

(No Model.)

J. G. CRAWFORD.
Mangle.

No. 238,657.

Patented March 8, 1881.

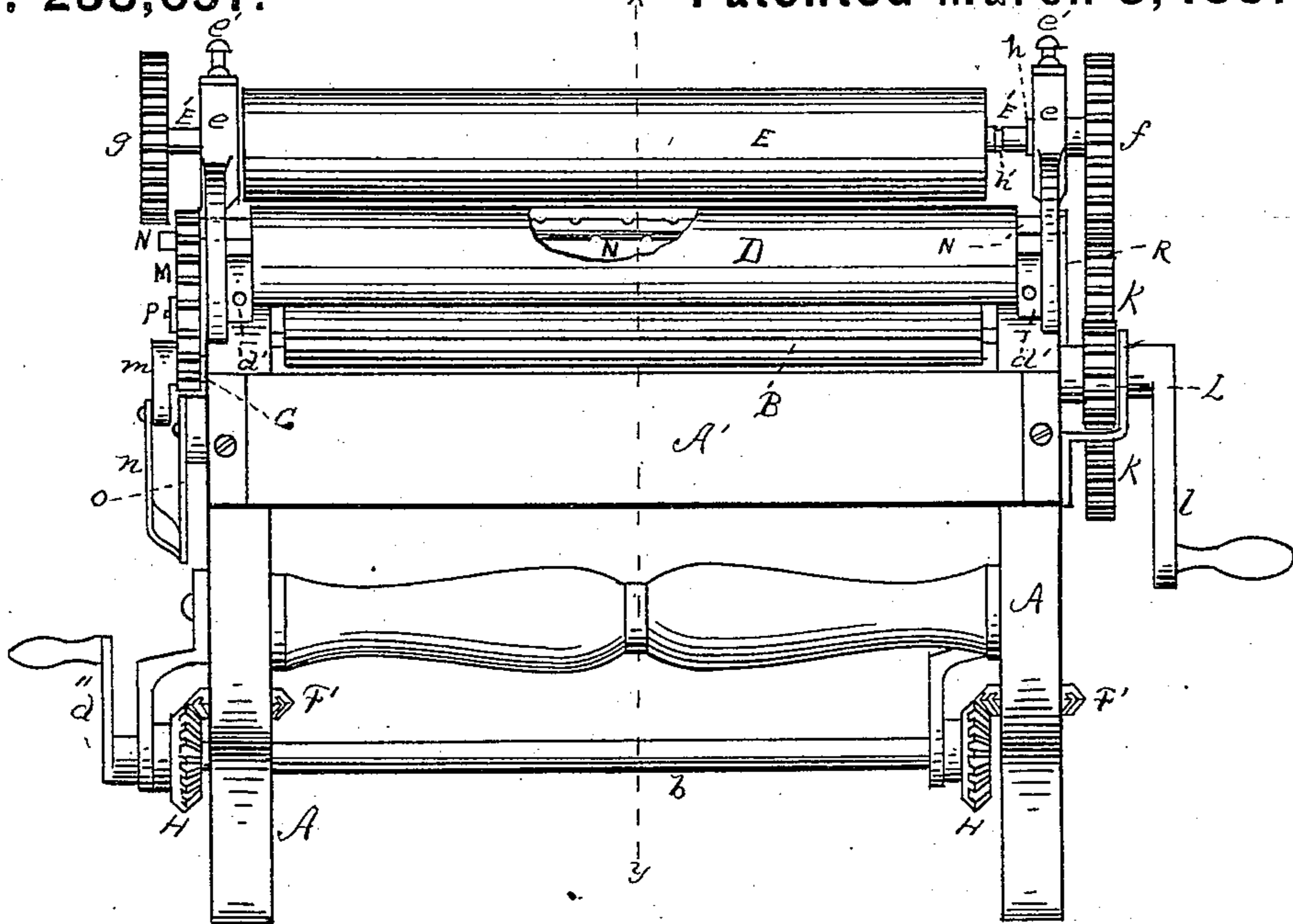


Fig. 1.

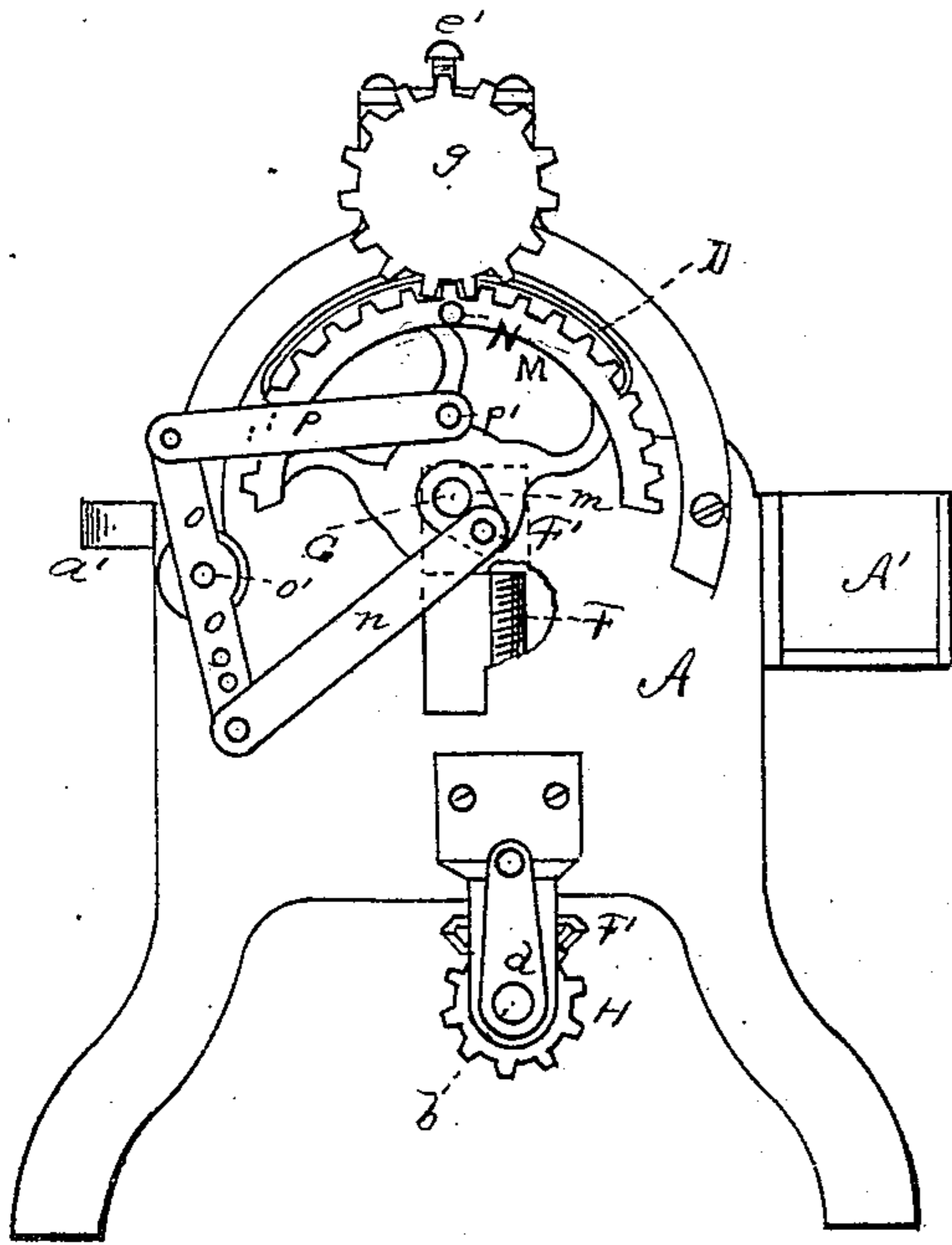


Fig. 2.

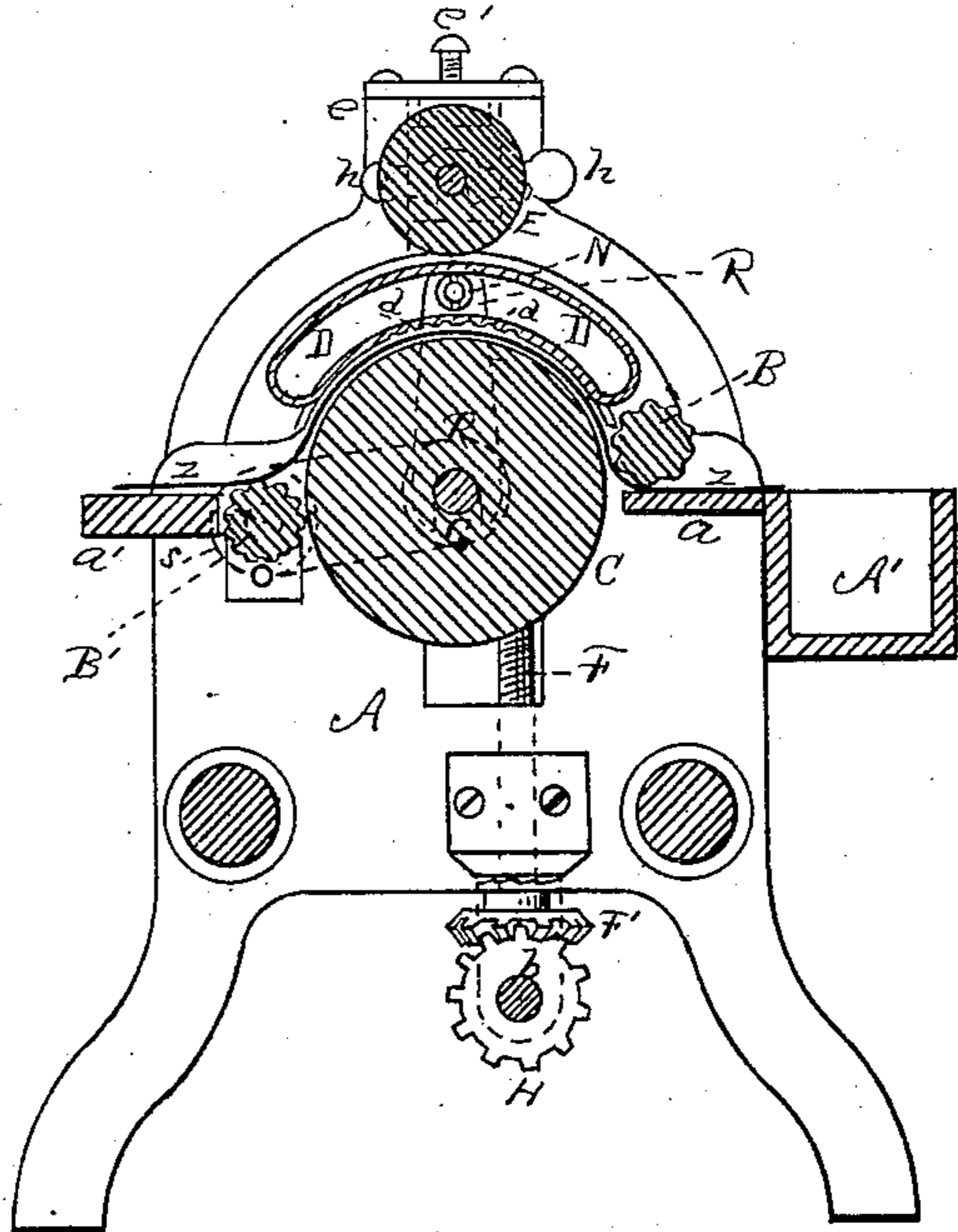


Fig. 3.

WITNESSES

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JAMES G. CRAWFORD, OF BOSTON, MASSACHUSETTS.

MANGLE.

SPECIFICATION forming part of Letters Patent No. 238,657, dated March 8, 1881.

Application filed October 22, 1880. (No model.)

To all whom it may concern:

Be it known that I, JAMES G. CRAWFORD, of Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Mangles, of which the following is a specification.

The nature of the invention in detail is described below.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a front elevation of my improved mangle, a small portion of the ironing-bed being represented as having been broken out. Fig. 2 is an end elevation of the same, with a small portion represented as having been broken out. Fig. 3 is a transverse vertical section upon line *x y*, Fig. 1.

A represents the frame of the machine; *a*, the table, from which the articles pass into the machine, (more especially when being fed under the ironing-bed;) *a'*, the table receiving the goods, and *A'* a box or receptacle holding a mass of goods to be smoothed.

B and B' are fluted rolls, the former placed loosely in the frame close to roll C, and feeding the articles between roll C and the ironing-bed, and the latter connected by a belt (shown in broken lines in Fig. 3) with the shaft G, said belt passing around a pulley, *s*, Fig. 3, and serving to turn the roll B' away from roll C, thus turning off the articles after they have passed through the machine.

D is the ironing-bed, of the shape shown in Fig. 3, and having its under portion provided with longitudinal grooves *d*, to add friction to the goods passing between it and the roll C. The ironing-bed is secured to the frame at the points *d'*.

E is a roll placed above the ironing-bed. Both rolls are placed close enough to the ironing-bed to smooth the clothes, which are squeezed between them and the bed. The roll C is rendered adjustable by means of screws F F', screwing into the boxes, (one being shown by broken lines F' in Fig. 2,) which support the shaft G, which carries the roll C. The lower end of each screw F is fixed in the bevel-gear F', meshing into gear H, connected by shaft *b*, (see Fig. 1,) said shaft being actuated by the crank *d''*, and thus screwing the boxes holding the shaft G up and down. The roll E is rendered adjustable by the well-known means of a box, *e*, at

each end, or near each end, of its shaft E', said boxes containing sliding bearings adjusted by the screws *e'*. The roll E is also capable of longitudinal adjustment by means of the catch *h*, which may drop into either of two grooves, *h'*, in shaft E'. The roll may therefore be actuated by the cog-wheel *f*, as in Fig. 1, or by the cog-wheel *g*, as in Fig. 2.

The machine being in the position shown in Fig. 1, motion is imparted to the rolls by turning the crank *l*, which turns the small gear-wheel L, which meshes into the large wheel K, fixed to shaft G. This wheel K turns the roll C and, by means of the gear-wheel *f*, the roll E, both rolls continuously rotating toward the ironing-bed D. Large articles, such as table-linen and sheets, are fed below the bed D, being guided in by the corrugated roll B, carried under by roll C, and having a finish imparted by the grooved portion *d*, and guided to the table *a'* by the corrugated roll B'.

In Fig. 3, *z* represents a sheet passing through the machine below the bed. Smaller articles, such as towels, are passed above the ironing-bed and carried between it and the pressure-roll E. Both the rolls C and E are usually covered with flannel or similar substance.

M is a segment-gear lying loosely on one end of the shaft G. A crank, *m*, fixed on the shaft G, has pivoted to it the rod *n*, whose opposite end is pivoted to the lever *o*, pivoted at *o'* to the frame. A rod, P, extends from the upper end of lever *o* to the point P' on the segment-gear M. A gas-pipe, N, for supplying heat to the ironing-bed D, extends from this segment-gear through the bed, and has its opposite end supported by a rod, R, extending up from the shaft G and placed loosely upon it. Thus the shaft G, when the roll C is rotating, imparts reciprocating motion to segment-gear M by means of the crank, rods, and lever *m n P o*, and hence causes the gas-pipe N to vibrate laterally back and forth in the ironing-bed, evenly heating all portions by means of jets extending upward and downward.

In case it is desired to polish small articles, such as collars and cuffs, the roll E is moved as above described, so that its wheel *f* is out of gear, and its wheel *g* meshes into the segment-gear M, as seen in Fig. 2. Then, motion being imparted to the shaft G, reciprocating rotary motion is imparted to the roll E by the

segment-gear, so that when collars are placed between it and the ironing-bed they are moved back and forth upon the bed, thus receiving a high degree of polish. Thus the machine may
5 be used as an ironing-machine as well as a mangle.

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

10 1. The combination, with the ironing-bed D, roll C, and shaft G, of the crank *m*, rods and lever *n o* P, segment-gear M, and gas-pipe N, all ar-

ranged and constructed substantially as and for the purpose described.

2. The combination of the roll C, shaft G, 15 gear K L, segment-gear M, and crank, rods, and lever *m n P o*, the double ironing-bed D, and the roll E and shaft E', longitudinally adjustable, and the gear *f g*, all arranged and constructed to operate as specified.

JAMES G. CRAWFORD.

Witnesses:

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