(No Model.)

J. T. & W. J. DONOVAN.

TOILET PAPER FIXTURE.

No. 427,407. Patented May 6, 1890.

Fig. 1.

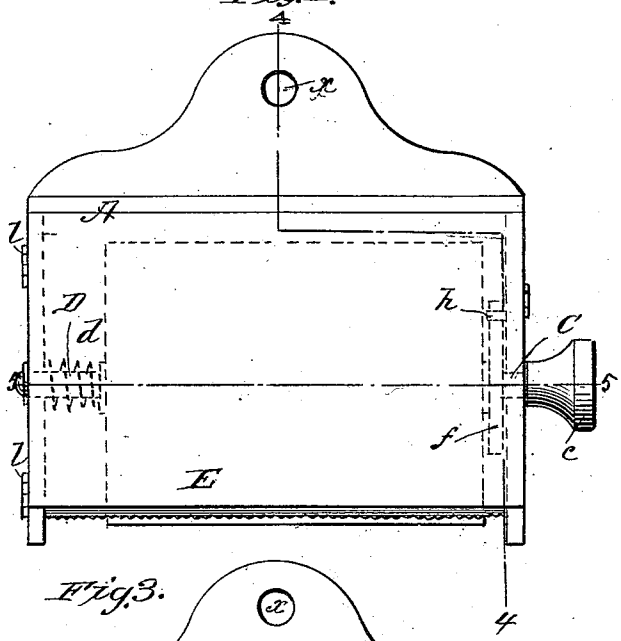


Fig. 2.

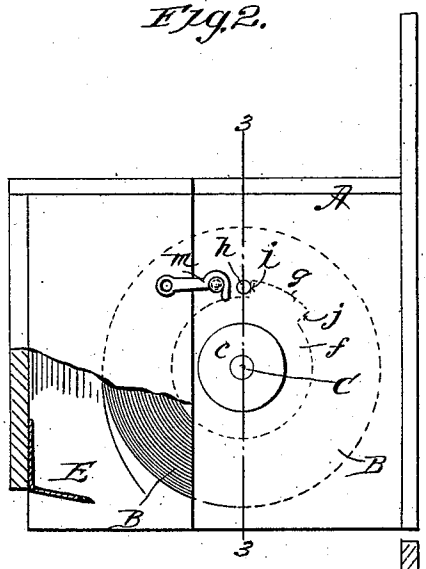


Fig. 3.

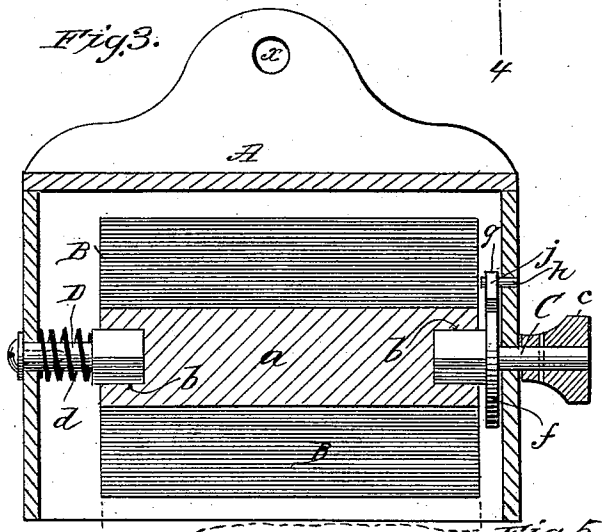


Fig 4

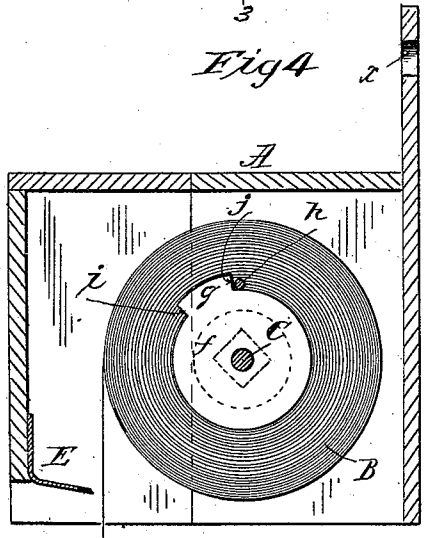
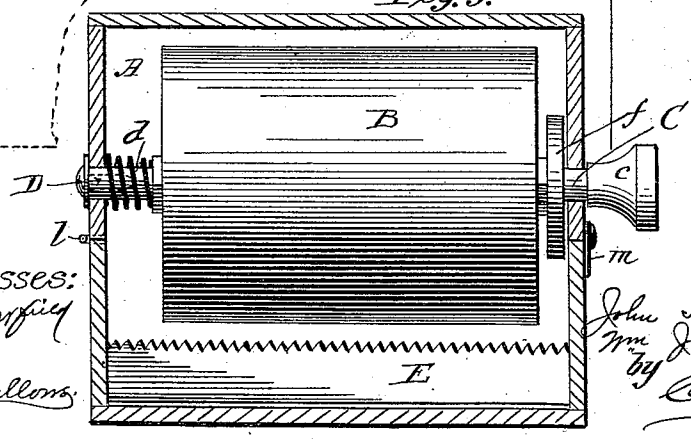


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN T. DONOVAN AND WILLIAM J. DONOVAN, OF SPRINGFIELD, MASSACHUSETTS.

TOILET-PAPER FIXTURE.

SPECIFICATION forming part of Letters Patent No. 427,407, dated May 6, 1890.

Application filed July 11, 1889. Serial No. 317,154. (No model.)

To all whom it may concern:

Be it known that we, JOHN T. DONOVAN and WILLIAM J. DONOVAN, citizens of the United States, both residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Toilet-Paper Fixtures, of which the following is a specification.

This invention relates to fixtures for inclosing rolls of toilet-paper, the object thereof being to provide a case for holding a roll of the paper, which permits its unwinding in portions from the roll and insures a limitation of the extent of each unwinding, and also to provide means for the severance of the unwound portion of the paper from the main rolled portion and to permit of the convenient replacing of an exhausted roll with a fresh one; and the invention consists in the construction and combination of the various parts, all substantially as will hereinafter more fully appear, and be set forth in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which the present invention is illustrated, and in which similar letters of reference indicate corresponding parts in all the views.

Figure 1 is a front view of the toilet-paper fixture, and Fig. 2 is a side view with parts thereof broken out and in section. Fig. 3 is a longitudinal vertical sectional view of the fixture, taken on the line 3 3, Fig. 2. Fig. 4 is a vertical cross-sectional view of the same, taken on the line 4 4, Fig. 1; and Fig. 5 is a horizontal sectional view on the line 5 5, Fig. 1.

In the drawings, A represents a case of rectangular form, having the four inclosing sides and top, while the bottom is open. The back is extended upwardly and provided with an eye *x*, whereby the fixture may be supported from a peg or hook affixed to the wall.

The form of paper-roll B to be employed in the fixture is to be somewhat shorter than the case, as shown, and provided with a core *a*, of wood or other suitably-hard material, having axial sockets *b b* in the ends thereof.

In the opposing ends of the case are arbors or studs C and D in axial alignment and projecting inwardly from the end walls of the case, having bearings for rotation in said walls, and the arbor C is also projected outwardly beyond the end wall and provided with a handle-knob *c*, by which it may be conveniently turned, and the arbor D is adapted to slide longitudinally in its bearings, a spring *d* being applied to insure its normal inward disposition. The inner extremity of each arbor is of prismatic or equivalent form, the sockets *b b* being correspondingly formed. By the provision of the spring-reacting longitudinally-movable arbor when the paper carried on a core has been exhausted such core may be removed and replaced by a fresh roll.

It will be understood that the removal of the core is effected by grasping and pushing it toward and in the longitudinal line of the one end arbor D and forcing such arbor along its axial line outwardly and away from the one C, (which, as shown, is immovable,) so that the socketed end of the core, which had been in engagement with the extremity of the arbor C, may be carried free from such arbor. The core may then be removed off from engagement with the arbor D.

Means are provided in relation to one of the arbors whereby the arbors and the roll will not make an entire rotation, but are limited, so that they may move to make a little less than an entire rotation—say seven-eighths thereof—and while various means may be employed one practical device is shown as comprised in a disk *f*, that is affixed on the arbor C, having a peripheral extension *g*, which covers a small portion—say an eighth—of the circumference of the disk, whereby two abutments *i j* are formed, and located in the circular line that said abutments describe as the disk is rotated on its arbor is a pin *h*, affixed to the end wall of the case.

E represents a severing-blade supported on the inner side of the front wall of the case A and projecting inwardly therefrom toward the roll, said blade being preferably located somewhat below the level of the axis of the roll, its edge being formed serrated.

In use, after an unwound portion of the paper has been cut or torn from the roll, the end of the roll lies opposite the severing-blade, about as shown in Fig. 2. The roll is

then rotated as far as it is permitted to turn in a direction for winding up the paper. As is plain, if the roll were permitted to make a complete rotation the end of the paper would stop at the place it occupied before being rotated—that is, opposite the severing-blade—as shown in said view, Fig. 2; but as the roll can make only less than an entire rotation—say seven-eighths of a rotation—it is not permitted to so move as to carry the end of the paper opposite the severing-blade; but at the time its motion is limited and stopped by the abutment *j* the end of the paper occupies a position about as seen in Fig. 4. In other words, the extent that the paper will now be below the blade bears such a proportion to the entire circumference of the roll as does the fraction of a rotation which the roll is not permitted to make bear to the whole thereof. Then on grasping the end portion of the paper and drawing thereon to unwind the same the paper may be downwardly drawn off the roll as the latter unwinds until the rotation of the roll is stopped by the abutment *i*, at which time a length of paper has been drawn off the roll and below the line of the severing-blade sufficient to just cover the circumference of the roll. The roll then being held immovable against the withdrawal of further paper therefrom, on now drawing downwardly and forwardly thereon the paper is severed by the blade, leaving the newly-made end opposite the blade. As before, at the time of again desiring to withdraw paper from the roll by the knob *c*, the roll is again turned as if to wind up, when the short portion is brought below the blade to be grasped, when on drawing down thereon, unwinding, the balance of the circumferential length of paper is again brought below the blade to be severed, and so on, the roll having a rotary reciprocating motion, never making quite an entire rotation.

As shown in the drawings, the forward portion of the case A is formed separable from the rear portion, being hinged thereto at the one end, as at *l*, while a hook and pin, as at *m*, or other suitable form of catch device is employed at the other end to maintain the parts of the case together and closed. On desiring to remove a core and introduce a new roll, by swinging the front of the case open such action of removal and substitution may be facilitated.

What we claim as our invention is—

1. A fixture for toilet-paper, consisting of a suitable case provided with a severing-blade and the arbors C D, to form bearings for the paper-roll, one of which arbors is adapted to have, but only to have, a partial rotation, and one of said arbors adapted to move longitudinally away from the other, substantially as described, for the purpose set forth.

2. A fixture for toilet-paper, consisting of a suitable case provided with a severing-blade and the stop-pin *h* and the arbors C D, one or both of which have their inner ends of prismatic or equivalent form, one of said arbors being provided with the knob and with the disk having the peripheral extension, whereby the two abutments *i j* are formed, and one of said arbors being longitudinally movable and provided with a spring for maintaining it in its inner disposition, substantially as described, for the purpose set forth.

3. A suitable frame or case provided with the severing-blade, the stop-pin *h*, and the arbors C D, one or both of which have their ends of prismatic or equivalent form, one of said arbors being provided with the knob and with the disk having the peripheral extension *g*, whereby the two abutments *i j* are formed and one of said arbors being longitudinally movable, and the spring *d*, for action on said movable arbor, combined with a roll of paper having a core provided with sockets to fit the end portions of said arbors, substantially as described, and for the purpose set forth.

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