2 Sheets—Sheet 1.

L. W. PETTEBONE.

MACHINE FOR CUTTING AND WINDING PAPER.

No. 188,406. Patented March 13, 1877.

Fig. 1.

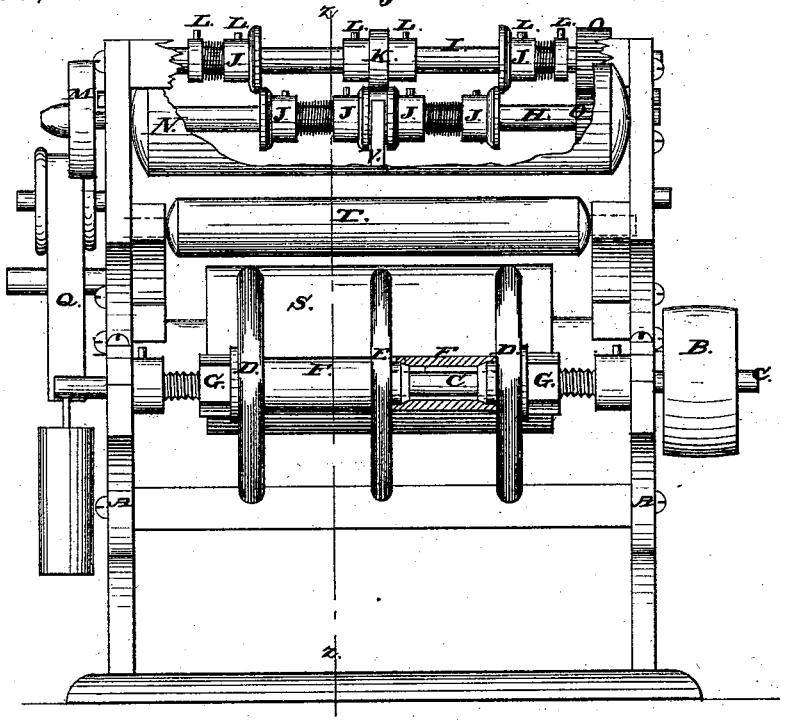
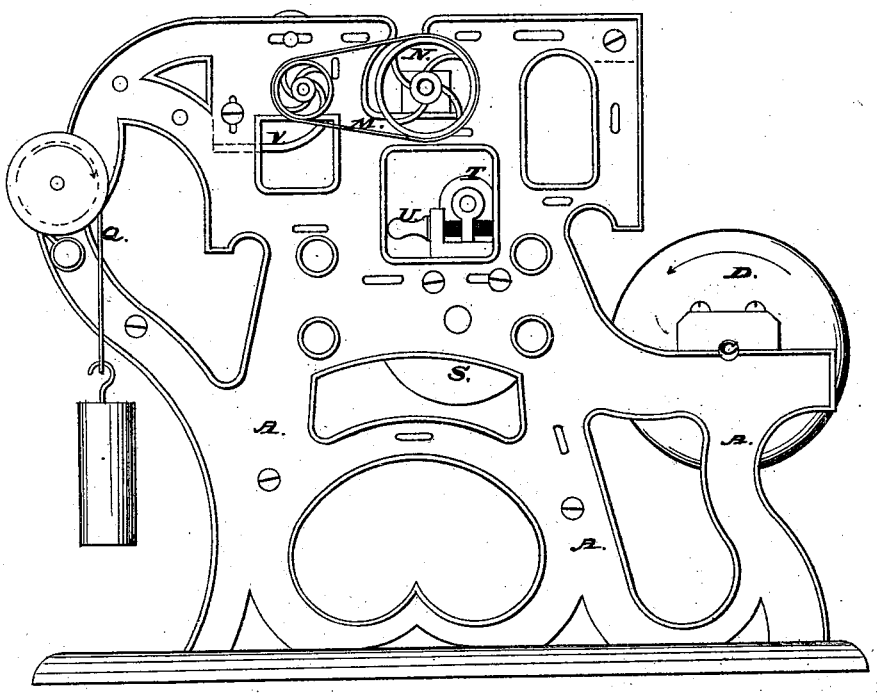


Fig. 2.



Witnesses:
Lauren Clark Woodruff
Stoughton Pettebone

Inventor:
Lauren Woodruff Pettebone

2 Sheets—Sheet 2.

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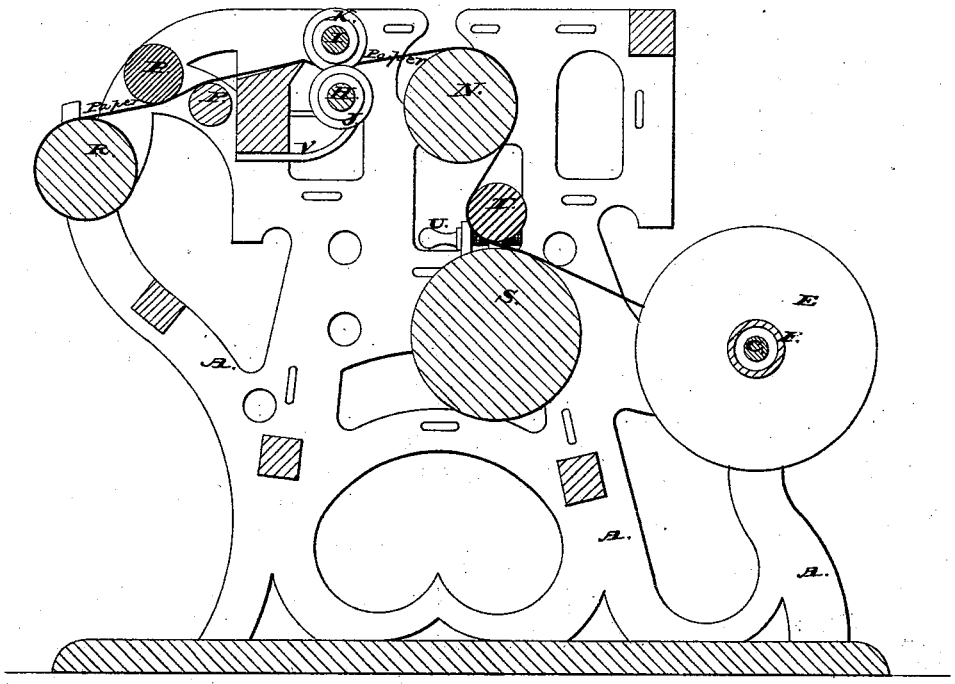
Fig. 3.



Witnesses:

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Inventor:

Lauren Woodruff Pettebone

UNITED STATES PATENT OFFICE.

LAUREN W. PETTEBONE, OF NIAGARA FALLS, NEW YORK.

IMPROVEMENT IN MACHINES FOR CUTTING AND WINDING PAPER.

Specification forming part of Letters Patent No. **188,406**, dated March 13, 1877; application filed January 24, 1877.

To all whom it may concern:

Be it known that I, LAUREN WOODRUFF PETTEBONE, of Niagara Falls, in the county of Niagara and State of New York, have invented an Improvement in Machines for Cutting and Winding Paper, of which the following is a specification:

My invention consists of the combination of rotary or circular knives, together with a tooth, feed-rolls, and flange.

The object of my invention is to make two or more perfect rolls of paper upon one and the same shaft at one and the same time.

Figure 1 is a front elevation of a machine embodying my invention. Fig. 2 is an elevation showing that end of the machine which is at the left hand in Fig. 1. Fig. 3 is a vertical transverse section, showing those parts of the machine which are at the right hand of the line *z z*, drawn across Fig. 1.

A A is the frame of the machine, which is constructed of iron, and sufficiently substantial to resist the vibrations of the operating parts. B is the driving-pulley upon the main shaft C of the machine, from which motion is communicated to the operating parts. D D are the end flanges, and E is the center flange. F F are the thimbles or spools upon which the rolls are made, all of which are adjustable upon the main shaft C, and are held firmly in place by the large nuts G G. H I are the shafts which carry the rotary or circular knives J J K, which are adjustable, and held in place by the set-screws L. Motion is communicated to the shaft H by the belt M upon the roll N, and to the shaft I by the spur-gear wheels O O. The roll N is driven by the friction of the paper passing over it, the tension of which is regulated by the rolls P P and the friction-strap Q upon the feeding-roll R. S T are rolls regulating the tension of the paper after it is cut, the roll T being adjusted by the screw U.

The main web of paper, being of sufficient width to make two or more rolls, is introduced from the reel or roll R, and, while passing between the rotary cutter-shafts H I, the edges are trimmed by the circular knives J J, and by means of the square-faced cutter K on the shaft I a strip five-eighths inch wide, more or less, is cut out from the web. A tooth, V, strips this cut portion of the paper from the female cutters, and thereby enables it to run down clear of all the machinery. The flange E upon the driving-shaft C being the same in thickness as the width of the strip cut from the web, and completely filling the space between the rolls, entirely prevents trembling or deflection in the shaft C, thus insuring perfect work for any size rolls desired.

I claim as my invention—

In a paper-rolling machine, the combination of the square-faced cutter K, mounted upon the shaft I, knives J J upon shaft H, the tooth V, and the center flange E, carried upon the shaft C, the width of said flange corresponding to that of the piece cut from the center of the web of paper, and to the width of the cutter K, substantially as described.

LAUREN WOODRUFF PETTEBONE.

Witnesses:

GEORGE IRISH,

A. B. BENEDICT.