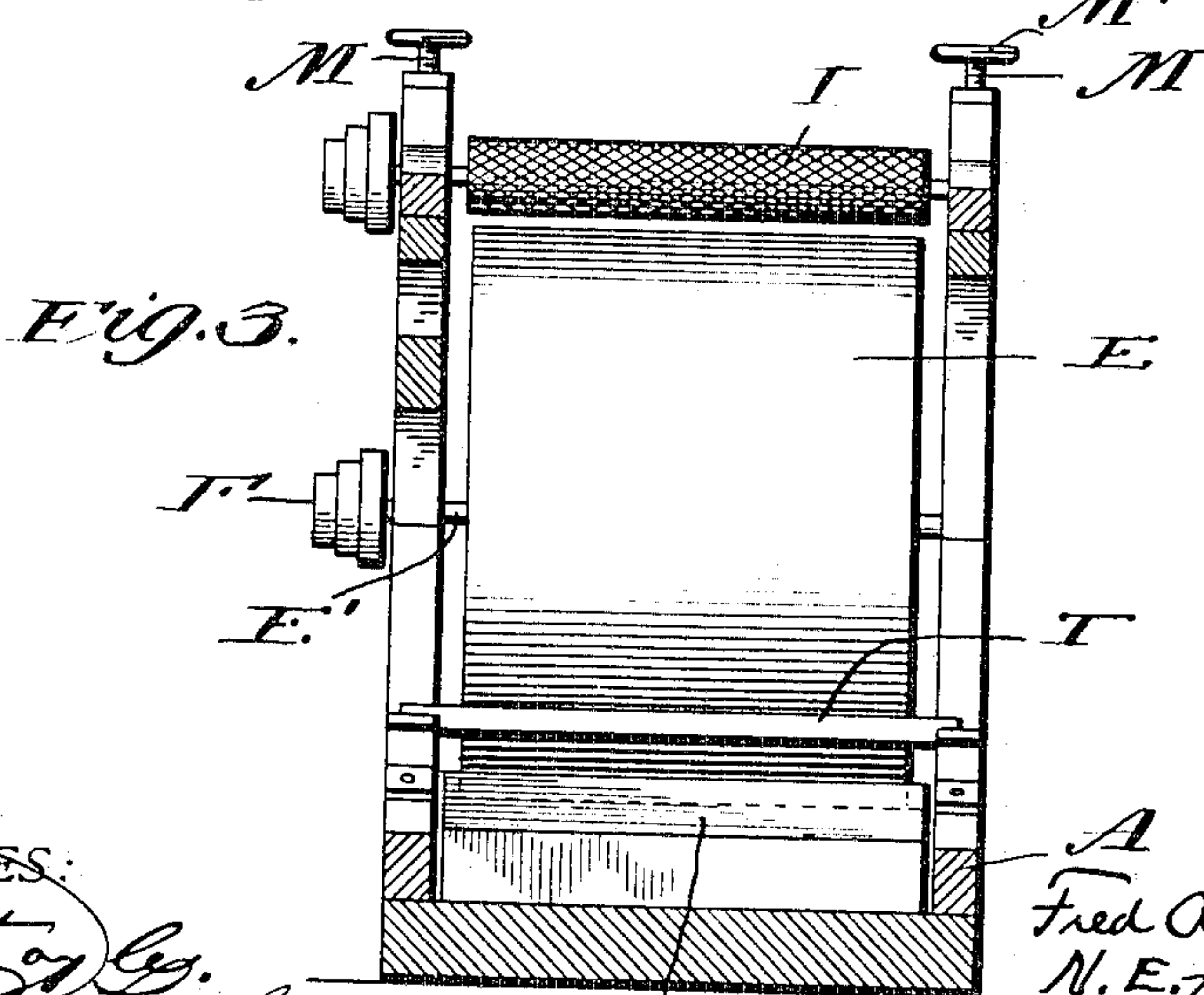
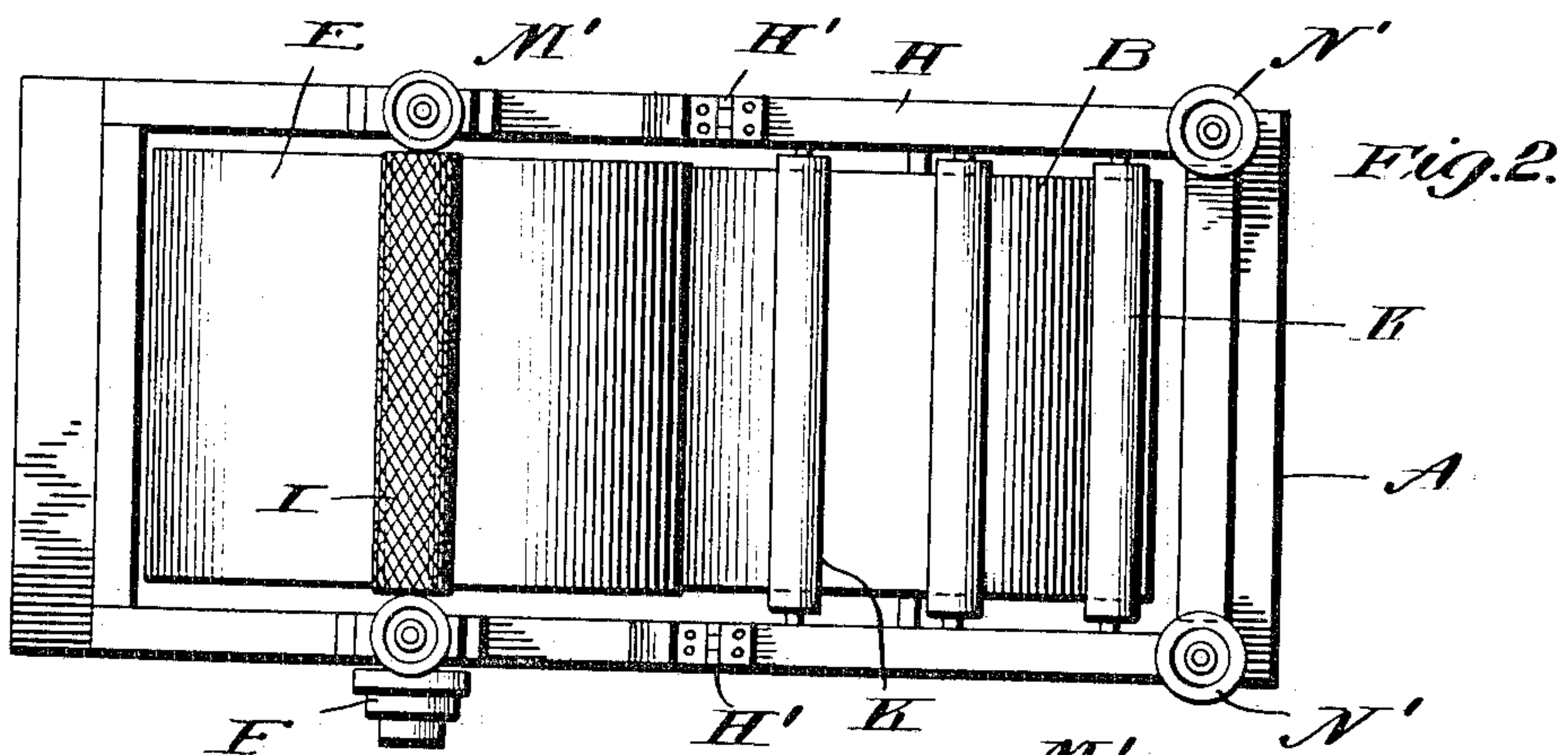
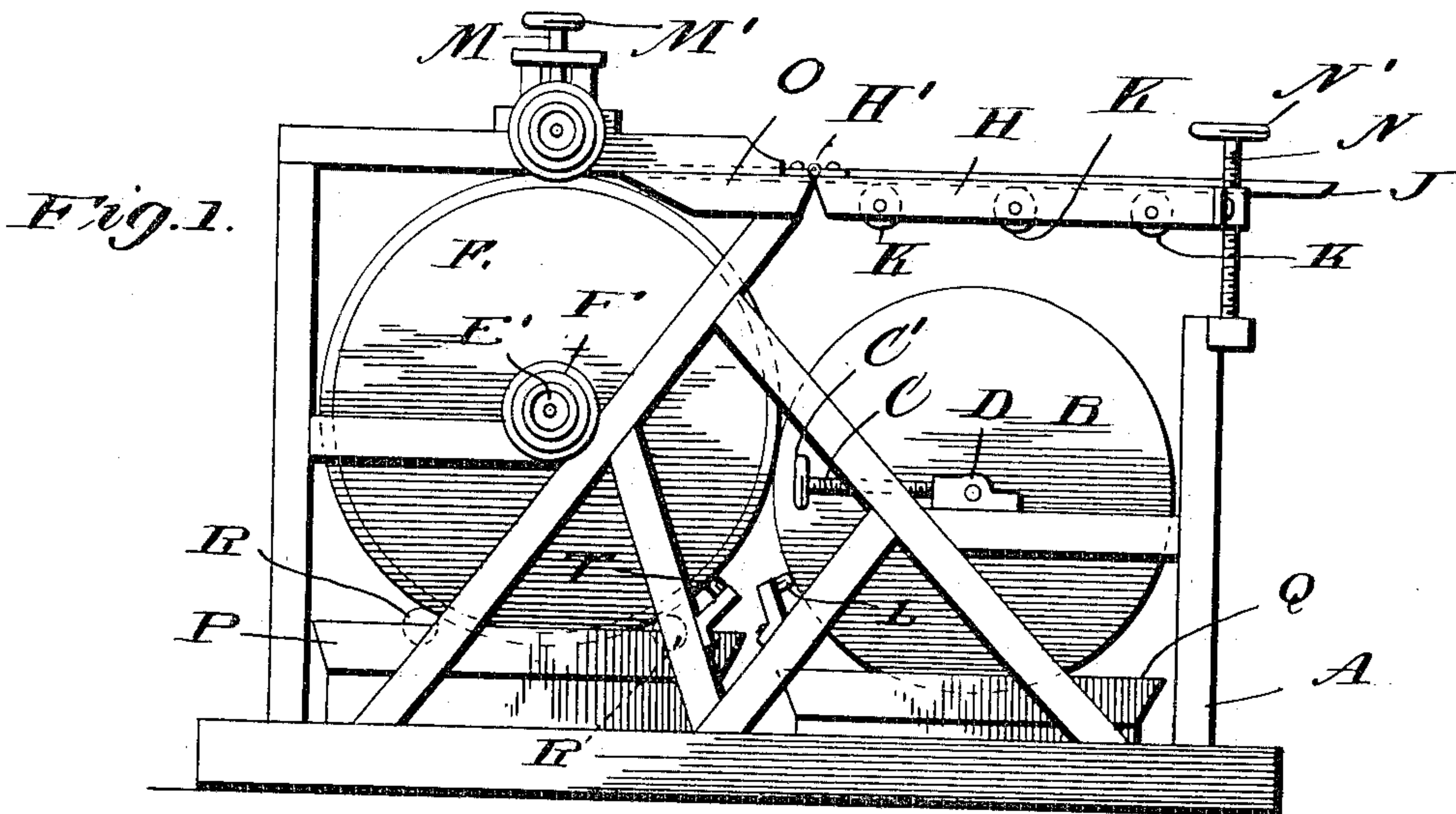


No. 819,182.

PATENTED MAY 1, 1906.

F. A. TAYLOR & N. E. FLINT.
FRICTION GRAINING MACHINE.

APPLICATION FILED NOV. 23, 1905.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FRED A. TAYLOR AND NATHAN E. FLINT, OF SAN FRANCISCO, CALIFORNIA.

FRICITION GRAINING-MACHINE.

No. 819,182.

Specification of Letters Patent.

Patented May 1, 1906.

Application filed November 23, 1905. Serial No. 288,803.

To all whom it may concern:

Be it known that we, FRED A. TAYLOR and NATHAN E. FLINT, citizens of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Friction Graining-Machines; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in graining-machines; and the object in view is to produce a simple and efficient means in which a grained surface may be applied to boards, paper, or other articles and comprises various details of construction and combinations and arrangements of parts, which will be hereinafter fully described and then specifically defined in the appended claims.

Our invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of our graining-machine. Fig. 2 is a top plan view, and Fig. 3 is a sectional view transversely through the machine.

Reference now being had to the details of the drawings by letter, A designates a frame which may be of any suitable construction, and journaled in suitable bearings in the frame is a cylinder B, upon the circumference of which is positioned a design of any kind which it is desired to transfer to the surface of a board or other article, and C is a screw having a hand-wheel C' fixed thereto, the inner end of said screw being fastened to a box D, there being one at each end of the spindle of the cylinder, said screw being provided for the purpose of adjusting said cylinder back and forth in order to regulate the frictional contact between the circumference of said cylinder and the circumference of the cylinder E, which we term the "negative" cylinder, which is distinguished from the cylinder B, which is called a "positive" cylinder, and which latter transfers the impression to the circumference of the printing-roller E, which is coated with a pliable gelatinous material. The printing-roller E has a spindle E' mounted in suitable bearings in the frame of the apparatus and has a cone-

pulley F at one end, to which belted connection may be had for driving the apparatus.

Mounted over the cylinder B is a rack H, hinged at H' to the top of the frame and carrying a series of antifriction-rollers K. The outer end of said rack is provided with screws N, which pass through threaded apertures in the frame of the rack, and said screws are mounted in suitable bearings upon the frame and provided with hand-wheels N', whereby as the screw is turned in one direction or the other the outer end of said rack may be tilted up or lowered. The hinged end of the rack is fixed to the table O and upon which and said rack a board J rests. Directly over the cylinder E is mounted an impression-cylinder I, having a corrugated circumference and adapted to bear against the upper surface of a board or other article to which the graining is to be applied for the purpose of feeding the board forward and pressing the under surface thereof to receive the graining from the gelatinous surface of the printing-roller E, to which the design has been transferred from the cylinder B. In order to drive the impression-cylinder, we provide a cone-pulley to which belted connections may be had for driving the impression-cylinder at a proper speed. The boxes in which the spindle ends of the impression-cylinder are mounted have screws M swiveled thereto, said screws passing through threaded bearings in portions of the frame and are provided with hand-wheels M' at their upper ends, whereby the impression-cylinder may be raised or lowered for the purpose of increasing or diminishing the frictional contact between the same and the surface of board or other article to be grained.

Directly underneath the cylinder B is a receptacle Q, in which the graining liquid is placed and in which receptacle the cylinder B turns, so that its surface may be coated. L designates a felt wiper which is fixed to the frame, and its free edge bears against the circumference of the cylinder B, whereby portions of the circumference of the cylinder B about the design to be transferred may be wiped off.

Positioned underneath the printing-roller E is a pan or receptacle P, in which a cleansing liquid is placed, and R designates two felt rollers carried by said receptacle P and adapted to bear against the gelatinous coated surface of the printing-roller E for the purpose of cleansing the same as the printing-roller

turns through the liquid in the receptacle P, and T designates a wiper which is fastened to the frame of the machine and bears against the surface of the printing-roller E, whereby
5 any smearing of liquid upon the surface of the printing-roller E may be cleaned before receiving an impression from the roller B.

The operation of our apparatus is simple and will be readily understood when taken in
10 connection with the foregoing description and the drawings, and by the provision of the adjustable table it will be observed that the angle at which the board is fed over the printing-roller E may be easily regulated by raising
15 or lowering the screws at the outer end of the rack, and the tension of the corrugated impression-roller may be regulated, whereby the surface of the board or other article may be made to bear against the gelatinous surface
20 of the printing-roller E with varying pressures.

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

25 1. A graining-machine comprising, in combination with a frame, a positive adjustable

cylinder adapted to carry a design for the graining, a printing-roller, an adjustable impression-cylinder, a rack hinged at its inner end intermediate and above said positive cylinder and roller, and means for raising and lowering the outer end of said rack, as set forth. 30

2. A graining-machine comprising, in combination with a frame, a horizontally-adjustable positive cylinder, a printing-roller journaled in the frame of the apparatus, a vertically-adjustable impression-cylinder mounted above said roller, a rack hinged intermediate and above said positive cylinder and roller, adjusting-screws mounted in threaded
40 apertures in the outer end of said rack and resting upon said frame, as set forth.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses. 45

FRED A. TAYLOR.
NATHAN E. FLINT.

Witnesses:

M. A. BRACE,
H. M. BRACE.