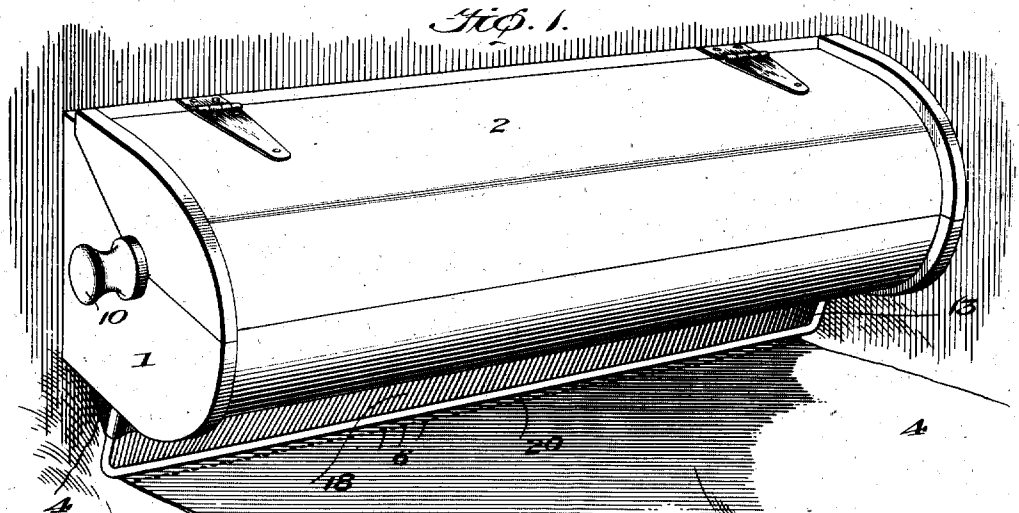
O. B. TAYLOR.

PAPER ROLL HOLDER.

APPLICATION FILED OCT. 28, 1914.

1,243,569. Patented Oct. 16, 1917.

Fig. 1.



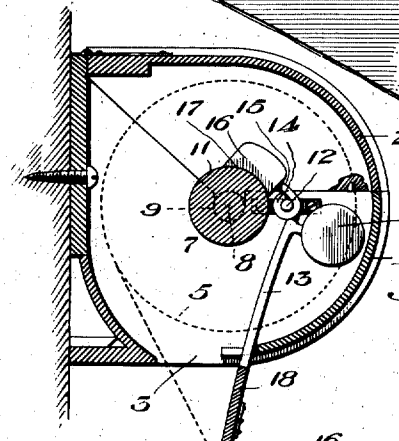
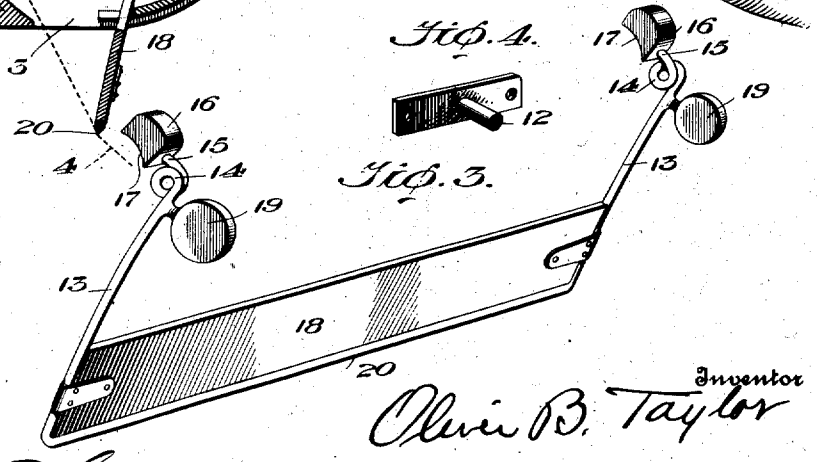


Fig. 2.

Fig. 4.

Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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PAPER-ROLL HOLDER.

1,243,569. Specification of Letters Patent. Patented Oct. 16, 1917.

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To all whom it may concern:

Be it known that I, OLIVER B. TAYLOR, a citizen of the United States, residing at Muskegon, county of Muskegon, and State of Michigan, have invented certain new and useful Improvements in Paper-Roll Holders, of which the following is a specification.

This invention relates to paper roll holders.

My object is to provide an automatic brake for arresting the rotation of a paper roll, particularly one used for sanitary paper toweling when the paper is torn off, and to eliminate friction when pulling or tearing the paper from the roll.

Heretofore tearing-off devices or knives have been used in connection with rolls of wrapping paper, but these have the disadvantage that considerable friction is offered to every movement of the paper. It has also been proposed to provide a roll of paper toweling having a series of sheets joined by perforations, the object being to tear off one section or sheet at a time. In practice, however, it is found that the quick jerk given the sheet unrolls a much larger quantity of paper than is required and a very large waste is thus brought about.

While my invention is not restricted to rolls of paper toweling having successive sheets, it is peculiarly adapted to this use and effects a very great saving in connection with rolls of sanitary toweling and is adapted for use in connection with such rolls as are now on the market.

The invention embodies means whereby when a piece of paper is torn from the roll, my invention automatically acts upon the spindle of the roll and checks, brakes or arrests the roll so that only the desired quantity is torn off.

The invention consists, broadly, in the combination with the spindle of a paper roll, of means automatically actuated by the paper web, when the piece of paper is torn off, to automatically apply a brake to the spindle of the roll to brake or arrest the rotation of the roll. I am aware that the invention may be carried out in a number of different ways and I do not limit myself to any particular embodiment nor to the embodiment of the invention which is set forth hereinafter and disclosed in the accompanying drawings, as the same is to be considered as illustrative, rather than restrictive, of the scope of the invention.

In the accompanying drawings:

Figure 1 is a perspective showing the invention in use;

Fig. 2, a vertical section taken just beyond one end of the paper roll, the latter and the web being shown in dotted lines and the brake applied;

Fig. 3, a detail perspective of the complete attachment when disconnected from its pivots; and

Fig. 4, a detail of one of the pivots or gudgeons.

The case which contains the removable paper roll is shown at 1 and may be provided with a swinging or other suitable cover 2 to protect the roll and afford the requisite ornamental appearance. In the bottom of the case is an opening 3 through which the web 4 of the roll 5 may be drawn when it is desired to tear off a section of the paper. Such rolls are usually provided with a line of slits or perforations 6 to afford easy severance. The roll is carried by a spindle 7 which is provided with reduced spindles 8 loosely received in bearings 9 in the case 1. Suitable knobs or finger-pieces 10 may be provided at the ends of the spindle.

While my invention contemplates the application of a brake to the spindle of the paper roll in any desired manner, provided it is automatically operated by the tension on the paper web when the paper is severed, I prefer to arrange the brake so that it will coöperate with the uncovered parts 11 of the spindle where it emerges at the ends of the paper roll 5.

Secured to, or projecting from the inner faces of the ends of the case 1 are pivots or gudgeons 12. A wire frame 13 has coiled parts 14 journaled on the said pivots or gudgeons, and to the ends 15 are secured brake-blocks 16 which may be of any desired material, although I prefer to employ pieces of rubber into which the said ends enter. These rubber brake-blocks or shoes 16 are preferably provided with concaved inner faces 17 of substantially the same curvature or arc as the ends 11 of the spindle. The ends 15 and the brake-blocks 16 are adapted to swing outside of and clear from the ends of the paper roll. The wire frame 13 is in the form of a bail to which is connected a guard or filling 18 which strengthens said frame and also gives it an ornamental appearance where it depends below

the case 1. The frame is adapted to strike against the case 1 to limit the forward movement of said frame when the paper web is pulled against said frame and the frame may have a certain degree of resiliency to permit a full application of the brake-blocks or shoes to the spindle before the frame eventually strikes the case 1 when the paper is being severed. Counterweights 19 are connected to the frame to normally swing the frame rearwardly and the brake-blocks out of contact with the spindle. My invention is not limited, however, to a normal disengagement of the brake from the spindle, as it might have a moderate or light contact therewith which would not interfere with the easy unreeling of the paper web from the roll, but which would permit a sufficient braking action to be exerted when the paper web was drawn against the frame, as is done when the web is being severed.

When the parts are in normal condition, the web depends freely through the slot 3. A downward pull on the web will permit any desired amount of toweling to be unreeled, but immediately the web is pulled toward the user to sever a portion thereof, it comes into engagement with the frame 13 and thereupon the tension causes the brake-blocks or shoes 16 to be drawn against the spindle of the roll to thereby check or arrest the rotation thereof. When the device is properly used, the web will be unreeled until a perforated line appears in the vicinity of the frame and then the web will be drawn outwardly against the frame and a slight upward motion will result in severing the web. To assist severance, the frame may be sharpened or provided with a knife edge, as at 20.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

In a paper roll holder, the combination with a case having a slot in its bottom and a hinged cover for its top, of a spindle whose free ends are journaled in said case between the meeting edges of the case and cover, a paper roll carried by said spindle, the end portions of the spindle being exposed beyond the ends of the paper roll, a U-shaped frame whose legs are pivotally connected to the interior faces of the ends of the case and are adapted to play between said ends and the ends of the paper roll, brake blocks carried by said legs of the frame which are adapted to engage the exposed ends of the spindle between the ends of the case and the ends of the paper roll, means for normally retracting the frame so that the brake-blocks will be free of the spindle ends, the legs extending through the slot and having their outward movement limited by the cover and cross-piece of said U-shaped frame being disposed so as to be engaged by the web of the paper when a portion thereof is being severed, whereby the brake blocks are made to engage the spindle when the paper web is pulled upon.

In testimony whereof, I hereunto affix my signature in presence of two witnesses.

OLIVER B. TAYLOR.

Witnesses:
FRANK A. RUNZEL,
HERMAN L. FREYE.