T. HAGERTY.

PLAITING MACHINE.

No. 189,030. Patented April 3, 1877.

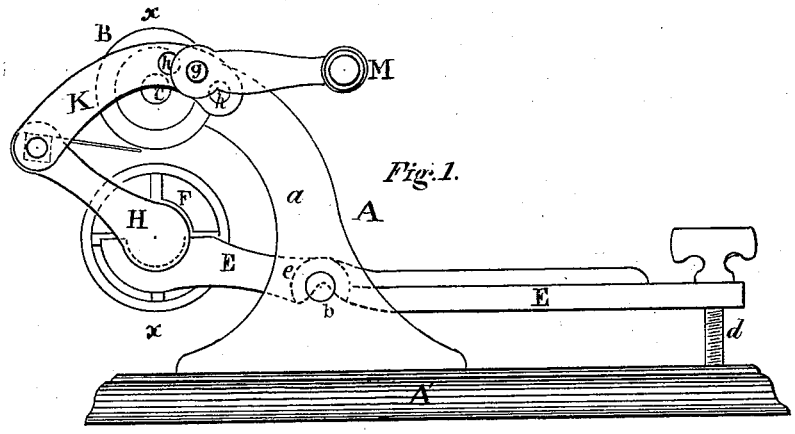

Fig. 1.

Fig. 3.

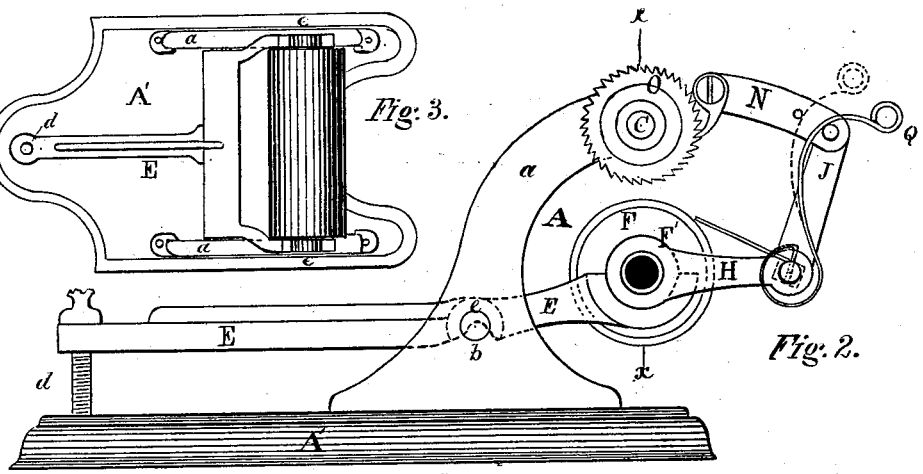

Fig. 2.

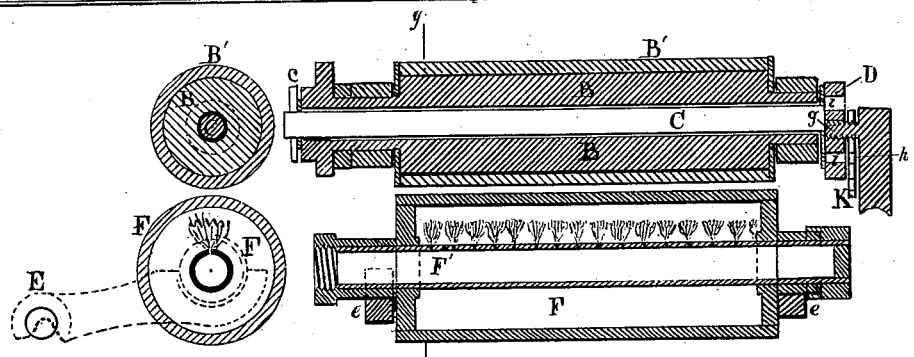

Fig. 5. Fig. 4.

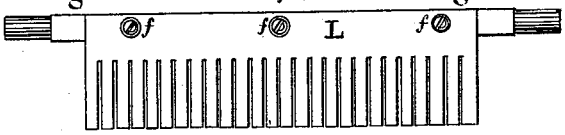

Fig. 6.

Witnesses

C. M. Connell

W. R. Singleton

Inventor:

Thomas Hagerty

Per Blanchard & Singleton

Attys

UNITED STATES PATENT OFFICE.

THOMAS HAGERTY, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN PLAITING-MACHINES.

Specification forming part of Letters Patent No. **189,030**, dated April 3, 1877; application filed March 6, 1877.

To all whom it may concern:

Be it known that I, THOMAS HAGERTY, of Brooklyn, E. D., in the county of Kings and State of New York, have invented certain new and useful Improvements in Plaiting-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which 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 letters of reference marked thereon, which form a part of this specification.

Figure 1 is a side elevation, showing the manner of operating the blade by means of the adjustable crank and pitman. Fig. 2 is an elevated view of the opposite side, showing the ratchet-wheel, oscillating arm, and link which move the rollers. Fig. 3 is a top view on reduced scale of the bifurcated arm. Fig. 4 is a longitudinal vertical section on line *x x*, and Fig. 5 a transverse section on line *y y* of Fig. 4. Fig. 6 is a top view of the plaiting-blade.

This invention relates to that class of knife or side plaiting machines in which the cloth is fed through between two horizontal revolving pressing-rollers after the plait has previously been formed by a knife or blade; and its object is to improve the construction of such machines in the following particulars, viz: First, in the construction of the frame; second, to separate the rollers and bring them together on the cloth with any amount of pressure that may be required; third, the manner of operating and adjusting the feeding-blade; fourth, to change from one size plait to the next size with but one adjustment of the machine.

In the drawing, A is the frame, consisting of the base-plate A′ and two arms or supports, *a a*, which are curved, as shown, for the purpose of allowing room for the arms of the bifurcated adjusting-lever and under roller to move freely in front, and also to provide a fulcrum for the lever to rest upon, as shown at *b*, Figs. 1 and 2. B is the upper roller, which is made of metal, and covered with rubber or other suitable material B′. On each of its ends are journals, which enter holes in the upper ends of the frame-arms *a a*. This roller B is cast hollow, and bored out to receive the driving-shaft C, which passes through said roller, and is held in place by the nut or pin *c*. To the other end of this shaft C I attach the adjustable crank D. E is the adjusting-lever, which is bifurcated in front to receive the hollow heating-roller F. The rear end of the lever is carried to the end of the base, where it receives the adjusting-screw *d*. The heated roller F has journals on each of its ends, which rest in bearings *e e* in the arms of the bifurcated adjusting-lever. A perforated gas-pipe passes through the center of the under roller, and to each of its ends are attached arms H H, as shown at Fig. 1. I is a square shaft, the ends of which are rounded off, and enter holes in the front ends of the arms H H, through which they extend a sufficient length to receive the link J on the left-hand end, and also the pitman K on the right-hand end. L is the feeding-blade, which is attached to the shaft I by screws *f*. M is the handle, which has on its crank end a pin, *g*, which passes through one of the holes *h h h* in the upper end of the pitman K, and screws into one of the holes *i i i* in the adjustable crank D.

To the left-hand journal of roller B, which passes through the frame, as shown in Fig. 2, I attach an oscillating arm, N, and a ratchet-wheel, O. The arm N moves freely on the shaft, and is kept in place by the ratchet-wheel, which is firmly secured to said shaft. A pawl, P, is attached to the arm N, and is set so as to engage the ratchet-wheel O. The link J, which swings on the left-hand end of the shaft I, is attached to the end of the oscillating arm N by means of the shouldered screw *k*. A spring, Q, is attached to the shaft I at the left-hand end, as shown at Fig. 2, and extends upward until it strikes against one or more pins, *l*, as shown in Fig. 2, which project from the arm N.

The operation of this device is as follows: The two rollers are brought together by means of the thumb-screw *m*, the pin on the handle M is put through one of the holes in the pitman K, and the corresponding hole in the crank D. The spring Q is set behind either pin on the arm, and holds the edge of the feeding-blade on the under roller, with a

considerable pressure from the point where it commences to carry the goods forward, the pressure on the cloth gradually diminishing as the blade moves until it has delivered the plait formed between the two rollers.

When the blade commences to recede it is not pressed on the cloth until the rollers commence to move along with the plait formed. It then commences to press or smooth out the cloth until it reaches the point where it again goes forward with the next plait. By turning the handle M in either direction motion is imparted to the crank D, which carries the pitman K upward to the limit of the stroke. The blade L has now carried the cloth up between the rolls, and, as it recedes, the rolls hold the plait formed.

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

1. In a plaiting-machine, the driving-shaft C, when passing loosely through the upper roller B, and being independent of the same, in combination with the adjustable crank D, pitman K, blade-shaft I, link J, oscillating arm N, ratchet-wheel O, and pawl P, substantially as shown.

2. The spring Q, attached to the blade-shaft I when made to press intermittently on the cloth by the forward and backward movement of arm N, or other parts of the machine.

3. In a plaiting-machine, the bifurcated adjusting-lever for raising and adjusting the lower roller, and also forming the bearings of the same, constructed substantially as described.

4. The combination of the driving-shaft C with the oscillating arm N and link J, to act on or engage the ratchet-wheel, part of the time positively, and part of the time with lost motion, when the machine is in operation.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

THOMAS HAGERTY.

Witnesses:
C. M. MESEROLE,
GEO. W. KING.