

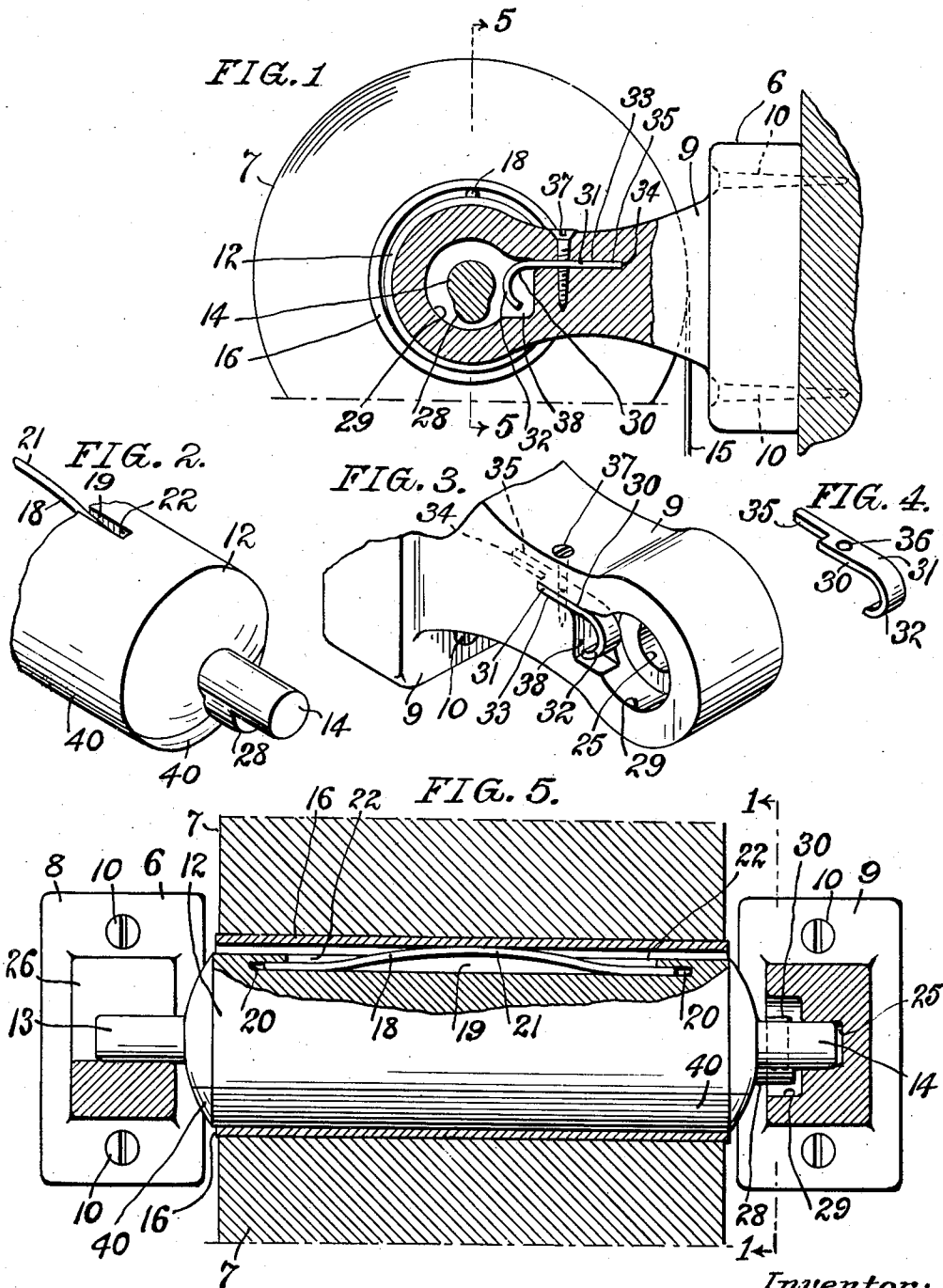
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PAPER ROLL HOLDER

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PAPER ROLL HOLDER

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3 Claims. (Cl. 242—55.2)

My invention relates to improvements in paper roll holders adapted for holding rolls of toilet paper and paper towels.

The object of my invention is to provide a roll holder with means for retarding the unrolling of the paper without limiting the rotation of the roll of paper to one revolution, or to a fraction of a revolution.

A further object is to provide novel means upon the roller, or mandrel, carrying the roll of paper, for insuring the roll of paper and the roller, or mandrel, turning together.

A further object is to provide brackets upon which the roller, or mandrel, carrying the roll of paper, is mounted for rotation, and construct one of the brackets with friction means adapted for engaging a cam secured upon the roller and thereby retarding the rotation of the roller for preventing the paper from unrolling too freely.

A further object is to provide means for normally positioning the roll of paper so that a strip of paper may be readily torn from the roll.

A further object is to construct a paper roll holder which is simple in construction and which can be manufactured at a low cost, and which eliminates the objectional features usually found in devices of this character.

These together with various other novel features of construction and arrangement of the parts, which will be hereinafter more fully described and claimed, constitute my invention.

Referring to the accompanying drawing:

Fig. 1 is a transverse vertical section, as on line 1—1, Fig. 5, showing my novel paper holder.

Fig. 2 is a perspective view showing one end of the roller, or mandrel, for carrying the roll of paper.

Fig. 3 is a perspective view showing the inner face of one of the brackets adapted for receiving the end of the roll shown in Fig. 2, and showing a spring mounted upon the bracket.

Fig. 4 is a perspective view of the spring, detached.

Fig. 5 is a vertical longitudinal section, as on line 5—5, Fig. 1.

In the drawing, in which like reference characters refer to like parts, 6 represents my novel holder for supporting a roll of paper 7. The holder 6 comprises brackets 8 and 9, adapted to be secured to a wall, or other suitable support, by fastening devices 10.

A roller, or mandrel, 12 is provided with stud shafts 13 and 14, which shafts are adapted to be rotatably mounted upon the brackets 8 and 9. The roller 12 is of such diameter that it will

freely enter the paper tube 16, upon which the strip of paper 15, forming the roll 7, is wound, with the inner end of said strip pasted to the tube 16, so that the latter will rotate with the roll 7.

The roller 12 is provided with friction means, in the form of a spring 18, for insuring the roll 7 rotating with the roller 12. The spring 18 is mounted upon the roller 12 in a novel manner. The roller 12 is provided with a longitudinal slot 19, having undercut end chambers 20, as shown in Fig. 5, adapted to receive the ends of the spring 18.

The spring 18 may be formed of round spring wire and provided with a bowed central portion 21, which portion 21 is held in a radial position upon the roller 12, for engagement with the tube 16, by radially extending walls 22, of the roller 12, which walls 22 define the slot 19. The spring 18 may be compressed by the tube 16, as the chambers 20 are of sufficient length to allow the ends of the spring 18 to slide into the chambers 20 when the spring is compressed by the tube 16. No other fastening means are necessary for retaining the spring 18 upon the roller 12.

The novel construction of the bracket 9 and the roller 12 is as follows: The bracket 9 is provided with an aperture 25, in which the outer end of the shaft 14 is mounted for rotation. The shaft 14 and the roller 12 may be readily mounted upon the bracket 9 as the bracket 9 is provided with the usual form of open vertical slot 26, as shown in Fig. 5.

The shaft 14 has a cam secured thereon adjacent to the end of the roller 12 from which the shaft 14 extends. The bracket 9 is provided with a recess 29, formed upon the inner face thereof to receive the cam 28 and allow the latter to freely rotate with the shaft 14. A spring 30 is mounted upon the bracket 9 and extends into said recess 29 and is adapted to be engaged by the cam for retarding the rotation of the roll 7, when the free end 15 of the paper strip is pulled, or suddenly jerked, with more force than is necessary for removing a small quantity of paper from the roll.

The spring 30 is constructed of flat spring metal, having a straight body portion 31 and a rounded end portion 32, which latter occupies the recess 29 and is positioned to be engaged by the cam 28. The bracket 9 is provided upon its inner face with a slot 33 for receiving said body portion 31 of the spring 30. The bracket 9 is also provided with a recess 34 for the insertion of the reduced shank 35, formed upon the end of the

body portion opposite to the rounded end portion 32. Said body portion 31 is provided with a hole 36 for the passage of a screw 37, adapted for retaining the spring 30 upon the bracket. The bracket 9 is also provided with an enlarged recess 38, which is occupied by the rounded end portion 32 of the spring 30, to permit the spring to yield sufficiently to allow the cam 28 to deflect the spring and pass over the rounded end portion 32, when the roll 7 is rotated by the pulling of the paper strip 15.

When the cam 28 has passed the spring 30 the roll 7 may be turned freely for nearly a revolution to permit a short strip of paper to be drawn from the roll 7. The roller 12 is provided with a weight 40, located adjacent to the radial position of the cam 28, relatively to the roller 12. The weight 40 tends to position the roller 12 so that it will have a free movement throughout a portion of its revolution before the cam 28 engages the spring 30, thus insuring a free movement of the roll 7 when the free end of the strip 15 is first pulled to rotate the roll.

In the operation of the paper roll holder, the spring 30 engages the cam 28 and the spring exerts sufficient resistance to the rotation of the cam to prevent the roll 7 from spinning and unrolling the paper to a length greater than the circumference of the roll.

Various changes in the construction and arrangement of the parts may be made without departing from my invention.

I claim:

1. A paper roll holder including a bracket adapted to be secured in a fixed position, a roller adapted for mounting a roll of paper thereon for rotation with the roller, a shaft projecting from an end of the roller, said bracket having a recess formed therein for mounting said shaft for rotation upon the bracket, a cam secured upon said shaft adjacent to the end of the roller, said bracket having an enlarged recess formed in the face thereof adjacent to the end of the roller adapted for freely receiving the cam, a plate spring having a flat body portion and a rounded end portion, said bracket having a slot formed upon the face thereof presented toward the roller adapted to receive said body portion with said

rounded end portion occupying said last mentioned recess and positioned therein for engagement by said cam, and fastening means upon said bracket extending transversely through said body portion for securing said body portion within said slot flush with said face of the bracket presented toward the roller.

2. A paper roll holder including a bracket adapted to be secured in a fixed position, a roller adapted for securing a roll of paper thereon, a shaft projecting from an end of the roller, said bracket having a recess formed therein for mounting said shaft for rotation upon the bracket, a cam secured upon said shaft adjacent to the end of the roller, said bracket having an enlarged recess formed in the face thereof adjacent to the end of the roller adapted for freely receiving said cam, a plate spring having a flat body portion and a rounded end portion, said bracket having a slot formed upon the face thereof presented toward the roller adapted to receive said body portion with said rounded end portion occupying said last named recess and positioned therein for engagement by said cam, said body portion having a reduced shank extending longitudinally from the end of said body portion opposite to said rounded end portion, said bracket having a recess occupied by said shank, and fastening means upon said bracket adapted for securing said body portion within said slot flush with said face of the bracket presented toward the roller.

3. A paper roll holder including a bracket, a roller mounted for rotation upon the bracket, a roll of paper mounted upon the roller, said roller having a longitudinal slot formed therein, a spring of greater length than said slot, said roller having undercut chambers located adjacent to the ends of said slot adapted to be occupied by the ends of the spring, said spring having a centrally bowed portion normally extending beyond the cylindrical surface of the roller, said roller having radially extending walls defining said slot and adapted for retaining said bowed portion of the spring positioned radially for frictionally engaging the roll of paper, and means upon the bracket adapted for engagement with the roller for retarding the rotation of the latter.

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