

(No Model.)

C. A. OVESON.
MANGLE.

No. 482,410.

Patented Sept. 13, 1892.

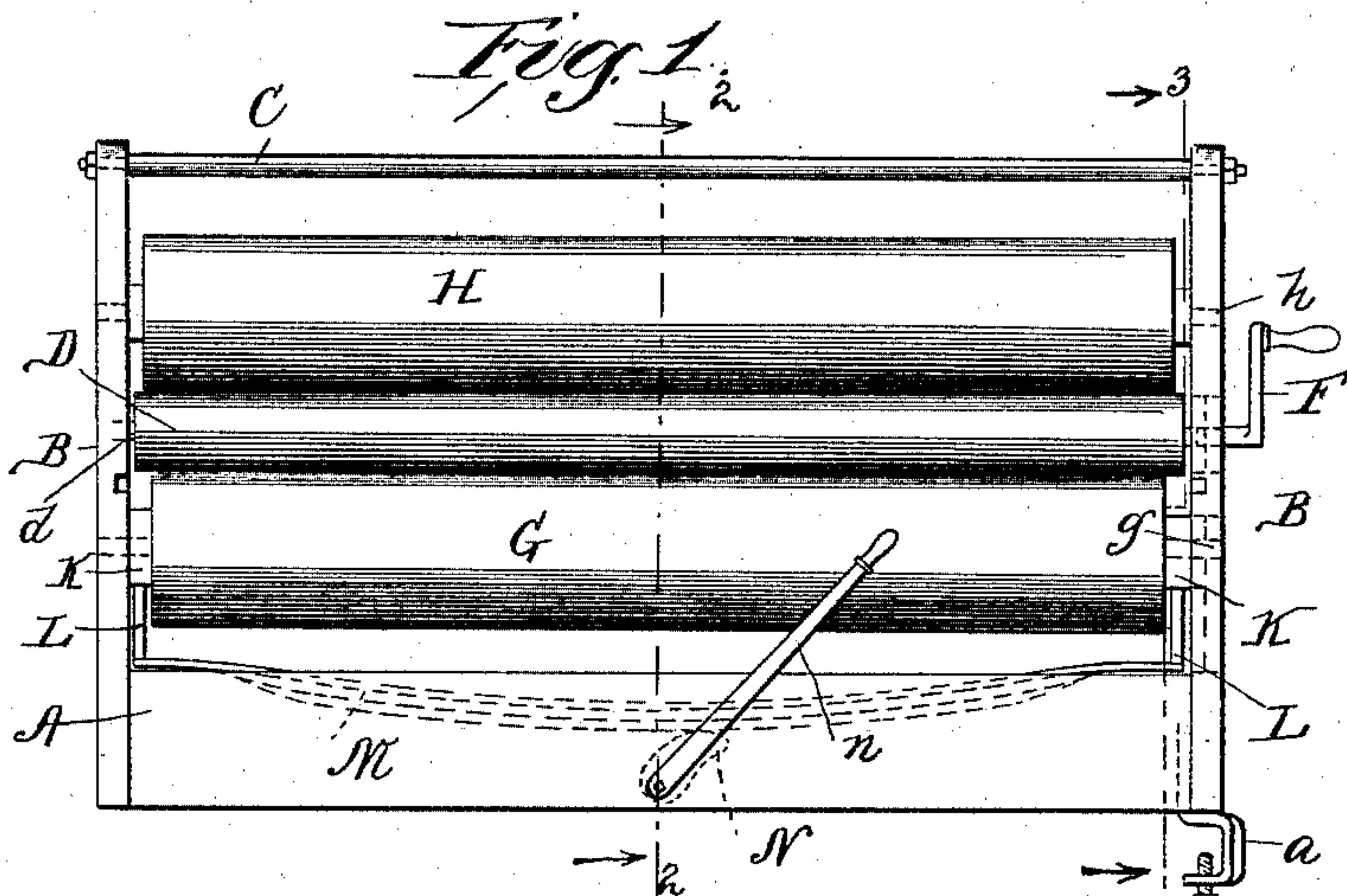


Fig. 2.

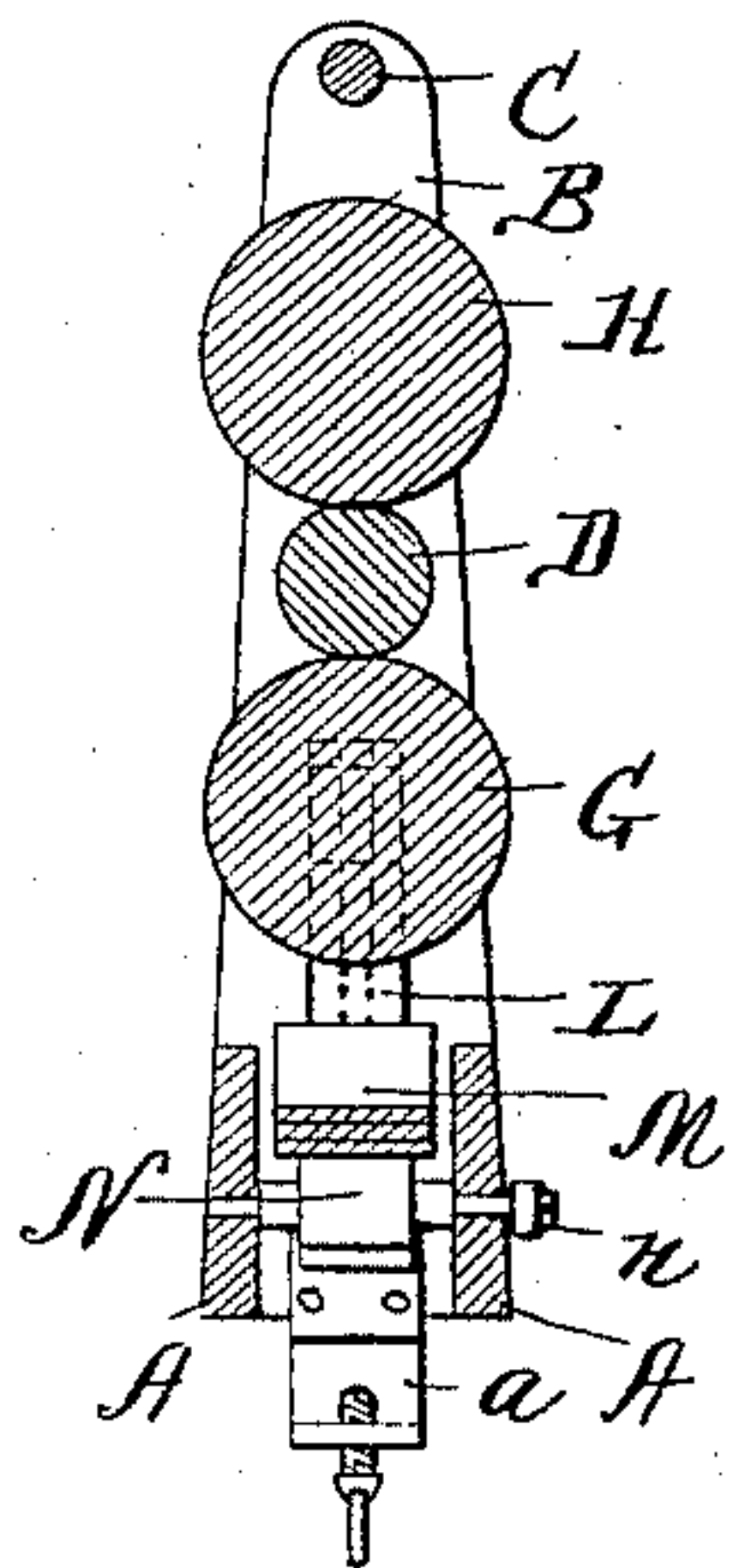


Fig. 3.

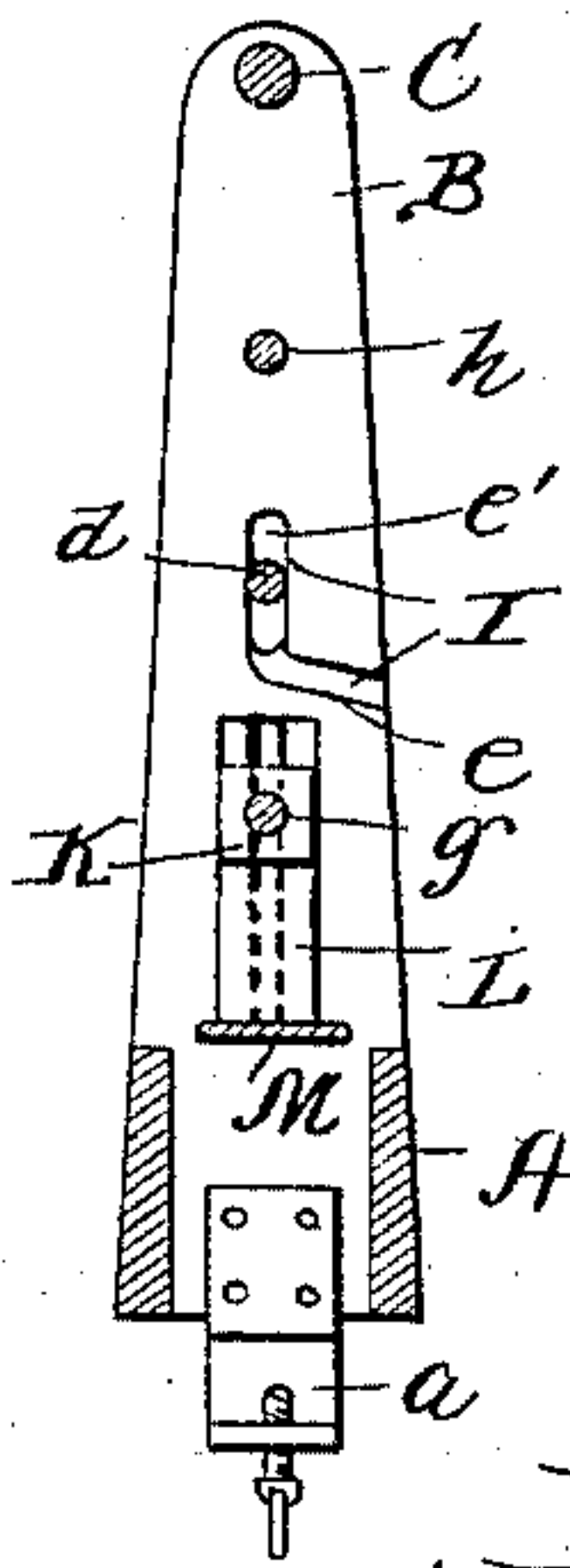


Fig. 4.

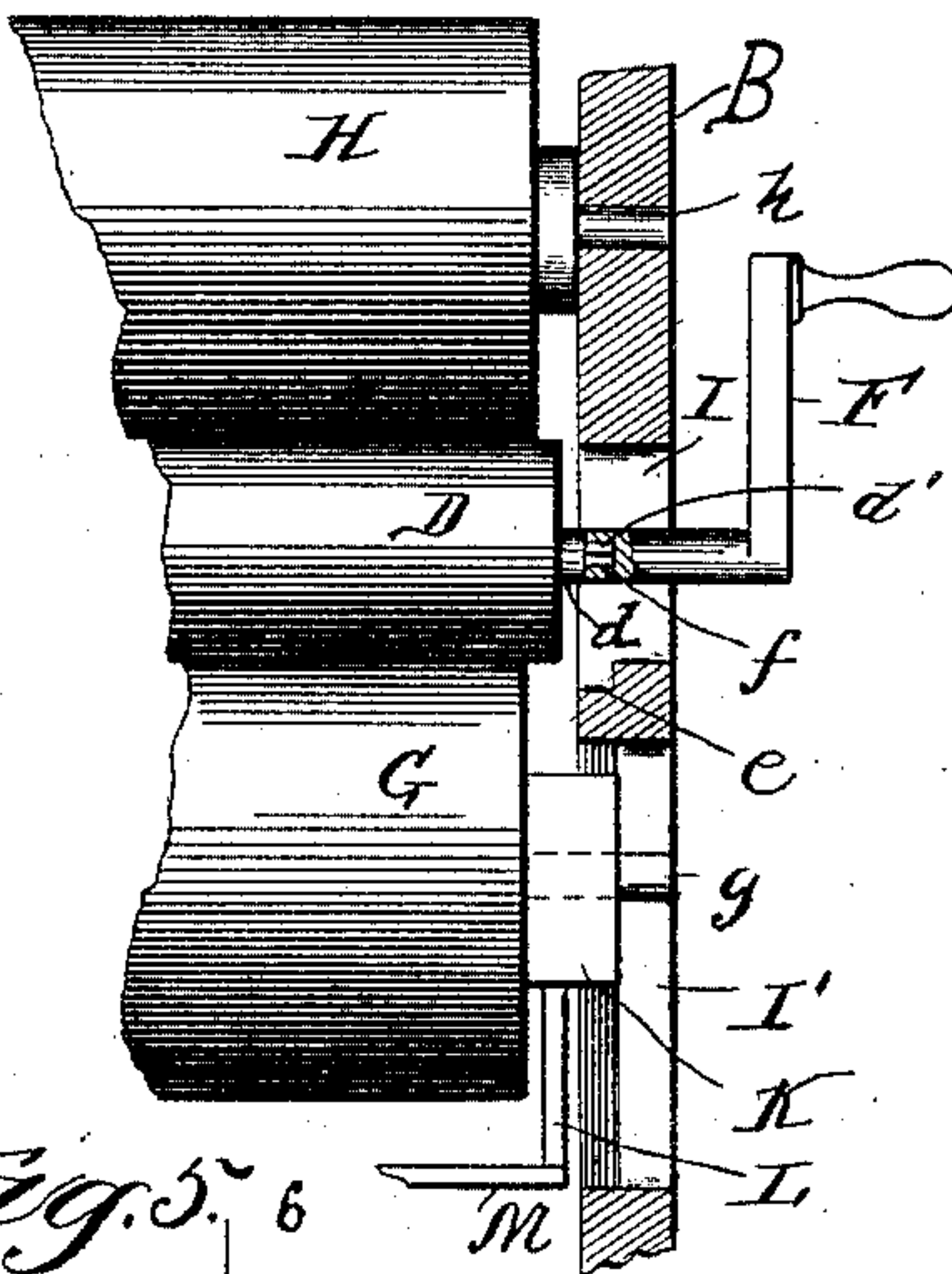


Fig. 5.

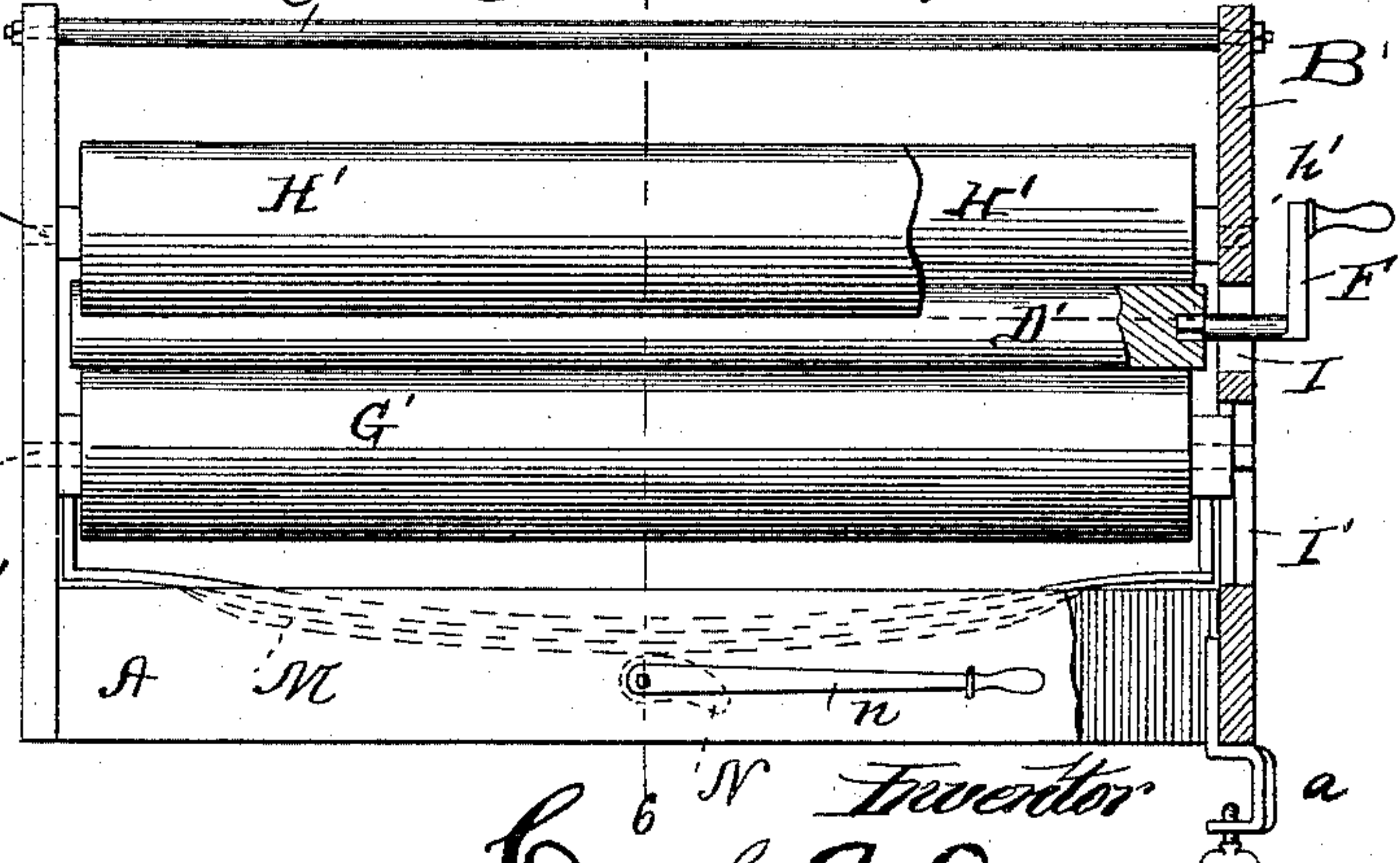
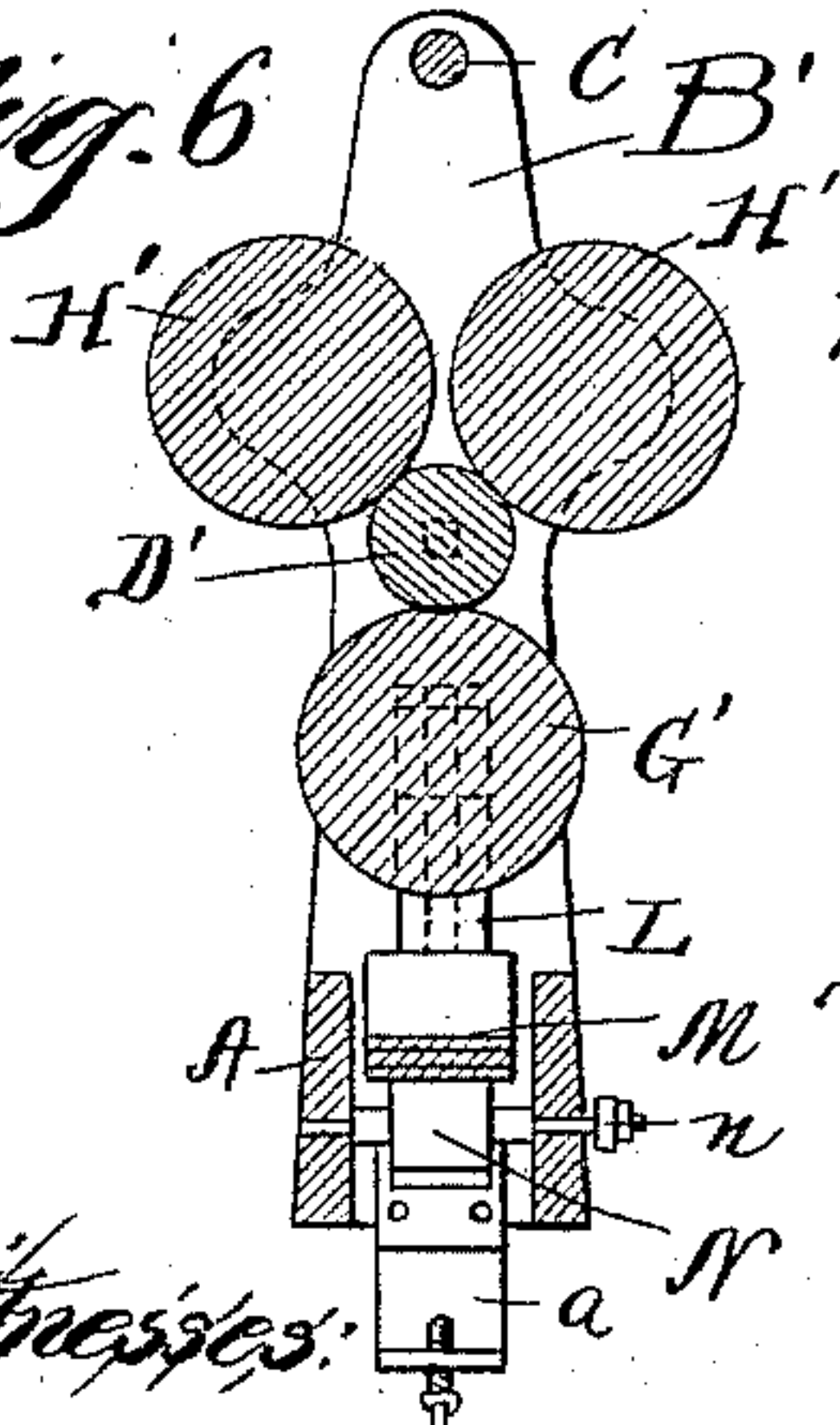


Fig. 6.



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Application filed December 23, 1891. Serial No. 415,966. (No model.)

To all whom it may concern:

Be it known that I, CARL A. OVESON, a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Mangles, of which the following, when taken in connection with the drawings forming a part thereof, is a full and complete description, sufficient to enable those skilled in the art to understand and make the same.

The object of my invention is to obtain an improved machine whereby unstarched textile fabrics of ordinary household use—for instance, sheets, napkins, pillow-slips, and the like—can be readily and expeditiously ironed or smoothed without the application of heat thereto.

In the drawings illustrating this invention, Figure 1 is a front elevation of a machine embodying my invention; Fig. 2, a cross-section thereof on line 2 2 of Fig. 1, viewed in the direction indicated by the arrows; Fig. 3, a cross-section thereof on line 3 3 of Fig. 1, also viewed in the direction indicated by the arrows; Fig. 4, a detail sectional view of the right-hand end of the machine illustrated in Figs. 1, 2, and 3; Fig. 5, a front elevation of a modification of the machine illustrated in Fig. 1, with the right-hand end thereof shown in section; and Fig. 6, a sectional view of the modification illustrated in Fig. 5, on line 6 6 thereof.

A given letter of reference is employed to indicate the same part where more than one view thereof is shown in the several figures.

A is the base of the frame of the device, and *a* a clamp whereby the device can be secured to an ordinary table. As many of such clamps *a* are employed as are necessary.

B B are standards, preferably of the same construction, forming a part of the frame of the device, and C is a rod extending from one of the standards B to the other thereof.

D is a roller around which the article to be ironed in the device is wrapped or rolled, and by me the wrapping or rolling of such article around the roller D is preferably done when such roller is removed from the frame.

d d are the journals of the roller D.

When the machine is in position to be operated, the roller D, having suitable material

wrapped around it, is placed therein, with each journal *d* in the part *e'* of the slot I.

F is a key-handle having a square hole *f* therein, Fig. 4, adapted to fit over the square end *d'* of journal *d* of roller D.

G H are respectively rollers rotatably secured in standards B B, and *g h* are respectively the shafts of rollers G H.

I is a slot consisting of the two parts *e* and *e'*, in which slot shaft *d* of roller D is fitted and adapted to turn and through which the key end of the key-handle F extends when the key part thereof is secured on the shaft *d* of roller D, and I' I' are slots in the standards B B, in which the shaft *g* of roller G, together with its journal-bearings, is vertically movable.

K K are the journal-bearings of shaft *g* of roller G, and L L are standards, the top ends of which are connected to the journal-bearings K K, and M is a spring on the ends of which standards L L rest.

N is a cam turning in base A of the frame of the device, and *n* is a handle or lever secured thereto by which such cam N is turned.

The operation of the device illustrated in Figs. 1, 2, 3, and 4, as I prefer to operate it, is: The handle *n* and cam N are turned downward from the positions in which they are illustrated in Fig. 1 to a horizontal position, or nearly so, and thereby the standards L L, resting on the ends of the spring, and journal-bearings K K on the standards L L and the roller G are lowered. When said roller G is lowered by the movement of the handle *n*, connected to the cam N, the roller D is left unsupported, and will therefore roll out of the slot I, as will be evident from an inspection of the drawings. The textile fabric or fabrics, whether sheets properly folded, napkins, pillow-slips, or other articles, are then rolled or wrapped around the roller D and the roller returned to its place in slot I. Handle *n* is then raised into the position illustrated in Fig. 1, or, if greater pressure on the several rollers D, H, and G and the articles wrapped around the roller D than is thereby secured is desired, such handle *n* is brought more nearly into a perpendicular position. The handle F is then put in place on the shaft *d* of roller D, and by means of such handle F

roller D is rotated. A varying and constantly-increasing pressure may and in the use of the machine I prefer that it shall be placed on the roller D by suitably varying the pressure on the handle *n*, and thereby changing the position of cam N, secured thereto. The handle F is rotated a few times until the articles are sufficiently smoothed. The rollers D G H are not heated.

10 In Figs. 5 and 6 a modification of the device illustrated in Figs. 1, 2, 3, and 4 is shown. In this modification there are four rollers, three thereof of larger diameter than the roller upon which the articles to be ironed or smoothed are rolled or wrapped and one (the lower of the three larger rollers) having a vertical movement in the frame of the device, moved and controlled in the same manner as is the lower roller moved and controlled in the machine illustrated in Figs. 1, 2, 3, and 4. In this modification the upper rollers, two in number, are lettered H' H', and the lower roller G', all of which are journaled in the two standards B'. D' is the roller around which the cloth is wrapped. *h' g'*, respectively, are the shafts of the rollers H' H' G'. Where the three rollers are used, as in this modification, the roller D', with the clothes thereon, can and I prefer that it shall be maintained in position when in operation by the rollers G' H' H' without such roller D' having a shaft, and hence the shaft of the handle F' can be made square at its key end, adapted to fit into a square hole in the end of the roller D'. Such a construction is illustrated in Figs. 5 and 6.

The operation of the modification illustrated in Figs. 5 and 6 is substantially like that of the construction hereinbefore described, the roller G' being lowered by means of the handle *n* sufficiently to allow the roller D' (handle F' being first removed therefrom) to be taken out from between the rollers G' H' H' and from the frame. The article to be ironed is then wrapped around the roller D', after which such roller is returned into place, the roller G' brought to press against it with sufficient force, and the handle F' put in position and the roller D' turned thereby. Where the rollers G', H', H', and D' are used, the rollers G' H' H' pressing against the roller D', on which the articles to be ironed or smoothed are wrapped, fewer turns of the handle F' are required than where the rollers G H D, as illustrated in Fig. 1, are used. Where, if at all, the roller H in the construction illustrated in Figs. 1, 2, 3, and 4 is omitted, the roller D will be pressed upward until the

shaft thereof comes in contact with the upper end of the slots I I. Such modification of the construction illustrated in Figs. 1, 2, 3, and 4 can be made; but the working of such machine will be attended with the expenditure of greater power than when constructed as herein illustrated and described, and the time required to iron or smooth any article on the roller D will be at least double the time required when the three rollers H, G, and D are used, and I do not, therefore, consider that such a construction would involve invention over the construction herein shown, the stop formed by the slot I being in such case, in view of the additional time required, the mechanical equivalent of the roller H.

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

1. In a mangle, a frame having standards, in combination with rollers rotatably secured in the standards of the frame, a roller of less diameter also rotatably secured in the standards of the frame, a handle detachably secured to such roller, the periphery of the first-named rollers in contact with the periphery of the second-named and smaller roller, a spring supporting the journal-bearings of the under roller, and a cam having a handle secured thereto, such cam being adapted to be pressed against the center of the spring, and thereby the first-named rollers pressed against the smaller roller and the articles contained thereon, whereby upon removing the pressure of the cam upon the spring the smaller roller will roll from the frame and by turning such cam against the spring pressure can be brought to bear upon the smaller roller when in the frame and the articles contained thereon as the same are rotated, substantially as described.

2. In a mangle, a frame having rollers D, G, and H journaled therein, one of said rollers (D) having protruding journals, a handle detachably secured to one of the journals, the under roller being vertically adjustable, a spring M, supporting said roller, a cam acting on the center of the spring for controlling the position of said under roller, and the standards of the frame, supporting said rollers D, G, and H, having L-shaped slots, whereby said roller D will roll out of said slot when pressure on the spring is removed by lowering the cam, substantially as described.

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