J. A. POLLEY.

PAPER FOLDING AND CUTTING MACHINE.

APPLICATION FILED MAY 12, 1911.

1,032,296.

Patented July 9, 1912.

2 SHEETS—SHEET 1.

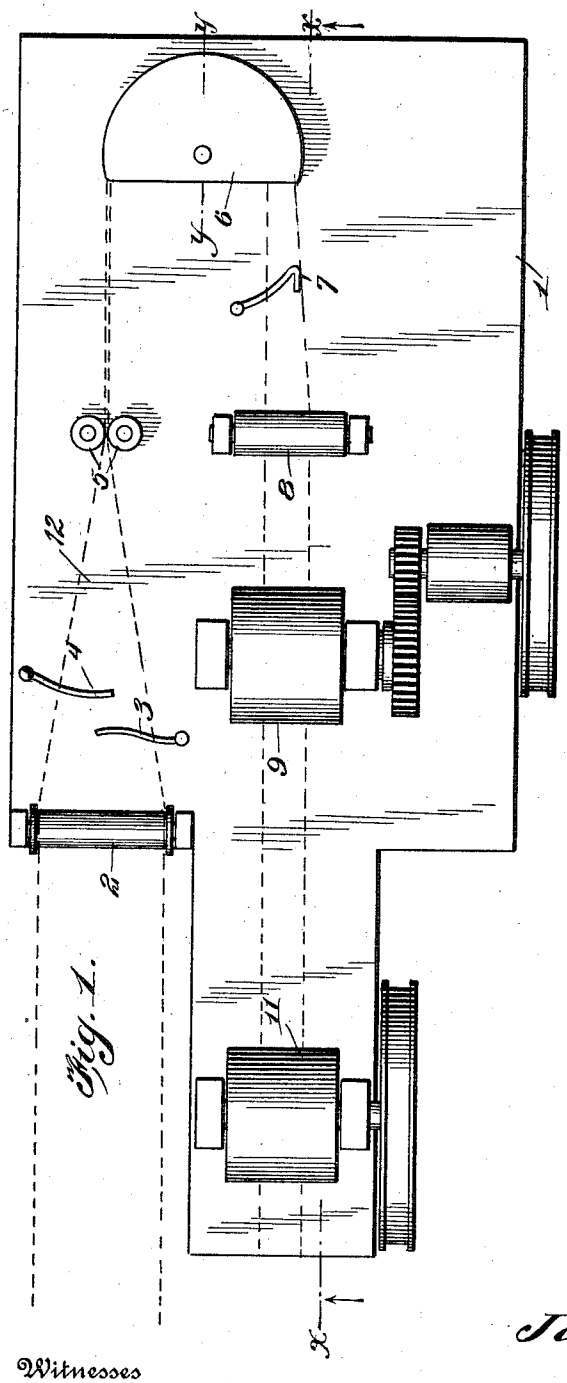


Fig. 1.

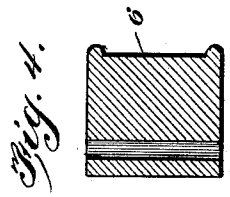


Fig. 4.

Witnesses

Louis R. Heinrichs

O. B. Hillyard.

Inventor

James A. Polley

By Victor J. Evans

Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

J. A. POLLEY.

PAPER FOLDING AND CUTTING MACHINE.

APPLICATION FILED MAY 12, 1911.

1,032,296.

Patented July 9, 1912.

2 SHEETS—SHEET 2.

Fig. 2.

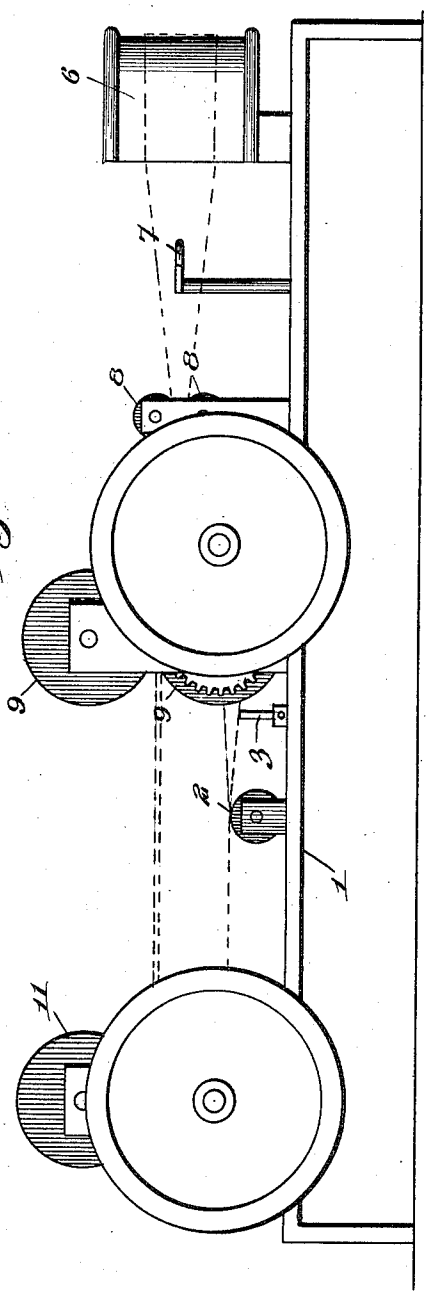
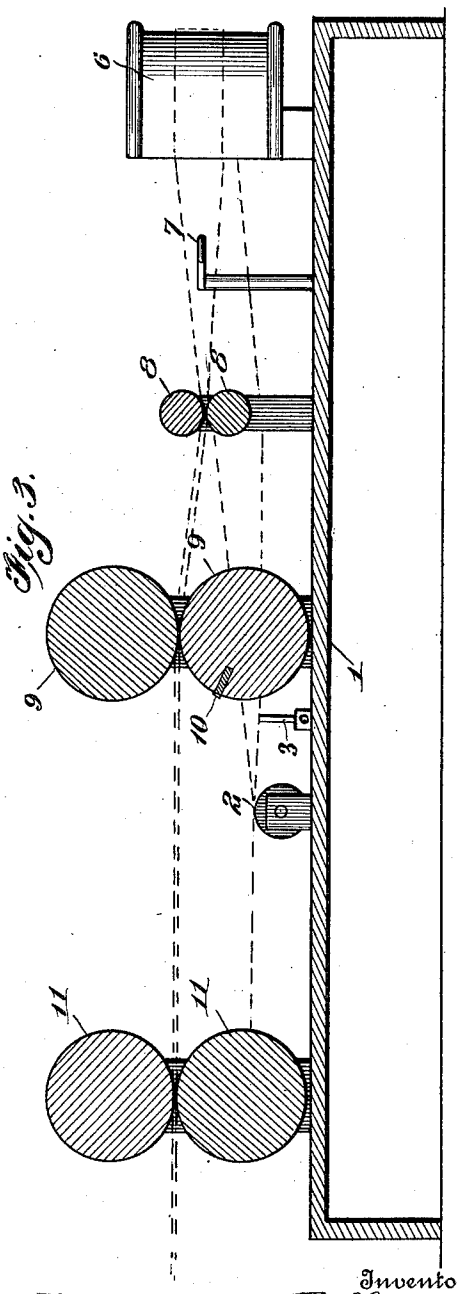


Fig. 3.



Inventor

James A. Polley

Witnesses

Louis R. Heinrichs

U. B. Hillyard.

By Victor J. Evans

Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES A. POLLEY, OF SOMERVILLE, MASSACHUSETTS.

PAPER FOLDING AND CUTTING MACHINE.

1,032,296. Specification of Letters Patent. Patented July 9, 1912.

Application filed May 12, 1911. Serial No. 626,705.

To all whom it may concern:

Be it known that I, JAMES A. POLLEY, a citizen of the United States, residing at Somerville, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Paper Folding and Cutting Machines, of which the following is a specification.

The present invention provides a machine for folding paper strips and cutting the same into required lengths, said strips being used for separating the rows of candy or like goods when packed in boxes for the market.

The machine is automatic in action and does not require the handling of the paper strip from the time it is fed into the machine until delivered therefrom in lengths ready for use.

The invention consists of the novel features, details of construction and combination of parts, which hereinafter will be more particularly set forth, illustrated in the accompanying drawings, and pointed out in the appended claims.

Referring to the drawings, forming a part of the specification, Figure 1 is a top plan view of a machine embodying the invention showing a strip of paper trained therethrough. Fig. 2 is a side view thereof. Fig. 3 is a longitudinal section on the line *x*—*x* of Fig. 1. Fig. 4 is a detail section of the guide on the line *y*—*y* of Fig. 1.

Corresponding and like parts are referred to in the following description, and indicated in all the views of the drawings, by the same reference characters.

The operating parts are mounted upon a table 1, which may be of any construction. A supporting roll 2 is located near one end of the table and the strip of paper to be folded passes thereover. Holders 3 and 4 are located in the rear of the supporting roll 2 and serve to support the strip of paper. A pair of pressure rolls 5 are vertically disposed and the folded strip is passed between them. A guide 6 is located at the rear end of the table and supports the folded strip which passes around the same. The guide 6 is of half round form and has upper and lower flanges to prevent vertical displacement of the strip. A gage 7 is located in advance of the guide 6 and regulates the width of the second fold of the strip upon itself between its longitudinal edges. Pressure rolls 8 press the parts of the folded strip together. A pair of rolls is located in advance of the pressure rolls 8, as indicated at 9. One of the rolls of the last mentioned pair is provided with a cutter 10 for scoring or cutting the folded strip into required lengths. The diameter of the cutting roll determines the length of the strips and by providing rolls of different diameters strips of various lengths may be cut. Drawing rolls 11 are located in advance of the rolls 9 and are driven at a higher rate of speed so as to separate the strip into proper lengths determined by the cuts.

The paper strip 12 to be folded and cut into required lengths for use is drawn from a roll and passes over the supporting roll 2 and is doubled upon itself intermediate of its longitudinal edges the latter being supported by the holders 3 and 4, the folded portions being pressed together by the pressure rolls 5, after which the folded strip passes around the guide 6 and is again doubled upon itself between its longitudinal edges the width of the strip after the second fold being regulated by means of the gage 7, the parts thus folded being pressed together by means of the rolls 8, after which the strip is scored by the cutting mechanism comprising the rolls 9, said strip being separated into lengths by the drawing rolls 11, the strips thus formed dropping into a receptacle.

When training the strip 12 through the machine an end portion is doubled upon itself and passed between the rollers 5, the fold being uppermost and the edge portions of the strip resting upon the parts 3 and 4. The folded end portion of the strip beyond the guide 6 is doubled upon itself a second time and passed between the rolls 8, after which the gage 7 is set to enter the second fold. After the strip has been trained through the machine the folds thereof maintain a fixed relation, thereby resulting in the provision of a twice folded strip of given width.

From the foregoing description, taken in connection with the accompanying drawings, the advantages of the construction and of the method of operation will be readily apparent to those skilled in the art to which the invention appertains, and while I have described the principle of operation of the invention, together with the device which I now consider to be the embodiment thereof, I desire to have it understood that the de-

vice shown is merely illustrative, and that such changes may be made when desired as are within the scope of the claims appended hereto.

Having thus described the invention what is claimed as new, is:—

1. A machine for folding a strip upon itself and doubling the folded strip intermediate of its longitudinal edges, said machine comprising a supporting roll, a pair of vertically arranged rolls, holders located intermediate the supporting roll and the vertical pair of rolls for engaging with the edge portions of the strip and sustaining the latter, a guide located some distance from the vertical pair of rolls and having upper and lower flanges, a pair of horizontally arranged rolls located about opposite the pair of vertical rolls to press the strip when folded a second time, a gage located at a point between the guide and the pair of horizontal rolls to regulate the width of the fold the second time, and means for scoring the strip after being folded a second time.

2. A machine for folding a strip upon itself and doubling the folded strip intermediate of its longitudinal edges, said machine comprising a supporting roll, a pair of vertically arranged rolls, holders located intermediate the supporting roll and the vertical pair of rolls for engaging with the edge portions of the strip and sustaining the latter, a guide located some distance from the vertical pair of rolls and having upper and lower flanges, a pair of horizontally arranged rolls located about opposite the pair of vertical rolls to press the strip when folded a second time, a gage located at a point between the guide and the pair of horizontal rolls to regulate the width of the fold the second time, cutting mechanism for scoring the folded strip at regular intervals, the same comprising a roll having a cutter, and a pair of drawing rolls for separating the strip into lengths and adapted to be driven at a higher rate of speed than the rolls of the cutting mechanism.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES A. POLLEY.

Witnesses:
WILLIAM P. MITCHELL,
FLORENCE HAM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."