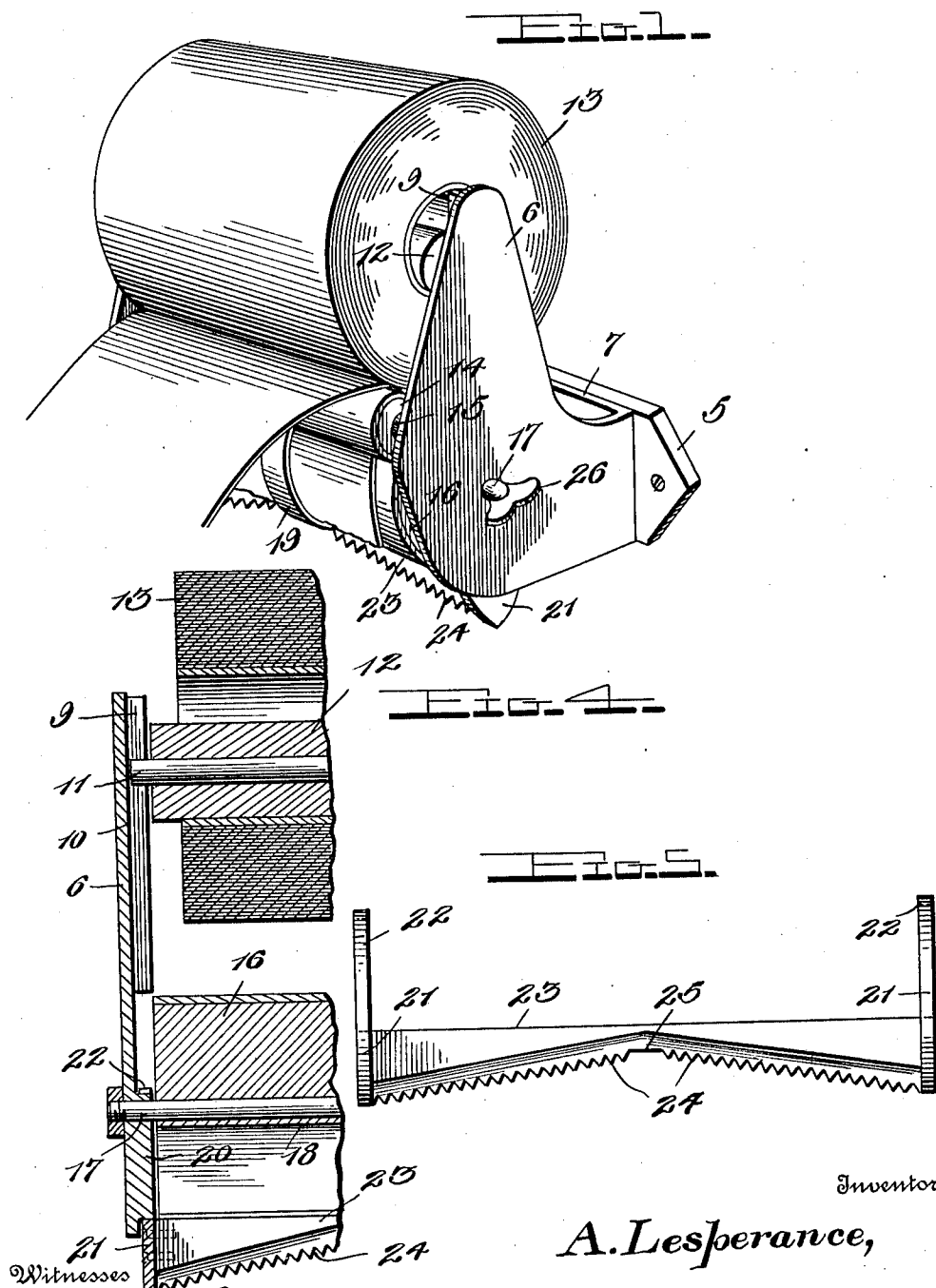


A. LESPERANCE.
PAPER HOLDER.
APPLICATION FILED DEC. 4, 1911.

1,021,154.

Patented Mar. 26, 1912.

2 SHEETS-SHEET 1.



Inventor

A. Lesperance,

Witnesses
Chas. L. Griestauer. By
G. B. Norton

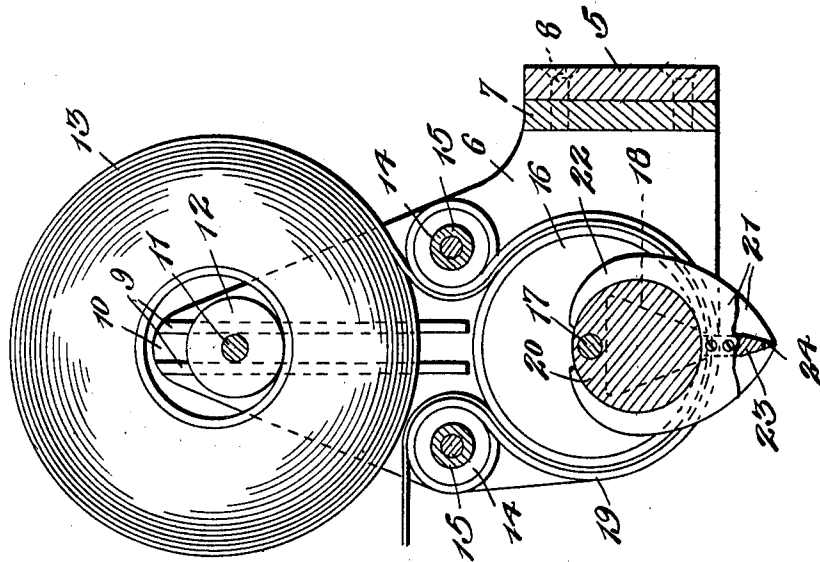
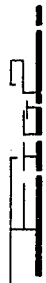
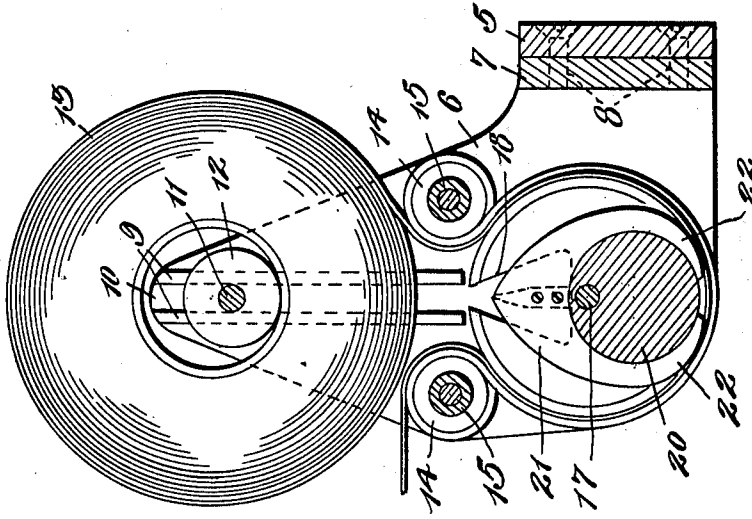
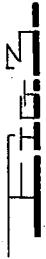
Watson E. Coleman.
Attorney

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2 SHEETS-SHEET 2.



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UNITED STATES PATENT OFFICE.

ALEXANDER LESPERANCE, OF LACONIA, NEW HAMPSHIRE.

PAPER-HOLDER.

1,021,154.

Specification of Letters Patent.

Patented Mar. 26, 1912.

Application filed December 4, 1911. Serial No. 663,720.

To all whom it may concern:

Be it known that I, ALEXANDER LESPERANCE, a citizen of the United States, residing at Laconia, in the county of Belknap and State of New Hampshire, have invented certain new and useful Improvements in Paper-Holders, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to paper holders and more particularly to devices of that character provided with automatic cutting means for severing the paper in uniform lengths.

The primary object of the present invention resides in the provision of a combined paper holder and cutter of the above type which is particularly designed with a view to its use as a holder for toilet papers whereby the necessity of preparing the roll of paper so that it may be removed from the roll in pieces of uniform length, is eliminated.

Another object of the invention resides in the provision of a roller around which the paper passes and a pair of guide rolls to direct the paper thereon, means coacting with the paper roller to hold the same upon said guide rolls, and an eccentrically mounted cutting element movable within said first named roller to engage the paper and sever the same as it passes around the roller.

Still another object of the invention is to provide a paper holder and cutter which is simple and durable in construction, highly efficient in practical use, and may be manufactured at comparatively small cost.

With the above and other objects in view, the invention consists of the novel features of construction, combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which,

Figure 1 is a perspective view of a paper holder constructed in accordance with my invention; Fig. 2 is a side elevation, one of the supporting plates being removed to illustrate the mounting of the cutter, said cutter being shown in its extended position with relation to the roller; Fig. 3 is a similar view showing the cutter disposed within the roller; Fig. 4 is a detail fragmentary section of the weight within the paper roll showing the manner of mounting the same; and Fig. 5 is a side elevation of the cutter removed from the roller.

Referring in detail to the drawings 5 designates a base plate which is adapted to be attached to a wall or other support. The supporting plates 6 are provided with flanges 7 which are disposed upon the base plate and are rigidly fixed thereto by means of the screws 8. Upon the inner opposed faces of these supporting plates 6, spaced parallel vertical ribs 9 are formed to provide guide-ways 10 in which studs 11 upon the ends of a cylindrical weight 12 are disposed. This weight is arranged within the paper roll 13 and maintains the same by gravity in engagement with the guide rolls 14 which are provided with suitable trunnions on their ends to be received in the bearings 15 formed upon the supporting plates 6. A roller 16 is arranged between the supporting plates below the guide rolls 14 and is provided with trunnions 17 upon its ends which are journaled in said supporting plates, said roller and the cylindrical weight 12 being disposed in the same vertical plane. The periphery of this roller may be covered with leather or other friction material if desired and said roller is provided with a longitudinally extending chamber 18 which is of substantially triangular form in cross section as clearly shown in Figs. 2 and 3. The guide rolls 14 are centrally connected by means of a tape 19 which passes around the roller 16, and the paper from the roll 13 is disposed between this tape and the friction surface of said roller, the tape 19 serving to hold the end portion of the paper upon the roller 16 so that it is moved when said roller is rotated and is directed outwardly from one of the rolls 14 by said tape.

To the bearings of the roller 16 the stationary eccentrics 20 are fixed. These eccentrics are engaged by the arms 22 upon the strap plates 21, said arms being curved and closely engaging upon the periphery of the eccentrics. The strap plates 21 are rigidly fixed upon the ends of a cutting blade 23 which is movable into and out of the chamber 18 in the roller 16. This blade is sharpened to a knife edge and is preferably serrated as indicated at 24. It will be observed that the serrated edge of the blade is inclined inwardly in opposite directions from the ends of said blade to its center. At the center of the blade the same is provided with a recess 25 in its cutting edge to receive the paper directing tape 19 which embraces the

roller 16. One of the trunnions 17 of the roller 16 is extended entirely through the supporting plates 6 and is provided with a suitable key 26 whereby said roller may be rotated.

From the foregoing description of parts, it will be seen that the operation of the device is substantially as follows. Assuming that the cutting blade 24 is in the position shown in Fig. 3, upon the rotation of the roller 16 in the direction indicated by the arrow, said blade through the medium of the eccentrics 20 will be gradually moved out of the chamber 18 in said roller and projected beyond the periphery thereof until one-half of a complete rotation of the roller has been completed. In the position of the cutting blade shown in Fig. 2 the same is at the limit of its outward movement and the length of paper has been completely separated from that portion which is connected to the roll 13. Upon a further movement of the roller 16 in the same direction, the blade is moved inwardly into the chamber 18 and is entirely disposed within said chamber before the blade reaches the position opposite the guide roll 14. It will thus be seen that the length of paper which is cut off is determined by the diameter of the roller 16 and of the eccentrics 20. After the severed length of paper has been withdrawn, the end of the paper is directed by the tape 19 over the periphery of the guide roll 14 at the left in the continued rotation of the roller 16.

From the foregoing it is thought that the construction and operation of the device will be fully understood. As the paper is gradually consumed from the roll 13, the cylindrical weight 12 forces the roll downwardly and holds the same at all times in close engagement with the guide rolls 14. By providing my automatic cutting device, the paper rolls may be used without preparing the same so that the paper will be cut in uniform lengths. It will of course be obvious that the device is by no means limited to use in connection with toilet paper rolls as above described but may also be used for severing wrapping paper. By providing the blade 23 with the inclined cutting edges, the paper is gradually severed in the outward movement of said blade from its opposite longitudinal edges inwardly to its center.

The combination and arrangement of parts above described provides a device of this character which is very positive in its action, is not liable to get out of order and may be inexpensively manufactured.

While I have shown and described the preferred construction and arrangement of the various parts, it will be understood that the device is susceptible of many minor modifications without departing from the es-

sentia feature or sacrificing any of the advantages thereof.

Having thus described the invention what is claimed is:—

1. In a device of the character described, the combination of a rotatable paper roll, supporting rollers for said paper roll, a paper directing roller rotatably mounted beneath said supporting rolls and in vertical alinement with the paper roller, and a guide tape connecting said supporting rollers and embracing the directing roller at its central portion.

2. In a device of the character described, the combination of a rotatable paper roll, spaced supporting rollers arranged beneath said paper roll, a gravity movable member arranged within the paper roll and acting to maintain the same in engagement with said supporting rollers, a paper directing roller rotatably mounted beneath the supporting rollers and having its rotative axis disposed in vertical alinement with the axis of the paper rolls, and a guide tape for the paper connected at its ends to the supporting rollers and embracing the directing roller at its central portion.

3. In a device of the character described, the combination of spaced supports having guide-ways on their opposed faces, a rotatable paper roll arranged between said supports, a gravity member loosely arranged within said paper roll and having studs movable in said guide-ways, spaced supporting rollers arranged beneath the paper roll, said gravity member maintaining the paper roll in position on said supporting roller, a paper directing roller arranged beneath said supporting rollers, and a guide tape for the paper connected at its ends to the supporting rollers and embracing the directing roller at its central position.

4. In a device of the character described, the combination of spaced supports, a paper roll rotatably mounted between the same, a shaft journaled in said supports, said supports having projecting portions upon their inner faces eccentrically disposed with relation to said shaft, a paper directing roller fixed on said shaft and provided with a longitudinal chamber, a cutting blade movably arranged within said chamber, and means fixed upon the ends of said blade and coacting with the eccentric projections of the supports to project the cutting edge of the blade beyond the periphery of the roller as the same is rotated and sever the paper.

5. In a device of the character described, the combination of spaced supports, a paper roll rotatably mounted between the same, guide and supporting rolls for the paper roll, a paper directing roll journaled in the supports beneath said guide rolls, a tape connecting the guide rolls and embracing the directing roller intermediate of its ends,

said directing roller having a longitudinally extending chamber, a cutting blade radially movable in said chamber and having a central recess in its cutting edge to receive said tape, and means for projecting the cutting edge of the blade beyond the periphery of the roller in its rotation to sever the paper in uniform lengths.

6. In a device of the character described, the combination of spaced supports, a paper roll rotatably mounted between said supports, guide and supporting rolls for the paper, a directing roller journaled in the supports beneath the guide rolls, a friction tape connecting the guide rolls and passing around said directing roller, said roller being provided with a longitudinally extend-

ing chamber, a cutting blade radially movable in said chamber and having its cutting edge inwardly inclined from each end to its center, the center of said blade being provided in its cutting edge with a recess to receive said tape, and means arranged at the ends of the roller and connected to said cutting blade to project the edge thereof beyond the periphery of the roller in its rotation to sever the paper in uniform lengths.

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

ALEXANDER LESPERANCE.

Witnesses:

FRANK P. TILTON,
C. F. LEONARD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."