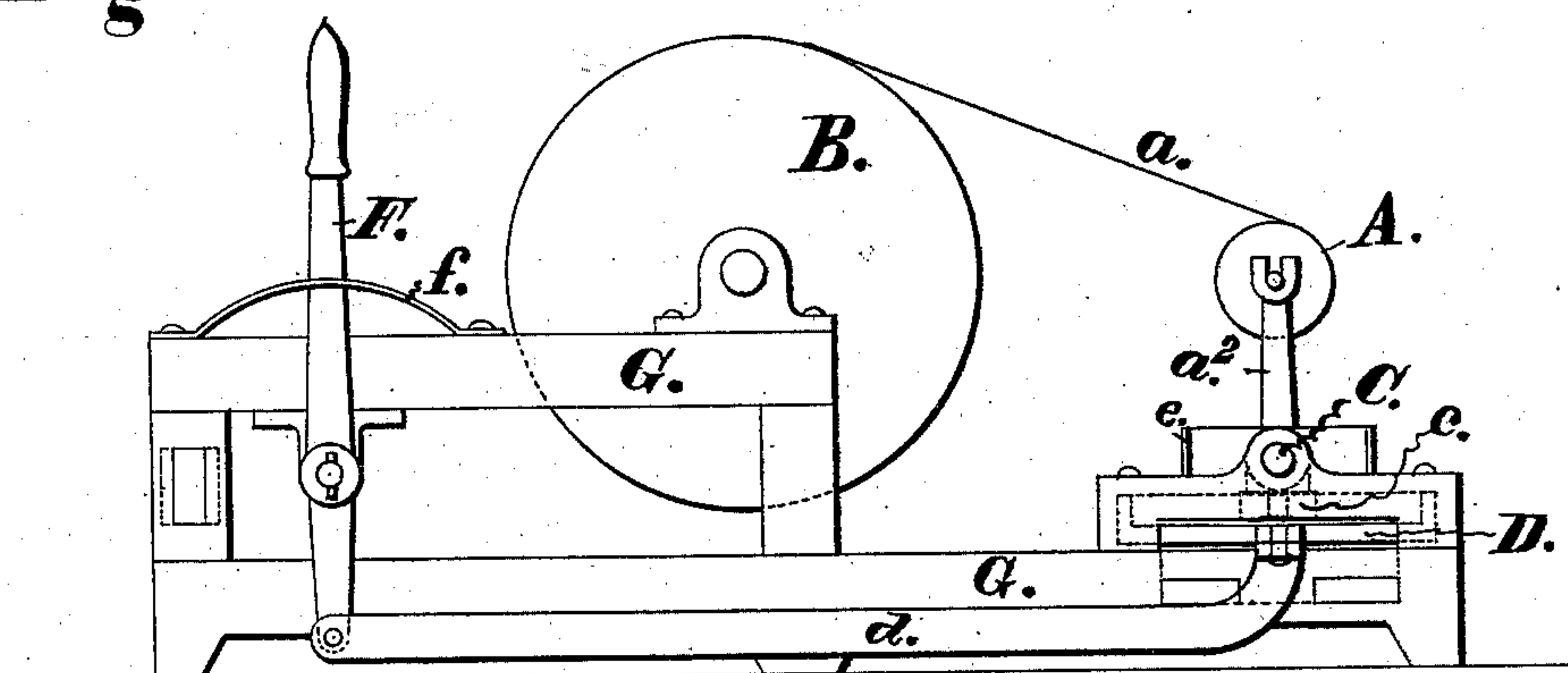
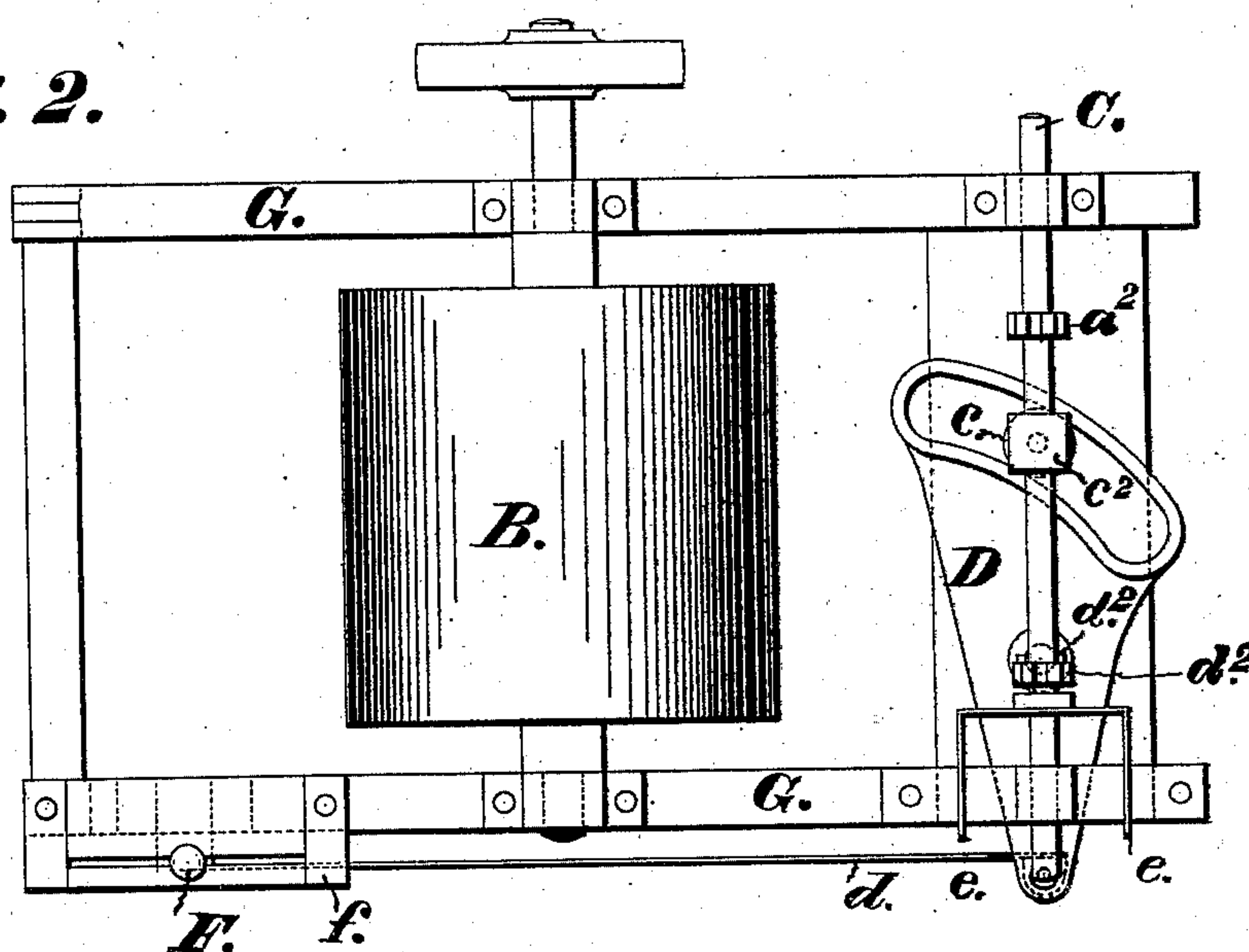


S. H. BINGHAM.  
MACHINES FOR WINDING PAPER, &c. INTO ROLLS.  
No. 194,642.                      Patented Aug. 28, 1877.

*Fig. 1.*



*Fig. 2.*



**Witnesses:**

*Stanley Williams*  
*Frank B. Williams*

**Inventor:**

*Samuel H. Bingham*  
*By R. R. Toomey*  
*Atty.*

# UNITED STATES PATENT OFFICE.

SAMUEL H. BINGHAM, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO  
THE BULLOCK PRINTING PRESS COMPANY, OF SAME PLACE.

## IMPROVEMENT IN MACHINES FOR WINDING PAPER, &c., INTO ROLLS.

Specification forming part of Letters Patent No. **194,642**, dated August 28, 1877; application filed  
May 5, 1877.

*To all whom it may concern:*

Be it known that I, SAMUEL H. BINGHAM, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Machines for Winding Paper or Textile Fabrics into Rolls, which improvement is fully set forth in the following specification and accompanying drawings, forming part of the same, in which—

Figure 1 is an elevation, and Fig. 2 a plan of the mechanism as applied to the said purpose.

The object of this invention is to provide mechanism for rapidly imparting end motion from a convenient distance to a roll of paper or textile material in order that the roll or cylinder upon which the continuous web of the material is drawn or received may receive the side margins of the same in correct alignment—in other words, that the side margins of the paper as received or drawn by one roll from another may always be kept at right angles with the axis of the receiving roll or cylinder.

I am aware that mechanical devices for this purpose are not new, and that gearing has also been resorted to in order to connect lines of shafting operated by hand-wheels at a distance from the roll to be moved endwise, but the objection to the use of gearing in particular is that the motion of the hand of an operator cannot be transmitted with sufficient rapidity by means of gearing to the axis of the roll to be moved endwise; but, by means of the devices now to be described, and illustrated in the accompanying drawings, the operative mechanism is so sensitive that the slightest motion of the hand of an operator will instantly draw over to one side or the other the roll, to which end motion must be imparted, and compel the drawn paper to be received or wound in perfect alignment of margin upon any roll that may be presented to receive or draw it.

In the said accompanying drawing, A represents any suitable paper-discharging roll having the web of paper  $a$  wound thereon, and mounted in bearings upon standards  $a^2$ . B is any cylinder suitable for receiving or

drawing the paper from the roll A. C is a shaft mounted in bearings transversely of the framing G, which framing supports the entire mechanism. From the shaft C, attached thereto, arise the standards  $a^2$ , supporting the roll A. D is an arc or link provided with a curved slot and pivoted or journaled at  $d^2$  to the bed of the framing G. In the slot of said link is fitted a roller,  $c$ , united by a pin or journal,  $c^2$ , to the shaft C, to which shaft are attached the guides  $e$ , which serve to preserve the rectilinear end motion of the said shaft. To the end of the link D, opposite its curved slot, is pivoted the connecting-rod  $d$ , which rod is operated at its opposite end by the hand-lever F, which is vibrated at the will of an operator upon the arc or guide-sector  $f$ .

From the construction of the mechanism as above described it can now readily be seen that as the cylinder B is caused to rotate by any attached machinery—it may be that of a printing-press or any winding machinery—the web of paper or any textile fabric upon the roll A will be unwound therefrom, being drawn by or wound upon the cylinder B, and that any tendency of the drawn paper to roll or draw out of proper marginal alignment upon the cylinder or roll B will be instantly corrected by a slight movement of the hand of an operator upon the hand-lever F, which, communicating its motion through the connecting-rod  $d$  and slotted link D to the shaft C, will cause such end motion thereof, and consequently of the roll A, supported by said shaft in the standards  $a^2$ , as to immediately correct all deviation and restore the true alignment of the drawn or winding paper upon the cylinder B.

It is obvious that more than one handle may be used to actuate this mechanism, since it may at times be desirable to move said mechanism from different stand-points.

I make no claim to any device or combination of devices used in this machine, except as the same are employed therein, and therein only in the performance of their legitimate functions herein assigned to them.

Having thus fully described this improved mechanism for correcting marginal deviations



in the rolling of paper and textile fabrics, I claim—

1. In a machine for drawing or winding rolls of paper or textile fabrics, the combination with the rolls of said machine of a hand rod or lever placed at or near one roll and connected to another roll by a system of rods and levers, substantially such as described, whereby an operator is enabled at will to rapidly impart end motion to one of said rolls, and thereby maintain correct alignment of the side margin of the rolling or winding material, substantially as specified.

2. In the machine hereinbefore described,

in combination with the rolls thereof, the sector D, connecting-rod *d*, and an operative handle or handles therefor, as and for the purpose specified.

3. In the machine hereinbefore described, the combination of the shaft C, sector D, connecting-rod *d*, and an operative handle or handles therefor, as and for the purpose specified.

SAMUEL H. BINGHAM.

Witnesses:

ROBERT EGDELL,  
ROBERT FARNHAM.