

No. 781,334.

PATENTED JAN. 31, 1905.

J. FRAZEE.  
PAPER CUTTER.  
APPLICATION FILED JUNE 10, 1904.

Fig. 1.

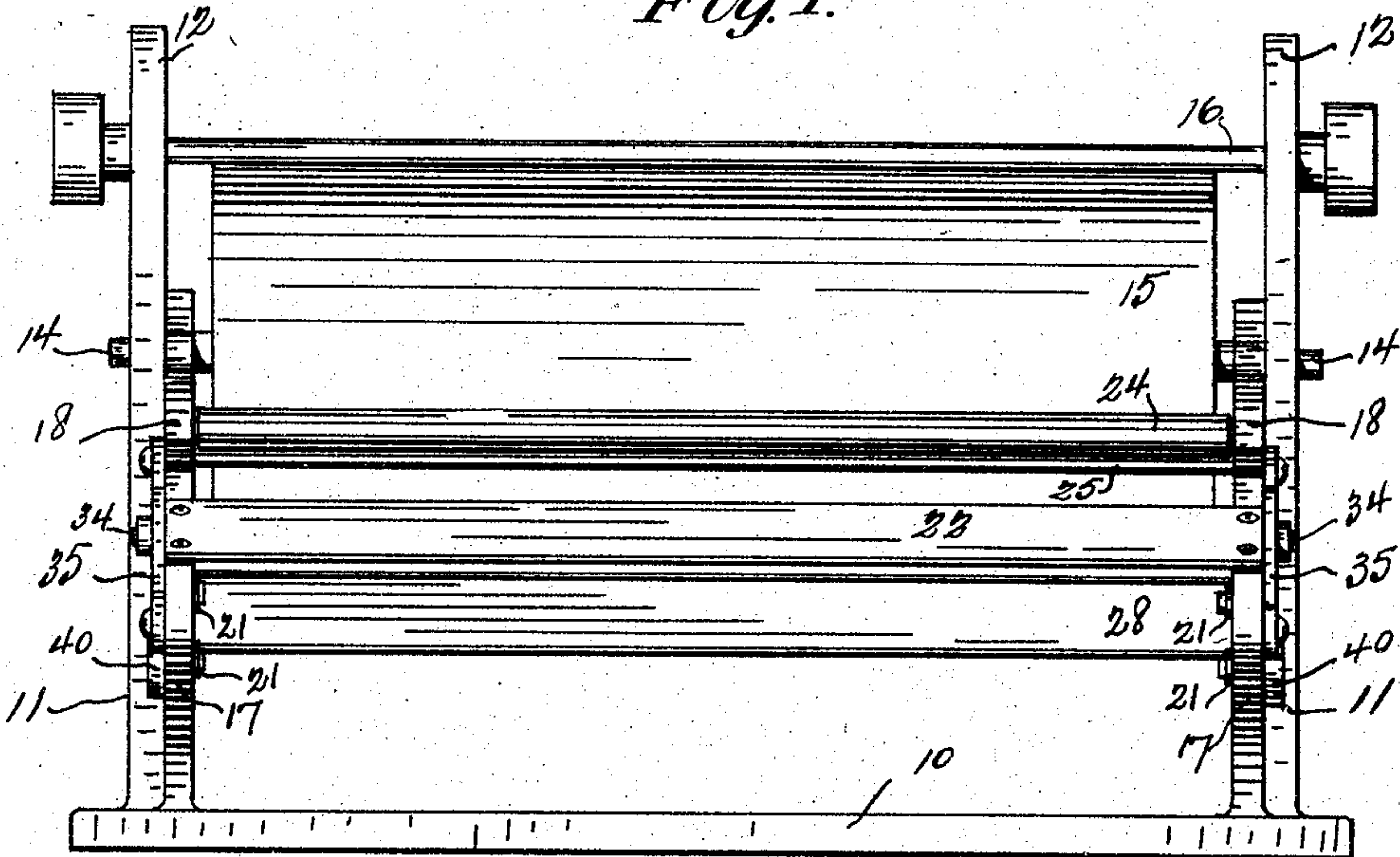


Fig. 2.

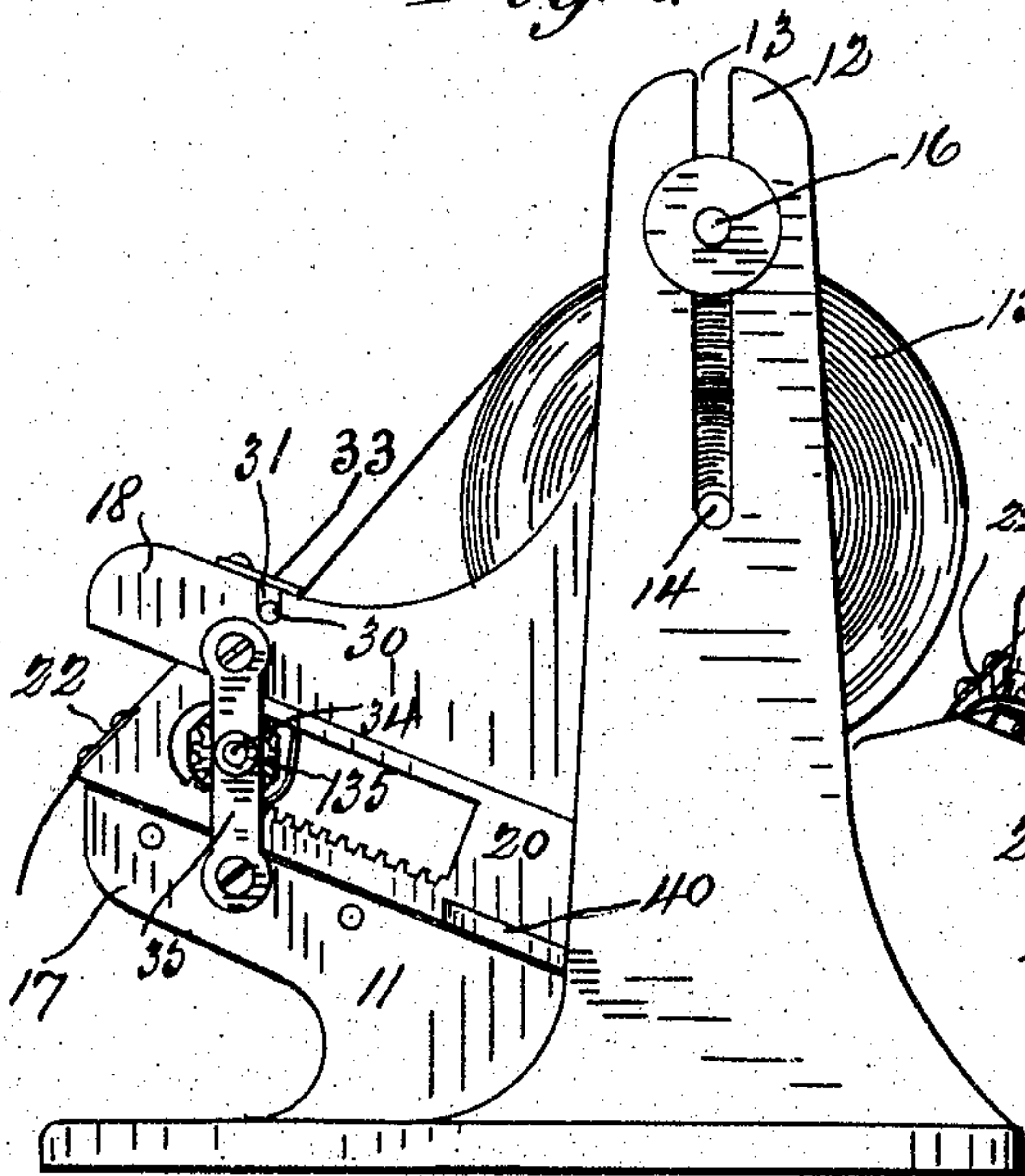
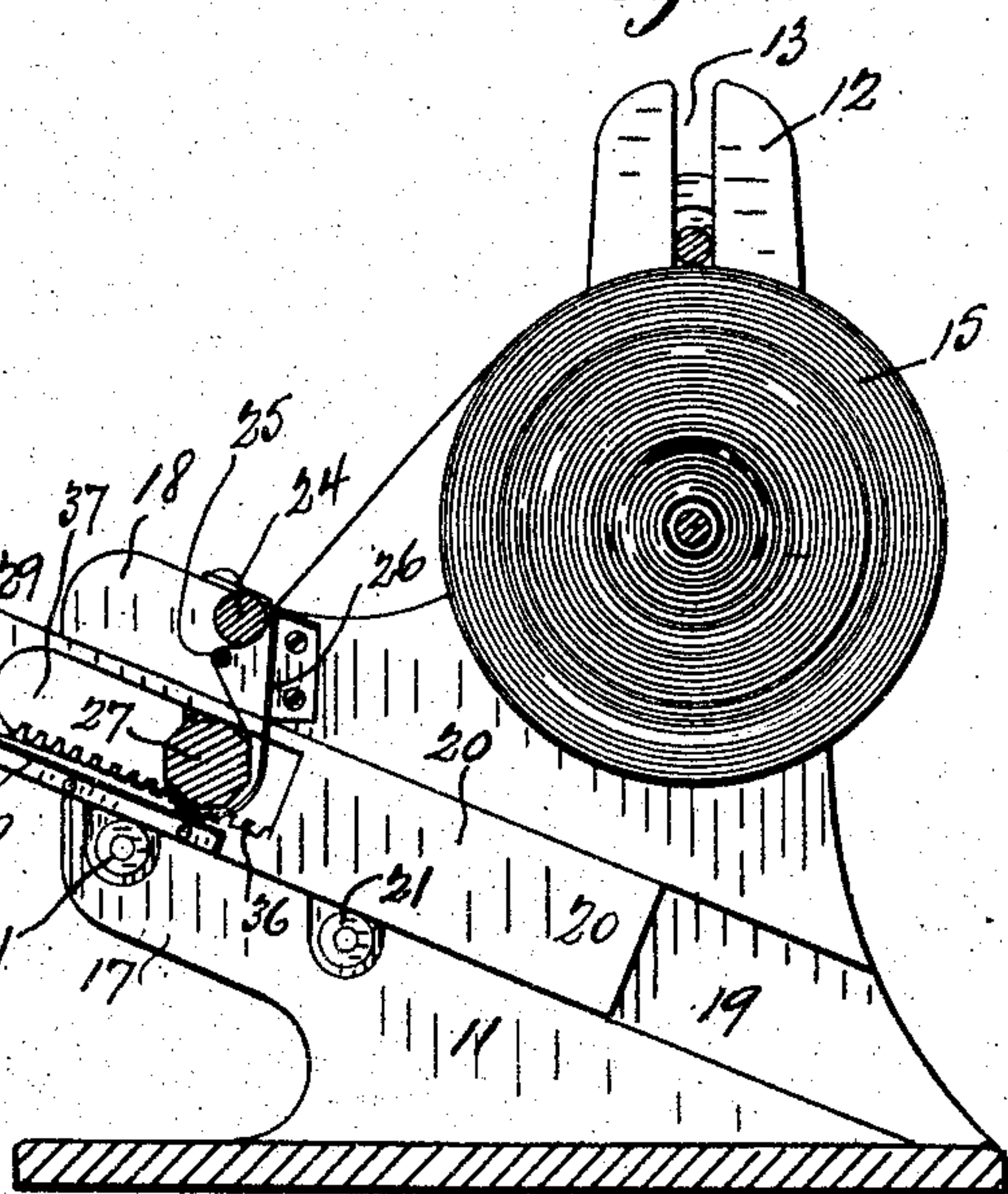


Fig. 3.



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## UNITED STATES PATENT OFFICE.

JEREMIAH FRAZEE, OF ANDERSON, INDIANA.

## PAPER-CUTTER.

SPECIFICATION forming part of Letters Patent No. 781,334, dated January 31, 1905.

Application filed June 10, 1904. Serial No. 211,951.

*To all whom it may concern:*

Be it known that I, JEREMIAH FRAZEE, of Anderson, county of Madison, and State of Indiana, have invented a certain new and useful Paper-Cutter; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like numerals refer to like parts.

This invention relates to means for holding wrapping-paper and the like in the form of a roll, preferably, and which is torn off in small portions or pieces as needed. It is used by grocers and other merchants on their counters, by which they obtain the necessary paper for wrapping articles of merchandise as they are sold. Devices for this purpose are old wherein a knife is provided for severing a portion of paper from a sheet on a roller; but in devices of the kind heretofore used, so far as I am aware, after a piece of paper has been torn off the end of the remaining sheet of paper lies under and behind the edge of the knife, so that it cannot be grasped by the fingers for drawing the sheet of paper through the machine for obtaining another piece. The knife is thrown up and the free end of the paper grasped and drawn through the machine; but two hands are necessary to do the work, because the end of the sheet is not exposed.

The object of this invention is to provide a device of the kind which leaves the end of the sheet of paper on the roller exposed convenient to be grasped. It sticks out beyond the knife about two inches, so that the merchant can while holding his package with one of his hands with the other hand grasp the exposed end of the sheet of paper and draw it through under the knife as far as desired and then tear it off or sever it, and the machine will automatically readjust itself, so as to leave about two inches of the end of the sheet of paper again exposed for convenience in obtaining the next piece of wrapping-paper. Therefore this machine is operated by one hand.

In accomplishing the above object I provide a paper-holding means and a knife, one of these two means being so arranged as to be movable relatively to the other. In the machine herein shown the knife is made mov-

able, although I do not wish to limit myself to that form. As the end of the strip is drawn outward the knife is moved outward with it to a certain limit, and after the knife stops the paper is further drawn out until a sufficient piece is obtained, which is then torn off. After the piece is torn away the knife returns to its original position; but the end of the paper sheet remains so that it is exposed beyond the edge of the knife.

The full nature of the invention will be understood from the accompanying drawings and the following description and claims.

In the drawings, Figure 1 is a front elevation of the device with a roll of paper in the machine; but the end of the sheet does not extend through under the knife in order that the parts of the device may appear more clearly. Fig. 2 is an elevation of the right-hand end of the device as it appears in Fig. 1 with the parts in their unoperated position and the end of the sheet of paper exposed. Fig. 3 is a vertical transverse section through the device between the ends and showing the parts in their operated position.

The device herein shown to illustrate the general nature of my invention is provided with a base 10 and two end frames 11, similarly formed. Each of the end frames has an upright standard 12, provided with a central vertical slot 13, adapted to receive the ends of the roller 14, upon which the roll of paper 15 is placed. This is not new, and any suitable means, such as the rod 16, may be used for retarding the movement of the roll of paper. Each end frame has two forwardly-extending parallel arms 17 and 18 and an inclined guideway 19. A knife-holder 20 is slidably mounted in each guideway 19 and between said arms 17 and 18. In the form herein shown these are mounted in an inclined position, so that gravity will suffice to return the knife-holder to its normal and inward position, as shown in Fig. 2. This form is adopted for the sake of simplicity, although the work of gravity could be performed, if desired, by springs. In order that said knife-holders 20 may readily move inward by gravity, they rest upon and are supported loosely by antifriction-wheels 21, mounted in



the arm 17 of each end frame. The knife 22 is secured to the outer beveled ends of the knife-holders 20, with the sharp edge downward.

5 The sheet of paper when the roll is first placed in the device must be threaded through the machine as follows: It is placed over a roller 24 and drawn backward behind a relatively smaller roller 25, which is almost under the roller 24 and close to it. A sheet of metal 26 extends across from one end frame to the other and is secured at its ends to the arm 18 to form a rear shield for the paper. The paper is inserted thence between said shield 26 and a corrugated roller 27. The lower part of the shield or plate 26 is curved substantially concentric with the roller 27 and close thereto, so that as the paper is fed between said two parts 26 and 27 it will be pushed forward or to the left, as shown in Fig. 3, upon a plate 28. This plate 28 extends from one side of the machine to the other and is at its ends secured to the paper-holders 20. It extends almost to the knife 22 and is inclined substantially the same as the paper-holders. The paper is fed through forwardly on the plate 28 by hand until it issues between the forward end of the plate 28 and the curved plate 29 immediately to the rear and above the lower edge of the knife 22. The paper is then fed farther until its end is exposed, substantially as in Fig. 2.

The spindles 30 of the roller 24 drop into slots 31 in the upper sides of the arms 18, as seen in Fig. 2, and are held from escape by a movable latch 33. This roller 24 is made removable to assist in inserting or threading the paper through the machine. The roller 27 has its end spindles 34 mounted in bars 35, connected with the arms 17 and 18. Said roller 27 is slightly corrugated, so that when the paper is drawn through said roller will be rotated by the paper. The purpose of this is to cause the roller 27 to assist in moving the knife-holders and knife outward from the position shown in Fig. 2 to the position shown in Fig. 3. To this end there is a gear-wheel 135 on each end of the roller 27, that meshes with the rack 36 on each knife-holder. Said knife-holders are each provided with a longitudinal slot 37, through which the gear 135 extends and operates. The rack is on the lower side of the slot 37, as seen in Fig. 3. It is evident that when the strip of paper is drawn through and the roller 27 rotated the gears 135 thereon will actuate the holders 20 and force them outward. The frictional engagement of the paper with the parts extending between said knife-holders 20—such as the roller 27, the plates 28 and 29, and the knife 22—also assists in the outward movement of the knife-holders. The result is that the knife-holders and all parts mounted in connection with them move outward along with the paper until the stop 40 on the out-

side faces of the knife-holders 20 engage the bars 35. Then the knife-holders stop and the sheet of paper is further drawn outward until the desired size is obtained, whereupon it is torn off by the same movement of the hand as with paper-cutters of the present type. After the piece of paper is torn off there is nothing to hold the knife and knife-holders outward. Then they slide back by gravity to the position shown in Fig. 2, but the paper does not return along with the backward and inward movement of the knife and associate parts because it is held by the rollers 24 and 25 and shield 26 with sufficient friction to prevent its return. The backward rotation of the roller 27 does not cause the backward movement of the sheet of paper, for there is not sufficient friction between them, as is the case when the paper is drawn outward.

The stops 40, as seen in Fig. 3, limit the inward movement of the knife-holders by engaging the standards 12. The free end of the sheet of paper which extends outward and is exposed after the knife and associate parts have returned inward is determined by the length of movement of the knife-holders. If that be two inches, there will be two inches of paper exposed. Consequently by modifying the extent of movement of the knife-holders in making machines of this type the exposure at the end of the sheet of paper can be provided for as desired.

The knife-edge 22 extends down below the curved plate 29, so it will shear off the paper, as usual in paper-cutters. The plate 29 is curved, so as to deflect the end of the sheet of paper downward and outward as it is being threaded through the machine. After once threading the paper through the machine no further threading is required until a new roll of paper is placed in the device.

While I have shown herein one form of carrying out my invention, I do not wish to be limited to its details, for there are various evident ways of changing some of the parts and still adhering to the spirit of my invention as the same is set forth in the claims below.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a paper-cutter, means for frictionally holding the sheet of paper, and a knife for severing the paper that is slidable at an upward inclination from said paper-holding means by the movement of the sheet of paper through the device.

2. In a paper-cutter, stationary means through which a sheet of paper passes for frictionally holding the same, and a knife for severing the paper that is movable away from said holding means by the movement of the sheet of paper through the device.

3. In a paper-cutter, a pair of oppositely-placed end frames adapted to carry a roll of



paper, means mounted in connection with said frames for frictionally holding the free end of the sheet of paper extending from the roll, and a knife for severing the sheet of paper that is mounted in connection with said end frames so as to slide with the movement of the sheet of paper through the device.

4. In a paper-cutter, a pair of oppositely-placed end frames adapted to carry a roll of paper, means mounted in connection with said frames for frictionally holding the free end of the sheet of paper extending from the roll, and a knife for severing the sheet of paper that is mounted in connection with said end frames so as to slide with the movement of the sheet of paper through the device to the cutting position and to slide back by gravity to its unoperated position when the sheet of paper is released.

5. In a paper-cutter, means for holding a roll of paper, means through which the sheet of paper is passed for frictionally holding the same, a knife for severing the sheet that is movable away from the paper-holding means, and means actuated by the movement of the paper through the device for moving the knife.

6. In a paper-cutter, a pair of oppositely-placed end frames, means mounted between the two frames for frictionally holding the sheet of paper, knife-holders slidably mounted in said end frames, a knife carried by said holders, and means actuated by the movement of the paper through the machine for moving said knife-holders.

7. In a paper-cutter, a pair of oppositely-placed end frames, means mounted between the two frames for frictionally holding the sheet of paper, knife-holders slidably mounted in said end frames, a knife carried by said end holders, a roller which the sheet of paper frictionally engages and actuates when the paper is drawn through the device, and means for transmitting power from said roller to the knife-holders for moving the same.

8. In a paper-cutter, end frames oppositely located and provided with inclined guideways, means mounted between said frames for frictionally holding the sheet of paper, a knife-holder slidably mounted in said guideways and having a rack-bar thereon, a knife secured to said knife-holders, a roller between and mounted in said end frames, and gear-teeth on said roller for engaging the racks on the knife-holders for operating the latter.

9. In a paper-cutter, end frames oppositely located and provided with inclined guideways, means mounted between said frames for frictionally holding a sheet of paper, a knife-holder slidably mounted in said guideways and having a rack-bar thereon, a knife secured

to said knife-holders, a roller between and mounted in said end frames, gear-teeth on said roller for engaging the racks on the knife-holders for operating the latter, and a flat plate extending between and secured to said knife-holders for guiding the paper to the knife.

10. In a paper-cutter, end frames oppositely located and provided with inclined guideways, means mounted between said frames for frictionally holding a sheet of paper, a knife-holder slidably mounted in said guideways and having a rack-bar thereon, a knife secured to said knife-holders, a roller between and mounted in said end frames, gear-teeth on said roller for engaging the racks on the knife-holders for operating the latter, a flat plate extending between and secured to said knife-holders for guiding the paper to the knife, and a curved plate extending between the knife-holders immediately behind and above the lower edge of the knife and in advance of the end of the flat plate so as to leave a space between it and the flat plate and to guide the paper from the flat plate under the edge of the knife.

11. In a paper-cutter, means for frictionally holding a sheet of paper, a knife-holding mechanism movable relatively to said paper-holding means, a knife secured to said knife-holding mechanism, and a roller for actuating said knife-holding mechanism, said actuating-roller being so located with reference to said paper-holding means and the knife that the sheet of paper when drawn through the device will engage at least one-half the circumference of said actuating-roller.

12. In a paper-cutter, oppositely-placed end frames, a pair of rollers mounted on and extending between said end frames between which the paper passes for frictionally holding the same, a knife-holder slidably mounted in each end frame, a knife secured to said holders, a roller mounted between said end frames which is engaged and actuated by the paper as it is drawn through the device, connections between the knife-holders and said roller whereby the knife-holders are actuated and moved, and a plate-like shield mounted on and extending between the end plates behind the paper-holding rollers and the knife-actuating roller with one end of said plate curved concentrically with and located near said actuating-roller.

In witness whereof I have hereunto affixed my signature in the presence of the witnesses herein named.

JEREMIAH FRAZEE.

Witnesses:

V. H. LOCKWOOD,  
N. ALLEMONG.