

(No Model.)

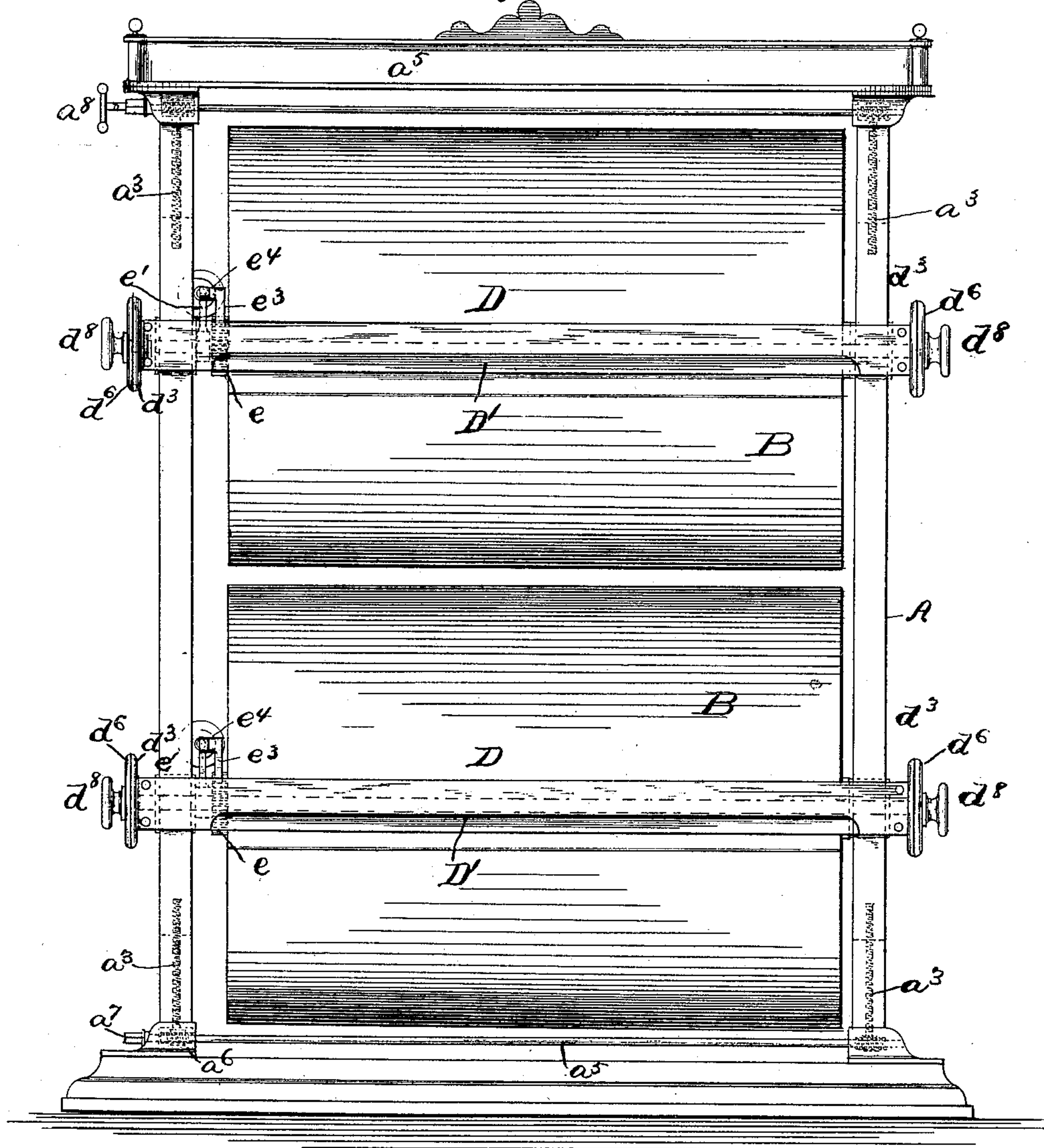
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W. E. NOTT.
ROLL PAPER HOLDER AND CUTTER.

No. 432,246.

Patented July 15, 1890.

Fig. 1.



Witnesses

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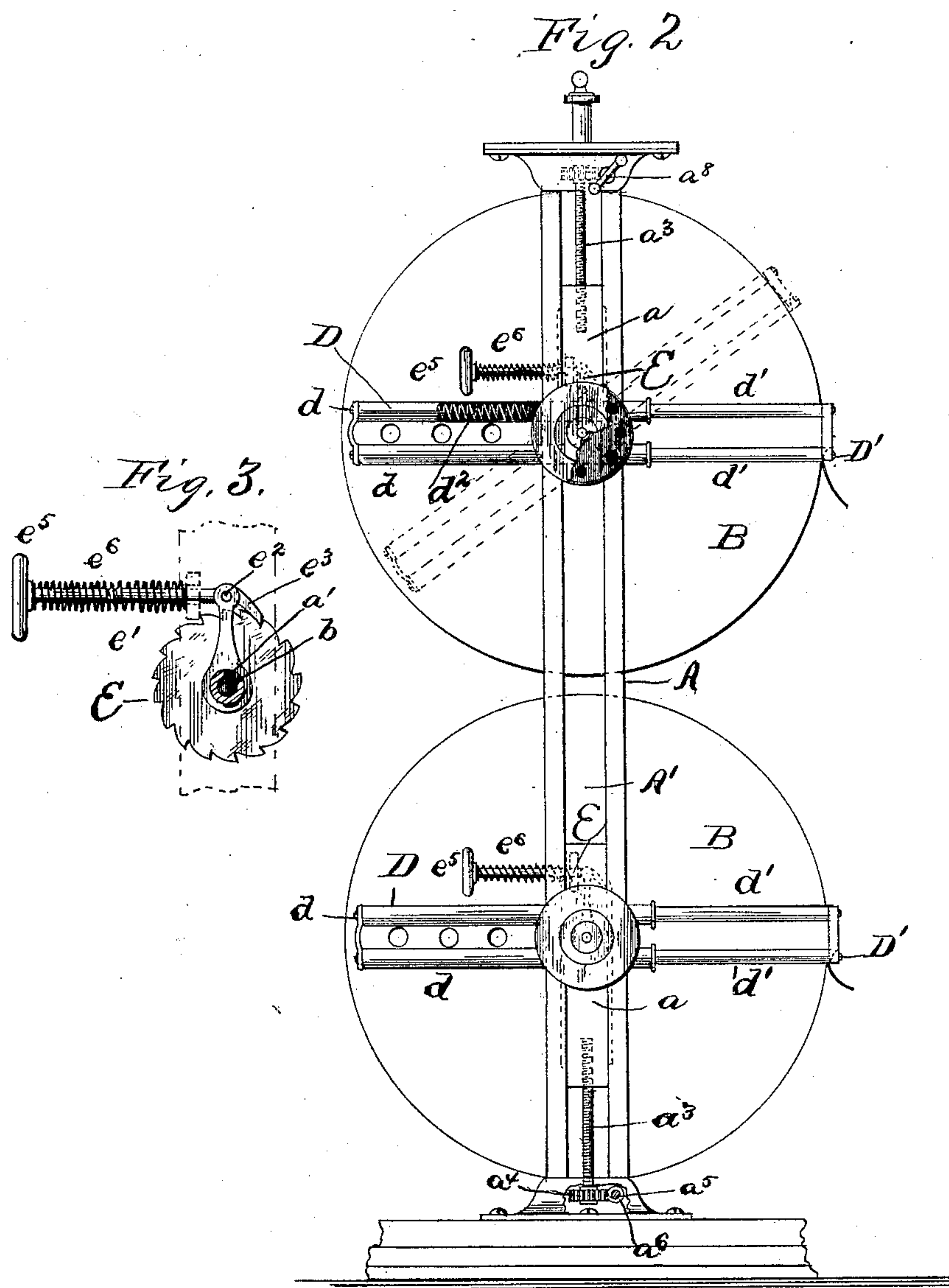
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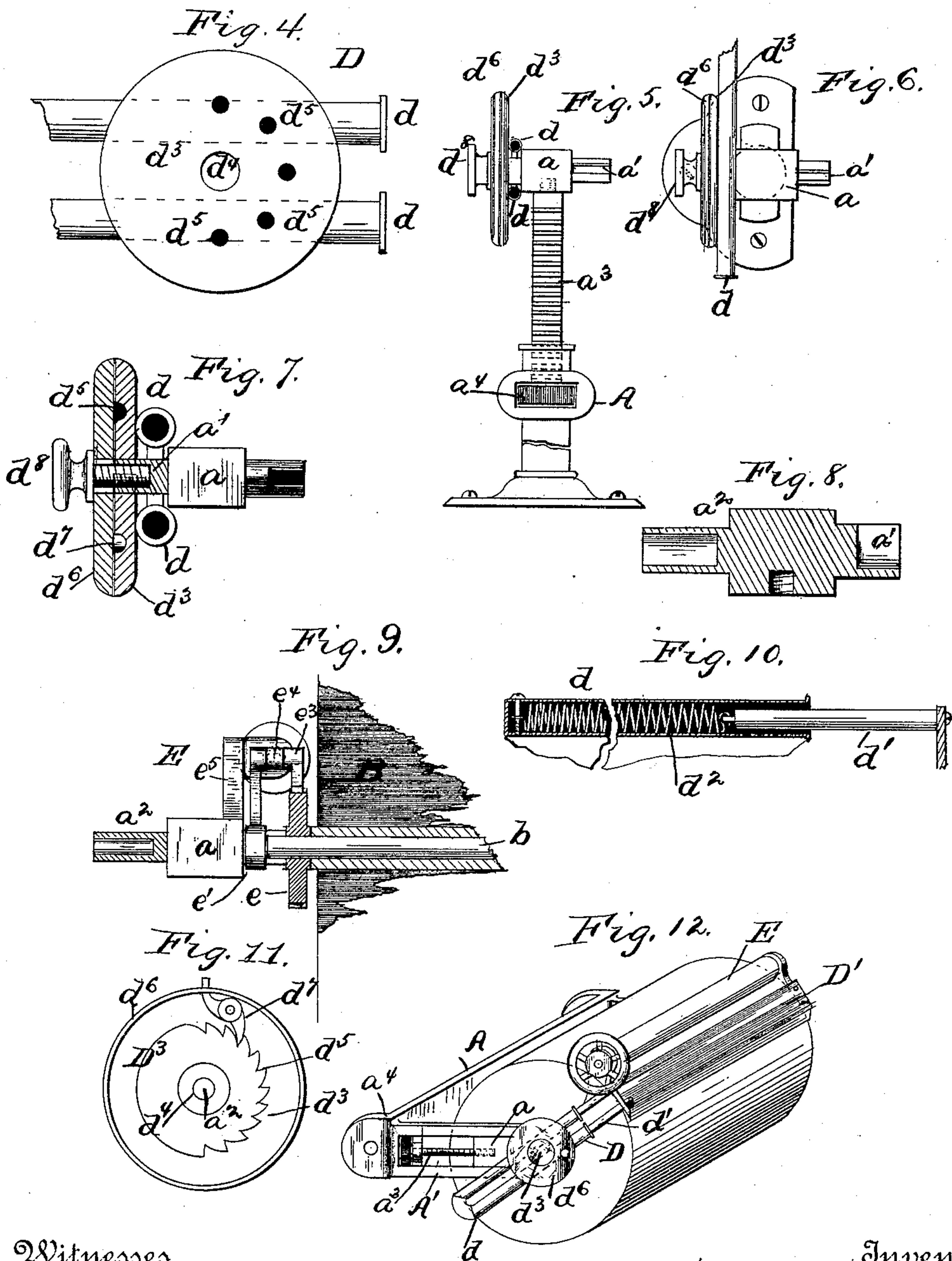
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UNITED STATES PATENT OFFICE.

WILFORD E. NOTT, OF HARTFORD, CONNECTICUT.

ROLL-PAPER HOLDER AND CUTTER.

SPECIFICATION forming part of Letters Patent No. 432,246, dated July 15, 1890.

Application filed June 25, 1889. Serial No. 315,542. (No model.)

To all whom it may concern:

Be it known that I, WILFORD E. NOTT, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Paper Holders and Cutters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to that class of paper-cutting machines in which a roll of paper is held in such manner that any desired length can be cut from the same by drawing the paper unrolled across a knife or cutter secured to the frame of the machine and extending across the space in which the roll is contained.

The object of my invention is to improve upon that class of machines, and particularly to provide means for adjusting the relative position of the roll of paper to the frame, means for automatically adjusting the knife or cutter so that its edge will always be in contact with the paper, means for moving the roll of paper so that the edge from which the last part was cut will be below the knife in position for the operator to take hold without lifting the cutter or putting his fingers beneath the same for that purpose, and in many minor details, all as will hereinafter be described.

My invention therefore consists of constructions and combinations, all as will hereinafter be described in the specification, and pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 represents a front elevation; Fig. 2, a side elevation; Fig. 3, a detail showing pawl-and-ratchet mechanism; Fig. 4, a detail showing the disk and part of the tubes; Fig. 5, a modification; Fig. 6, a top plan of the device shown in Fig. 5; Fig. 7, a top plan, partly in section, showing the disks, block, and other details; Fig. 8, a section of the block; Fig. 9, a detail showing the ratchet-wheel and pawl in position; Fig. 10, a detail showing the tube in section; Fig. 11, a modification of the pawl-and-ratchet mechanism; Fig. 12, a modification of the device shown in Fig. 1.

A represents the frame, of any desired con-

struction, and having slots A' for blocks a, which serve as bearings for the rolls of paper B. Owing to the fact that these rolls vary in size in their original packages and are constantly being reduced in size by withdrawing the paper therefrom, it is desirable that some means be provided for adjusting the relative position of the rolls, so that if there be rolls of different thickness the position of the rolls can be arranged so as not to interfere with each other. Therefore these blocks are provided with suitable adjusting-screws a^3 , secured at their opposite ends against longitudinal movement, so that as they are turned they will move to and from a given point, as may be desired. The means for turning these screws may be of any desired character; but I prefer the form shown in Figs. 1 and 2, where the screws are provided with pinions a^4 , connected together by a shaft a^5 , having the worm-gear a^6 and key-head a^7 for the key or wrench a^8 , by which the shaft is turned. If desired, the shaft a^5 may be dispensed with and the screw turned by a hand-wheel, as shown in Figs. 5 and 12. Other power may be applied, if desired. The block is provided with a recess a' for the journal b of the rolls B, which can be placed in position without the necessity of changing any part, as the open upper surface allows the journals to be dropped into place. The stud a^2 carries the cutter-frame D. This frame consists, preferably, of two hollow tubes d d , in which are inserted two rods d' d' , secured at their inner ends to retracting-springs d^2 d^2 , which tend to draw the rods d' d' into the tubes d d , to the bottoms of which the said springs are secured in any suitable manner.

To the upper or outer ends of the rods d' is secured the knife or cutter D', which has a scissor-edge for cutting the paper. The knife or cutter always remains in contact with the paper, no matter to what size the roll of paper may be reduced, as the springs d^2 d^2 act upon the rods d' to draw the latter into the tubes, and consequently hold the knife or cutter against the paper. These tubes are cast with or secured to a disk d^3 , having an opening d^4 , which passes around the stud a^2 to furnish a bearing for the frame D, and a number of depressions d^5 , arranged on an arc of a circle

for the stud-pin d^7 on a second disk d^6 , secured in place upon stud a^2 by a screw d^8 , which forces it against the disk d^3 . If it be desired to alter the angle of the cutter-frame, the disk d^6 is loosened, so that the pin d^7 can be withdrawn from the depression d^5 that it happens to be in, and the angle of the frame changed before the disk d^6 is returned to position and clamped in place. If desired, the disk d^3 may have a segmental ratchet (see Fig. 11) instead of the depressions, and the disk d^6 may have a pawl instead of the pin to accomplish the same result and obviate the necessity of unlocking the disk d^6 when it is desired to change the angle of the cutter-frame.

In the paper-cutters now in use the paper is cut close to the knife, and the roll of paper must be moved slightly to bring the end of the paper under the knife. If the springs which hold the knife in place be very strong, several attempts are often made before the roller can be turned. As stated in the preamble, one of the objects of my invention is to provide positive means for causing the roller to revolve when desired. One form of device for accomplishing this object is shown in Figs. 1, 2, 3, and 9, and another form in Fig. 12. The device E (shown in the former figures) consists of a ratchet-wheel e , secured to the shaft of the paper-roll, a rocking arm e' , loose on said shaft or on the part a , a pin e^2 , journaled in the upper end of the arm e' and carrying the pawl e^3 , a push-rod e^4 , sliding in an arm e^5 on the block a and having a spring e^6 for retracting it after it has been pushed in, and pivoted at its forward end to the pin e^2 , as shown, so that when the rod e^4 is pushed in it rocks arm e' and causes the pawl e^3 to turn the ratchet-wheel and the shaft of the paper-roll, so that the paper will project beyond the cutting-edge of the knife, where it can be grasped.

In Fig. 12 is shown a modification especially adapted for barbers' shops and other places where narrow rolls of paper are used. This device differs from the devices shown in the other figures, in that it is designed to carry a single roll of paper, whereas as many rolls as may be desired can be placed upon the other frames by slightly changing or enlarging the construction therein shown. It also differs in the means for turning the roll

to make the edge of the paper appear beyond the knife. It consists of a roller secured to the cutter-frame and provided with a hand-wheel by which it can be turned. This roller rests upon the paper and follows all the movements of the cutter-frame, so that no matter what position the center frame takes the roller will always be in position to move the roll of paper and cause the free end of the latter to project beyond the cutter.

What I claim as new is—

1. The combination of a frame having slots, the paper-roll having blocks in said slots, adjusting-screws secured to said blocks and frame, substantially as described, and the cutter-frame moving with said roll.

2. The combination of a frame having slots, the paper-roll having blocks in said slots, adjusting-screws geared together and secured to said blocks and frame, and the cutter-frame moving with said roll.

3. The combination of the frame, a paper-roll adjustable in said frame, and the cutter-frame moving with said roll and having mechanism for changing its angle.

4. The combination of the frame, a paper-roll journaled on and adjustable in said frame, a cutter-frame, and mechanism for moving the paper-roll under the cutter on said frame.

5. The combination of a frame, a block having the stud a^2 , a cutter-frame journaled on said stud and having a disk, and a second disk having means for holding said frame in any desired position.

6. The combination of a frame, a paper-roll journaled in said frame, the tubes pivoted upon the journals of said roll, springs within said tubes, and the rods inserted in said tubes.

7. The combination of a frame, a paper-roll journaled in said frame, the tubes pivoted upon the journals of said roll, locking devices for said tubes, springs within said tubes, and the rods inserted in said tubes.

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

WILFORD E. NOTT.

Witnesses:

THOMAS F. HOLDEN,
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