E. DANGOISE.

Machine for Cutting and Rolling Paper.

No. 209,868. **Patented Nov. 12, 1878.**

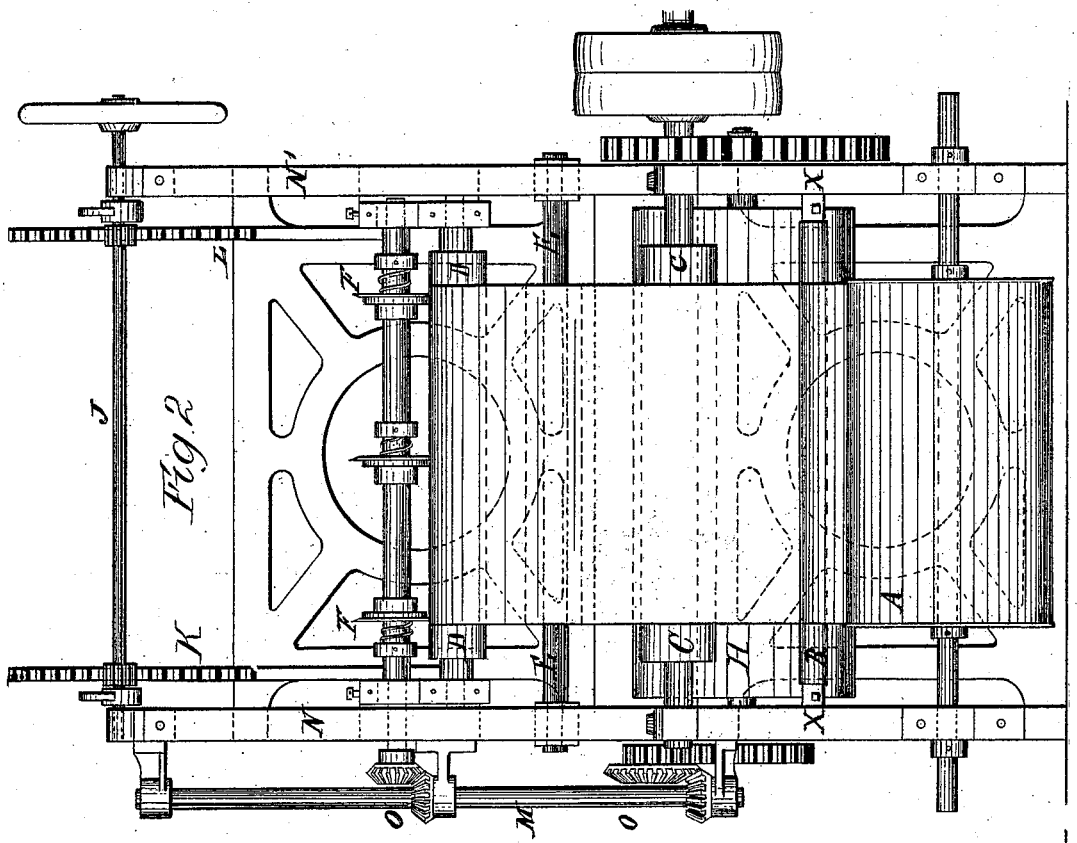

Fig. 2

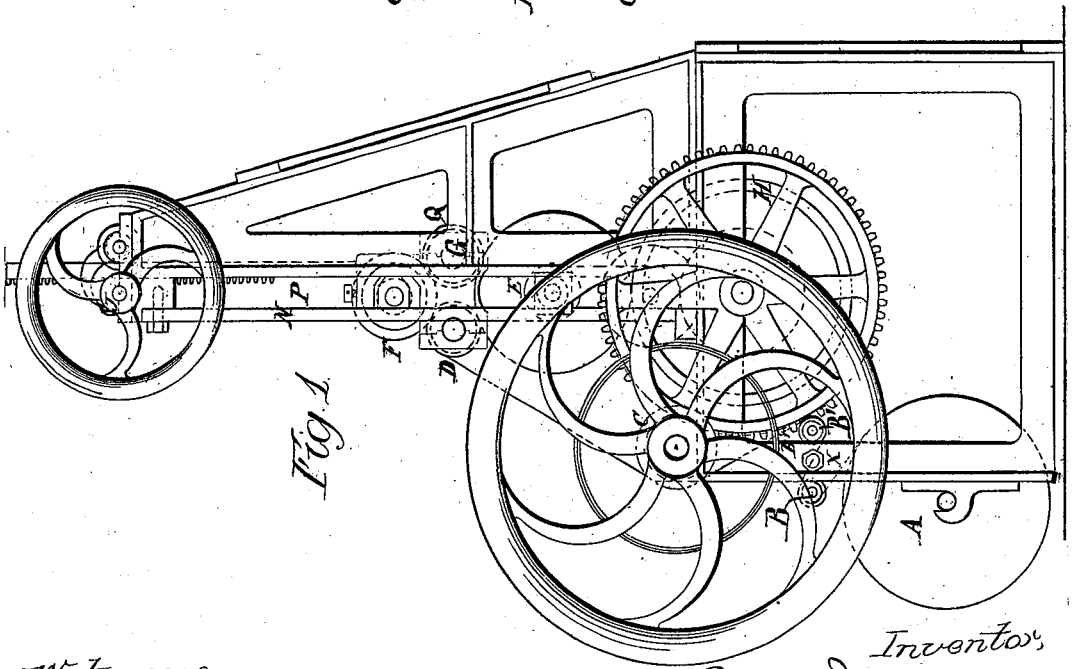

Fig. 1

Witnesses,
Henry Howson Jr.
Harry Smith

Inventor,
Ernest Dangoise
by his attorneys
Howson and Son

UNITED STATES PATENT OFFICE.

ERNEST DANGOISE, OF BRUSSELS, BELGIUM.

IMRROVEMENT IN MACHINES FOR CUTTING AND ROLLING PAPER.

Specification forming part of Letters Patent No. **209,868**, dated November 12, 1878; application filed August 10, 1878.

To all whom it may concern:

Be it known that I, ERNEST DANGOISE, of Brussels, in the Kingdom of Belgium, have invented certain Improvements in Machines for Winding Paper into Rolls, of which the following is a specification:

The object of my invention is to construct a machine for cutting and trimming paper, fabrics, and similar material, and winding it up into rolls; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a side elevation of the machine, and Fig. 2 a front view.

To bearings on the opposite side frames of the machine are adapted the journals of a drum, H, which is driven, through the medium of suitable gear-wheels, from the driving-shaft, carrying the smoothing-roller C. On the drum H rests the roller E, onto which the continuous sheets of paper, after they are cut, are wound, the journals of this roller being adapted to bearings arranged in guides P in the opposite side frames of the machine. To these guides are also adapted plates, which form bearings for three rollers, D, G, and F, the two former being arranged to rest on the rolls of paper, which are wound on the roller E, while the roller F carries a series of circular cutting-knives, Fig. 2, arranged at points corresponding with the widths of paper desired to be cut. The edges of these knives are adapted to corresponding grooves in the roller D, and on the roller G are arranged a series of blades, corresponding in position to the knives on the roller F, for a purpose explained hereinafter.

The cutter-roll F is driven from a vertical shaft, M, through bevel-wheels *o o*, receiving motion from the driving-shaft through suitable gearing.

The front plates N of the guides P are removable, so that the roll E may be withdrawn when it is desired to remove the rolls of paper from the roller E.

The plates which form the bearings for the rollers F D G have secured to them vertical racks K L, controlled by pinions on a horizontal shaft, J, furnished with retaining-pawls and ratchets, so that the said rollers may be raised to any desired height after the required amount of paper has been wound on the roller E.

The roll A of paper to be cut is arranged on the lower part of the frame, as shown in Fig. 1, and immediately above this roll is the stretcher or tension device X, so secured to the opposite side frames that it can be adjusted to different angles to vary the tension. This stretcher carries two bars, B and B′, the paper from the roll A first passing over the bar B and under the bar B′, and thence over the roll C, which, being caused to rotate in a direction opposite to that pursued by the paper, smooths the paper and removes all creases therefrom. The paper then passes over the roller D and between the latter and the cutter-roll F, by which the said paper is cut into a number of strips of the required width, these strips being wound by means of the drum H onto metal or wooden bobbins arranged on the roller E. The rollers D G, resting on the rolls of paper as they are wound onto the said bobbins, give the required tension and pressure to the paper, while the rings or blades Q on the roller G, entering between the strips of paper as they are wound into rolls, guide the said strips and insure the formation of even and compact rolls.

If desired, the cutting-knives on the roll F, except those at the ends for trimming the edges of the paper, may be dispensed with, in which case the blades Q on the roller G are so constructed as to cut the paper to the proper widths as it is wound onto the roller E, these blades thus serving the purpose of both cutting and guiding the paper.

I claim as my invention—

1. The combination of the winding drum and roller of a paper-winding machine with a pressure-roll, D, and a roll, G, provided with rings or blades, the said pressure-roll and roll G having bearings in the same adjustable plates or frame, substantially as set forth.

2. The combination of a winding-roller, E, cutter-roll F, and roll G, provided with rings or blades for guiding the rolls of paper, substantially as specified.

3. The combination of a pressure-roll, guide-roll G, and cutter-roll with the winding-roll of a paper-winding machine.

4. The combination of winding mechanism and a winding-roll, E, with guides P, provided with removable plates N, as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ERNEST DANGOISE.

Witnesses:

HIPPOLYTE BIEBUYCK,

GUSTAVE BIEBUYCK.