

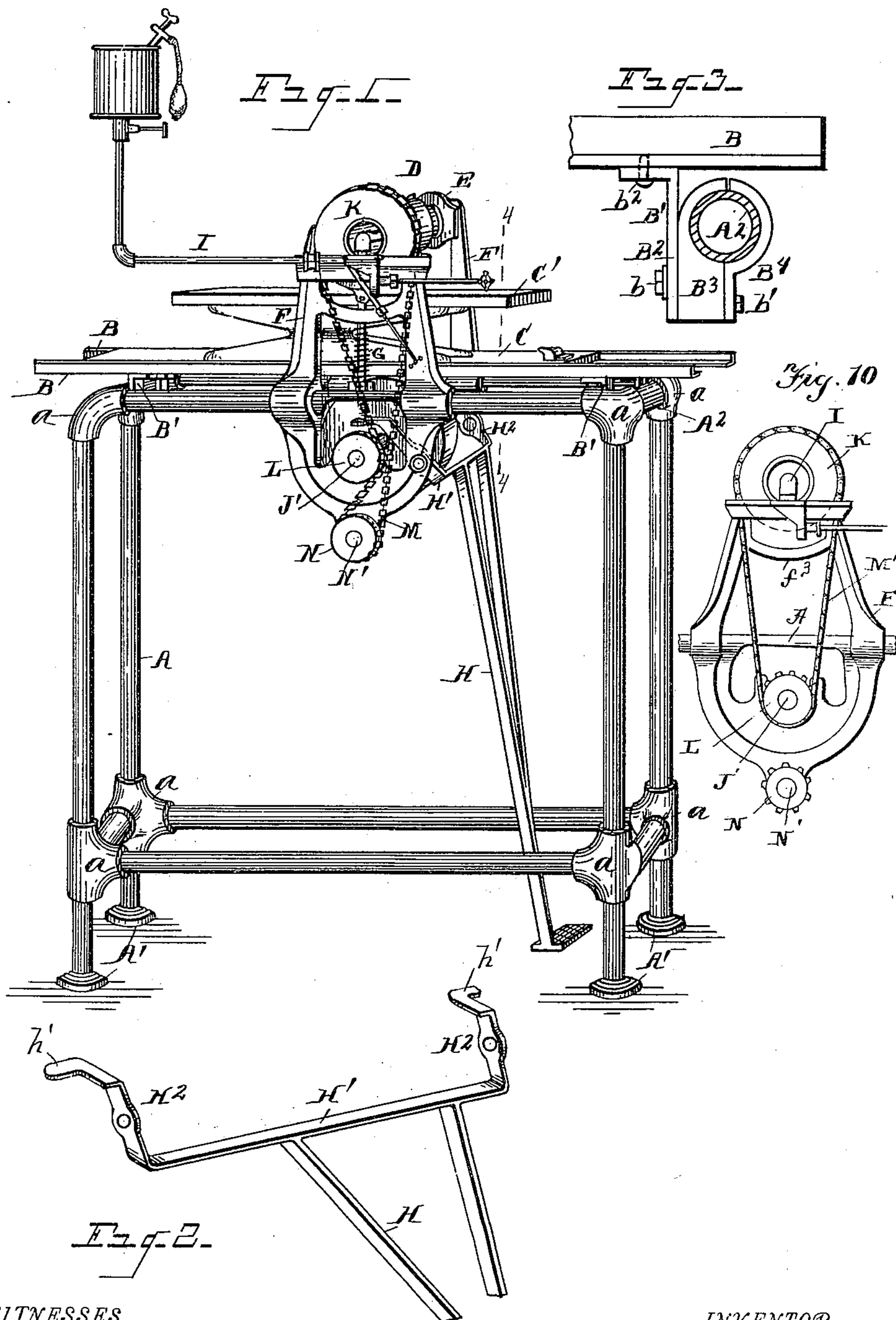
(No Model.)

2 Sheets—Sheet 1.

W. PHILLIPS.  
IRONING MACHINE.

No. 547,028.

Patented Oct. 1, 1895.



*WITNESSES*

O. B. Baenziger.

M. A. Martin.

INVENTOR

William Phillips

By his Attorney

Newell S. Wright

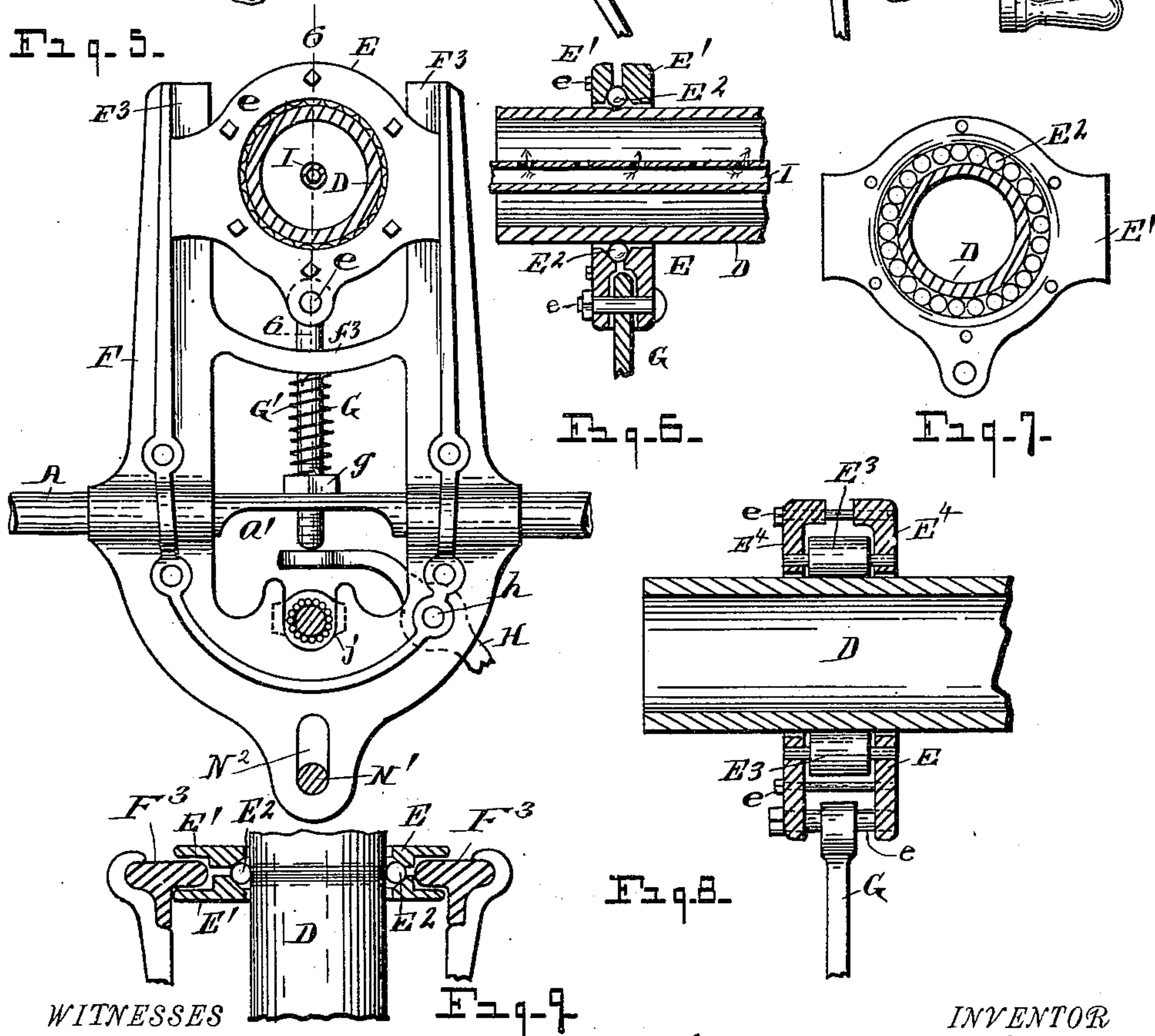
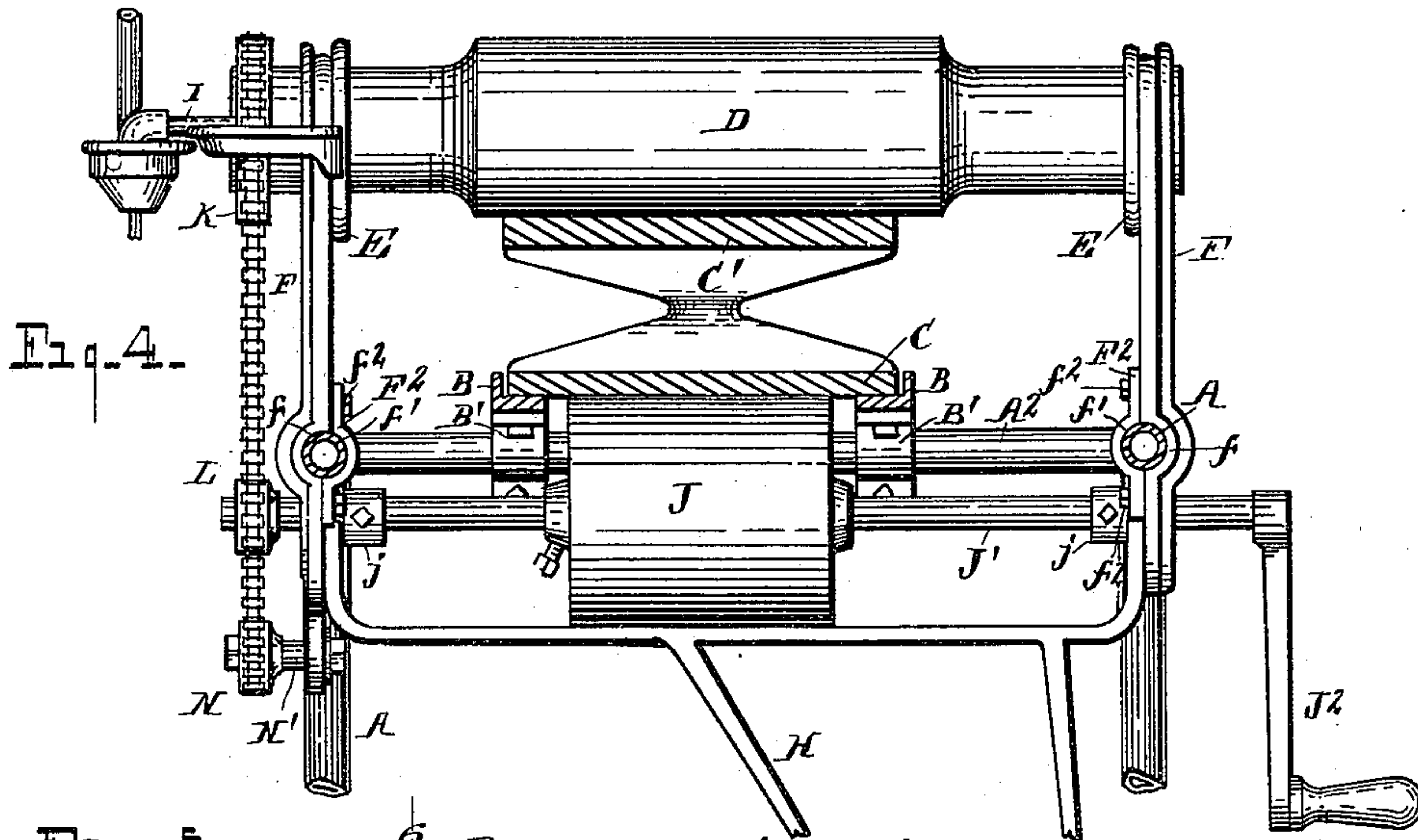
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# UNITED STATES PATENT OFFICE.

WILLIAM PHILLIPS, OF NORTHVILLE, MICHIGAN.

## IRONING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 547,028, dated October 1, 1895.

Application filed November 19, 1894. Serial No. 529,231. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM PHILLIPS, a citizen of the United States, residing at Northville, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Ironing-Machines; and I 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, which form a part of this specification.

My invention has for its object certain new and useful improvements in an ironing-machine, and has in view greater simplicity, economy, and efficiency.

It consists of the construction, combination, and arrangement of devices and appliances hereinafter specified and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a view in perspective. Fig. 2 is a detail view of the fork of the lever. Fig. 3 is a detail view illustrating the manner in which the track is supported upon the frame. Fig. 4 is a vertical section on the line 4 4, Fig. 1. Fig. 5 is a partial side elevation showing one of the supports for the polishing-iron and other devices. Fig. 6 is a detail view, in section, on the line 6 6, Fig. 5. Fig. 7 is a detail view of one of the plates of the bearing for the axis of the polishing-iron, showing also ball-bearings. Fig. 8 is a view of a modification, showing a roller-bearing. Fig. 9 is a horizontal section through a bearing of the polishing-iron; and Fig. 10 is a view of a portion of the machine, showing a modification of the gearing whereby it is adapted for rotating the polishing-iron in the opposite direction to the movement of the ironing-board.

My invention is designed more particularly to provide a manual-power machine of superior utility, and which can be operated with more ease and by which more satisfactory results can be obtained than in other devices of this class heretofore constructed.

Accordingly I carry out my invention as follows:

A represents a supporting-frame. This frame may be of any suitable construction within the scope of my invention; but I prefer to construct it, as shown, of suitable pip-

ing joined together. A frame constructed of piping is obviously simple and economical. The legs of the frame may be provided with any suitable feet A', by which the machine may be fastened in place. Asso made, A<sup>2</sup> denotes the end braces or portions of the supporting-frame. It will be understood that the various portions of the frame may be connected by suitable unions *a*.

B B represent tracks for a traveling support C, made reciprocatory thereupon.

C' denotes an ironing-board upon the support C.

The tracks B B are supported by suitable brackets B', engaged upon the end pieces A<sup>2</sup> of the frame in any suitable manner. These brackets are each preferably constructed, as shown more particularly in Fig. 3, of a supporting metal strap B<sup>2</sup>, a concaved block B<sup>3</sup>, and a concaved metal strap B<sup>4</sup>, the straps B<sup>2</sup> and B<sup>4</sup> being bolted upon the intermediate block B<sup>3</sup>, as shown at *b* and *b'*, the strap B<sup>2</sup> also being bolted to the track, as shown at *b*<sup>2</sup>.

D denotes a polishing-iron, having the extremities of its axis journaled in bearings E E.

F denotes supports or supporting-brackets engaged upon the frame A. These supports or brackets F are preferably constructed of a casting recessed toward its lower end, as shown at *f*, to partially embrace the supporting-frame A. F<sup>2</sup> denotes a metal strap also recessed intermediate its ends, as shown at *f'*, to partially embrace the supporting-frame, said strap being bolted to the bracket, as shown at *f*<sup>2</sup>. The casting is formed with guide-flanges F<sup>3</sup> F<sup>3</sup>, within which the bearing E at one end of the polishing-iron has a vertically reciprocatory movement. I prefer that each of the bearings E should be formed of plates E' E', having their outer edges recessed for engaging with the supports, and bolted together, as shown at *e*. Between the plates E' E', as indicated in Figs. 6 and 7, I have located ball-bearings, as shown at E<sup>2</sup>, the plates E' E' being recessed adjacent to the polishing-iron to partially receive the balls. Instead of the ball-bearings E<sup>2</sup> my invention contemplates roller-bearings also, as indicated at E<sup>3</sup>, Fig. 8, located between the plates E<sup>4</sup> E<sup>4</sup>. I connect, preferably, with each of the bearings E a depending arm G, the upper end of which may be engaged between



the plates E' E' and held in place by one of the connecting-bolts *e*. The lower end of the arm G preferably extends through the adjacent portion of the frame A, as indicated in Figs. 1 and 5. The frame may be cut away adjacent to the lower end of the arm G, as shown at *a'*. Upon the arm G is a spring G', the tension of which may be regulated by an adjusting-nut *g*. The upper end of the spring G' may bear against a cross-arm *f*<sup>3</sup> of the support F. The normal tendency of the spring is intended to force the polishing-iron down and to hold it in firm engagement upon the ironing-board C' and to cause a suitable friction between the traveling ironing-board and the polishing-iron when in operation. The spring will obviously give a yielding fractional contact of the polishing-iron upon the ironing-board. To raise the polishing-iron off from the ironing-board whenever desired, I provide a foot-lever H, preferably formed with a yoke H' at its upper end, having arms H<sup>2</sup> fulcrumed upon the lower end of the support F, as shown at *h*. It will be evident that the operator, by placing his foot upon the treadle of the lever H, will exert a pressure upward upon the polishing-iron to raise it off from the ironing-board, the spring restoring it to normal position when the pressure upon the lever H is removed. The bearings E will thus slide vertically upon the guides F<sup>3</sup> in the support F. By cutting away the frame, as at *a'*, as hereinbefore mentioned, the upper end of the lever H, which is provided with laterally-projecting ears *h'* to engage with the lower ends of the arms G, will have a free upward movement at that point. The polishing-iron may be heated in any desired manner, as by means of a gasoline burner I, extended into the interior of the polishing-iron. To reciprocate the traveling support C with the ironing-board thereupon, I prefer to employ a friction-roller J, mounted upon a shaft J', provided with an operating-handle J<sup>2</sup>. The shaft J' has its bearings *j* in the supports F. These bearings are preferably in the nature of ball-bearings, as indicated in Fig. 5, the bearings being constructed essentially the same as the bearings for the polishing-iron. It will be apparent that the polishing-iron, exerting its pressure upon the ironing-board, forces the traveling support into contact with the friction-roller J, so that when the friction-roller is rotated, by means of the operating-handle J<sup>2</sup> the ironing-board will be reciprocated horizontally beneath the polishing-iron. It is well understood that in ironing damp goods the surface of the polishing-iron adjacent thereto becomes quickly cooled, so that it is desirable to change the surface of the polishing-iron, so that a well-heated surface will be brought into contact with the goods. My invention, to this end, contemplates the rotation of the polishing-iron in operation, which I accomplish, preferably, by providing one extremity of the axis of the polishing-iron with a

sprocket-wheel K. An additional sprocket-wheel L is located upon the corresponding extremity of the shaft J' of the friction wheel or roller J.

M denotes a sprocket-chain engaged upon the sprocket-wheels K and L, whereby the polishing-iron will be rotated at a desired speed as the friction-roller is operated. An additional sprocket-wheel N is journaled on the stud N', which is adjustably secured to the support F by means of the slot N<sup>2</sup>. The chain M is led over the sprocket-wheels K and N with a portion in engagement with the sprocket-wheel L, which will cause the polishing-iron to rotate in the same direction with the movement of the ironing-table. However, if it is desired to rotate the iron in a direction opposite to the movement of the table, the sprocket-wheel N may be dispensed with and the chain M led over the wheels K and L, as shown in Fig. 10. By this means the surface of the polishing-iron may be continuously changed in operation to bring a heated surface into contact with the goods.

What I claim as my invention is—

1. In an ironing machine, the combination, with a frame, of supports secured thereto, each support having its lower end provided with a bearing, and one of the supports being provided with a slot at its lower end, a movable bearing in the upper end of each of the supports, a polishing iron journaled in the bearings, one end of which is provided with a sprocket wheel, a friction roller journaled in the bearings at the lower ends of the supports, one end of which is provided with a sprocket wheel, an ironing table between the roller and the iron, a stud adjustably secured in said slot in one of the supports, a sprocket wheel upon the stud and a chain over said sprocket wheels, substantially as set forth.

2. In an ironing machine, the combination, with a frame, the top side pieces of which are each perforated, of a support secured to each of the side pieces adjacent the perforation, each support having a perforated cross-arm, a vertically movable bearing in the upper end of each support, an arm secured to said bearing, and projecting through the cross-arm and the side of the frame, an adjusting nut on the arm, a spring between the cross-arm and the nut, a polishing iron journaled in said bearings, a treadle pivotally secured to the frame, the upper end of which is adapted to engage with the lower ends of said spring actuated arms, and a reciprocatory table under the polishing iron, substantially as set forth.

In testimony whereof I sign this specification in the presence of two witnesses.

WILLIAM PHILLIPS.

Witnesses:

MARY A. MARTIN,  
N. S. WRIGHT.