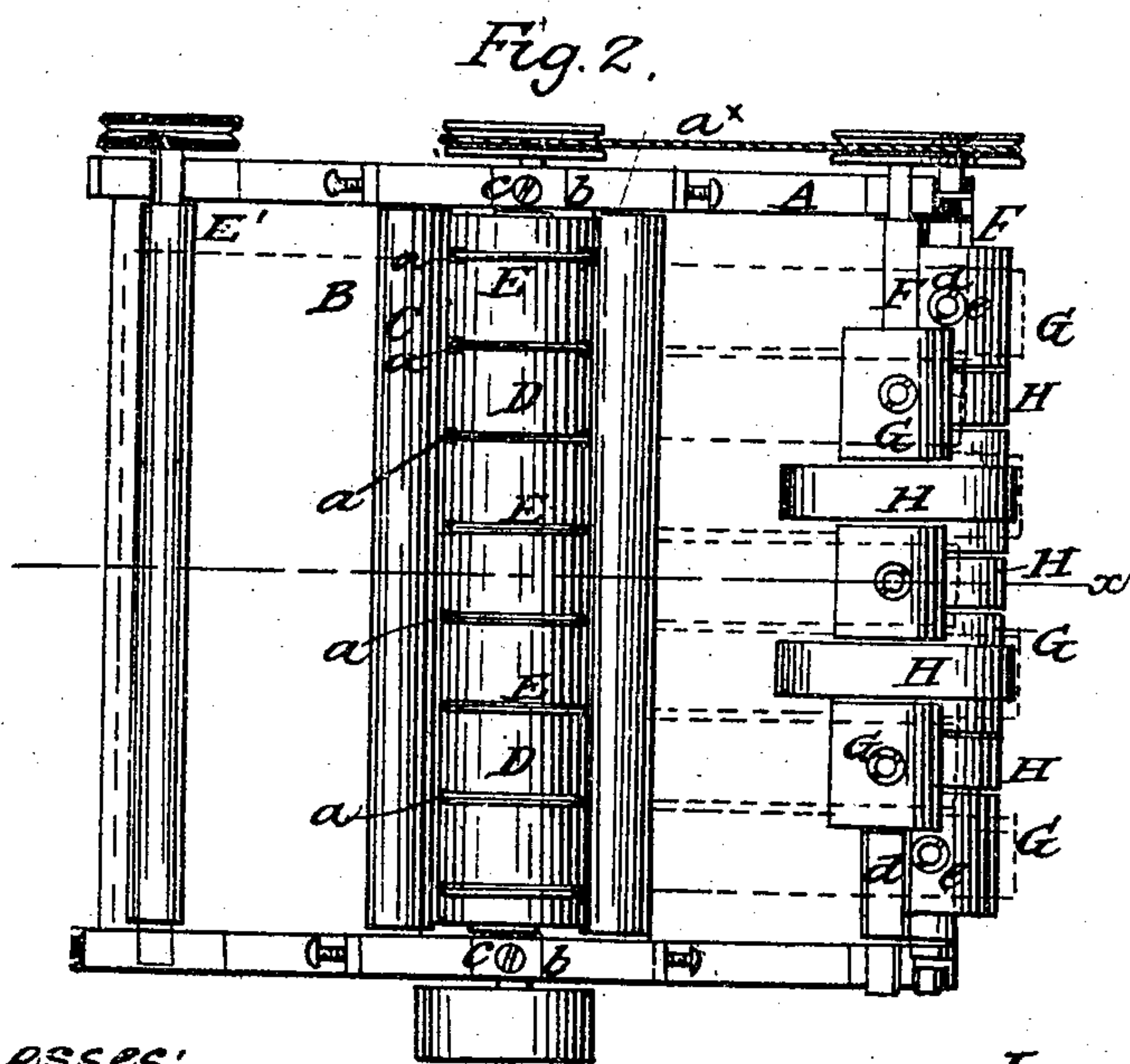
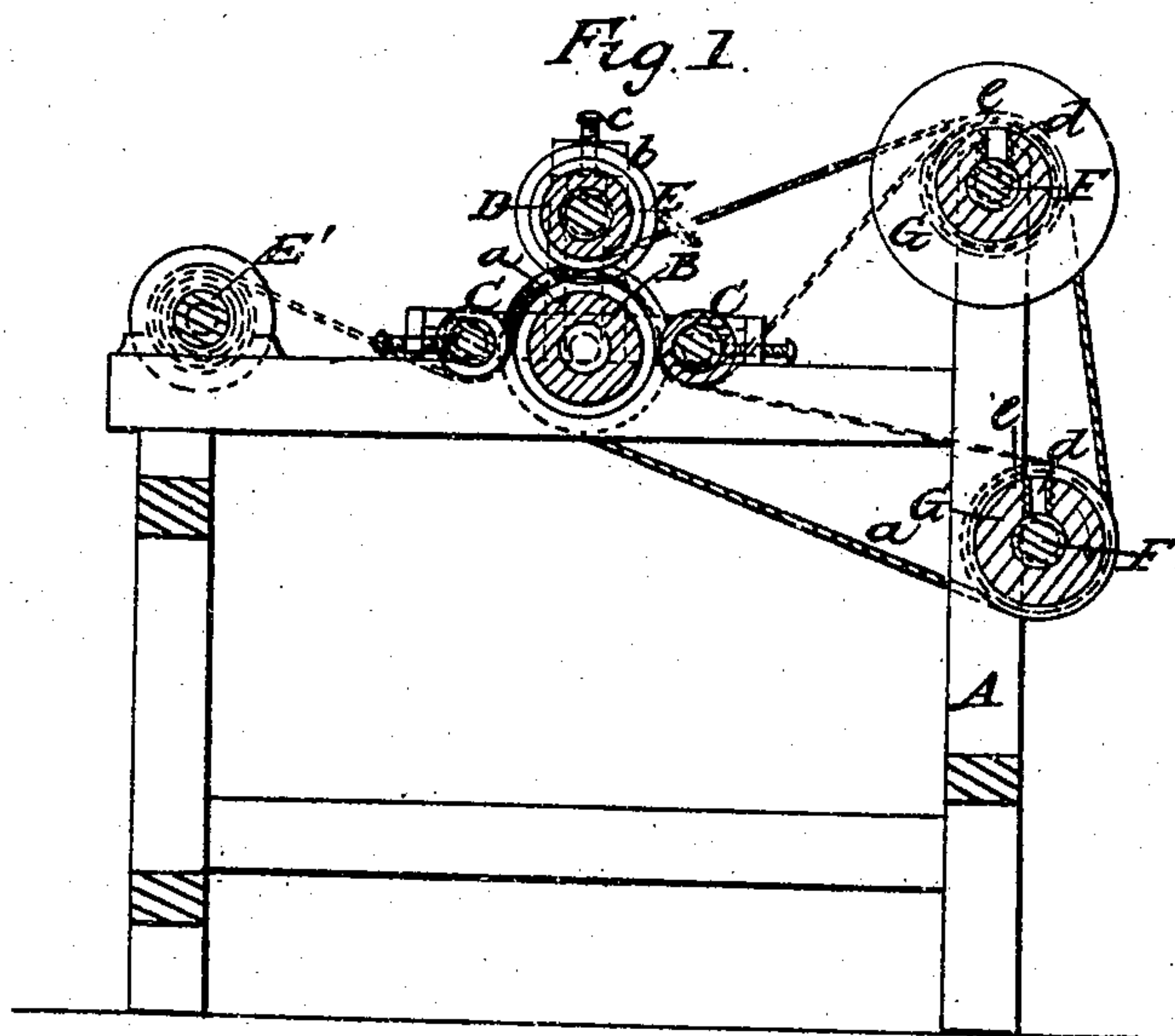


J. B. WORTENDYKE.

Machine for Cutting Paper for Paper Twine, &c.

No. 44,249.

Patented Sept. 13. 1864.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOHN B. WORTENDYKE, OF GOODWINVILLE, NEW JERSEY.

## MACHINE FOR CUTTING PAPER FOR PAPER TWINE, &c.

Specification forming part of Letters Patent No. 44,249, dated September 13, 1864.

*To all whom it may concern:*

Be it known that I, J. B. WORTENDYKE, of Goodwinville, in the county of Bergen and State of New Jersey, have invented a new and improved machine for cutting paper for the manufacture of paper twine, and for other purposes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a plan or top view of the same.

Similar letters of reference indicate like parts.

This invention relates to a new and useful device for cutting paper from a continuous roll into strips.

The invention is designed more especially for cutting paper for the manufacture of paper twine, but it may be advantageously used for other purposes where paper requires to be cut into narrow strips.

The invention consists, first, in the employment or use of two rollers in connection with a grooved cylinder and a cylinder of cutters arranged in such a manner as to insure the proper cutting of the paper in an expeditious manner.

The invention consists, secondly, in the employment or use of two sets of receiving-rollers, as herein shown and described, whereby the cut paper strips are wound upon their respective blocks without the liability of one strip lapping over or upon the block of the strip contiguous to it.

The invention consists, thirdly, in a novel manner of attaching the blocks on which the cut strips are wound to their shafts, whereby the strips are wound compactly on the blocks and without subjecting the former to any undue strain or tension.

A represents a framing of rectangular form, and constructed in any proper manner to support the working parts.

B is a cylinder placed horizontally on the framing A, and having a roller, C, at each side of it, the axes of the rollers C C being in the same horizontal plane. These rollers C may be covered with felt, india-rubber, or

other suitable material to give them a surface which will be yielding or pliable to a certain degree.

Directly over the cylinder B, and in the same axial plane, there is a cylinder, D, which is provided with a series of circular cutters, E, at suitable and equal distances apart, said cutters working or fitting in grooves *a*, made circumferentially in the cylinder B, so that the periphery of the cylinder D may work in contact with that of cylinder B. The journals of the cylinder D are fitted in slotted uprights *b* at each side of the framing A, with set-screws *c* in their upper ends, by which the pressure of D on B, or, rather, the pressure of D on the paper which passes between D and B, may be regulated as desired.

E' is a roller placed on the framing A, at one end of it, and having the paper which is to be cut wound upon it in a continuous roll, and at the opposite end of the framing there are placed two shafts, F F—one above the other—and on these shafts the blocks G, on which the cut paper strips are wound, are placed. These blocks are not keyed on their shafts, being secured thereon by friction, which result is obtained by a piece of india-rubber, *d*, inserted in a hollow screw, *e*, passing into the blocks radially from their peripheries. The rubber *d* may be made to press in a greater or less degree on the shafts F by turning or adjusting the screws *e*.

Between the blocks G and upon the shafts F disks H may be placed.

The paper to be cut passes from the roller E' underneath the rollers C C and over the cylinder B, the rollers C C keeping the paper snugly down on the upper part of B, so that the cutters E can act in the most efficient manner in cutting the paper into strips. This feature of the two rollers C C, placed at opposite sides of the cylinder B, is an important one, for, whether the tension to which the paper is subjected in passing through the machine be greater or less, it cannot affect the proper action of the cutters on the paper, for the latter will always be pressed snugly over the cylinder B. The strips as they are cut are wound upon the blocks G on the two shafts F F, the strips passing alternately from the cutters to the blocks on the two shafts. By this arrangement or division of the blocks



the latter are not placed in contact, and the paper strip of one block cannot lap over the strip on the block adjoining or contiguous to it. The disks H keep the blocks G at the required distance apart, and they may, if desired, be of greater diameter than the blocks, in order to serve as guides for the strips while being wound upon the blocks. By having the blocks G secured on the shafts F by friction the paper is prevented from being subjected to any undue tension, which would occur in case of the roll of paper being of an irregular thickness, and it insures the strips being wound compactly on the blocks. In case, for instance, one of the strips is subjected to a considerable tension in being wound on its block G, the latter will be held stationary and its shaft F allowed to slip within it, until the tension is reduced so that the friction produced by the spring or rubber *d* is able to turn the block.

In working the machine, power is applied

to the cylinder B and motion communicated therefrom to the shafts F by a belt, *a*.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The two rollers C C, in combination with the cylinders B D, arranged relatively with each other, to operate in the manner substantially as and for the purpose herein set forth.

2. The employment or use of two or more shafts, F F, to receive the blocks G, on which the cut paper strips are wound, substantially as and for the purpose specified.

3. In combination with the cutting devices, as stated, the securing of the blocks G on the shafts F by means of a friction device, for the purpose of allowing each block to have a separate or independent movement, substantially as set forth.

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Witnesses:

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