

Oct. 17, 1967

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3,347,480

PAPER DISPENSER

Filed Dec. 7, 1965

FIG. 1

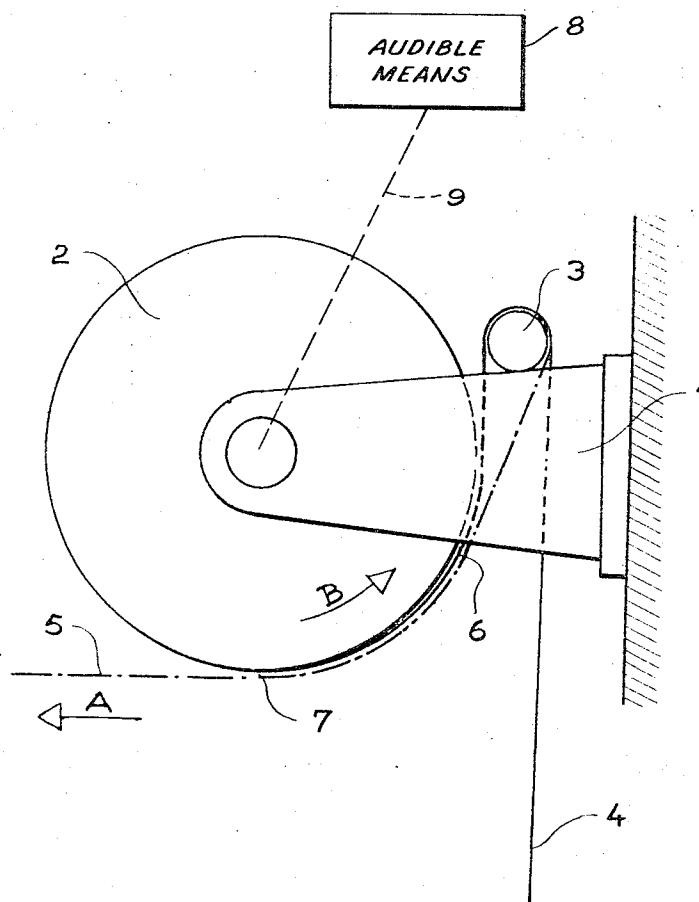


FIG. 2



1

3,347,480

PAPER DISPENSER

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Filed Dec. 7, 1965, Ser. No. 512,052

Claims priority, application France, Dec. 7, 1964, 997,733

8 Claims. (Cl. 242—55.2)

There are a number of different types of dispensers available for dispensing paper packed in rolls, for example toilet paper, kitchen paper, cleaning paper, and so on.

Often, once these papers are unrolled to a desired length, they tear off irregularly and many devices have been conceived for making a clean tear; on the other hand and often also due to this difficulty of tearing, great amounts of waste are produced.

With a view to overcoming these drawbacks, the present invention has for an object to provide improvements in paper dispensers, and accordingly the invention contemplates the provision of a dispenser for dispensing paper in roll form, comprising a support member and a cylindrical rod member mounted on said support behind the paper roll, the axis of said rod being parallel to the axis of the roll and over which the paper to be dispensed is passed.

The rotation of the roll of paper may bring about the operation of an audible signal while the paper is being unrolled.

In order that the invention may be more clearly understood, reference will now be made to the accompanying drawing which shows an embodiment thereof by way of example.

In the drawing:

FIG. 1 is a view which diagrammatically shows the device of the invention in side elevation; and

FIG. 2 is a view which shows a portion of the device according to a modification thereof.

Referring now to the drawing, a dispenser according to the invention comprises a support member 1, similar to conventional dispensers. On this support member is mounted the paper roll, indicated at 2, but this is located so that the depending portion of paper is at the front instead of at the rear as in a conventional device.

The paper is then passed upwardly over a cylindrical rod member 3, secured to the support member 1, and the end hangs freely down at 4.

The rod member 3 may be mounted in any desired fashion on the support member 1: it may either be fixed and relatively polished so that the paper may easily slide over its surface, or it may be rough as shown in FIG. 2 and capable of turning about its axis under the effect of friction of the paper thereon.

The rod member should be quite close to the paper roll and to this end may be mounted to slide between two end positions as the paper is unrolled. It is necessary only that it shall remain at all times parallel to the axis of the paper roll and be firmly secured to the support member.

When the free end 4 of the strip of paper is pulled vertically downwards, the paper unrolls perfectly by sliding or rolling over the rod member 3.

The paper is shown in the slack condition by full lines and, of course, it will be tensioned during use of the device.

If, when the desired length of paper has been obtained,

2

it is pulled horizontally at 5, the paper will take up the position shown in dotted lines on the drawing.

It will be observed that in this position, the unrolled strip will be strongly applied against the roll 2 from the point 6 to the point 7, i.e. over a substantial portion of the surface of the roll, e.g. more than one-eighth of such surface as shown in the drawing. Since a braking effect is imposed between the roll 2 and the free part 5 as the latter is pulled by the user in the direction of the arrow A, the roll, under this tension, will have the tendency to turn in the opposite direction indicated by the arrow B.

This arrangement gives rise to a large degree of friction which brings about tearing of the paper either in a preferred perforated zone of the paper if such exists, or in the vicinity of the point 7. Thus, excessive waste of paper due to tearing irregularities is avoided or minimized.

In order to avoid wilful wastage by users, particularly in public places, the dispenser may be provided with an audible warning device 8 which comes into operation during the entire time that the roll 2 is being rotated via suitable coupling means 9 shown diagrammatically. This warning device may be of any desired form and may be mounted in any suitable manner and may comprise either mechanical means for driving a small bell hammer by friction on the roll or be located within the spindle or it may be operated electrically by pressure of the rod 3 during unrolling or in any other fashion.

I claim:

1. A dispenser comprising support means for supporting a roll of tearable material for rotation about a determinable axis, a rod extending parallel to said axis, the material having an end length which passes over said rod, said support means and rod being relatively positioned in spaced relation and suitably unenclosed to enable the end length of material to peripherally contact the roll and extend tangentially therefrom so that upon application of tension force to the end length of material, the roll is urged to rotate in a direction tending to rewind the end length of material back onto the roll whereby there is produced a tearing force in the end length of material at the line of tangency where the material overlaps and extends from the roll.

2. A dispenser as claimed in claim 1, wherein said rod has a smooth surface to allow the material to slide thereover.

3. A dispenser as claimed in claim 1, wherein said rod has a rough outer surface and is adapted to rotate about an axis parallel to that of said roll.

4. A dispenser as claimed in claim 1, wherein said rod is mounted for displacement towards or away from said roll, while remaining parallel to the axis of said roll.

5. A dispenser as claimed in claim 1 comprising an audible warning device and means for activating said warning device by the rotation of the roll.

6. A method of tearing a length of material from a rotatable roll thereof, said method comprising drawing a length of material from said roll, passing said length around a fixed member extending parallel to said roll, and contacting said length with the periphery of the roll of material such that by applying tension to said length, the roll of material is urged to rotate in a direction tending to rewind said length back onto the roll and thereby there is produced a tearing force in the length of mate-

3,347,480

3

rial at the line of tangency thereof where said length overlaps said roll and extends therefrom.

7. A method as claimed in claim 6, wherein said length of material is in contact with the roll over more than one-eighth the peripheral surface thereof.

8. A method as claimed in claim 7, wherein said length of material is drawn substantially horizontally after contacting the surface of the roll.

4

References Cited

UNITED STATES PATENTS

1,522,152	1/1925	Steiner	242—62
2,367,201	1/1945	Cooper	242—55.53
2,554,849	5/1951	Anderson	242—55.53
2,805,029	9/1957	Fanning	242—55.53

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