

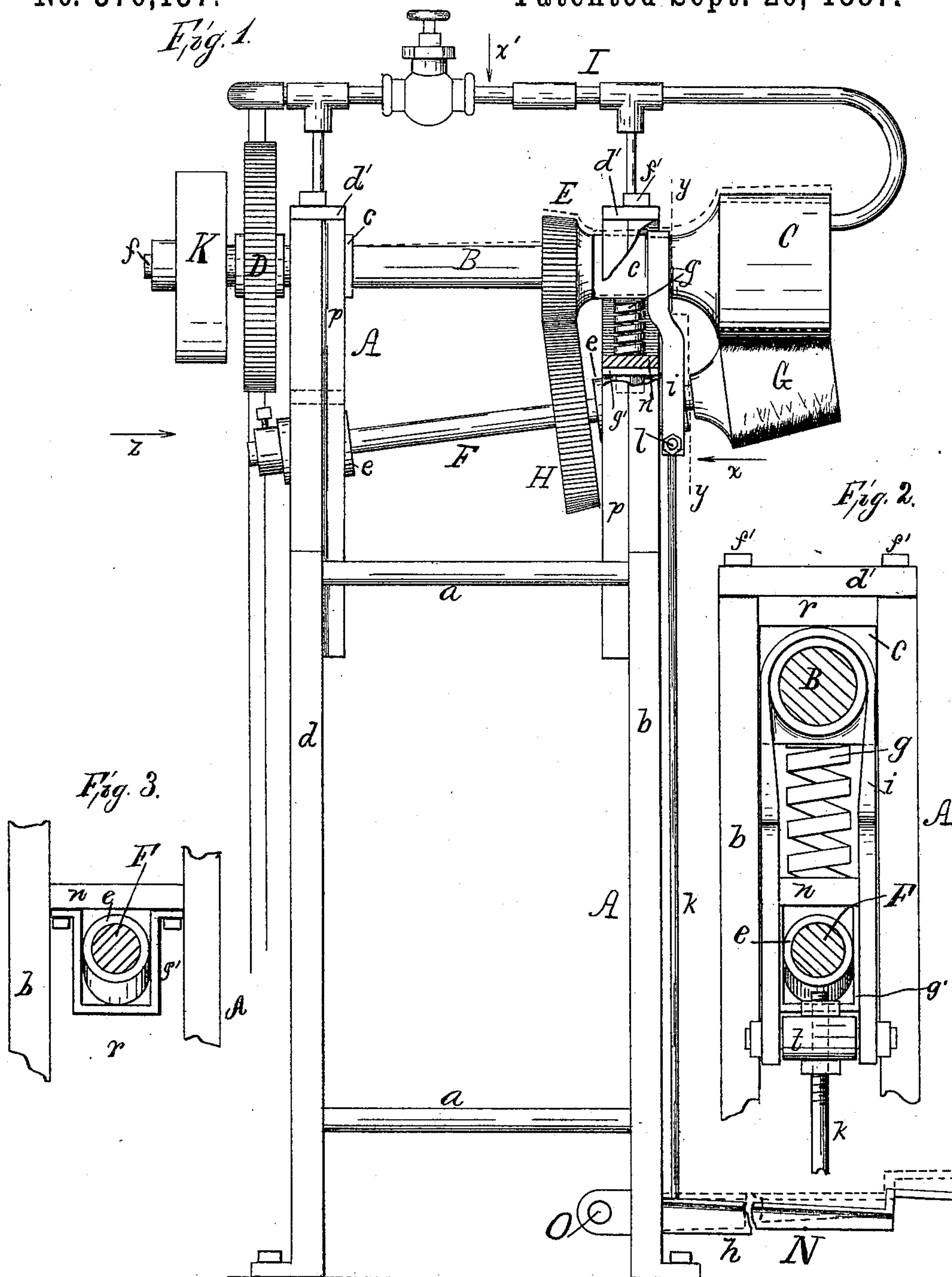
(No Model.)

2 Sheets—Sheet 1..

A. T. HAGEN.  
IRONING MACHINE.

No. 370,137.

Patented Sept. 20, 1887.



Attest:

C. B. Nash.

M. L. McDermott,

*Inventor:*

A. P. Hagen,

By E. B. Whitmore,  
Atty.

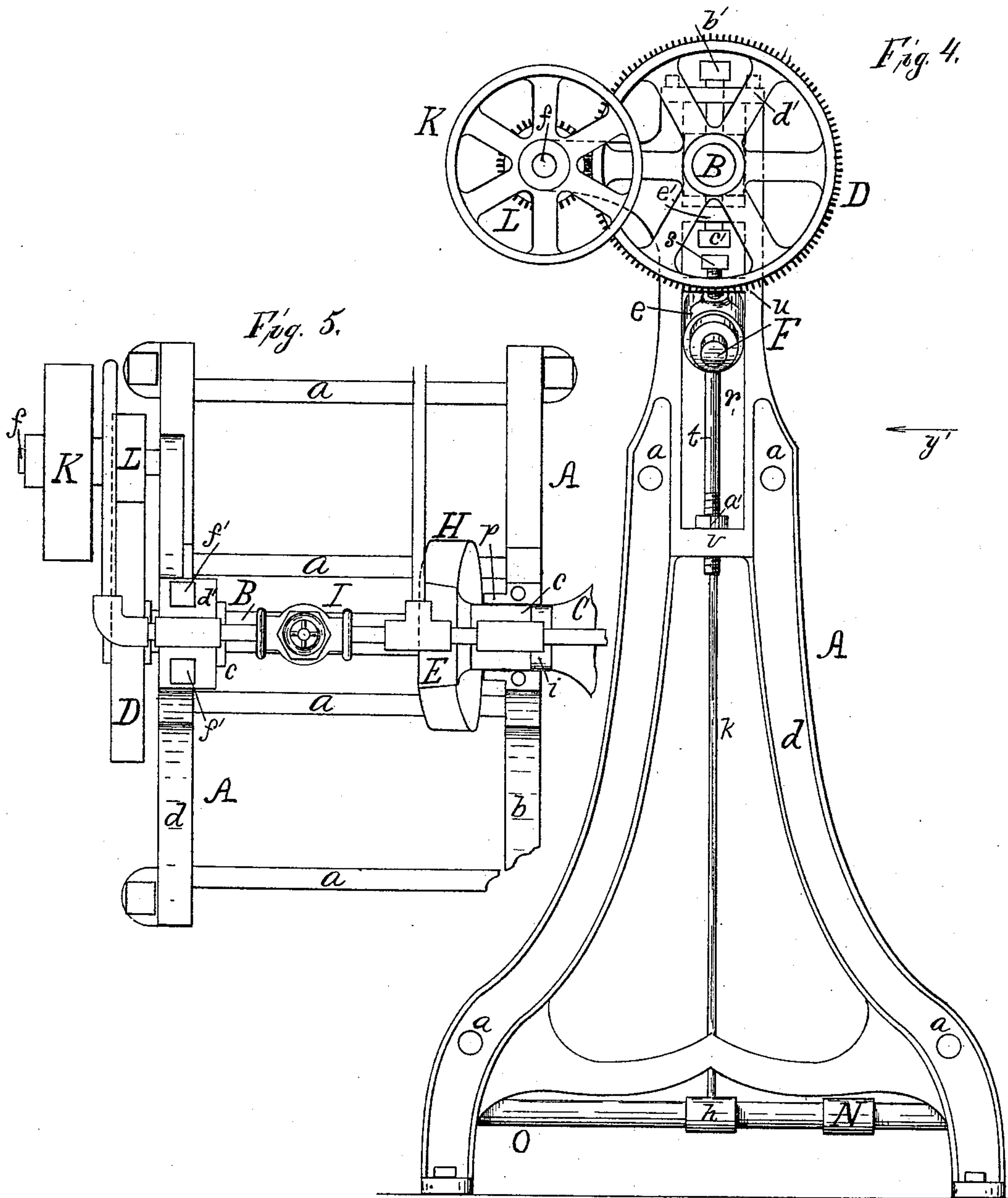
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By E. B. Whitmore, Atty.



# UNITED STATES PATENT OFFICE.

ARTHUR T. HAGEN, OF ROCHESTER, NEW YORK.

## IRONING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 370,137, dated September 20, 1887.

Application filed October 16, 1886. Serial No. 216,386. (No model.)

*To all whom it may concern:*

Be it known that I, ARTHUR T. HAGEN, of Rochester, in the county of Monroe and State of New York, have invented a new and useful  
5 Improvement in a Device for Ironing and Polishing, which improvement is fully set forth in the following specification, and shown in the accompanying drawings.

The object of my invention is to produce a  
10 convenient device for ironing and polishing small articles of starched wearing-apparel—such as cuffs, collars, &c.—being hereinbelow fully described, and more particularly pointed out in the claim.

15 Referring to the drawings, Figure 1 is a side elevation of the device, parts being broken away and sectional and other parts shown in two positions by full and dotted lines, the device being seen as indicated by arrow *y'* in Fig. 4.  
20 Fig. 2, drawn to a larger scale, is a view of some of the parts at the upper portion of the machine, seen as indicated by the arrow *x* in Fig. 1, the shafts being vertically sectioned, as upon the dotted line *y y*; Fig. 3, a detached view of  
25 some of the parts seen in the direction in which Fig. 2 is seen, drawn to better show the manner of holding the upper end of the inclined shaft; Fig. 4, an end elevation of the machine seen as indicated by arrow *z* in Fig. 1; and Fig.  
30 5, a plan seen as indicated by arrow *x'* in Fig. 1, parts being broken away and omitted.

Referring to the parts, A is the frame of the machine, composed of the sides or standards *b*  
35 and *d*, joined by cross-girts *a*, said standards being substantially alike and formed with rectangular vertical openings *r*, near their upper ends.

B is the main shaft of the device, resting in bearings *c* at the upper part of the frame, within  
40 the openings *r*, said shaft carrying a polishing-roller, C, overhanging one side of the frame and being provided with a spur-gear, D, overhanging the opposite side of the frame, and a beveled pinion, E, between the bearings *c*.

45 F is an inclined shaft, held in bearings *e* within the spaces *r* of the frame, below the main shaft, said shaft F holding an inclined tapered covered roller, G, to co-operate with the polishing-roller C, said shaft being further  
50 provided with a bevel-gear, H, to co-operate with the pinion E.

I is a system of air and gas pipes for heating the polishing-roller, which latter is hollow.

K is a band-pulley for driving the device, rigid with the pinion L, both turning upon a  
55 stud, *f*, rigid with the frame, said pinion co-operating with the spur-gear D.

*g* is a stiff spring placed under the front bearing, *c*, of the shaft B to support the latter, said  
60 spring resting upon a horizontal ledge, *n*, of the frame and serving to hold the polishing-roller C away from the roller G and the pinion E away from the gear H.

N is a treadle of common form, held by a shaft, O, resting in bearings in the frame, said  
65 shaft being provided with a rigid arm, *h*, from which a rod, *k*, reaches upward toward the main shaft. A strap, *i*, is bent over a reduced part of the box or bearing *c* of the shaft B, having its pendent ends joined by a tie, *l*, to which  
70 said treadle-rod *k* is adjustably connected. The spring *g*, as above stated, holds the roller C away from the companion roller G, and by pressing the treadle with the foot said roller C is brought down upon its companion, the gears  
75 E and H at the same time interlocking, so that the shaft F and roller G may be turned by the shaft B.

*p* are laterally inward-projecting flanges or parts around the opening *r*, added for the pur-  
80 pose of affording greater breadth of bearing for the boxes of the shafts B and F.

*s* and *t* are vertical bolts bearing, respectively, upon the upper and under side of the bearing *c* of the shaft F, said bolt *s* being threaded  
85 through the ledge *u* of the frame, and the bolt *t* threaded in the ledge or bar *v*, with a threaded set-nut, *a'*, bearing thereon. By means of these bolts the rear end of the shaft F may be vertically adjusted to throw the pressure between  
90 the rollers C and G more at the point or the heel thereof, as may be required. The rear end of the shaft B is designed to be similarly vertically adjusted by the opposing vertical screws *b'* and *c'*, the former passing downward  
95 through the cap *d'* of the standard *d*, and the latter passing upward through the cross-ledge *e'* of said standard. When the forward end of the shaft B is raised or lowered by the action of the spring and treadle, as above described,  
100 the rear bearing, *c*, of said shaft rocks or yields slightly between the points of said screws *b'*



and  $c'$ , the front bearing sliding in the opening  $r$ . The cap-pieces  $d'$  are held to the frame by bolts  $f'$ , said caps covering the openings  $r$  in the standards  $b$  and  $d$ .

5 The forward end of the shaft F is held in a pendent stirrup,  $g'$ , secured to the ledge  $n$  within the space  $r$  of the standard  $b$ , so as to admit of slight vertical play, but to admit of no lateral play. The weight of the shaft, with its  
10 roller, &c., keeps it down upon the lower part of the stirrup, the slight vertical play being necessary in the adjustment of the rear end of the shaft, above described. This shaft F is rigid while operating in conjunction with the  
15 shaft B—that is, it has no motion other than rotary, while the shaft B is moved vertically, as described above—the weight of the shaft F and the downward pressure upon its roller hold-

ing it rigidly down against the bottom of the stirrup.

What I claim as my invention is—

20 In an ironing-machine, a main rotatory shaft with movable bearings, and a polishing-roller, in combination with an inclined rotatory shaft with movable bearing and roller, a rigid stir- 25 rup for the forward bearing of said inclined shaft, adjusting-screws for the rear bearing of said inclined shaft, a holding-strap and spring for said main shaft, a treadle, and a treadle-rod joined adjustably to said strap, substan- 30 tially as shown and set forth.

ARTHUR T. HAGEN.

Witnesses:

E. B. WHITMORE,  
M. L. McDERMOTT.