

(No Model.)

W. SIMMONDS.

MACHINE FOR STARTING AND SIZING HATS.

No. 278,614.

Patented May 29, 1883.

Fig: 1.

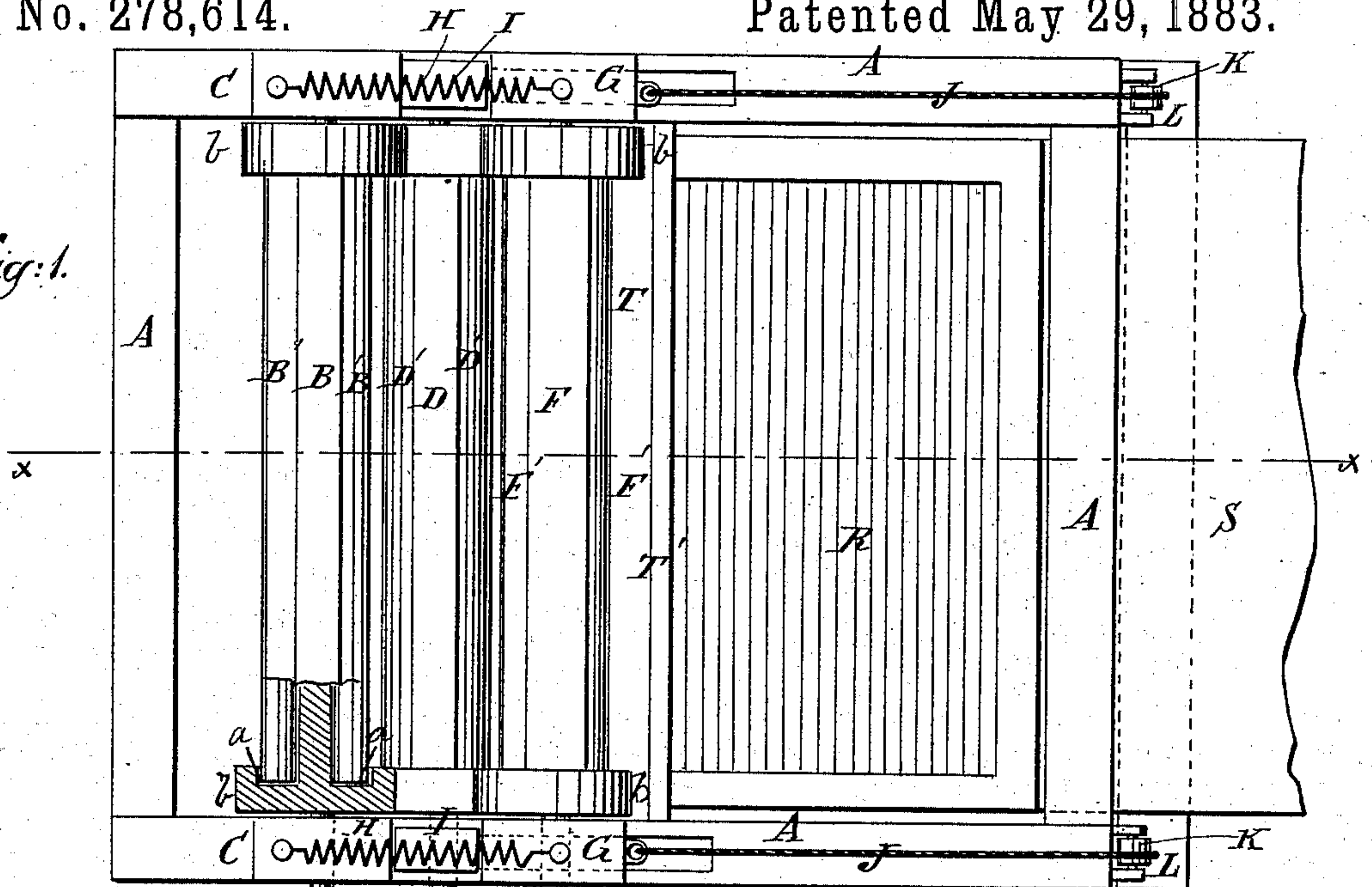


Fig: 2.

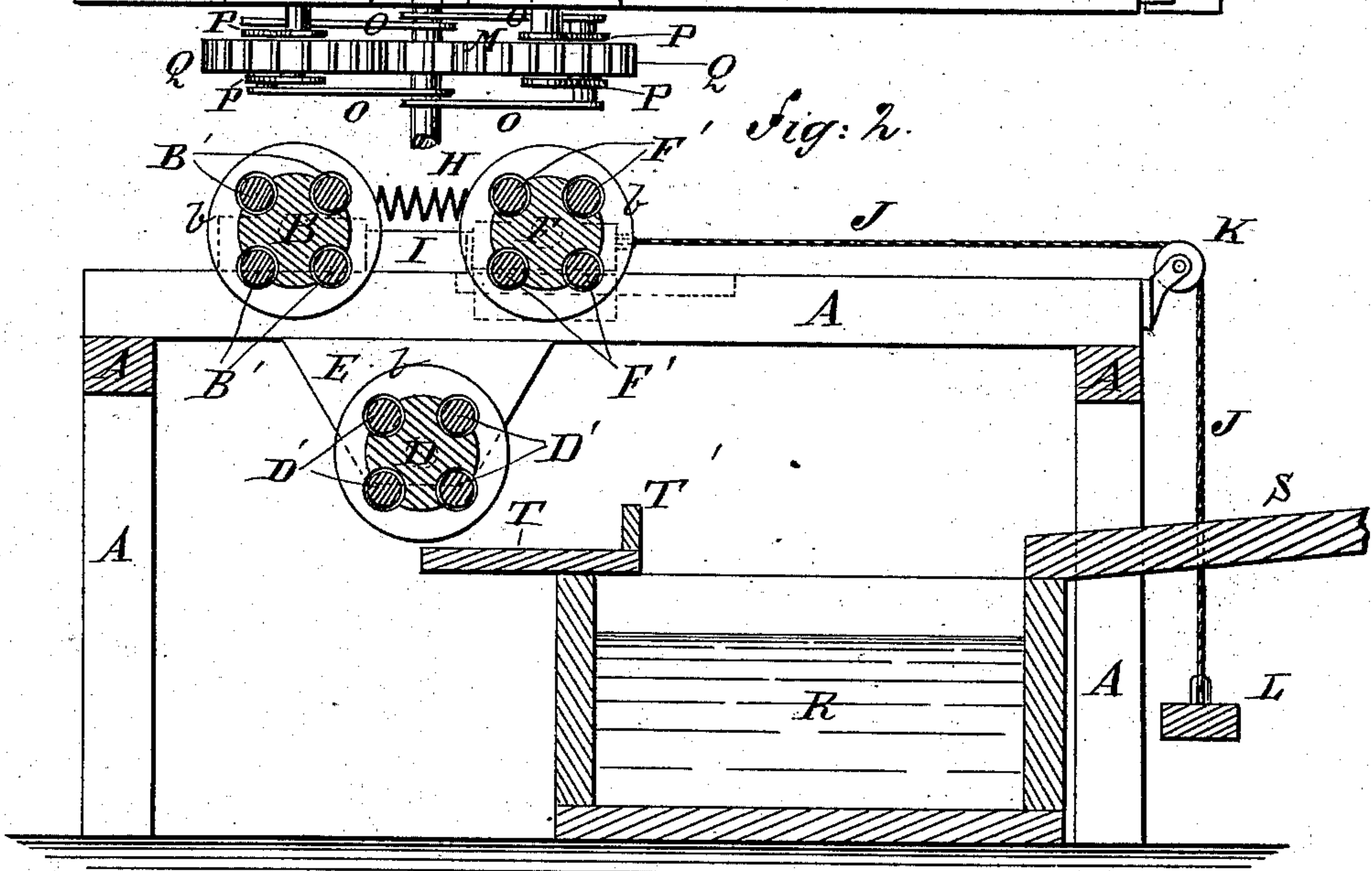
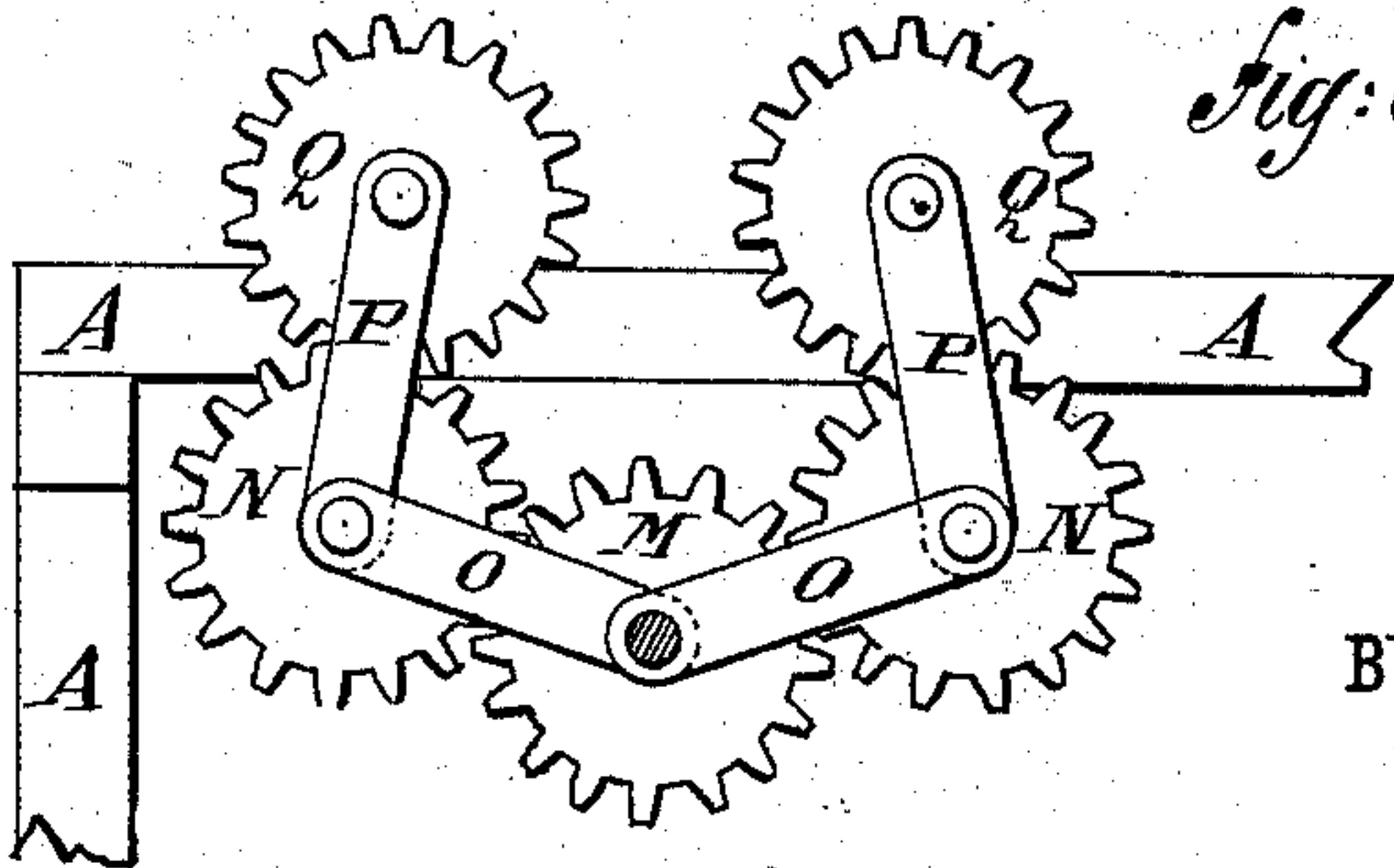


Fig: 3.

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UNITED STATES PATENT OFFICE.

WILLIAM SIMMONDS, OF YONKERS, NEW YORK.

MACHINE FOR STARTING AND SIZING HATS.

SPECIFICATION forming part of Letters Patent No. 278,614, dated May 29, 1883.

Application filed December 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SIMMONDS, of Yonkers, Westchester county, New York, have invented a new and useful Improvement in Machines for Starting and Sizing Hats, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of my improvement, partly in section. Fig. 2 is a sectional elevation of the same, taken through the line *xx*, Fig. 1; and Fig. 3 is a side elevation of a part of the same, showing the driving-gearing.

The object of this invention is to facilitate the starting and sizing of hats.

The invention consists in a machine for starting and sizing hats, constructed with a frame provided with three rollers, two journaled to stationary bearings and one journaled to sliding bearings. The rollers are driven by gear-wheels attached to their journals and meshing into intermediate gear-wheels suspended by bars from the said journals. The movable roller is held back by springs and drawn forward by cords and a treadle connected with the bearings of the said movable roller. To the vat beneath the frame is attached a table provided with an edge flange to receive the hat-rolls from the rollers and prevent the said rolls from rolling into the said vat. The rollers are made with small rollers placed in semi-cylindrical recesses formed in the faces of the main rollers and journaled to the end flanges of the said main rollers, as will be hereinafter fully described.

A is the frame of the machine.

B is the rear upper roller, the journals of which revolve in bearings C, attached to the rear part of the top of the frame A.

D is the lower roller, the journals of which revolve in bearings in hangers E, attached to the under sides of the top side bars of the frame A.

F is the forward upper roller, the journals of which revolve in sliding bearings G, placed upon the top bars of the frame A and made to move forward and back in straight lines in tongues and grooves or other suitable guides.

The roller F is held back by spiral or other springs H, attached to the bearings C G, and its rearward movement is limited by blocks I, or other stops attached to the top of the frame A, between the bearings C G.

To the bearings G are attached the ends of two cords, J, which pass over guide-pulleys K, pivoted to supports attached to the forward sides of the upper forward corners of the frame A. The lower ends of the cords J are attached to a bar, L, suspended by the said cords J in such a position that it can be readily pressed down by the operator with his foot to draw the roller F forward and discharge the hat-rolls when desired.

The rollers B D F are so arranged that the space between them will be of a proper size to receive a hat-roll. In the face of each of the rollers B D F are formed four (more or less) semi-cylindrical grooves, in which are placed small rollers B' D' F', the ends of which revolve in bearings *a* in flanges *b*, formed upon or attached to the ends of the said rollers, as shown in Fig. 1, so that the said rollers B' D' F' will project for about half their diameters beyond the surface of the rollers B D F, as shown in Fig. 2.

To a journal of the roller D is attached a gear-wheel, M, the teeth of which mesh into the teeth of the two gear-wheels N, the journals of which revolve in bearings in the ends of the bars O P. The lower ends of the bars O are perforated to receive and ride upon the journal of the roller D. The upper ends of the bars P are perforated to receive and hang upon the journals of the rollers B F, to which journals are attached gear-wheels Q, the teeth of which mesh into the teeth of the gear-wheels N. Power is designed to be applied to the journal of the roller D by a belt and pulley or other suitable means. With this construction the centers of the suspended gear-wheels N will always be at the same distance from the centers of the gear-wheels M Q, so that the said gear-wheels will always be in mesh, however the roller F may be adjusted.

R is the water-vat, which is placed beneath the forward part of the frame A, and to the forward part of its top is attached a table, S, for the workmen to roll and unroll the hats upon. The table S is made with a slight rear-

ward inclination, so that the drip-water will flow back into the vat R.

To the rear part of the top of the vat R is attached a table, T, to receive the hat-rolls when they are discharged from the rollers. The forward edge of the table T is provided with an upwardly-projecting flange, T', of sufficient height to prevent the hat-rolls from rolling into the vat R when they drop upon the said table.

In using the machine the workman prepares the hat-rolls upon the table S, and then drops the said hat-rolls through the space between the top rollers, B F, into the space between the three rollers B D F, where they are operated upon by the small rollers B' D' F', as the said rollers B D F revolve in a manner very similar to hand-rolling. When the hat-rolls have been sufficiently operated upon, the workman presses the treadle L down with his foot, which draws the roller F forward and allows the said hat-rolls to fall upon the table T, whence they are removed by the workman, dipped into the liquid in the vat R, unrolled, and rerolled, ready to be again placed between the rollers B D F.

I am aware that in a machine for felting hat-bodies, two polygonal rollers journaled in sliding bearings provided with springs and arranged above a larger roller having fixed bearings, the rollers revolving in a vat, have heretofore been employed; and I therefore lay no claim to such invention.

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

1. A machine for starting and sizing hats,

constructed substantially as herein shown and described, and consisting of the frame A, the rollers B D, journaled in stationary bearings, and the roller F, journaled in sliding bearings G, mechanism for driving the rollers, springs H, blocks I, cords J, and treadle L, as set forth.

2. In a machine for starting and sizing hats, the combination, with the stationary rollers B D, sliding bearings G, movable roller F, springs H, cords J, and treadle L, of the gear-wheels Q Q N M and bars O O P P, all pivoted to each other and to the journals of the gear-wheels, substantially as described, and for the purpose set forth.

3. In a machine for starting and sizing hats, the combination, with the sliding bearings G and the movable roller F, of the springs H, the cords J, and the treadle L, substantially as herein shown and described, whereby the said movable roller can be readily moved forward to discharge the hat-rolls, as set forth.

4. In a machine for starting and sizing hats, the combination, with the rollers B D, sliding roller F, treadle L, and the vat R, of the table T, having edge flange, T', substantially as herein shown and described, whereby the hat-rolls are received from the said rollers and are kept from rolling into the said vat, as set forth.

WILLIAM SIMMONDS.

Witnesses:

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C. SEDGWICK.