

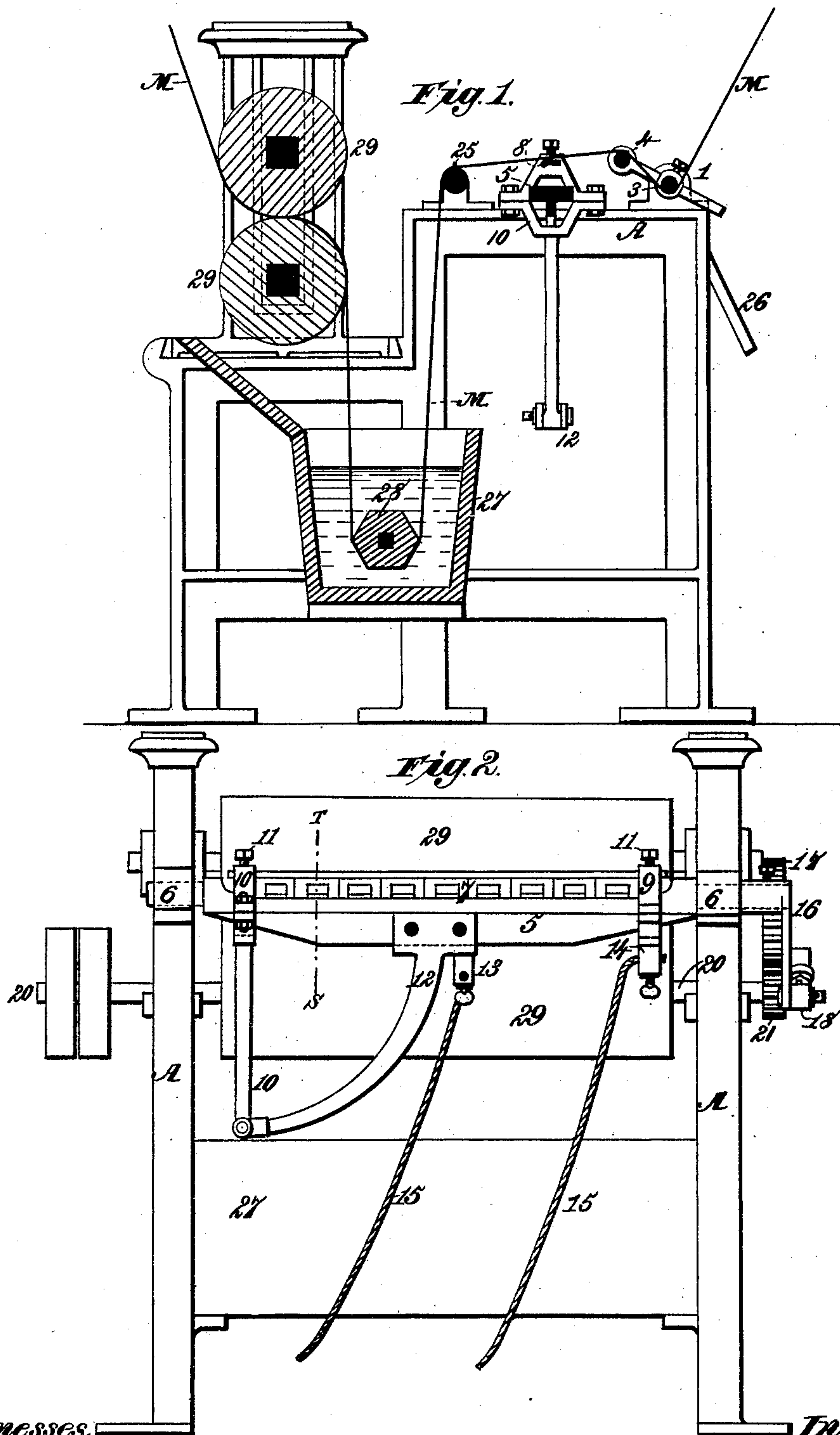
(No Model.)

2 Sheets—Sheet 1.

W. BANKS & S. BRIERLEY.
MACHINE FOR SINGEING CLOTH.

No. 353,194.

Patented Nov. 23, 1886.



Witnesses.
Robert Everett
J. A. Rutherford

Inventors.
William Banks
Samuel Brierley
By *James L. Norris* atty.

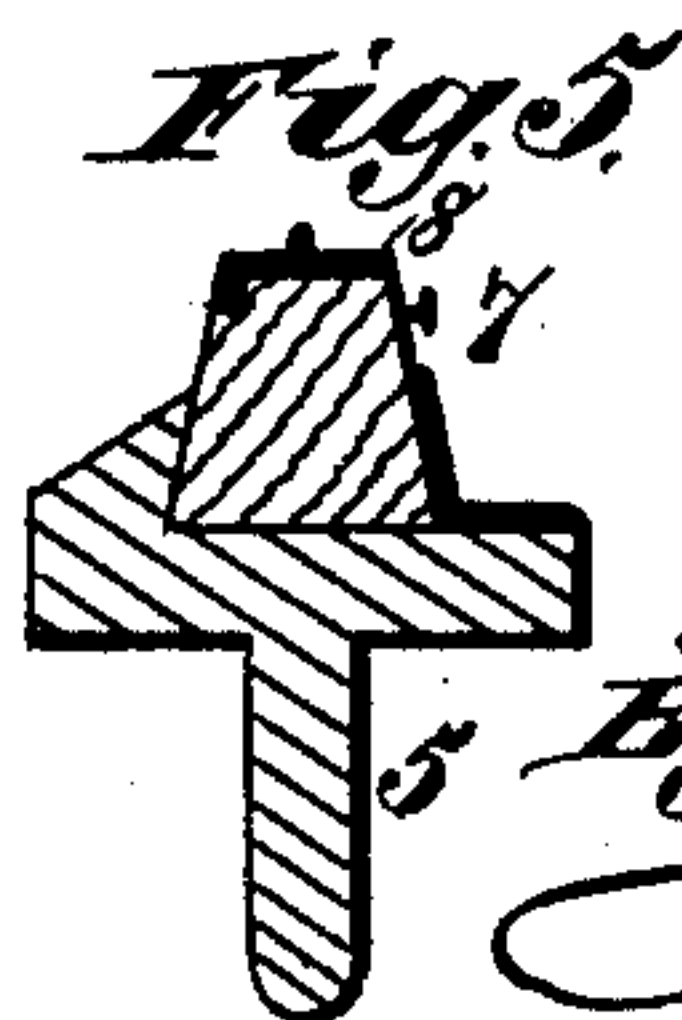
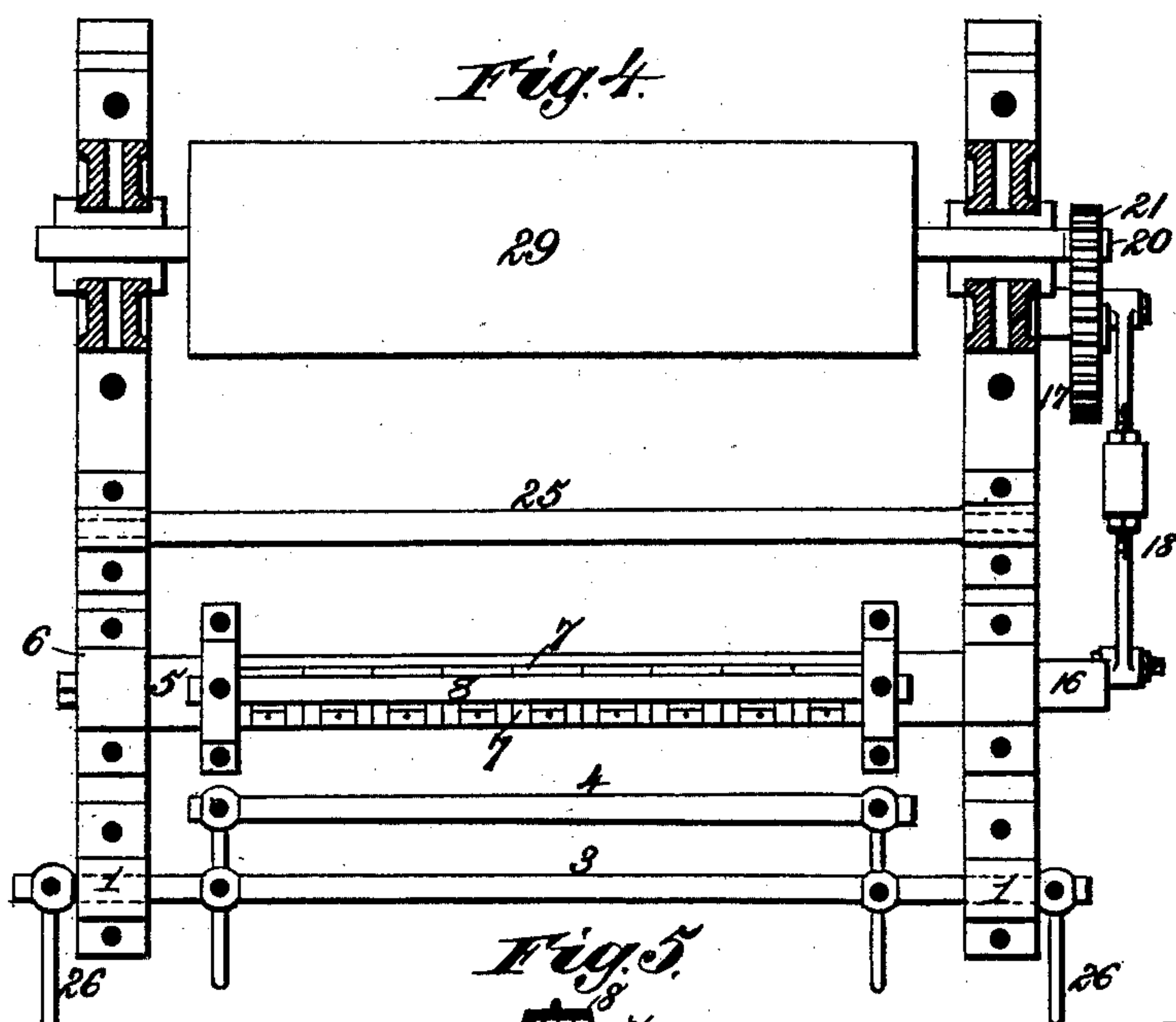
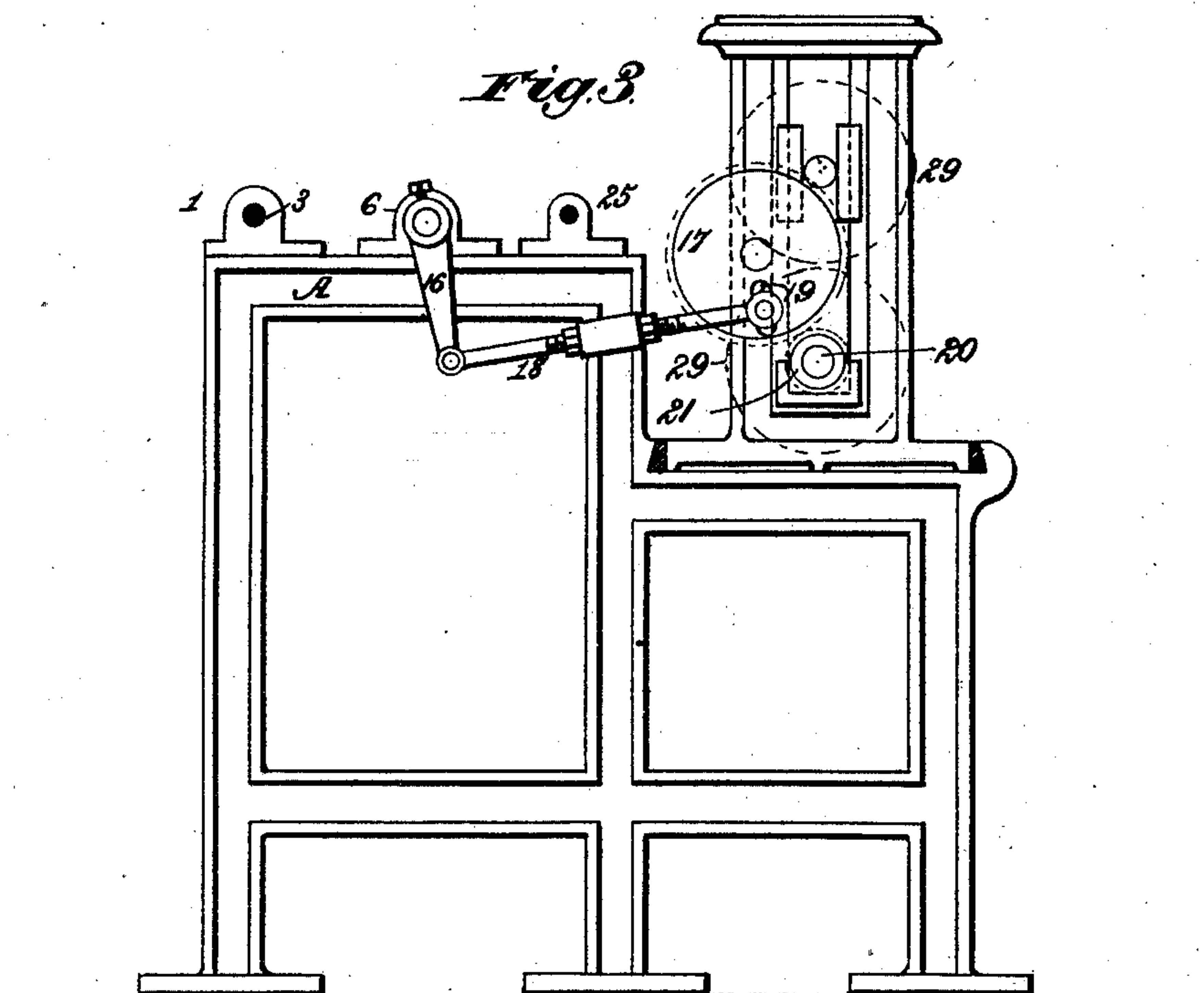
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UNITED STATES PATENT OFFICE.

WILLIAM BANKS AND SAMUEL BRIERLEY, OF BOLTON, COUNTY OF LANCASTER, ENGLAND.

MACHINE FOR SINGEING CLOTH.

SPECIFICATION forming part of Letters Patent No. 353,194, dated November 23, 1886.

Application filed July 1, 1886. Serial No. 236,842. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM BANKS and SAMUEL BRIERLEY, of Bark street, Bolton, in the county of Lancaster, England, have invented new and useful Improvements in Machines for Singeing Cloth, of which the following is a specification.

Our invention relates to that class of machinery employed for singeing and removing "nap" and other imperfections from cloths made from silk, cotton, worsted, woolen, linen, jute, and other fibrous materials; and it consists in placing in a suitable position on the machine a platinum, German-silver, or other metallic wire or other equivalents, connected in the manner well understood to an electric machine known as the "dynamo," and capable of raising the said wire or other equivalents to an incandescent state or otherwise, over which the cloth is passed, touching or otherwise. The platinum or other wire, or its equivalent, is attached to the terminals of a dynamo-machine, and supported on a bridge of fire-brick or other non-conductor.

In the drawings, Figure 1 is a part sectional side elevation of a singeing-machine with our improvements applied. Fig. 2 is a part front elevation of same. Fig. 3 is an outside elevation of Fig. 2, showing the gearing for operating or oscillating the platinum or other wire or tape. Fig. 4 is a detail plan view, partly in section, of Fig. 2; and Fig. 5 is an enlarged sectional elevation of the platinum wire or tape with its supporting-bridge and carrying-frame through line S T in Fig. 2.

To the frame A, carrying the singeing-machine, are secured the fixings or bearings 1, to carry the swiveling guide-rods 3 and 4. The fixing or carrying frame 5 extends across the front of the machine, and is mounted in the bearings or pedestals 6. The top side frame, 5, is fitted with the fire-brick or other non-conductor bridge 7, on which is supported the wire or tape 8, of platinum, German silver, or other suitable metallic material that will permit of the requisite heat without fusing. The ends of the metallic wire or tape 8 are secured in the brass or other metallic terminals 9 and 10, mounted on the oscillating bridge or frame 5, being secured by the set-screws 11. The terminal 9 is secured to the oscillating bridge 5, the

terminal 10 being pivoted at its lower extremity to the arm 12, attached to the oscillating bridge 5, which allows the terminal 10 to regulate itself according to the contraction and expansion of the wire or tape 8, thus insuring the latter lying flat on its supporting-bridge 7. The arm 12 is insulated from the bridge 5 by any suitable means. The metallic terminals 13 and 14 are attached to the under side of the terminal 9 and the arm 12, and are connected to the terminals of a dynamo-machine by the wires 15, through which the electric current is conducted, and by which the wire or tape 8 is raised to an incandescent state, or a suitable heat sufficient to singe or burn off the nap and other imperfections from cloth as it is passed over such wire or tape by touching or otherwise.

The bridge or frame 5 is oscillated by the lever 16, mounted on one end, which is coupled to the spur-wheel 17, centered on the cheeks of the machine by the connecting-rod 18, the latter admitting of adjustment of the face of the platinum or other wire or tape. The spur-wheel 17 is provided with the slot 19, to regulate the amount of oscillation of the frame 5. The spur-wheel 17 is driven from the shaft 20 by the spur-pinion 21. By oscillating the frame 5 the platinum or other wire or tape 8 presents a changing surface to the fabric under operation, by which a uniform heat is imparted to the cloth being operated upon.

This machine operates as follows: The cloth is indicated by the line M, being delivered from a batch or otherwise, and directed under the guide-rod 3, and over the guide-rod 4 to the roller 25, between which is mounted the wire or tape 8 and its connections, as shown. The guide-rod 3, with its operating-handles 26, is mounted in the bearings 1, which allows of the adjustment of the guide-rod 4, and determines the position of the cloth when passing over the said wire or tape 8. The cloth, after passing over the roller 25, descends into the water-trough 27, and round the winch 28, from whence it is passed through the rollers 29 of the machine to a batching-roller, or otherwise. The speed of the machine and the proximity of the cloth to the wire or tape 8 are regulated according to the degree of heat attained by the said wire or tape.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of the bridge or frame 5, carrying the platinum or other wire or tape 8, means for oscillating the bridge or frame, and electrical connections for heating the said wire or tape, substantially as and for the purposes described.
2. The combination of the bridge or frame 5, carrying the platinum or other wire or tape 8, means for oscillating the bridge or frame, the terminal 9, the pivoted terminal 10, and its supporting-frame 12, connected with the pivoted terminal for holding the said wire or tape, and allowing it to expand and contract, substantially as and for the purposes described:

3. The combination, with the bridge or frame 5, carrying the platinum or other wire or tape 8, of the spur-wheels 17 and 21, means for operating the latter wheel, connecting-rod 18, and lever 16, for oscillating the bridge or frame, substantially as and for the purposes described.

In witness whereof we, the said WILLIAM BANKS and SAMUEL BRIERLEY, have hereunto set our hands and seals this 4th day of June, A. D. 1886.

WILLIAM BANKS. [L. S.]
SAMUEL BRIERLEY. [L. S.]

Witnesses:

JOHN BRADSHAW,
EDMUND CHADWICK.