

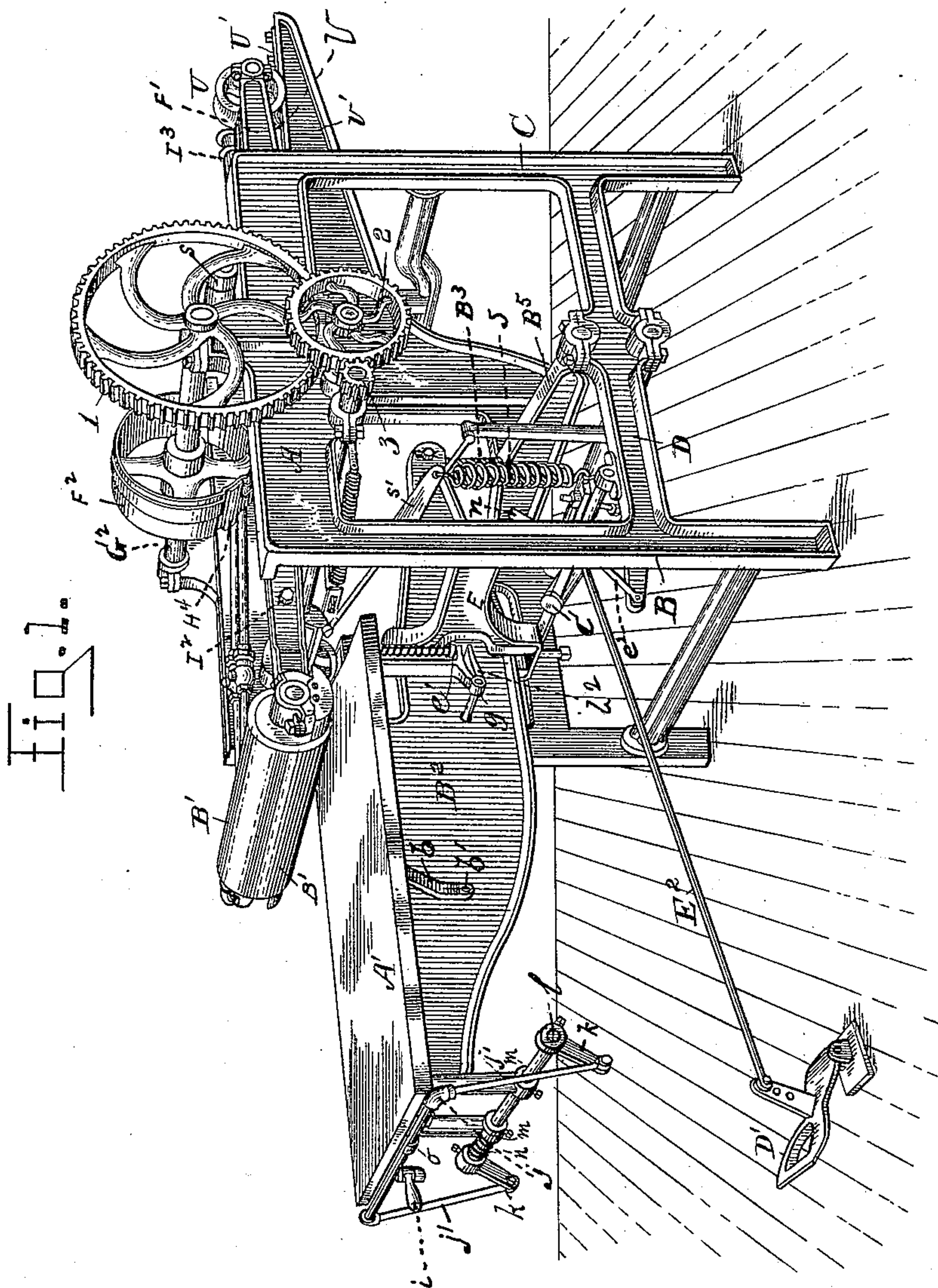
(No Model.)

5 Sheets—Sheet 1

L. H. WATSON.  
IRONING MACHINE.

No. 447,987.

Patented Mar. 10, 1891.



WITNESSES:

INVENTOR

Oscar A. Michel

L. H. Scott,

LEWIS H. WATSON,

BY *Drake & Co.* ATTY'S.

(No Model.)

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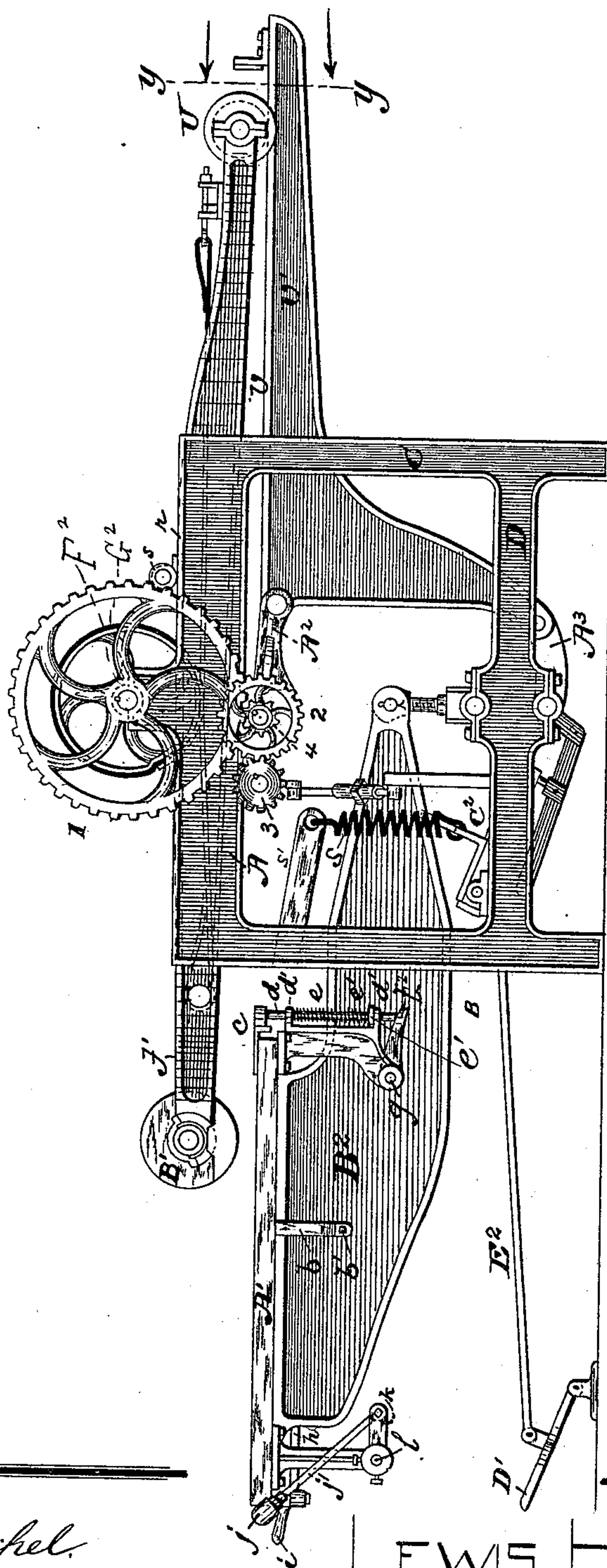


Fig. 2.

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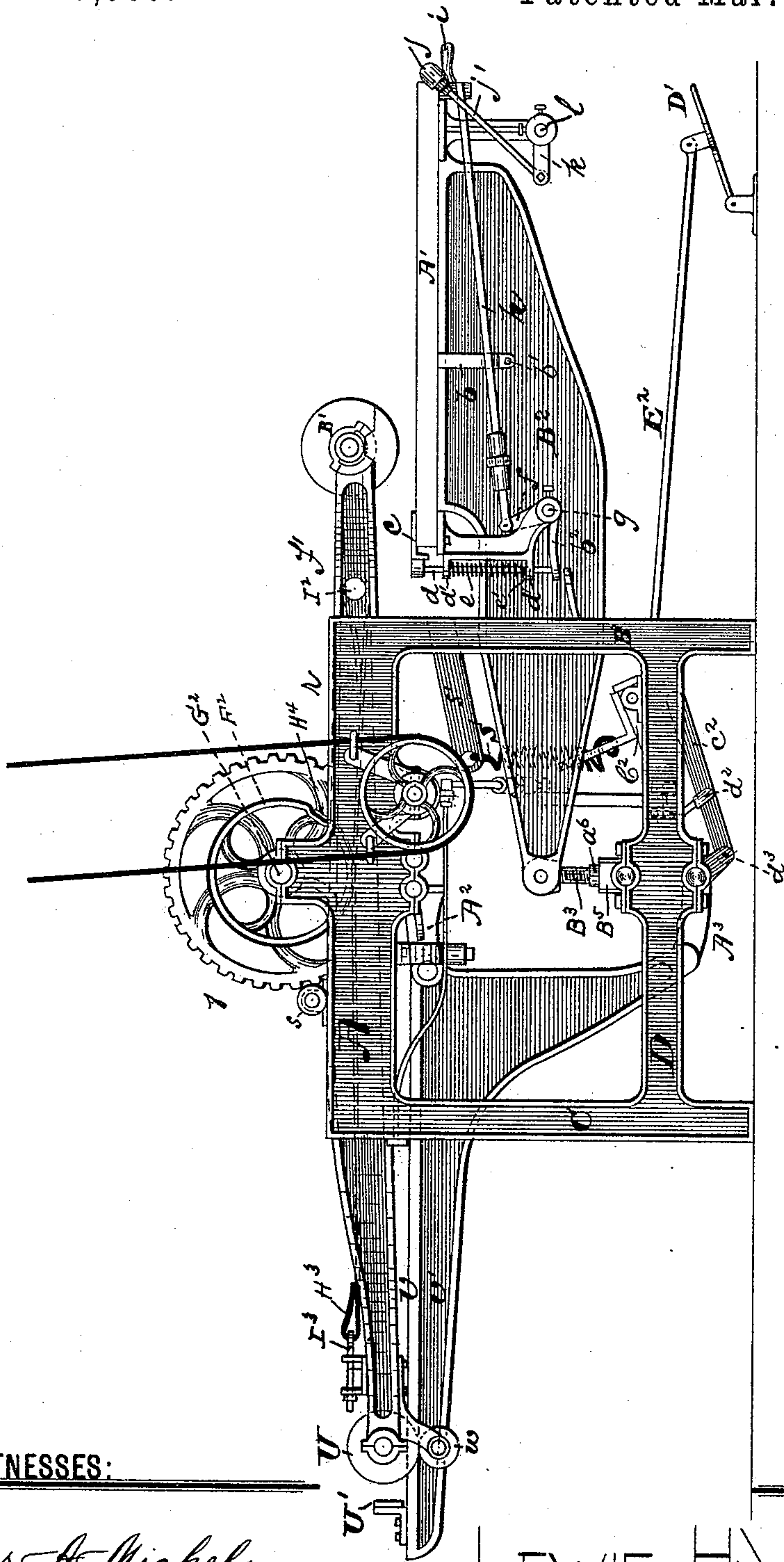
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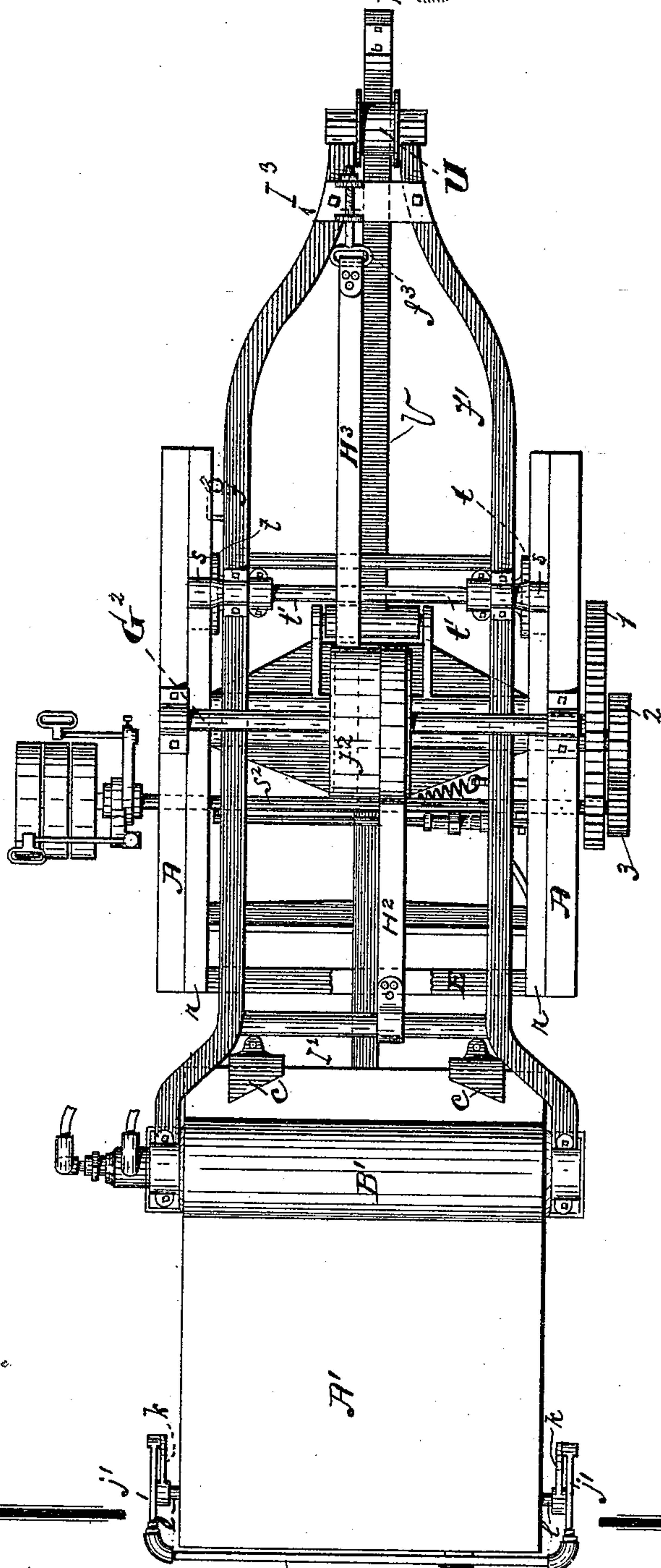
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WITNESSES:

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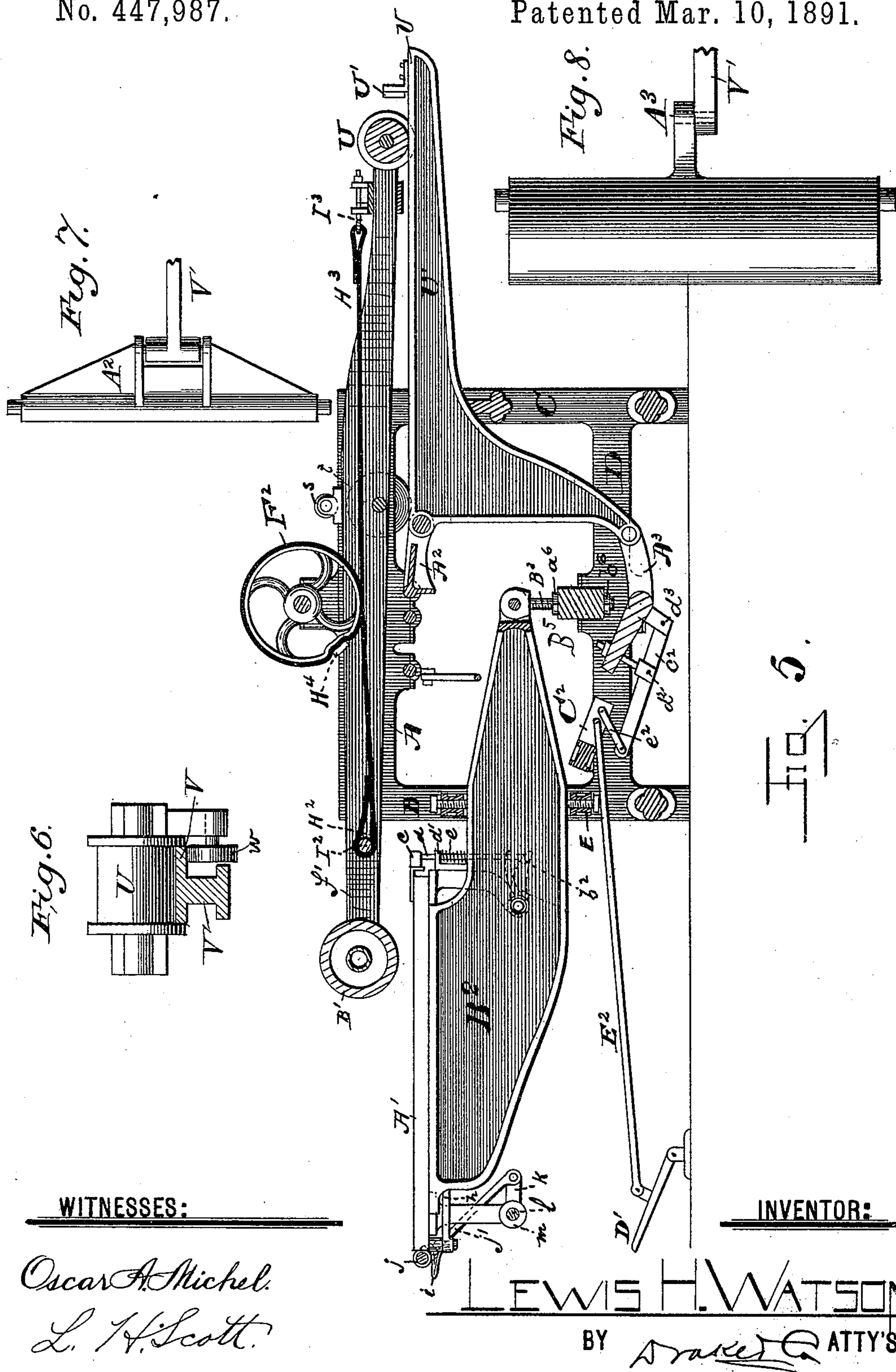
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Patented Mar. 10, 1891.





# UNITED STATES PATENT OFFICE.

LEWIS H. WATSON, OF NEWARK, NEW JERSEY.

## IRONING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 447,987, dated March 10, 1891.

Application filed May 23, 1890. Serial No. 352,840. (No model.)

*To all whom it may concern:*

Be it known that I, LEWIS H. WATSON, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Ironing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as 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 and figures of reference marked thereon, which form a part of this specification.

This invention relates to that class of ironing-machines adapted especially for ironing the bodies of shirts, and the object is to facilitate the operation of the machine, to improve the quality of the work done thereby, and to secure other advantageous results hereinafter referred to.

The invention consists in the improved ironing-machine and in the combination and arrangement of the several parts thereof, as hereinafter set forth, and finally pointed out in the claims.

Referring to the accompanying drawings, Figure 1 represents a perspective view of an ironing-machine embodying my improvements. Figs. 2 and 3 represent side elevations of said machine, taken from opposite sides thereof. Fig. 4 is a plan view. Fig. 5 is a vertical section, except as to the ironing-table, taken near line *x* of Fig. 4, looking in the direction of arrow *a*. Fig. 6 is a rear view taken through line *y* of Fig. 2, showing the relation of certain wheels to a track or way upon the bracket *V'*. Fig. 7 is a top plan view of a certain rock-shaft and broken-off portion of a certain bracket connected therewith at the upper part of the machine; and Fig. 8 is a top plan view of another rock-shaft, showing its relation to the same bracket at the lower part of the machine.

Similar letters and figures of reference designate corresponding parts wherever they occur.

In said drawings, A, B, C, D, and E designate certain portions of a stationary frame upon which various working parts of the machine are mounted, consisting of two sides

and certain bracing-bars firmly uniting and holding the same together, as will be understood.

Passing through an opening or slot in a cross-bar E is a bracket or support B<sup>2</sup>, upon which is firmly secured the ironing-table A'. Said bracket or support is held in position in said bar E, by means of a set-screw, (shown in Fig. 1,) and is adjusted or leveled by means of an adjusting-screw B<sup>3</sup>, pivotally connected at the inner end thereof and passing through a cross-bar B<sup>5</sup>, journaled upon the supporting-frame, so that it can be adjusted vertically by means of nuts *a*<sup>6</sup> and *b*<sup>6</sup>; as will be understood upon reference to Figs. 1, 2, 3, and 5, the cross-bar E being shown more clearly in Fig. 1. At the rear end of said ironing-table are adjustable clamps *c* for grasping the shirt at the shoulders and firmly holding it thereat while being ironed. Said clamps are connected with and worked by certain mechanism under the control of the operator, which consists of a vertically-arranged rod *d*, secured to each of said clamps and working in suitable bearings *d'*, around which rods and between said bearings is arranged a coiled spring *e*, the upper end of which bears against the upper of said bearings and the lower end against a suitable seat or collar *e'*, secured to said rods, as indicated in Fig. 2. The bottom ends of said rods rest upon arms *b*<sup>2</sup>, mounted upon a shaft pivoted in bearings *g* at opposite sides of the machine, as indicated in said Figs. 2 and 3. Said last-mentioned shaft also carries an arm *f*, Fig. 3, which connects with a rod *h*, which latter connects with a pivoted hand-lever *i* at the front end of the ironing-table within easy and convenient reach of the operator, and by means of which he can at will open or close the clamps aforesaid by turning the long arm or handle of the lever *i* in the proper direction, the clamps being held automatically in their closed position by means of the springs *e*, as will be understood by reference to the drawings. The opposite or tail end of the shirt is held by means of mechanism, also under the control of the operator, arranged at the front end of the ironing-table, consisting of a clamping-bar *j*, having arms *j'*, which connect pivotally with cranks *k*, secured to a shaft *l*,



working in suitable bearings  $m$ , the clamping-bar being automatically held in contact with the shirt by means of a torsion-spring  $n$ , Fig. 1, coiled around said shaft  $l$ .

5 In adjusting the clamping-bar into holding engagement with the shirt the operator has simply to raise it against the pressure of the spring  $n$  and let it down upon the table in proper position upon the shirt, and when the  
10 shirt is released the bar may be dropped into a seat or hook  $o$ , arranged for the purpose, as will be understood upon reference to Figs. 1, 2, 3, and 4.

The ironing roll or cylinder  $B'$  is journaled  
15 in and carried by a traveling carriage or frame  $F'$ , which at or near the center thereof is supported upon and traverses reciprocally on tracks  $r$ , arranged at the top and each side of the stationary frame, said traveling frame  
20 being provided with suitable wheels  $s$ , journaled thereon for the purpose. Immediately beneath said wheels  $s$  and the said tracks or ways are also flanged wheels  $t$ , journaled upon or carried by a shaft  $t'$ , Fig. 4, working in or  
25 carried by said traveling frame and arranged to engage with the under side and edge of said tracks when the machine is in operation and the pressure is brought upon the ironing-roll. When said pressure is released, the  
30 weight of the frame and the parts connected therewith is supported upon the upper wheels, as will be understood.

At and to the rear end of the traveling frame is journaled a double-flanged wheel  $U$   
35 and a smaller wheel  $w$ . The first-named wheel rests upon and traverses reciprocally with the frame. A track  $V$ , Figs. 1, 2, and 3, and the last-named or smaller wheel engages with and traverses the under side of said track as the  
40 frame travels back and forth when the machine is in operation. Said track  $V$  is formed upon a bracket  $V'$  and has a vertical or up-and-down motion, which is imparted thereto by means of mechanism connected therewith  
45 and to a foot-treadle  $D'$ , located at the front of the machine upon the floor, as indicated in Figs. 1, 2, 3, and 5. Said mechanism consists of two rocking shafts  $A^2$  and  $A^3$ , journaled, respectively, in the upper and lower  
50 portions  $A$  and  $D$  of the stationary frame. To the lower of said rock-shafts is connected a lever  $c^2$ , which is fulcrumed at  $d^2$ , the short arm thereof being connected to said shaft at  $d^3$ . The long arm of said lever being connected  
55 by means of a rod  $e^2$  to a rocking shaft  $C^2$ , journaled in said portion  $D$  of the stationary frame, said rod  $e^2$  and rocking shaft  $C^2$  forming a knuckle-joint, and are connected with said foot-treadle  $D'$  by means of a rod  
60  $E^2$ , as shown in Figs. 1, 2, and 5, so that when sufficient pressure is brought to bear upon the foot-treadle the knuckle or elbow joint will be straightened, or partially so, which throws the long arm of the lever  $c^2$  downward,  
65 which results in forcing the track upward and in turn raises the rear end of the traveling frame, thereby forcing the ironing-roller

at the front end firmly and with great pressure down upon the ironing-table, as will be understood upon reference to Figs. 2 and 5 70 aforesaid. When the pressure on the foot-treadle is released, the parts aforesaid immediately resume their first or normal position under the impulse of a spring  $S$ , connected to the said rock-shaft  $C^2$ , and to an arm or  
75 bracket  $s'$ , projecting from the stationary frame, as will be understood.

The forward and backward motions are imparted to the traveling frame and ironing-roll by means of power transmitted through an ordinary train of gears and pinions 1, 2, 3, and 4  
80 to a drum or pulley  $F^2$ , mounted upon a shaft  $G^2$ , journaled in suitable fixed bearings at the top or upper portion of the stationary frame, said pulley being connected with the front  
85 and rear portions of the traveling frame by means of two straps  $H^2$  and  $H^3$ , one end of each being firmly and suitably clamped side by side at a fixed point  $H^4$  on the periphery of said pulley, and their other ends extending  
90 in opposite directions and being secured respectively to suitable holding plates or rods  $I^2$  and  $I^3$ , attached to the opposite ends of said traveling frame, as indicated in the drawings, more particularly in Fig. 4, so that as the said  
95 pulley is rotated in a given direction the said frame is drawn one way and when rotated in the opposite direction the frame is drawn the other or opposite way, as will be manifest.

The reciprocatory motion is imparted to the  
100 driving-pulley by means of separate belts, one of which is crossed, operated by any suitable belt-shifter, as will be understood. The belt-shifting mechanism, however, not being new in itself I do not claim the same herein,  
105 and therefore a more detailed description thereof is not deemed requisite.

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

1. In an ironing-machine, the combination, with a stationary ironing-table, of an ironing-roll, a traveling carriage or frame carrying said roll and mounted upon suitable ways or tracks, a vertically-movable bracket or track  
115 engaging with the rear end of said traveling frame and upon which the latter travels, and means adapted to tilt said frame and bring said roll into contact with the ironing-table and release it therefrom, as described, for the  
120 purposes set forth.

2. In an ironing-machine, the combination, with a stationary ironing-table, of an ironing-roll, a traveling carriage or frame carrying said roll and mounted upon suitable ways or  
125 tracks, a vertically-movable bracket or track, rock-shafts  $A^2$  and  $A^3$ , journaled, respectively, at the upper and lower portions of the supporting-frame and pivotally connected with said bracket or track, and means for operating the same, as described, for the purposes  
130 set forth.

3. In an ironing-machine, the combination, with a stationary ironing bed or table, of an



ironing-roll, a traveling carriage or frame carrying said roll and mounted upon suitable tracks or ways, a vertically-movable bracket or track, rock-shafts  $A^2$  and  $A^3$ , journaled, respectively, to the supporting-frame and pivotally connected with said bracket or track, a lever  $c^2$ , a rock-shaft  $C^2$ , journaled upon the supporting-frame aforesaid, a connecting-rod  $e^2$ , a foot-treadle, a connecting-rod  $E^2$ , and a spring  $S$ , arranged with relation to one another and operating to bring the ironing-roll into contact with the ironing-table and to release it therefrom at the will of the operator, as described, for the purposes set forth.

4. In an ironing-machine having a stationary ironing bed or table, a movable frame carrying an ironing-roll and mounted upon tracks or ways carried by the supporting-frame of said machine, a bracket  $V'$ , carrying a track  $V$ , wheels carried by said movable frame and engaging said tracks, and means

operating in connection with said movable frame and bracket to impart a forward-and-backward and a tilting movement to said frame, as described, for the purposes set forth. 25

5. In an ironing-machine, the combination, with the ironing-table, of a clamping-bar arranged at the front end thereof and having depending arms, cranks  $k$ , pivotally connecting therewith, a shaft  $l$ , working in suitable bearings and carrying said cranks, a spring  $n$ , and a seat or hook  $o$ , said parts being arranged with relation to one another, and operating, as described, for the purposes set forth. 30

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of May, 1890. 35

LEWIS H. WATSON.

Witnesses:

OLIVER DRAKE,  
OSCAR A. MICHEL.