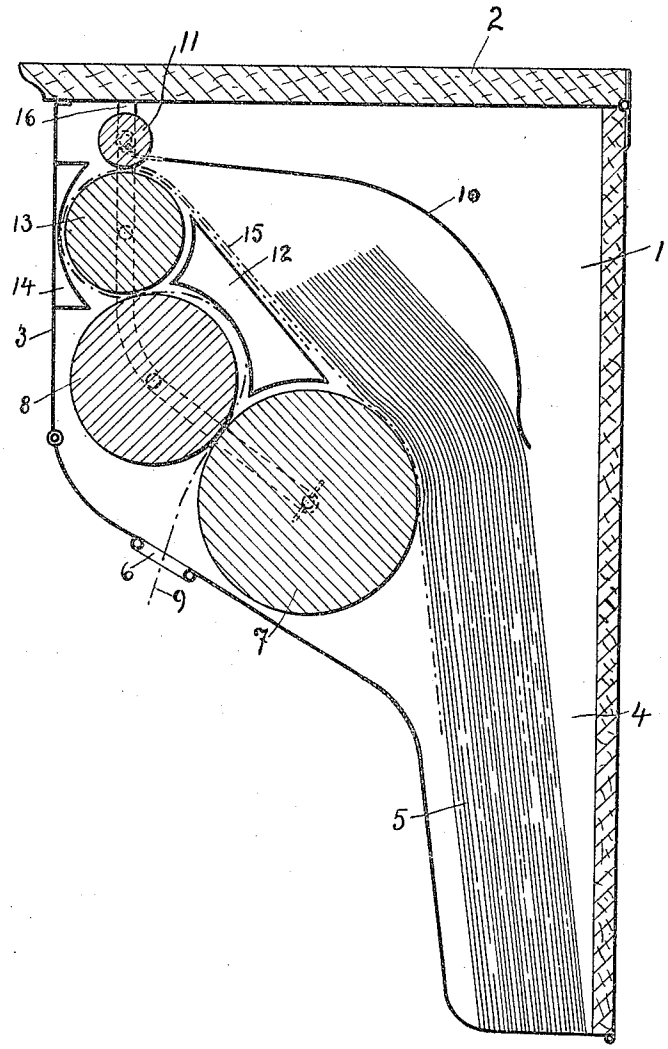
A. LUNDBERG.

APPARATUS FOR DELIVERING TOILET PAPER PIECE BY PIECE.

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1,312,449. Patented Aug. 5, 1919.



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UNITED STATES PATENT OFFICE.

ADOLF LUNDBERG, OF STOCKHOLM, SWEDEN.

APPARATUS FOR DELIVERING TOILET-PAPER PIECE BY PIECE.

1,312,449. Specification of Letters Patent. Patented Aug. 5, 1919.

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To all whom it may concern:

Be it known that I, ADOLF LUNDBERG, a citizen of the Kingdom of Sweden, residing at Stockholm, Sweden, have invented new and useful Improvements in Apparatus for Delivering Toilet-Paper Piece by Piece, of which the following is a specification.

This invention relates to apparatus for delivering toilet-paper piece by piece and its object is to provide such an apparatus of a simple and accurately working construction.

Another object is the provision of an apparatus of the type aforementioned provided with two rotatable rollers one or both of which is coated with a covering of high frictional property, the paper sheets being pulled out between said rollers from a guide preferably consisting of rollers set to rotate by means of the paper sheets passing between them, and the paper bundle from which the paper sheets are pulled out being pressed by means of a movable weight or a spring against the frictional roller so that, while pulling out a paper sheet, the sheet contacting the roller is moved, owing to the friction, to the guide and then between the frictional rollers so as to be accessible outside the apparatus.

A preferred embodiment of the apparatus is in sectional view illustrated in the accompanying drawing.

Referring to the drawing, 1 is a receptacle or box having at the top and the foreside lids 2 and 3 respectively which may be opened and shut. At the bottom the box is provided with an extension 4 into which the bundles of paper sheets are placed. Furthermore the box has an aperture or slot 6 through which the paper sheets are pulled out. Placed inside the box close to the aperture 6 and contacting each other are two rotatable rollers 7 and 8 so located that, when the portions of the rollers facing the aperture 6 are turned apart, the paper sheet 9 lying between the rollers is delivered through the aperture 6. Both of the rollers 7, 8 (or only one of them) are coated with a covering of high frictional property, for instance sand-paper or the like. A bundle of paper-sheets being placed in the extension 4, one side of the bundle contacts the roller 7, and in order to maintain the frictional engagement with the roller the bundle is pressed against the roller by means of any suitable weight or spring, as for instance a cover 10 resting against the bundle and adapted to be lifted out of the box. The cover 10 may suitably be journaled on the pins of a rotatable roller 11.

The paper sheets are moved from the bundle 5 to the rollers 7 and 8 by the aid of a guide preferably arranged as follows. The portion of the guide situated near the bundle consists, on the one hand, of the cover 10 and, on the other hand, of a removable guiding piece 12 placed between the rollers 7 and 8. The next portion of the guide is formed by the roller 11 and a roller 13 located close to the said roller 11. Furthermore, the guide consists of the roller 13 and a guiding piece 14 placed near the same and preferably secured to the lid 3, said guiding piece guiding the paper sheet to the rollers 8 and 13. The last portion of the guide consists of the roller 8 and the guiding piece 12 guiding the sheet to the rollers 7 and 8.

When a sheet 9 extending through the aperture 6 and besides contained within the guide aforementioned is pulled out between the rollers 7 and 8, all the rollers 11, 13, 8 and 7 are set to rotate. On account thereof the portion of the roller 7 contacting the bundle 5 will push the sheet 15 bearing against said roller between the cover 10 and the guiding piece 12, till the end of sheet 15 be engaged by the rollers 13 and 11. Then the sheet 15 is, by means of the guide described, moved in between the rollers 7 and 8 and passed out through the aperture 6. Since the roller 7 starts the sheet 15 immediately after that the sheet 9 has left the tangent line between the roller 7 and the bundle 5, the ends of the sheets 9 and 15 will cover each other, as shown in the drawing.

In order to secure the proper movement of the paper sheets, also the roller 13 may be coated with a material of high frictional property. When a fresh bundle is to be inserted in the box, the lid 2 is raised and the lid 3 lowered and the cover 10 together with the roller 11 is lifted out of the box. Then the bundle is placed into the extension 4, the cover 10 together with the roller 11 being replaced.

The pins of all the rollers 7, 8, 13 and 12 may preferably be inserted in common lateral notches 16 made in the box 1 in such manner that the rollers are in contact with each other and may easily be lifted out of the box.

A fresh bundle having been placed in the box, the first sheet may be made accessible outside the aperture 6 by rotating the roller 7. For this purpose the one pin of said roller may be provided with a square head onto which is placed a key by the aid of which said rotation may be effected.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. An apparatus of the character described, comprising a receptacle formed with a slot in its front and adapted to contain a bundle of separate toilet paper sheets, a plurality of rollers mounted within the receptacle adapted to contact with each other, a removable guiding piece mounted between the rollers at the rear thereof, a removable roller, and a spring cover mounted on said removable roller adapted to maintain frictional engagement of said bundle with the lowermost roller.

2. An apparatus of the character described, comprising a receptacle formed with a slot in its front and adapted to contain a bundle of separate toilet paper sheets, a plurality of rollers mounted within the receptacle arranged to contact with each other and actuated by a paper sheet drawn out by hand from between the rollers, a removable guiding piece mounted between the rollers at the rear thereof, a guiding piece mounted at the front of the rollers, a removable roller, and a spring cover mounted on said removable roller adapted to maintain frictional engagement of said bundle with the lowermost roller.

In testimony whereof I have signed my name.

ADOLF LUNDBERG.

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