

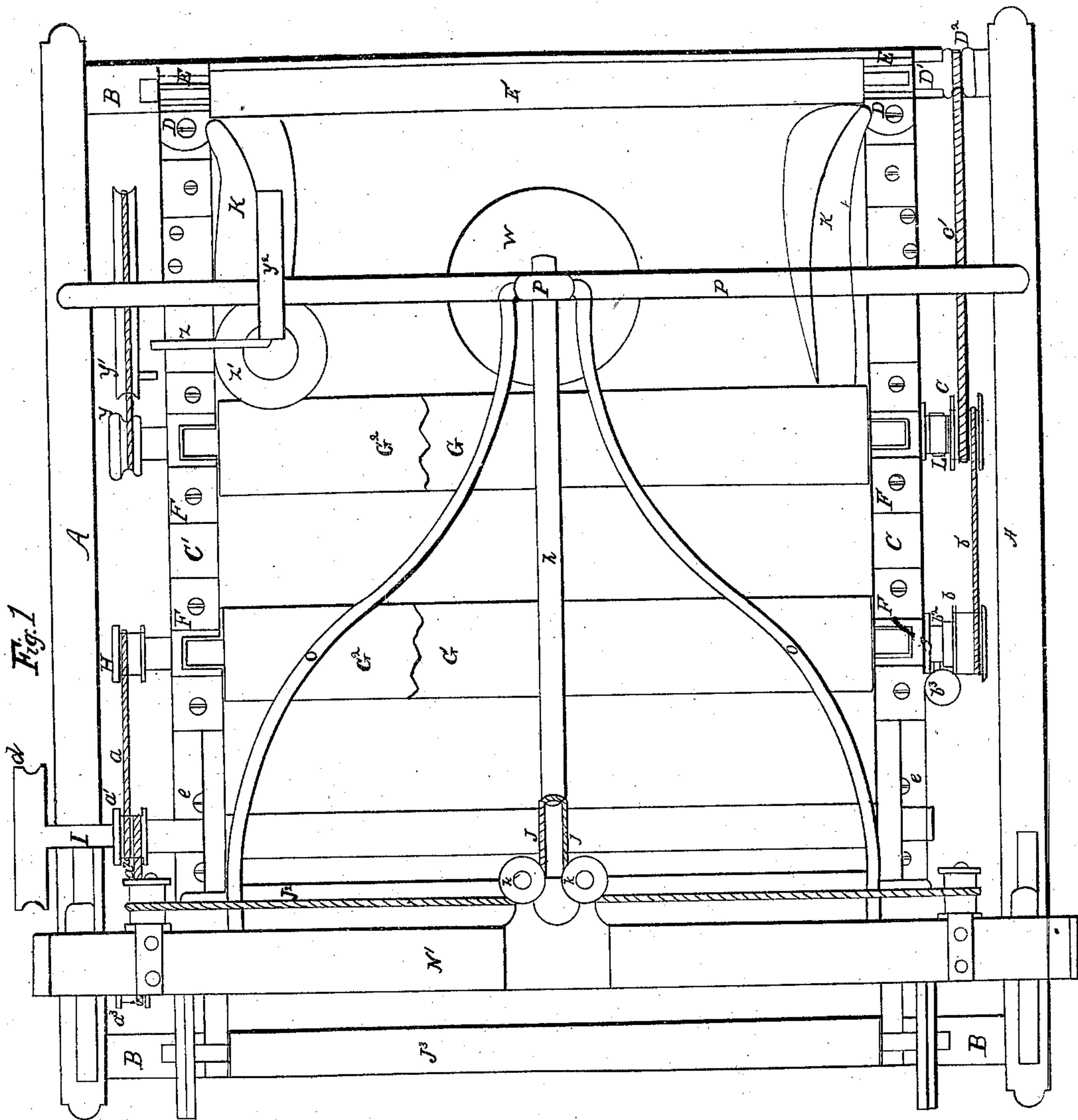
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T. Thompson.

Machine for Winding Wadding.

N^o 17,177.

Patented Apr. 28, 1857.



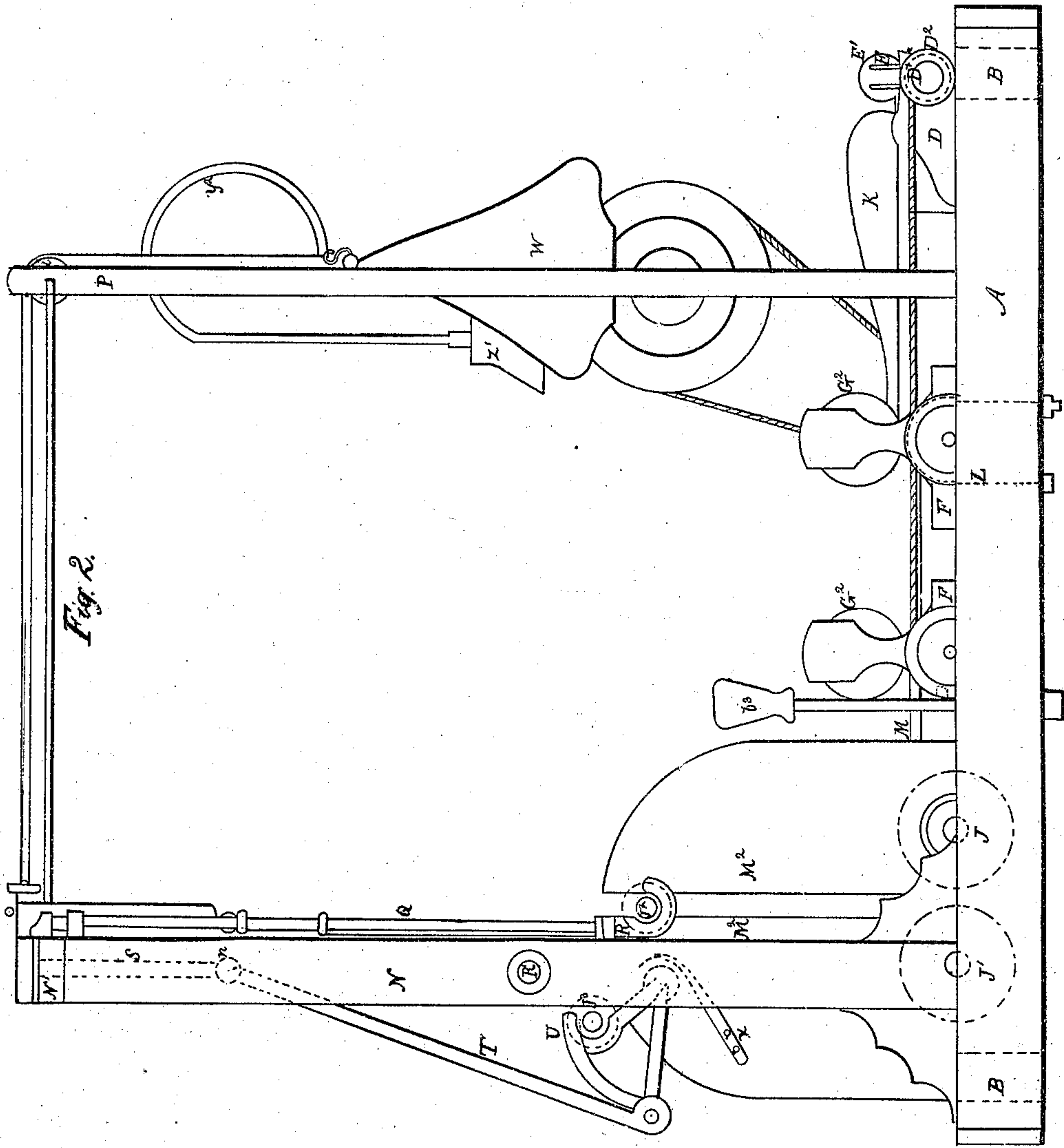
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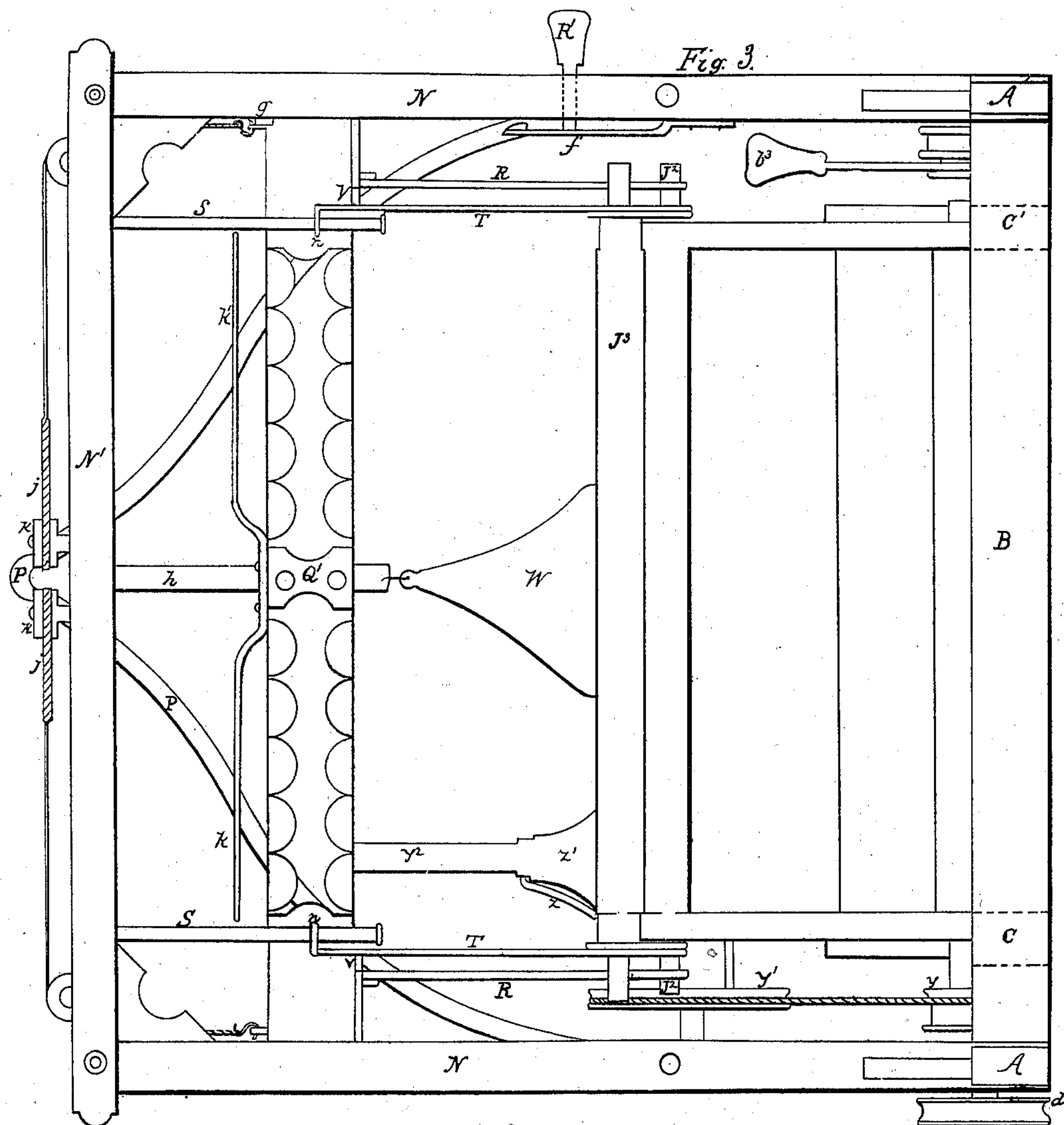
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UNITED STATES PATENT OFFICE.

THOMAS THOMPSON, OF NIVERVILLE, NEW YORK.

MACHINERY FOR WINDING WADDING.

Specification of Letters Patent No. 17,177, dated April 28, 1857.

To all whom it may concern:

Be it known that I, THOMAS THOMPSON, of Niverville, in the county of Columbia and State of New York, have invented certain new and useful Improvements in Machines or Apparatus for Winding and Separating Wadding, Laps, and Similar Materials; and I do hereby declare that the same is described and represented in the following specification and drawings.

To enable others skilled in the art to make and use my improvements I will proceed to describe their construction and operation referring to the drawings in which the same letters indicate like parts in each of the figures.

Figure 1, is a plan of the machine. Fig. 2, is an elevation of one side. Fig. 3, is an elevation of the delivering end.

The nature of my invention and improvements in machines or apparatus for winding and separating wadding, laps, and other similar materials consists in certain devices for removing the rollers that are filled and supplying empty rollers, without stopping the machine or wasting the material wrought; as the operation of changing the rollers divides or breaks the wadding in a proper manner.

In the above mentioned drawings A, A, are two side pieces of the frame, and B B two end pieces which are connected by the bars C, C', parallel to the side pieces the whole being firmly fastened together so as to make a frame to which the other parts are attached or connected.

The boxes D, D, are fastened to the bars C, C, for the journals of the lower receiving roller D' to turn in which roller is provided with a pulley D² by which it is operated. The stands E, E, are fastened to the boxes D, D, for the journals of the top receiving or delivering roller E' to turn in, this roller is carried by the friction of the material passing under or unwound from it. The boxes F, F, are fastened to the bars C, C, for the journals of the rollers G, G', over which the material acted upon passes, being pressed and compacted by the rollers G², G², which lie over the rollers G, G', upon the wadding so as to press and compact it as it passes along, the rollers G² G² being turned by the friction of the material passing under them.

The shaft of the roller G' has the pulley

H, at one end which is driven by the band *a*, from the pulley *a'* on the shaft I, as shown in the drawing. The other end of the shaft of the roller G', has the pulley *b*, upon it to carry the band *b'*, and drive the pulley *c*, on the shaft of the roller G, to turn it. The pulley *c*, carries the band *c'*, to drive the pulley D² and operate the roller D'. The shaft I, has a pulley *d*, upon it outside of the frame for a band from the moving power which is to operate the machine. This shaft I, turns in boxes *e, e*, fastened to the bars C, C, and has the roller J fastened to it which roller in connection with the roller J' represented by dotted lines in Fig. 2, form the seat for the roller J² upon which the wadding, laps or other material is wound in the machine.

The shaft of the roller J' has a pulley on it *a³* for the band, *a²*, from the pulley, *a'*. There are some guides K, K, Figs. 1 and 2, between the rollers E', and G², made of sheet metal, formed so as to turn over each edge of the wadding, or other material, and make it enter double between the rollers G, and G², so as to form a sort of hem at each edge, so as to render it less liable to be fractured. The friction strap L passes over a portion of the pulley, on the roller G, and is provided with a screw and nut to tighten it, as shown in Fig. 2, so as to tighten the strap, in order to create friction enough on the back rollers to break off the web when the clutch box is disconnected.

The pulley *b*, is fitted to turn loose on the shaft of the roller G', and the clutch *b²* is fitted to traverse but not to turn, on the same shaft, and so constructed and arranged as to be traversed to, and from the pulley *b*, by the upright lever *b³*, and lock the pulley to, or release it from the shaft, to break the wadding whenever the roller J² is full, by letting the roller G, and those which derive motion from it, stop. There are some boards arranged between the rollers G, and G', and J, to hold up the end of the wadding as it is forced forward after being broken off so as to make it enter properly between the rollers, as shown at M, Fig. 2.

There are some guides M², M², fastened to the bars C, C, which hold the roller J² and allow it to rise as the wadding is wound upon it. These guides are made so wide as to hold the wadding to a proper width upon the roller.

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There are two posts N, N, firmly fastened in the pieces A, A, and connected at the top by the bar N', which form a frame to support the apparatus which supplies an empty roller when the roller J² is full. The top bar N', is connected by the braces O, O, to the arched frame P, which is also fastened to the pieces A, A, before mentioned.

There are two rods Q, Q, fastened to the rear of the posts N, N, for the bar or frame Q' to traverse on which bar has the two hooks R, R, hinged to its lower edge, so arranged as to swing and catch under the journals of the roller J² to take it up, when the frame is released by the attendants pushing in the knob R', so as to push the spring hook f, off of the projection g, and allow the weight W, to draw up the frame and roller (when it is filled with wadding) by the strap h, over the pulley i, and cords j, j, over the pulleys k. The ends of spring k', on the bar Q' strike the braces O, O, to ease the bar and frame of a part of the concussion when it is drawn up.

There are two rods S, S, fastened into the bar N', for the ears n, n, of the links T, T, to traverse on; these links are connected to and operate the hooks U, U, which hold an empty roller J³, so that after the full roller is raised out by the ascent of the bar Q' the hooks U, U, being raised by the links T, T, vibrate on screws in the guides M², so as to deposit the empty roller between said guides to receive the wadding; the upper ends of the links being furnished with a hook shown in dotted lines in Fig. 2, which catch onto the projection, v, v, on the bar Q' when it rises. The spring x, on the guide M², throws the hook U, back as the bar descends after the empty roller is deposited.

There is a pulley Y, on the journal of the roller G, which drives the pulley Y', on a stud in the arch frame, the latter pulley being provided with a pin to strike the arm Z, from the bell Z', which bell is connected by a spring Y², to the arched frame P; the use of this bell is to enable the operator to put an equal quantity of wadding on each

roller by changing the rollers when the bell rings.

I contemplate that the knob R', and lever b³, may be connected and arranged so as to be operated by the machine, and break off the web or wadding and change the rollers at stated periods instead of ringing the bell. Also that each succeeding pair of rollers may be driven faster than the preceding pair, so as to draw, stretch or elongate the material as may be desired. And further that part or all the rollers may be made hollow and heated by steam should the fabric operated upon make it necessary.

This machine is intended to take the fibrous material from the apron which conveys it from the cards, or other machines on which it may be prepared.

This apparatus for changing the rollers may be applied to such machines as require to have the rollers changed at stated periods; with the following advantages: That is, it will change the rollers without stopping or detaining the machine, and without any waste of the material being wrought, or loss of labor of the attendant.

I believe I have described and represented my improvements in machines or apparatus for winding and separating wadding, laps and similar materials so as to enable any person skilled in the art to make and use them.

I will now state what I desire to secure by Letters Patent, to wit:

1. I claim the apparatus substantially such as is herein described for removing the full roller, and supplying or depositing the empty roller or the equivalent thereof for the purposes, substantially set forth.

2. I also claim the devices covered by the first claim or their equivalents, in combination with the rollers arranged to divide or break the wadding or other material wrought substantially as described.

THOMAS THOMPSON.

Witnesses:

RICHARD KIRK,
J. W. STOCKET.