(No Model.)

A. Q. ROSS.

ROLL PAPER HOLDER AND CUTTER.

No. 452,720. Patented May 19, 1891.

Fig. 1.

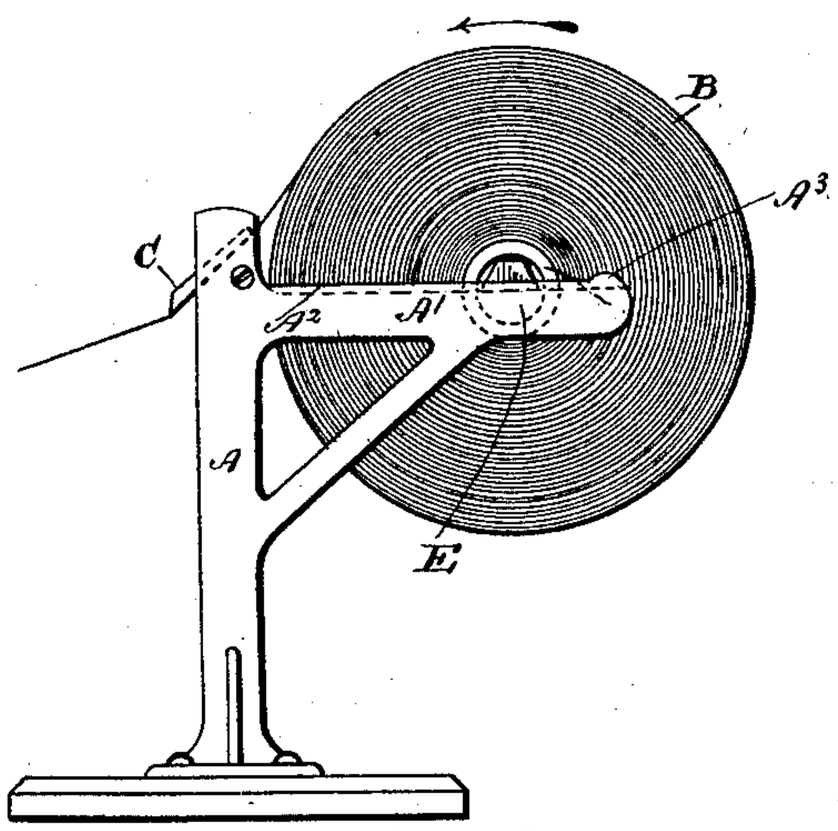


Fig. 3.

Fig. 2.

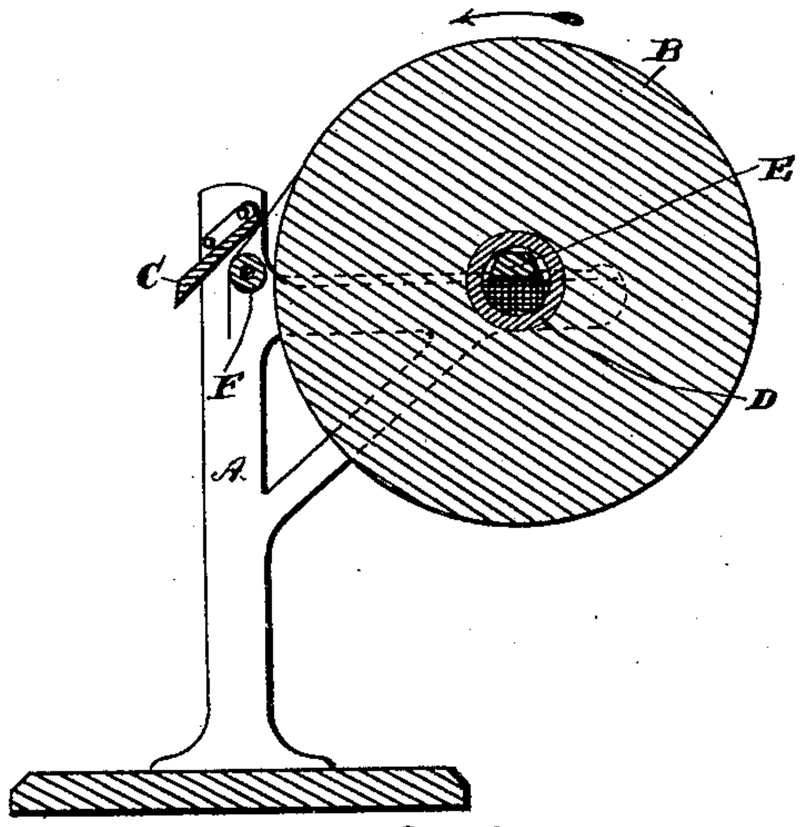
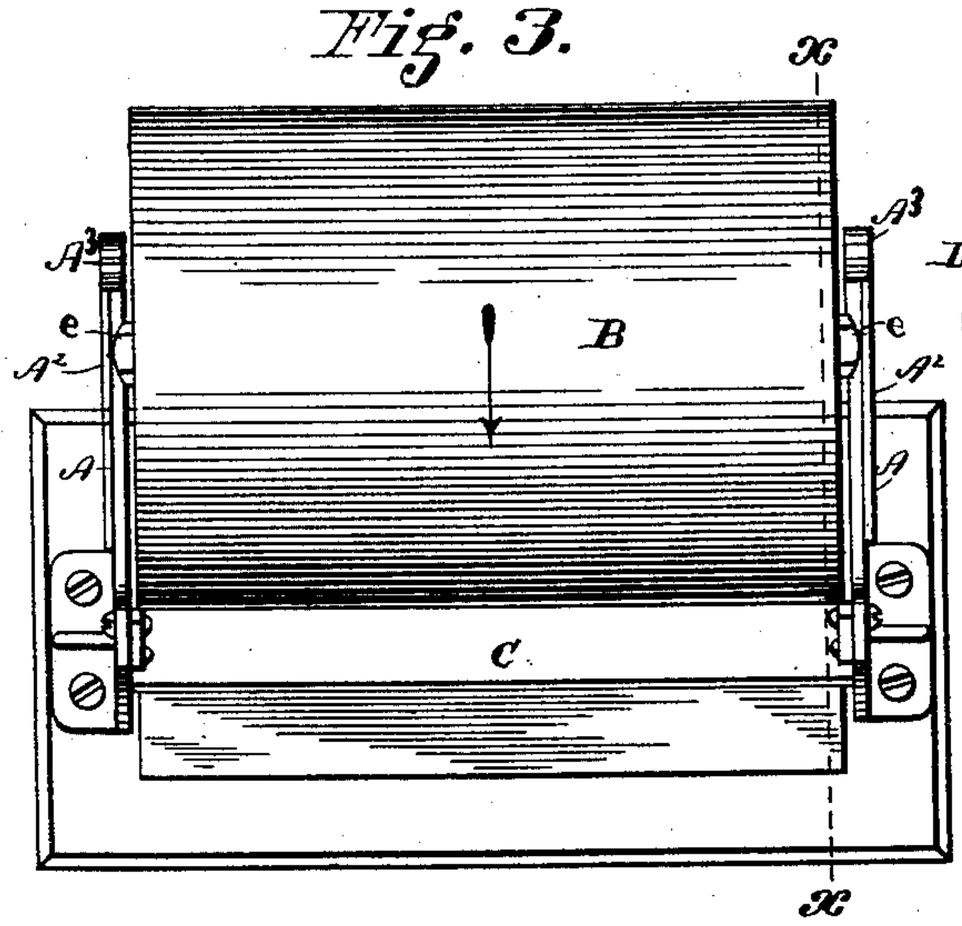


Fig. 4.



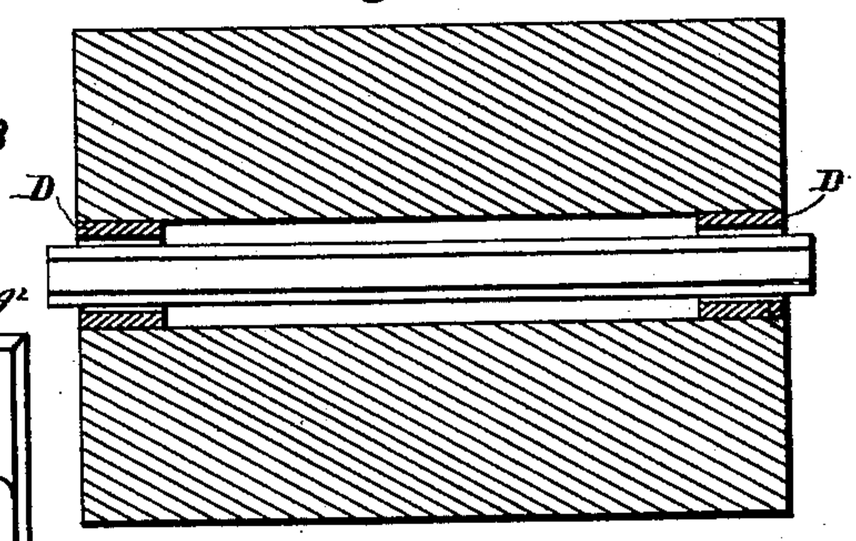
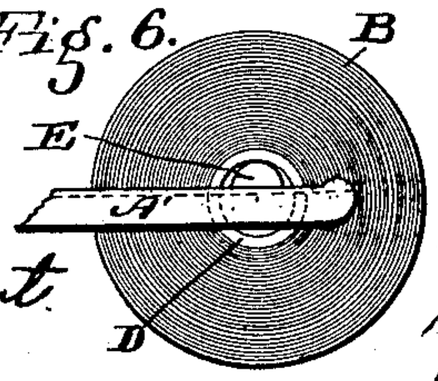


Fig. 5.

Fig. 6.



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ROLL-PAPER HOLDER AND CUTTER.

SPECIFICATION forming part of Letters Patent No. 452,720, dated May 19, 1891.

Application filed September 20, 1888. Serial No. 285,873. (No model.)

To all whom it may concern:

Be it known that I, ABBOTT Q. ROSS, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Paper-Roll Holders and Cutters; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

In that class of paper-roll holders in which the roll of paper is mounted upon a concentric shaft or axis, and in which a knife or cutting-edge is provided, against which the free end of paper unwound from the roll is drawn to sever a sheet, there is liability of racing the roll when the end of paper is quickly pulled, thereby causing the unwinding of more paper than is needed or desired, and, furthermore, unless the roll is perfectly cylindrical, which seldom or never happens, it is apt to shift either forward or backward in regaining its equilibrium after a sheet has been removed, thereby removing the new end of paper from a point convenient to be grasped and requiring the turning of the roll more or less to find said end.

It is the object of my invention to so mount the roll as to prevent both the aforesaid racing and the shifting of the roll in regaining its equilibrium.

The means which I have contrived in carrying out my invention I will first describe, and then point out particularly in the claims at the end of this specification.

In the accompanying drawings, Figure 1 represents an end view of a paper-roll holder embodying my improvements; Fig. 2, a cross-sectional view of the same; Fig. 3, a top plan view; Fig. 4, a longitudinal sectional view; Fig. 5, a detail view of a friction-roller against which the roll bears when the free end of the paper is pulled. Fig. 6 is a view showing a modified form of supporting-bar.

Similar letters of reference in the several figures indicate the same parts.

The letter A indicates a frame consisting of uprights secured to a suitable base and having substantially horizontal portions or arms A′, as shown.

B represents a roll of paper, and C a cutting-blade by which the length of paper as withdrawn from the roll is adapted to be severed. The roll of paper is provided with a central aperture, as shown clearly in Figs. 1, 2, and 4, and in each end of this aperture is preferably inserted a cylindrical bushing D, which may be of any suitable material, though metal serves best. Through the aperture of the roll is inserted a bar or support E, which is adapted to rest upon the arms A′ of the frame, being preferably made flat on the under surface, so as to prevent it from turning when the roll is revolved. It will be observed that this bar or support E does not fill the aperture of the roll nor the aperture of the bushings, if they are used, and that consequently the support which it affords the roll is eccentric to the center of rotation of the roll. In other words, by the use of this bar the roll is hung from above its center, which produces increased friction at the point of support that overcomes any racing tendency and also prevents the dropping of the roll either forward or backward when slightly elliptical or out of true. The upper surface of the supporting-bar may be rounded, as shown in Fig. 6, or may be angular or polygonally-shaped, as shown in Figs. 1 and 2. In either case the friction between it and the aperture of the roll or the bushings in the roll, if they be used, will be much greater than if the roll were mounted on a concentric support, as will be readily understood.

To remove the paper from the roll mounted as described it is only necessary that its free end be pulled out to the required distance under the knife-blade C and then drawn upward, so as to cause the knife to sever it. As the roll is rotated by the draft upon the paper it is drawn toward the knife, and as it diminishes in size its supporting-bar E slides upon the arms A′ A′ in the direction indicated by the dotted arrow in Fig. 1. When thus drawn forward, the roll might be permitted to bear directly against the frame-work; but I preferably interpose a friction-roller F, (see Figs. 2 and 5,) in order that its operation may be smoother and to prevent the paper being torn.

Guide-flanges A^2 are formed upon the arms A′, so as to properly confine the supporting-

bar in its place on said arms and prevent its working out, and to permit a free and independent movement of the ends of the supporting-bar upon the arms A′, so that the bar will accommodate itself to rolls that are more or less conical in form, the extremities of the bar are made rounded or beveled, as shown at *e* in Fig. 3. By this provision considerable independent motion of the ends of the bar is allowed without causing them to bind against the guide-flanges A^2.

Lugs or shoulders A^3 are provided at the outer extremities of the arm A′ for the purpose of preventing the supporting-bar from sliding off said arm when the roll is rotated backward.

Having thus described my invention, what I claim as new is—

1. In a paper-roll holder, the combination, with a roll of paper having a central aperture, of an angular bar passing through said aperture and constituting an eccentric support for the said roll, and horizontal guideways in which the ends of the supporting-bar rest, substantially as described.

2. In a paper-roll holder, the combination, with the frame having the substantially horizontal arms and the guide-flanges and end lugs or stops thereon, of the roll of paper and the bar constituting an eccentric support for the roll, said bar having the under sides of its ends squared for bearing on the horizontal arms, substantially as described.

3. In a paper-roll holder and cutter, the combination, with the frame having the substantially horizontal arms provided with guide-flanges, of the roll of paper, and the roll-supporting bar having the beveled ends, substantially as and for the purpose specified.

4. In a paper-roll holder and cutter, the combination, with the frame having the substantially horizontal arms, of the knife, the roll, the bar for supporting the roll eccentrically and having a sliding motion on the arms of the frame, and the friction-roller against which the roll bears and rotates when the free end of paper is drawn upon, substantially as described.

5. In combination with a roll-paper holder and cutter, a supporting-bar or axle provided with an angular upper surface adapted to support the roll, and a flat under surface adapted to slide on horizontal guideways, as herein set forth.

6. In a roll-paper holder and cutter, the combination, with the frame having substantially horizontal guideways, of a supporting-bar having flat bearing-surfaces on which it is adapted to slide in said guideways, as herein set forth.

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