(No Model.)

J. M. BOLTON.

STAND AND CUTTING KNIFE FOR PAPER ROLLS.

No. 386,622. Patented July 24, 1888.

Fig. 1.

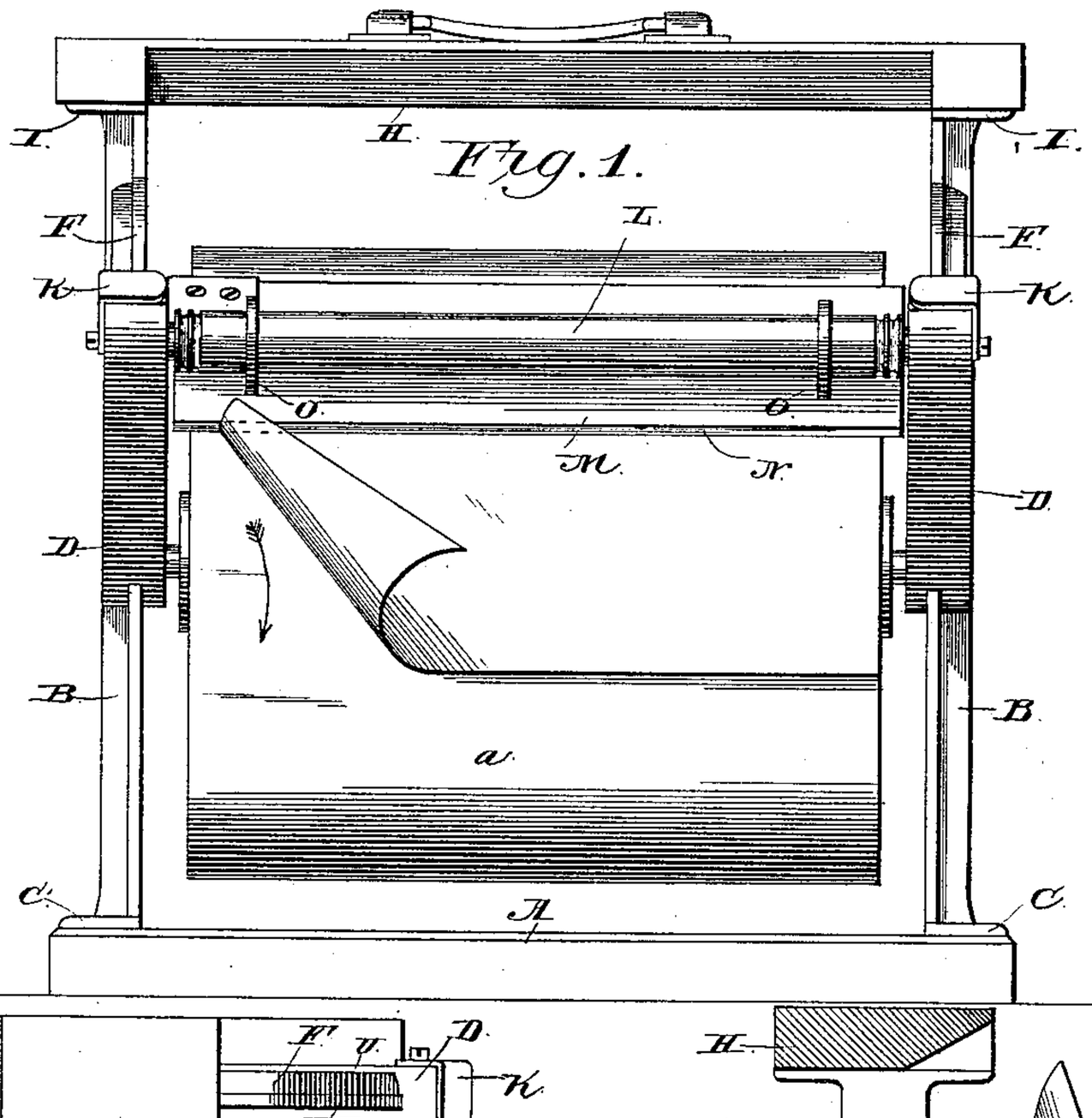


Fig. 2.

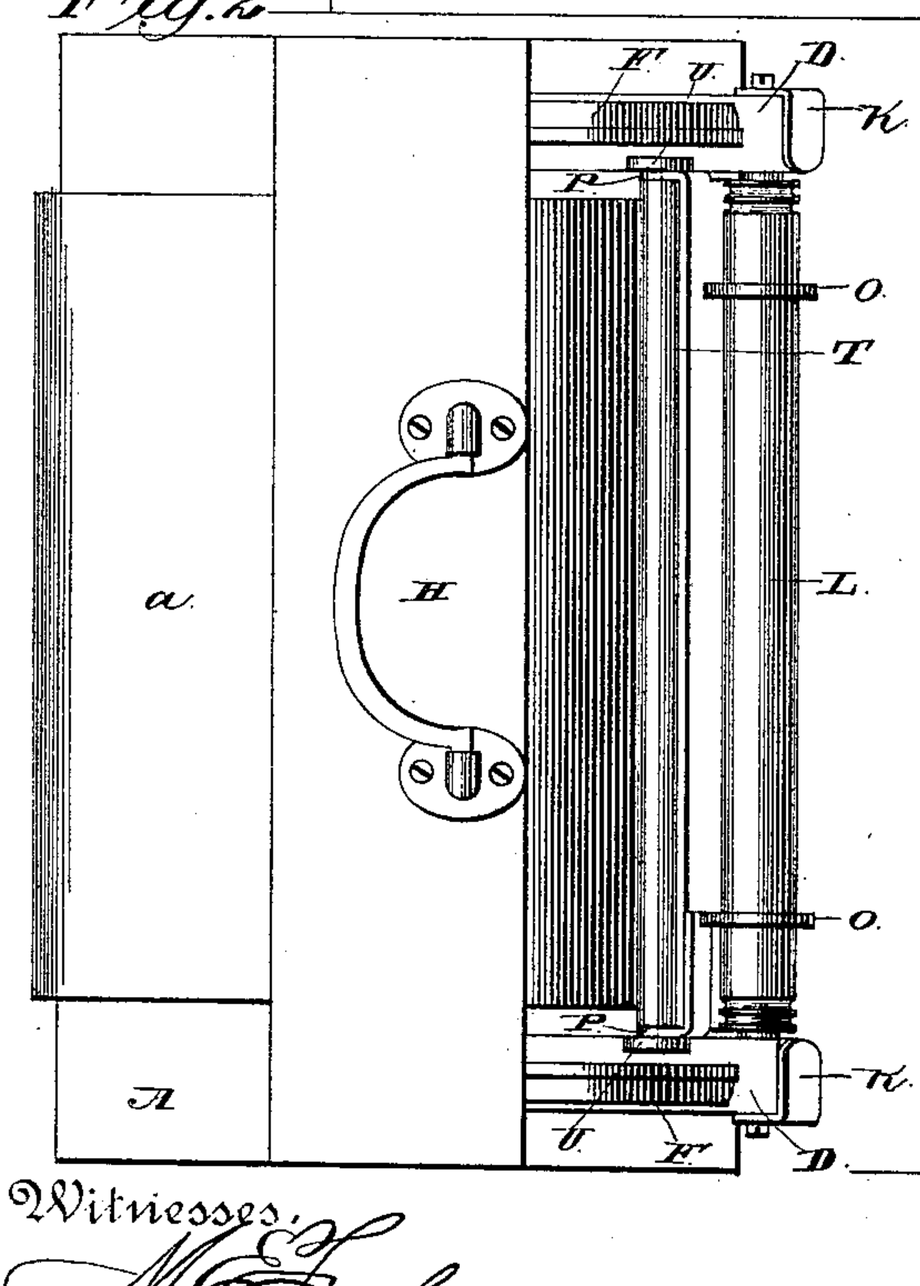
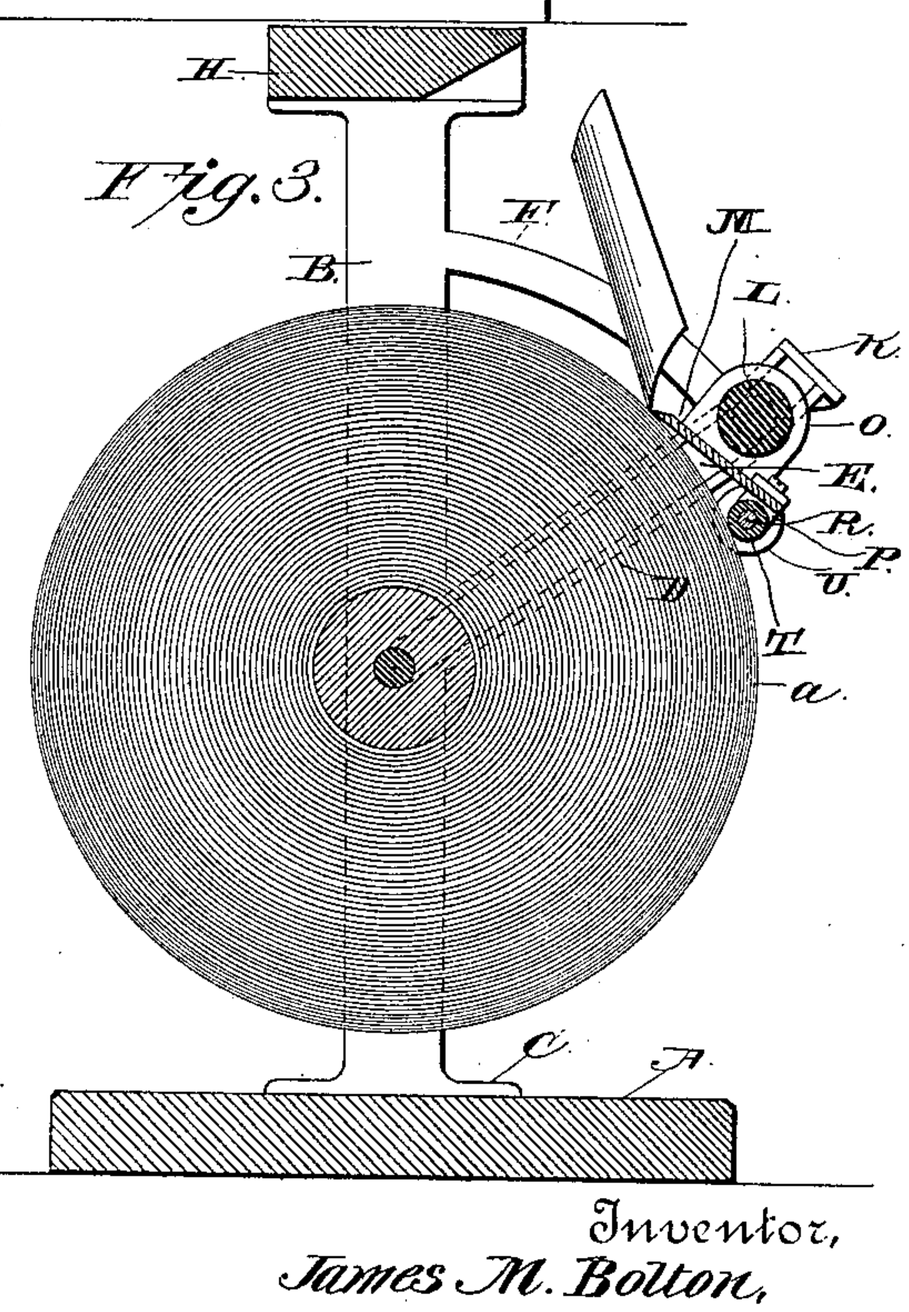


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES MADISON BOLTON, OF SPRINGFIELD, ILLINOIS.

STAND AND CUTTING-KNIFE FOR PAPER-ROLLS.

SPECIFICATION forming part of Letters Patent No. 386,622, dated July 24, 1888.

Application filed April 5, 1888. Serial No. 269,667. (No model.)

To all whom it may concern:

Be it known that I, JAMES MADISON BOLTON, a citizen of the United States, residing at Springfield, in the county of Sangamon and State of Illinois, have invented a new and useful Improvement in Stands and Cutting-Knives for Paper-Rolls, of which the following is a specification.

My invention relates to an improvement in stands and cutting-knives for paper-rolls; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of a paper-roll provided with a stand and cutting-knife embodying my improvements. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical transverse sectional view of the same.

A represents a suitable base or support.

B represents a pair of vertical standards, which have feet C at their lower ends, bolted or screwed to the upper side of the base. The said standards are provided at a suitable distance from their upper ends with outwardly-extending upwardly-inclined arms D, which are provided on their inner sides with grooves E. The lower ends of the said grooves are rounded, and the outer upper ends thereof are open, as shown.

F represents curved braces, which connect the upper ends of the standards to the outer ends of the inclined arms D. The said standards, braces, and arms are preferably cast integrally; but they may be formed separately and secured together, if desired. The upper ends of the standards are connected by a cross-bar, H, which is bolted to horizontal plates I at the upper ends of the standards, said plates being similar in size and shape to the feet C at the lower end of the standards.

K represents a pair of caps, which are pivoted to the outer sides of the arms D, near the outer ends of said arms, and are adapted to be closed over the open ends of the grooves E therein. The coil of paper *a* has its trunnions journaled in the lower ends of the grooves E, the said grooves forming guides to conduct the said trunnions to their bearings.

L represents a shaft, which has its ends reduced in diameter to a sufficient extent to enable them to enter the grooves E, the length of the shaft being equal to the width of the space between the sides of the said grooves.

M represents a knife or cutting-blade, which is straight, has a plane lower surface, and has one edge beveled, as at N. Projecting from the upper side of the blade or cutter, near the ends thereof, is a pair of ears, O, in which are openings to receive the shaft L, and thereby the said blade or cutter is hinged to the said shaft and is adapted to turn axially thereon. The ends of the blade opposite the corners of the cutting-edge thereof are provided with depending ears P. A shaft, R, is journaled in the said ears and extends longitudinally on the under side of the blade or cutter, near the rear edge thereof. On the said shaft and arranged between the ears is loosely journaled a hollow cylindrical roller, T, and on the ends of said shaft which project beyond the ends of the ears are loosely journaled a pair of circular collars or disks, U.

When the roll of paper is mounted in its bearing, the shaft has its ends inserted in the grooves of arms D and causes the beveled cutting-edge of the blade and one side of the hollow cylindrical roller to bear against the periphery of the paper-roll. The free end of the roll of paper should project a sufficient distance beyond the beveled cutting-edge of the blade to enable the same to be grasped.

The operation of my invention is as follows: When a piece of the paper is wanted, the operator grasps the free end of the roll and draws upon the same, so as to cause the roll to partly rotate until the paper has been unrolled to a sufficient extent, and he then draws outward on the end of the roll of paper, so as to present the same to the cutting-edge of the blade or cutter, the latter serving to effect a clean cut of the paper, as will be readily understood. The function of the cylindrical roller T is to maintain the cutting-blade at a tangent to the roll, so as to adapt the edge of the blade to readily cut the paper when the free end of the latter is drawn outward, as before stated, and the function of the rollers or disks U is to bear against the ends of the roll, so as to guide the paper properly to the cutting-edge of the blade.

When the paper is to be used by merchants and others for wrapping parcels and the stand is arranged on the counter, or above the same, the paper will be drawn from the lower edge of the blade, as illustrated in Fig. 1 of the drawings. If the stand containing the roll is supported under the counter, the roll will be placed in a reverse position in the stand, so as to cause it to rotate in the opposite direction from that indicated by the arrow in Fig. 1, and the shaft L will be unshipped from the grooves of arms D and arranged in the reverse direction in the said grooves, so as to have the cutting-edge of the blade uppermost on the roll, as indicated in Fig. 3, thereby adapting the paper to be drawn upward from the roll when cutting the same.

The function of the caps K is to cover the upper ends of the grooves E, so as to prevent the shaft L from becoming accidentally unshipped from the said grooves, and also prevent dust and dirt from accumulating on the bearings of the shaft.

It will be readily understood that, owing to the downward inclination of the grooves in which the ends of the shaft L are secured, the said shaft and the cutting-blade will be moved inwardly toward the axis of the roll by their own gravity as the diameter of the roll decreases, so as to cause the cutting-blade and the cylindrical roller to be at all times firmly in contact with the periphery of the roll. If preferred, three or more of the standards B may be employed, arranged in line with or above each other, so as to adapt the stand to hold two or more of the rolls of paper and the cutting devices therefor.

Having thus described my invention, I claim—

1. The combination of the standards having the inclined arms provided with the grooves E, said grooves being adapted to form the bearings for a roll of paper, and the shaft L, having its ends arranged in the grooves, the cutting-blade secured to the said shaft, and the roller under the said blade at a distance from the cutting-edge thereof, whereby the cutting-blade will be at all times maintained at a tangent to the roll of paper, substantially as described.

2. The combination of the stand having the inclined arms D, provided with grooves E, the roll of paper having its bearings journaled in the lower ends of the grooves, the shaft L, having its ends arranged in the grooves, the cutting-blade having the ears pivoted or hinged on shaft L, and the roller on the under side of said plate, at a distance from the cutting-edge thereof, for the purpose set forth, substantially as described.

3. The combination of the stand having the arms provided with the inclined grooves E, said grooves being adapted to form the bearings for a roll of paper, the shaft L, having its ends arranged in grooves E, the cutting-blade having the ears pivoted or journaled on shaft L, the roller arranged under the cutting-blade, at a distance from the cutting-edge thereof, and the disks or rollers U at the ends of the cutting-blade, substantially as described.

4. The stand having the inclined arms provided with the grooves or ways E, said grooves or ways being adapted to form the bearings for a roll of paper, the shaft L, having its ends arranged in said grooves or ways above the roll of paper, and the cutting-blade pivoted or hinged to the shaft, as set forth.

5. The stand having a roll of paper supported thereon, combined with the shaft L, arranged above the roll of paper, and the cutting-blade hinged or pivoted to said shaft and bearing on the paper-roll, whereby the blade will be maintained at all times at an angle to the paper-roll, as set forth.

6. The combination, with the journaled roll of paper, of the shaft L, movable laterally in guides toward and from the roll, and the cutting-blade hinged or pivoted on shaft L and arranged at a tangent to the roll, with its edge in contact with the latter, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JAMES MADISON BOLTON.

Witnesses:
JAMES H. CORBLEY,
JNO. E. EVERHART.