

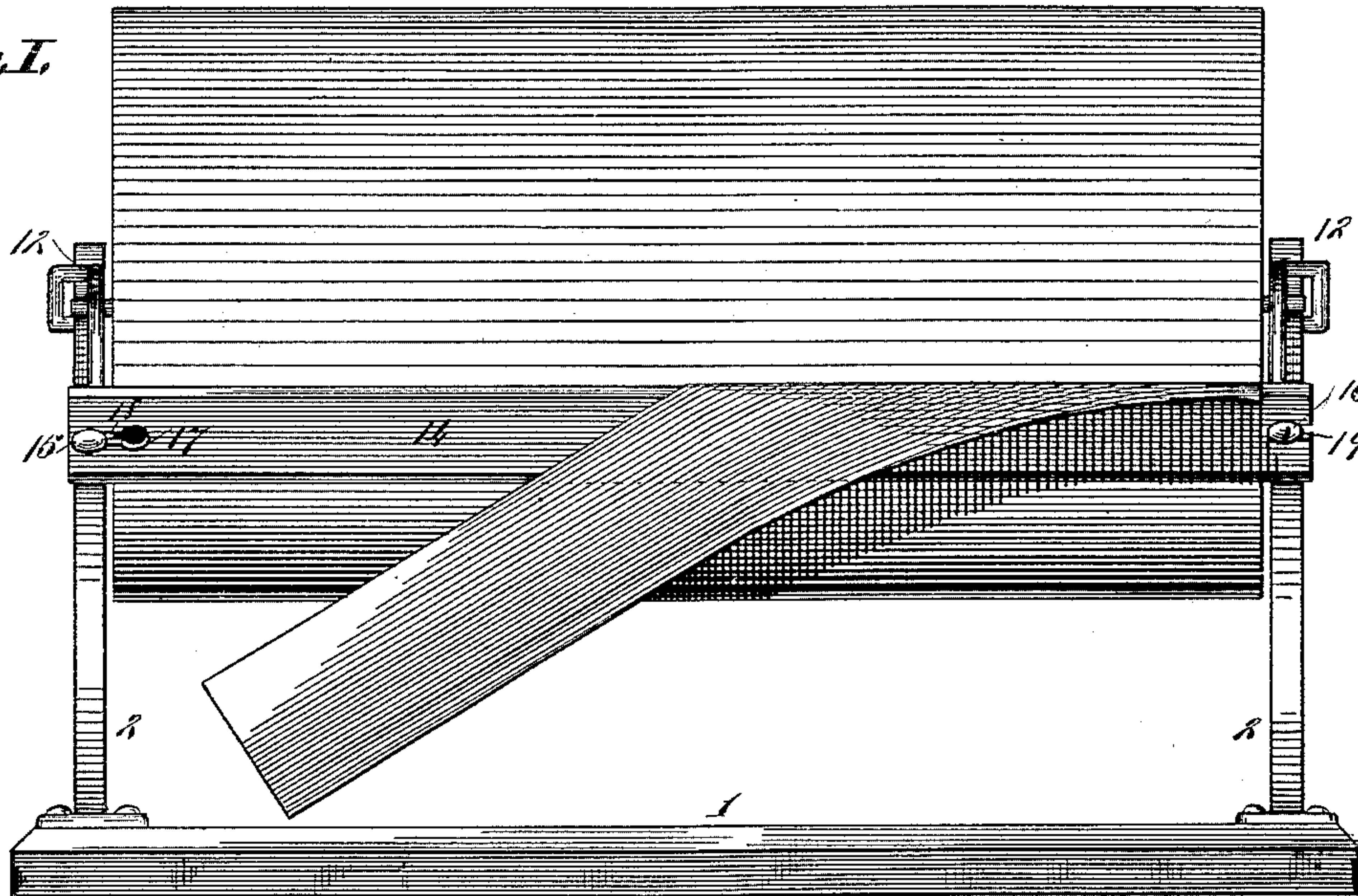
(No Model.)

L. EHRLICH.  
PAPER CUTTER.

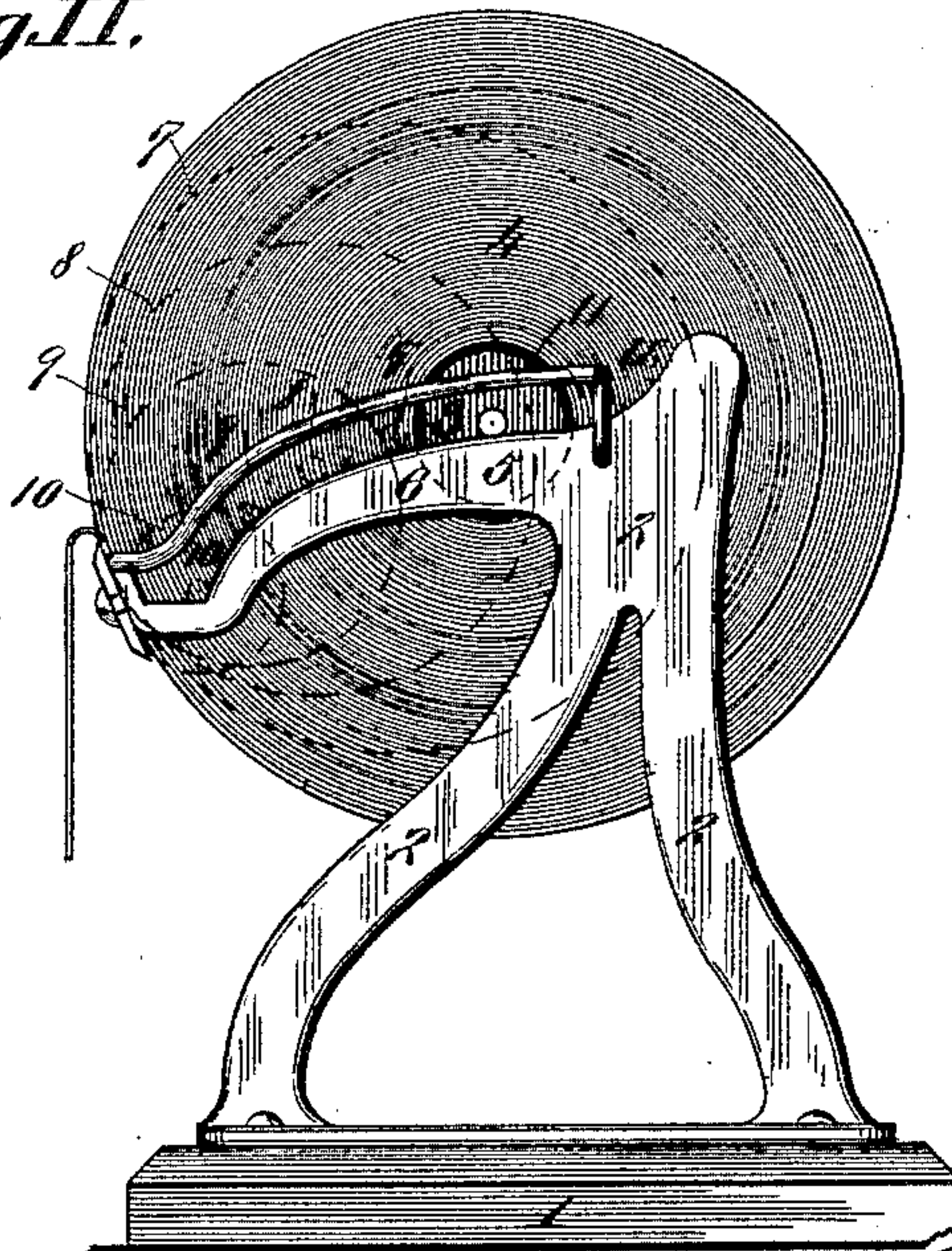
No. 394,063.

Patented Dec. 4, 1888.

*Fig. I.*



*Fig. II.*



*Fig. III.*

*Attest:*  
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*E. Arthur.*

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*By Knight Bros.*  
*Attys*



# UNITED STATES PATENT OFFICE.

LEO EHRLICH, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE AMERICAN ROLL  
PAPER COMPANY, OF SAME PLACE.

## PAPER-CUTTER.

SPECIFICATION forming part of Letters Patent No. 394,063, dated December 4, 1888.

Application filed December 20, 1887. Serial No. 258,503. (No model.)

*To all whom it may concern:*

Be it known that I, LEO EHRLICH, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Paper-Cutters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

10 Figure I is a front elevation of my improved paper-cutter. Fig. II is an end view. Fig. III is an enlarged detail view of one of the arms upon which the roller rests.

15 My invention relates to a paper-cutter in which a stationary knife is used and in which the roller moves toward the knife as the paper is taken off; and my invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

20 Referring to the drawings, 1 represents a suitable base, and 2 end pieces, which form the support for the roller.

3 represents the roller upon which the paper 4 is wound or placed, and which is provided with arbors or pins 5, which rest upon arms 6, formed upon or secured to the end pieces, 2, and projecting in a substantially horizontal position therefrom. The upper faces of these arms are inclined, and this inclination increases or is greater at the outer ends of the arms than at their inner portions. As the paper is removed the roller moves outward on these arms, owing to the inclination, and the inclination is made steeper or given a greater pitch at the outer portions of the arms, so that as the weight of the roller decreases its pressure against the knife will not correspondingly decrease, but will remain the same. For example, when the roller is first put on, it occupies about the position shown in full lines in Fig. II, the arbors or pins 5 bearing upon the inner portions of the arms, where the inclination is not great. The roller is heavy now, and this inclination causes it to press against the knife with just sufficient force, and no more. As the paper is removed, the roller gradually approaches the position shown by dotted line 7, and quite a portion of the paper having been removed the pressure of it upon the knife would not be so great

were the inclination upon the upper face of the arms the same. To avoid this lack of pressure the arms are given the gradual increase in inclination, so that as the roller moves from the position shown by dotted line 7 to the dotted line 8 the pins or arbors 5 travel over a still steeper inclination, and this inclination correspondingly increases as the roller moves from the dotted line 8 to the dotted line 9, and from the latter to the dotted line 10, where the inclination is quite acute. By a systematic inclination of the arms or the upper faces of the arms in this manner the roller is made to bear against the knife with a uniform pressure from the time it is first put on until the paper is entirely removed, which adds very much to the ease and perfect working of the device.

To prevent the roller from being accidentally thrown from its support while in use, I place guard-rails 11 about the arbors and running in line with the arms, as shown. The inner ends of these rails are bent outward at 12 (see Fig. I) to permit the passage of the pins or arbors 5 in putting the roller in place and removing it.

14 represents the knife, which is suitably secured to the arms 6. I have shown it fastened to the arms by means of a headed pin, 15, and a screw, 16. The knife has an enlargement, 17, to receive the head of the pin 15, and it is then slipped endwise to cause the pin 15 to enter a longitudinal slot, 18, in the knife. The other end of the knife is provided with a longitudinal slot, 19, to receive the screw 16. The knife can thus be quickly applied and removed, and by having it removable and having knives of different lengths the ends 2 may be placed farther apart and nearer together to accommodate themselves to rollers of different lengths.

I claim as my invention—

1. In a paper-cutter, the arms having varied inclinations, in combination with a roller and knife, substantially as and for the purpose set forth.

2. In a paper-cutter, the end pieces provided with arms having varied inclinations at their upper faces, in combination with a knife, and a roller having pins or arbors adapted

ed to bear upon the arms, substantially as and for the purpose set forth.

3. In a paper-cutter, the combination of the end pieces provided with arms having varied inclinations on their upper faces, in combination with the roller and guard-rails, substantially as and for the purpose set forth.

4. In a paper-cutter, the end pieces having substantially horizontal arms inclined on their upper faces, in combination with a roller supported on said arms and a knife secured to said arms, substantially as and for the purpose set forth.

5. In a paper-cutter, the combination of the end pieces provided with arms, knife secured to the outer ends of the arms, guard-rails having bends 12 and located above and in line with the arms, and roller having pins or arbors bearing on the arms, substantially as and for the purpose set forth.

6. In a paper-cutter, in combination with a knife and a roller, inclined ways upon which said roller is supported, the inclinations of said ways being varied, for the purpose set forth.

7. In a paper-cutter, the combination, with the roller and the supports therefor, of the pin 15, secured to one support, and the screw 16, secured to the other support, the knife 14, formed with an orifice, 17, and a longitudinal slot leading thereto at one end for securing the knife to the pin, and a longitudinal opening, 19, at the other end for receiving the screw, substantially as described.

LEO. EHRLICH.

In presence of—

GEO. H. KNIGHT,

JOS. WAHLE.