to be held against rotation, thus to cause said tubular element to frictionally engage the surface of the roll to prevent the fully free rotary motion thereof.

Still another object is to provide a further improvement in the means for supporting the roll of tissue for rotary movement, in the shape of a tubular member having a wide end to end slot, and formed with laterally bent extensions at its opposite ends adapted to engage the adjacent walls of the casing should efforts be made to shift the roll supporting member in the direction of its length for the purpose of removing the roll of tissue from the casing.

Still another object is to permit the last named tubular member to be used either as the means supporting the roll of tissue for rotation, or as the non-rotating retarding weight, thus to simplify manufacture and reduce costs to a minimum.

Still another object is to provide a swingable dog mounted on the dispenser casing and adapted, when swung to one position, to engage the last named tubular member, for the purpose of preventing said member from being taken out of the casing, with said dog being so located as to normally be concealed from view and, further, made relatively inaccessible until all the tissue on the roll has been used, thus to prevent the removal of the roll of tissue from the dispenser by unauthorized persons.

Other objects will appear from the following description, the claims appended thereto, and from the annexed drawing, in which like reference characters designate like parts throughout the several views, and wherein:

Figure 1 is a front elevational view of a dispenser formed in accordance with the present invention, a roll of tissue being shown in dotted lines;

Figure 2 is a sectional view on line 2—2 of Figure 1;

Figure 3 is an enlarged, fragmentary side elevational view of the dispenser as seen from the line 3—3 of Figure 1;

Figure 4 is a view similar to Figure 1 showing a modified form;

Figure 5 is a side elevational view of the dispenser of Figure 4, as seen from the line 5—5 of Figure 4; and

2

Figure 6 is a detail sectional view on line 6—6 of Figure 4.

In the form of the invention shown in Figures 1 and 2, the dispenser has been generally designated at 10, and includes a casing formed similarly to that shown in Patent 2,650,773. The casing, thus, includes a flat back wall 12 merging at its upper edge into a forwardly and upwardly inclined connecting portion 14 in turn merging into a flat top wall 16 extending over the full width of the casing. Side walls 18 are integral or otherwise made rigid with the top wall 16, and at their back edges, may be partially cut away as at 20 for the purpose of conserving material. The back wall 12 has rectangularly spaced openings receiving screws 22 extendable into a wall W for the purpose of fixedly mounting the dispenser in place upon the wall.

Formed in the side walls 18 are relatively wide, straight, vertically extending slots 24, said slots at their upper ends terminating at the top wall 16, and terminating at their lower ends intermediate the opposite ends of the side walls 18. Extending between the side walls, and engaged at its ends in the slots 24, is a weight means formed as a tubular element 26 open at its opposite ends. The tubular element 26 has its ends projecting beyond the side walls 18 as shown in Figure 1, and in the planes of the side walls, the tubular element has diametrically opposed, transversely extending slots 28 at each end, receiving the opposite edges of the slots 24 of the side walls.

The tubular element 26 is thus mounted for up and down sliding movement in the slots 24, and due to the interengaging slots 24, 28, the tubular element will be held against rotation at all times.

Below the closed lower ends of slots 24 the side walls 18 are formed with inclined slots 30, opening at one end upon the forward or outer edges of the side walls, and extended downwardly at an angle of approximately 45° from their open ends. Slots 30 terminate at their closed inner ends medially between the front and back edges of the respective side walls. Extending between and engaged at its ends in the slots 30 is a roll supporting means in the form of a tubular member 32 which preferably is cut away through part of its circumference over its entire length to define a wide slot 34 therein.

The opposite ends of the tubular member 32 include portions engaging in slots 30 of the respective side walls 18. To provide said portions, integrally formed in the member at said ends and projecting through the slots 30 outwardly from the side walls are extensions 36, said extensions 36 being transversely curved in correspondence with the curved cross section of the tubular member. The tubular member 32, as shown in Figure 2, is of what may be appropriately termed a crescent shaped cross section with the extensions 36 extending, when viewed in cross section, over approximately one third of the length of the crescent defined by the main or body portion of the tubular element.

On the outer, free ends of the extensions 36, lateral projections 38 are formed, extending in planes normal to the length of the tubular member adjacent the outer surfaces of the adjacent side walls 18. The projections 38 can be integrally formed out of the material of extensions 36, by a bending operation.

It will thus be seen that the tubular member 32 can be inserted in position by disposition of the extensions 36 in the open ends of the slots 30, with the extensions 36 then being slid longitudinally of the slots 30 to the inner ends thereof. The tubular member 32 does not rotate, but fits loosely through the cardboard core of a conventional roll of tissue R to permit rotational movement of the roll.

To prevent theft of the roll of tissue, or any other unauthorized removal of said roll, there are provided flat, generally rectangular dogs 40 pivotally connected by rivets

41 to the side walls 18, and disposed against the side walls 18 in the spaces between the ends of the crescent shaped body portion of tubular member 32, that is, the portion having slot 34 formed therein, and the inner surfaces of the side walls. The dogs swing about axes parallel to the axis of the tubular member 32, between the full and dotted line positions shown in Figure 2. When the dogs swing to their full line position, they engage against one edge of the longitudinal slot 34 formed in the body portion of the tubular member 32, thus preventing the tubular member 32 from being moved toward the open ends of slots 30.

The location of the dogs is such as to render them substantially inaccessible to one seeking to remove the roll of tissue before all the tissue has been used. The dogs are substantially concealed inwardly from the periphery of the roll, being disposed when in their full line positions substantially entirely in the area circumscribed by the periphery of the cardboard core of the roll. As a result, unless determined efforts are made to ascertain the manner in which the roll is locked in the casing, protection against unauthorized removal of the roll is offered, with the locking means illustrated being such as to offer a sufficient deterrent to anyone seeking to remove the roll bodily for the purpose, for example, of freely unwinding from the roll an excessive quantity of tissue.

The tubular member 32, though illustrated in Figures 1 and 2 as supporting the roll for rotation, can itself be used as the weight means, in place of the tubular element 26, in view of the fact that it is so shaped as to permit the extensions 36 to engage in the slots 24, whereby to permit the tubular member 32 to gravitate freely within the slots 24 while still being held against rotational movement. Thus, one tubular member 32 can be used as the weight means and another like member used as the roll support means, thus simplifying manufacturing operations.

In Figures 4-6 a modified construction is illustrated wherein the casing has been designated at 42. The casing is similar in all respects to Figures 1 and 2 with the exception that instead of the slots 30, small circular openings 44 are formed in the respective side walls. Communicating with the opening 44 of one side wall 42 is a small slot 46.

Engaged at its ends in the respective openings 44 is a roll support member or elongated rod 48, having a head 50 at one end adapted to engage against the outer surface of that side wall 42 in which the slot 46 is provided. Adjacent head 50, the rod 48 has secured thereto a leaf spring 52, one end of which is welded or otherwise secured fixedly to the rod 48 intermediate the ends of the rod, and the other end of which is spaced outwardly from the rod in engagement with the inner surface of the adjacent side wall 42.

In this form of the invention, one can dispose a roll R in the space between the side walls 42, after which the rod 48 is inserted through that opening 44 having the slot 46 in communication therewith. The rod 48 is shifted to the left in Figure 4, with the spring 52 engaged in slot 46. When the rod has been fully inserted, the spring 52 will snap outwardly to the position thereof shown in Figure 4, the rod now being rotated through perhaps 90 degrees. The free end of the spring will now be in engagement with the adjacent side wall 42 and the rod 40 will be locked against endwise movement, thus preventing unauthorized removal of the roll R. The spring 52 is, of course, wholly concealed within the core of the roll, so as to be inaccessible to one seeking to remove the roll before the tissue has been entirely consumed.

When, of course, all the tissues has been used, the cardboard core can be partially torn away to expose the spring 52, after which the rod 48 is rotated and the spring 52 is shifted into longitudinal contact with the rod and is aligned with slot 46 to permit the rod to be removed for substitution of a new roll of tissue.

In the form of the invention shown in Figures 4-6, either the tubular element 26 or the tubular member 32 (Figures 1 to 4) can be used as a weight means.

As shown in Figure 2, the first form of the invention can be provided, in addition to the slots 30, with small circular openings 54 located adjacent the inner ends of the slots 30, one of the openings 54 having a slot 56 communicating therewith. This permits use of the rod 48 in the form of the invention shown in Figures 1 and 2, in place of the tubular member 32. Further, it can permit use of both the rod 48 and the tubular member 32, to provide a sure locking device, with both the rod and the tubular member extending through the core of the roll.

It is believed apparent that the invention is not necessarily confined to the specific use or uses thereof described above, since it may be utilized for any purpose to which it may be suited. Nor is the invention to be necessarily limited to the specific construction illustrated and described, since such construction is only intended to be illustrative of the principles, it being considered that the invention comprehends any minor change in construction that may be permitted within the scope of the appended claims.

What is claimed is:

1. A roll paper dispenser comprising: a casing including a pair of opposed side walls having generally vertical slots formed therein; means carried by and extending between the side walls below the slots for rotatably supporting a roll of paper to be dispensed; and means to retard free rotation of said roll, comprising a cylindrical weight element extending between the side walls and engaged at its ends in the slots for free gravitation toward said roll supporting means so as to impose its weight upon said roll, said element having diametrically opposed, circumferentially extending slots formed in said ends thereof receiving opposite edges of the side wall slots to prevent rotation of the weight element.

2. A roll paper dispenser comprising: a casing including a pair of opposed side walls; means carried by and extending between the side walls for rotatably supporting a roll of paper to be dispensed, said means comprising a member removably engaged at its ends in the respective side walls; and means on said member for locking the member in engagement with the side walls, said means being shiftable to a position freeing the member for disengagement from the side walls, said member comprising an elongated rod extending between the side walls, the side walls having openings receiving opposite ends of the rod to permit removal of the rod by movement thereof in the direction of its length, the rod including a head at one end engaging against the outer surface of one of the side walls to permit longitudinal movement of the rod in one direction only when the rod is being removed from the casing, the opening of said one side wall having a slot in communication therewith, said locking means comprising a leaf spring fixedly secured at one end to the rod intermediate the ends of the rod, the other end of said spring normally being spaced outwardly from the surface of the rod adjacent said head so as to engage the inner surface of said one side wall, to cooperate with the head in preventing movement of the rod in the direction of its length in either direction, said spring being depressible into longitudinal contact with the rod so as to align with said slot and permit removal of the rod in said one direction.

References Cited in the file of this patent

UNITED STATES PATENTS

740,389	Blue	Oct. 6, 1903
1,338,057	Wasser	Apr. 27, 1920
2,492,728	Balz	Dec. 27, 1949
2,650,773	Fanning	Sept. 1, 1953