

(No Model.)

M. A. MAYBEE.

PLAITING MACHINE.

No. 273,296.

Patented Mar. 6, 1883.

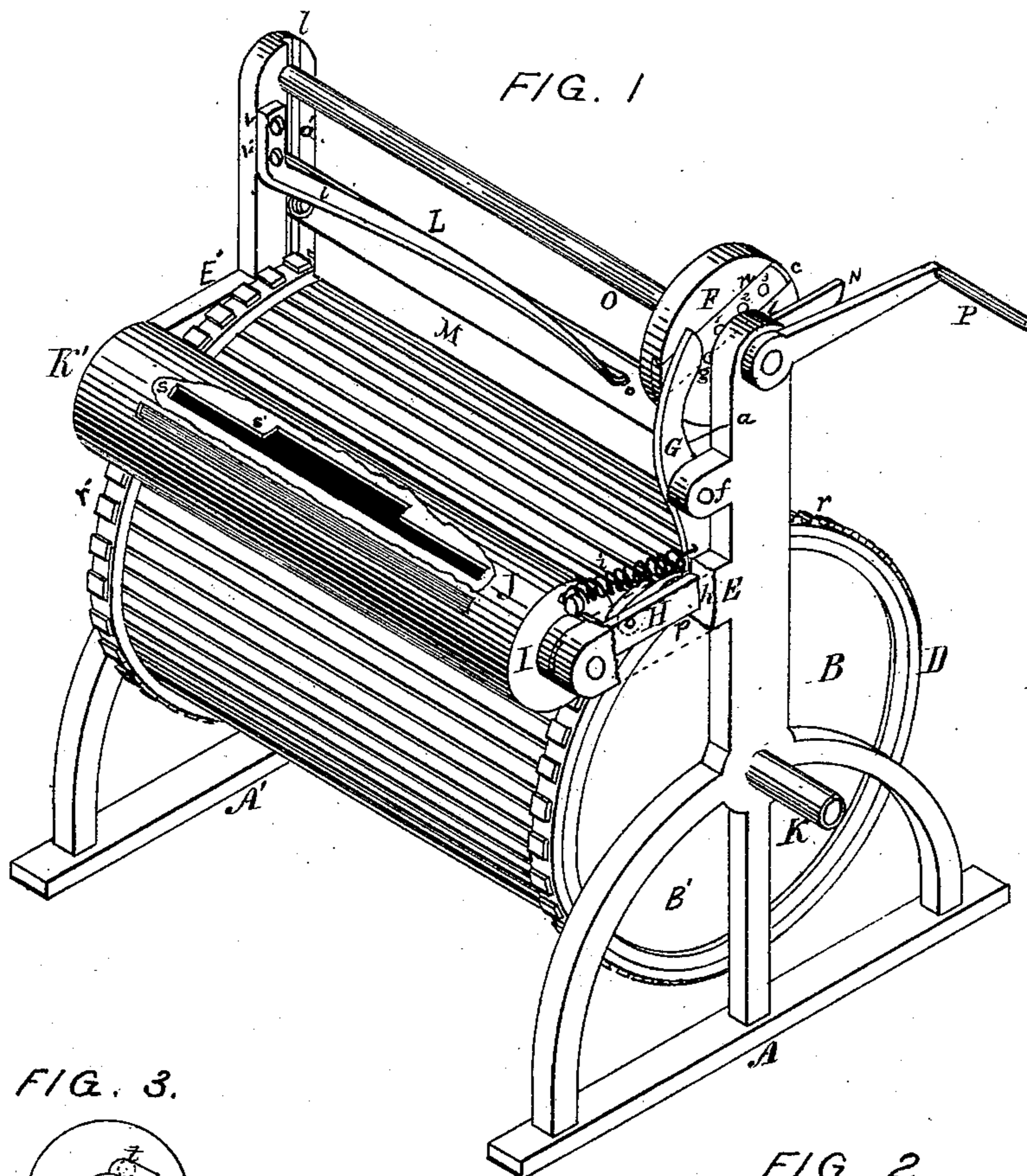


FIG. 3.

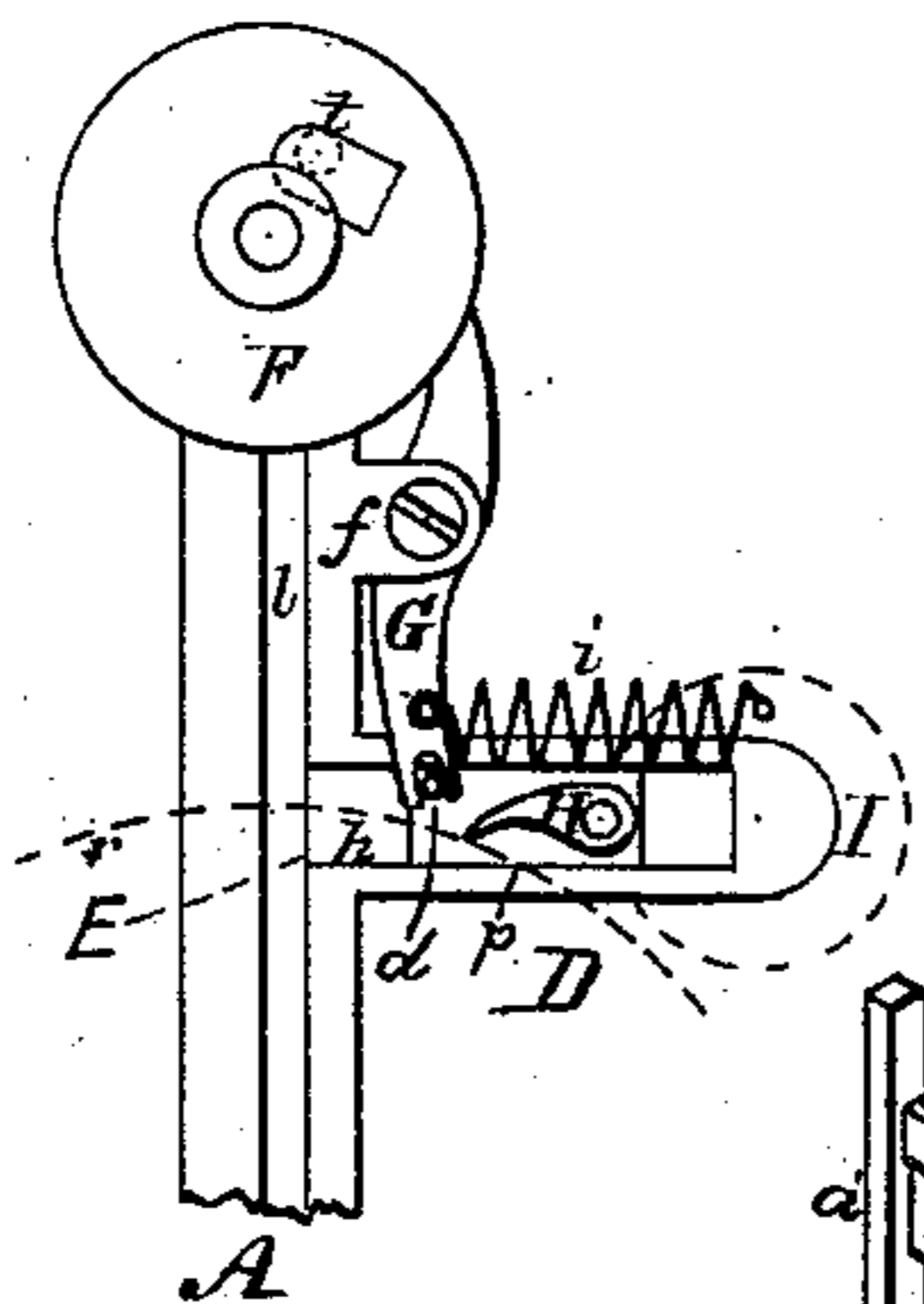


FIG. 4.

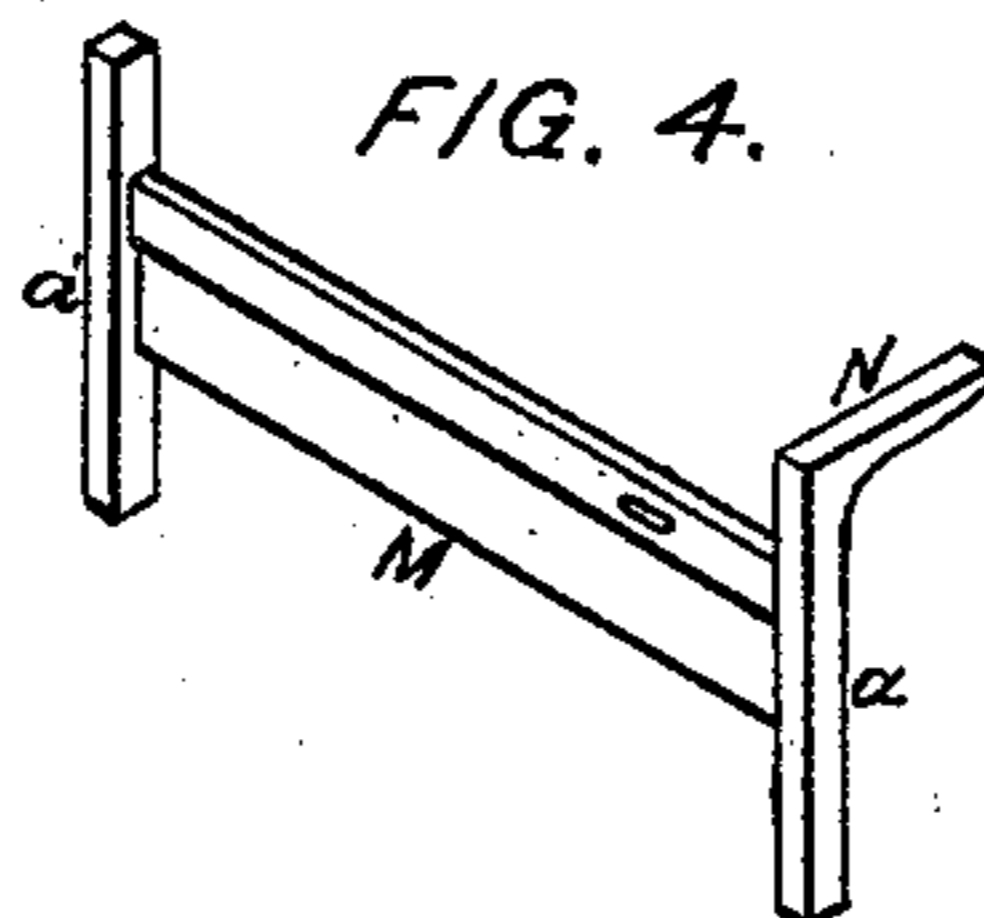
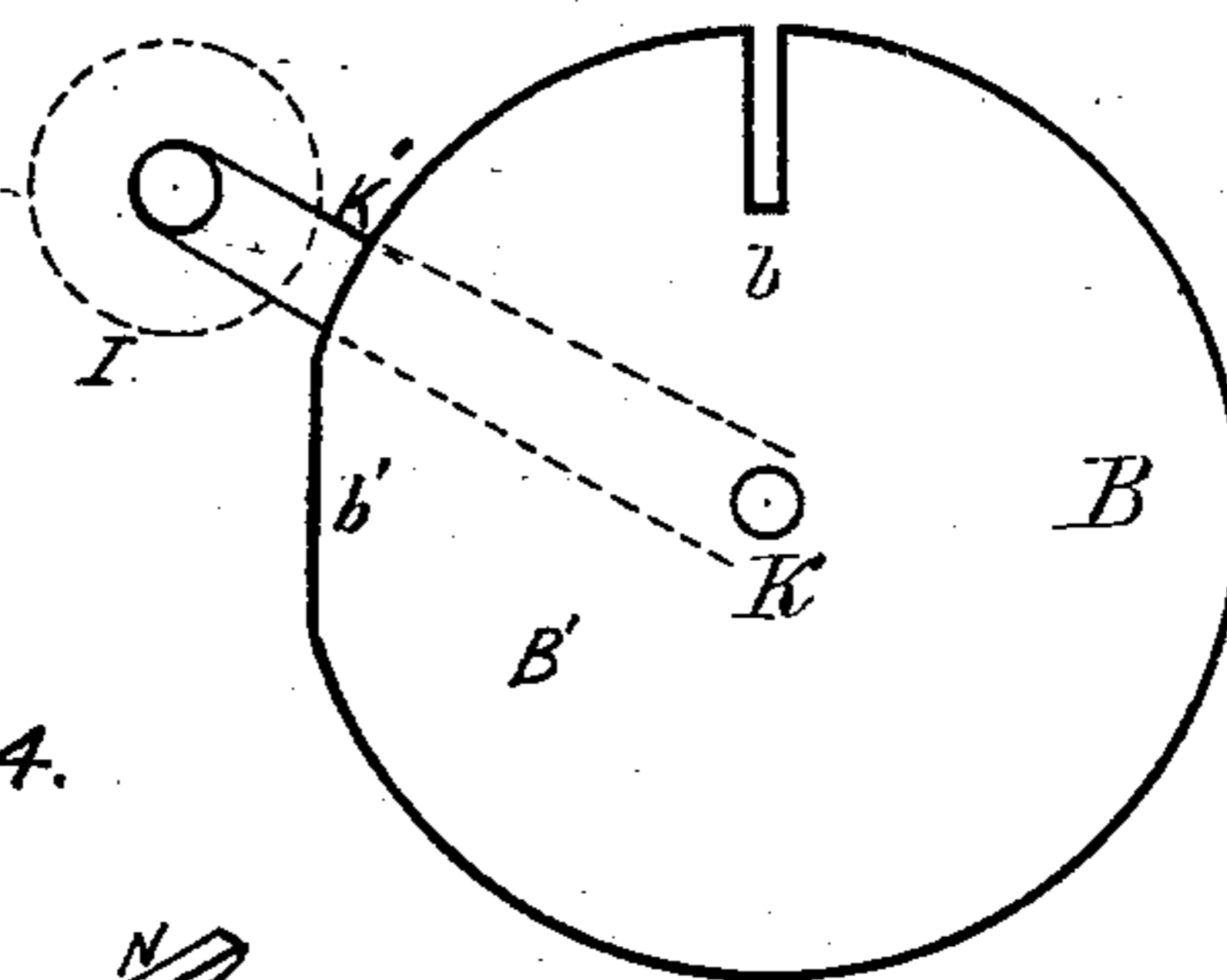


FIG. 2.



WITNESSES.

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UNITED STATES PATENT OFFICE.

M. ADDIE MAYBEE, OF SYRACUSE, NEW YORK.

PLAITING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 273,296, dated March 6, 1883.

Application filed April 22, 1882. (No model.)

To all whom it may concern:

Be it known that I, M. ADDIE MAYBEE, of Syracuse, county of Onondaga, and State of New York, have invented a certain new and
5 useful Improvement in Machines for Making Plaits; and I declare the following to be a full and complete description of the same, so as to enable any person skilled in the art to which it appertains to make and use the same.

10 The object of my invention is to furnish an automatic machine which will both dampen cloth, then fold the same into uniform plaits, and press the plaits ready for use by passing them over an endless surface heated by steam
15 or otherwise.

The invention consists of two horizontal cylinders, the inner one firmly fastened to an upright frame, and the outer one, with evenly-grated surface, arranged with mechanism to be
20 revolved about the inner, and to move alternately with a reciprocating knife, with guides at the ends, working in the grooves in the standards of the upright frame. Two arms extend from the upright frame-standards, and
25 fastened to the extremities thereof is a horizontal-cylinder steam-chamber, with openings, and with movable sheath to regulate the steam. B' is also a horizontal-cylinder steam-chamber, whose outer walls are the same as the inner
30 walls of the fixed cylinder B, with pipes K to admit and K' to carry off steam.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a perspective view of a device embodying my invention. Fig. 2 is a section of
35 the inner cylinder, showing the groove for the knife to enter and the plane surface to facilitate the removal of the plaits. It also shows the bent pipe K', which conducts the steam from B' into the steam-chamber I, and a section of I. Fig. 3 is a portion of A, with arm E
40 and shoulder f reversed, showing the head of the lever G and its connection with the pin d extending out from guide p, and the ratchet H, with guide p arranged to slide in the groove h
45 of the arm E. It also shows wheel F reversed. Fig. 4 shows the knife M, with guides a a' and shoulder N extending from the top of guide a at right angles.

50 In the upright frame-standards A A' are placed two cylinders, B D. The cylinder B is firmly fixed to the standards by screws or

otherwise, and its inner walls form the airtight steam-chamber B', except openings for
pipes K and the bent pipe K' to admit and
55 to carry off steam or heat. It contains also the slot b, into which the knife M enters when the plait is formed, and a plane surface, b', to facilitate the removal of the plaits. The cylinder D has an equidistant grated surface, and
60 at the ends is encircled with bands r r', with equidistant cogs to correspond with the grates.

The arm E, extending from the frame-standard A, contains a groove, h. The ratchet H is riveted to the sliding guide p, arranged to slide
65 back and forth in the groove h, and connects with the coggled band r on the cylinder D. The oscillating lever G is held in position by the spiral i. Its slotted head rests on pin d (see Fig. 3) in the sliding guide of the feed-
70 ratchet H. Its fulcrum is pivoted to the shoulder f, and its free or power end rests on a horizontal pin, g, which pin is provided with a friction-roller, and is set in guide n, arranged to slide in groove c of the wheel F. The wheel
75 F is firmly attached to the shaft O, and revolves with it as the power is applied at the crank P.

The knife M is provided with guides a a' at the ends, arranged to slide in the grooves ll in
80 the upright frame-standards A A', and guide a has a shoulder, N. The spring L is attached at one end to the upright frame-standard A' by screws v v', and the other end is bent at a right angle and enters slot o in the knife.
85

I is a cylinder steam-chamber held between the arms E E' of the upright frame-standards, provided with openings e e', and with a movable sheath, J, to regulate the quantity of
90 steam. The pipe K receives the steam into the steam-chamber B', and K' (see Fig. 2) conducts it therefrom into the steam-chamber I.

Sufficient steam will be generated by a tea-kettle for ordinary use, and connecting the nose thereof with the pipe K by means of a
95 rubber hose, the steam-chamber B' is filled with steam and the surface of cylinder B thereby heated, and the pipe K' conducts the steam to the chamber I, and when sufficient quantity is thrown off to moisten the goods first
100 passed over I to and beneath the knife M, the further operation of the device is as follows: Applying power to the crank P in position as shown in Fig. 1, the wheel F and the shaft O re-

volving together, the pin *g*, extending from the guide *n*, engages the power end of the lever *G* and moves it out, and the fulcrum of the lever being at the outer extremity of the shoulder *f*, and its slotted head connecting with the pin *d* in the sliding guide *p* of the feed-ratchet *H*, draws in *H*, which, engaging the cogged band *r* at the end of the cylinder *D*, pushes *D* forward a distance equal to the width of a grate. The pin *g* passing the point of contact with the lever, the spiral spring *i* restores the lever to its position of rest. The cylinder *D*, also being at rest, comes in contact with the shoulder *N* of the guide *a* of the knife *M* and presses the knife downward, thereby forming the plait, and passing the point of contact with the shoulder *N*, the spring *L* restores the knife to a position of rest. In this manner the plaits are formed and are pressed between the two cylinders as they move along with the cylinder *D* until they reach the plane surface *b'*, where they may be readily taken out in a condition for use.

To vary the width of the plaits, I have grooved the eccentric wheel *F* with groove *c*, and arranged the pin *g* with guide *n* to slide therein, and in the guide have provided holes 1 2 3, and hold this guide in position with a pin or screw, *t*, passing through the wheel, as shown in Fig. 3. When this pin is in hole 1 of the guide *n*, the knife forms a plait upon each bar; when in hole 2 a plait is formed every two bars, and when in hole 3 every three bars, and so on.

Blank places in the cloth, as wide as desired between plates, may be left by turning the crank backward after the lever *G* has moved the cylinder *D* and before the pin *g* leaves the point of contact with the lever, the knife being at rest. By moving the cylinder *D* in this manner about the cylinder *B* it is obvious that the plaits may be pressed as much as desired, the knife meanwhile being at rest.

I am aware of my previous inventions in plaiting-machines, especially No. 224,201, but deem my present invention more practical, cheaper of construction, and of superior capacity.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a plaiting-machine, in combination, the upright frame-standards *A A'*, the fixed cylinder *B*, the revolving cylinder *D*, the knife *M*, the steam-chambers *B'* and *I*, and the pipes *K* and *K'*, provided and arranged with suitable

mechanism, as described, and for the purposes specified.

2. The revolving cylinder *D*, provided with evenly-grated surface, and with cogged bands at the ends, in combination with the cylinder *B*, fixed to the upright frame-standards *A A'*, and having slot *b* and plane surface *b'*, the frame-standards *A A'* grooved and provided with arms *E E'* and shoulder *f*, and the pipes *K* and *K'*, as shown, and for the purposes specified.

3. The revolving cylinder *D*, in combination with the fixed cylinder *B*, steam-chamber *B'*, and the steam-chamber *I*, having sheath *J* and openings *e e'*, as shown, and for the purposes specified.

4. The revolving cylinder *D*, in combination with cylinder *B*, steam-chamber *B'*, steam-chamber *I*, sheath *J*, openings *e e'*, and the knife *M*, as shown, and for the purposes specified.

5. The revolving cylinder *D*, revolving about *B*, fixed to the frame-standards *A A'*, in combination with the ratchet *H*, with guide *p*, sliding in groove *h* in the arm *E*, connecting by pin *d* with the lever *G*, which lever is held in position with spiral spring *i*, the eccentric wheel *F*, the pin *g*, with guide *n*, sliding in the groove *c* of the wheel *F*, to engage alternately the lever *G* and the shoulder *N* of guide *a* of the knife, and knife *M*, provided with the spring *L*, operated as shown, and for the purposes specified.

6. The revolving cylinder *D*, revolving about *B*, fixed to the upright frame-standards *A A'*, in combination with the ratchet *H*, with sliding guide in the arm *E*, connecting with the lever *G*, provided with spring *i*, the eccentric wheel *F*, grooved, and the pin *g*, with guide *n*, sliding therein and engaging the lever *G* in turning the wheel backward to skip bars or press plaits, operated as shown, and for the purposes specified.

7. In a plaiting-machine, in combination with the knife *M*, the eccentric wheel *F*, grooved, and the pin *g*, provided with guide to slide in the groove, and having holes 1 2 3 to vary the width of the plaits, operated as shown, and for the purposes specified.

In witness whereof I have hereunto set my hand this 18th day of April, 1882.

M. ADDIE MAYBEE.

In presence of—

J. NEAL PERKINS,
HOMER WESTON.