H. MONK.

IRONING APPARATUS.

No. 192,929. Patented July 10, 1877.

Fig: 1.

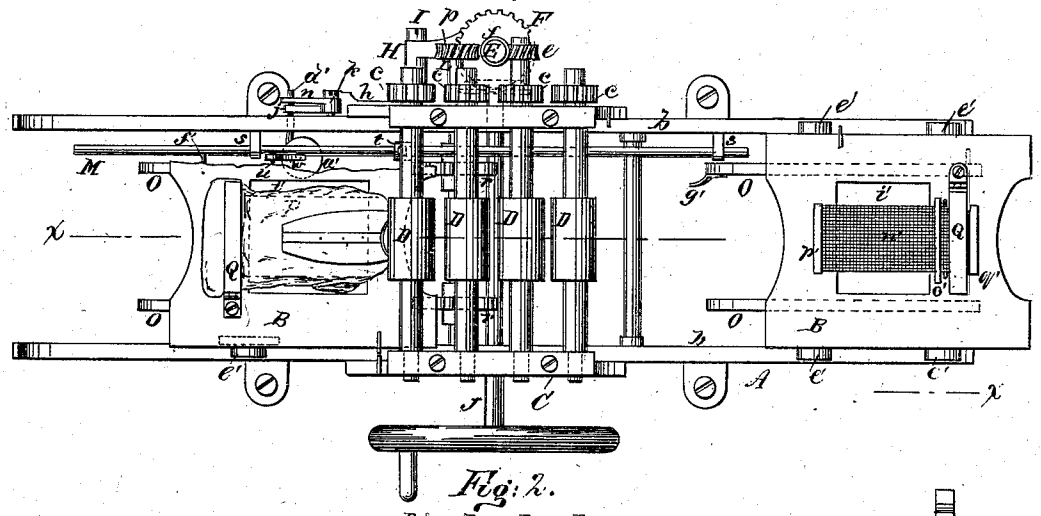


Fig: 2.

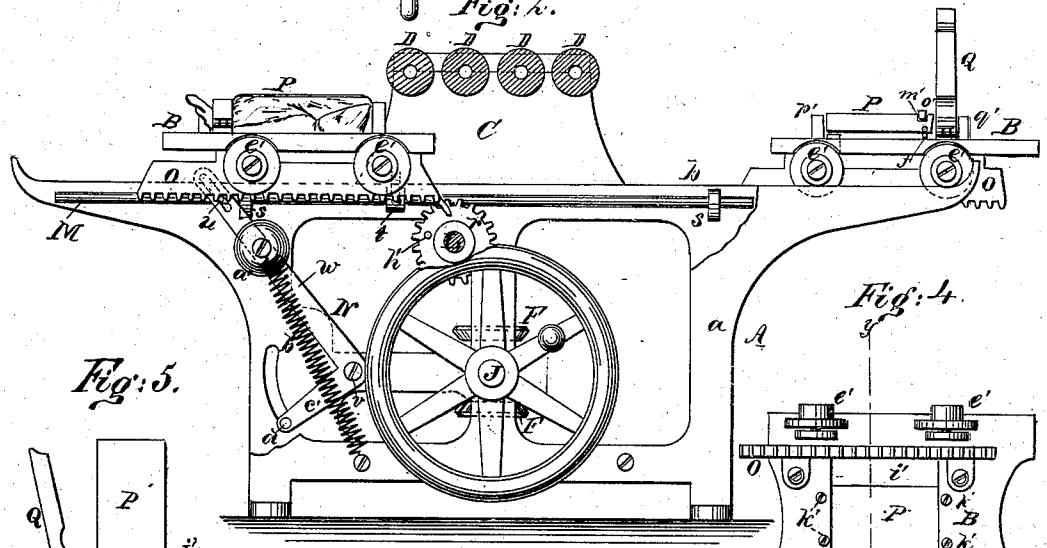


Fig: 5.

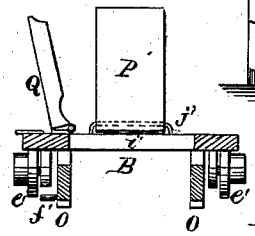
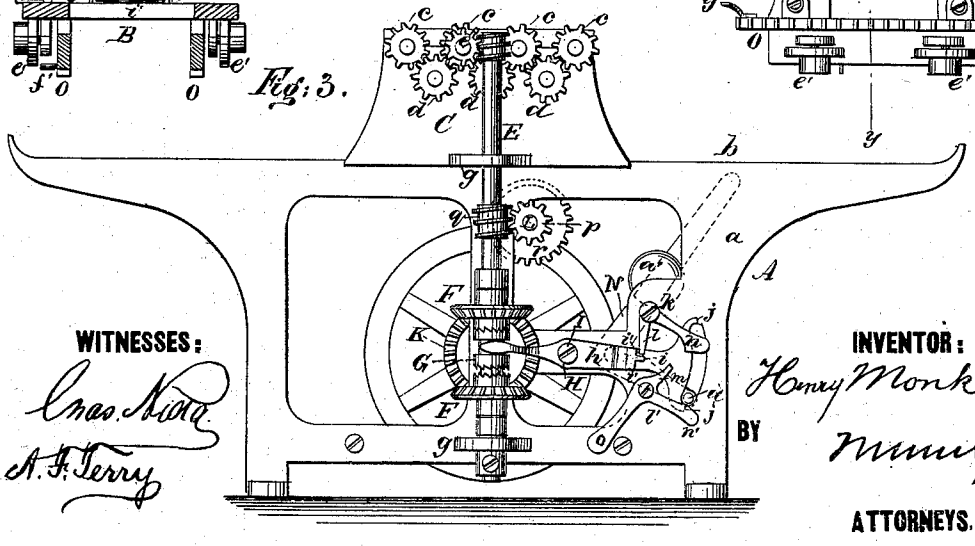


Fig: 4.

Fig: 3.



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IMPROVEMENT IN IRONING APPARATUS.

Specification forming part of Letters Patent No. **192,929**, dated July 10, 1877; application filed April 30, 1877.

To all whom it may concern:

Be it known that I, HENRY MONK, of Troy, in the county of Rensselaer and State of New York, have invented a new and Improved Ironing-Machine, of which the following is a specification:

Figure 1 is a plan view of my improved ironing-machine. Fig. 2 is a side elevation in part section on line *x x* in Fig. 1. Fig. 3 is a side elevation, showing the reversing-gear. Fig. 4 is an inverted plan view of one of the tables. Fig. 5 is a transverse section on line *y y* in Fig. 4.

Similar letters of reference indicate corresponding parts.

The invention relates to an improvement in the class of machines in which the article to be ironed is attached to a table that is adapted to slide beneath a heated roll or rolls.

The invention relates to the construction and combination of parts, as hereinafter described and claimed.

It also consists in a novel method of fastening the shirts to be ironed, and in an arrangement of gearing for driving the rolls and tables, as hereinafter more fully described.

Referring to the drawing, A is the frame of the machine, consisting of two similar side pieces, *a*, connected by suitable cross-bars. Upon the upper edges of the side pieces *a* a track, *b*, is formed, upon which the ironing-tables B are supported.

Supports C are formed at the sides of the frame A, in which the hollow rolls D are journaled. The shafts of these rollers are tubular, and to them the spur-pinions *c* are secured. Motion is communicated from one of these pinions to the other by the intermediate pinions *d*, which are placed on studs that project from the support C.

The shaft of one of the rolls D is longer than the others, and upon it is placed a worm-wheel, *e*, which is turned by a worm, *f*, on the vertical shaft E. The shaft E is journaled in brackets *g* that project from the side of the frame A, and upon it two miter-wheels, F, are placed loosely, so that they face each other.

Upon the bosses of these wheels ratchet-teeth are formed, and between the wheels F on the shaft E is placed a clutch, G, which slides longitudinally on the shaft; but is prevented from turning thereon by a feather in the shaft and a slot in the clutch. The said clutch is provided with ratchet-teeth at its ends corresponding with the teeth on the bosses of the wheels F, and is grooved at its center to receive the fork of the shifting-lever H.

This lever is fulcrumed on a stud, I, that projects from the side of the frame, and its arm *h* is provided with a finger, *i*, at the sides of which are shoulders *i'*. The end of the arm *h* is widened and arc-shaped, and is provided with fingers *j*.

Above the arm *h* a bent lever, *k*, is pivoted to the frame A, the arm *l* of which acts as a latch for retaining the finger *i*, and the other arm, *n*, acts as a counter-weight, and extends beyond the end of the arm *h*, so that it may be engaged by the pin that moves the said arm.

Below the arm *h* a lever, *l'*, is pivoted to the frame A. The arm *m* of the lever *l'* is capable of locking the finger *i*, and the arm *n'* is engaged by the pin that moves the lever H.

A weight, *o*, is formed on the lever *l'*, which throws the arm *m* under the finger *i*.

J is the driving-shaft of the machine, which is provided with the miter-wheel K that meshes with both of the wheels F. The shaft J may be driven by any convenient power.

L is a shaft that is journaled in the frame A, and is provided with a worm-wheel, *p*, that is driven by a worm, *q*, on the vertical shaft E. Spur-wheels *r r* are secured to the shaft L, for carrying the tables under the rolls D.

A rod, M, is placed in guides *s* at the side of the frame A, and is provided with a finger, *t*, and with a pin, *u*, that is received by a slot in the right-angled lever N.

The lever N is fulcrumed on a stud, *v*, that projects from the inner side of the frame A. The slotted arm *w* of the said lever is provided with a weight, *a'*, and also with a spring, *b'*, for drawing it downward on either side of its fulcrum.

The arm *c'* of the said lever is provided with a pin, *d'*, that projects through a curved slot in the side of the frame, and is capable of engaging the fingers *j* of the lever H.

The ironing-tables B are provided with flanged rollers e', that run upon the upper edges of the side pieces a of the frame A.

O O are racks attached to the under surface of the tables B, and capable of being engaged by the spur-wheels r.

A stud, f', projects from the side of one of the racks for engaging with the finger t on the rod M, and a finger, g', projects downward from the inner end of the rack O, and is engaged by a stud, h', that projects from one of the wheels r.

A rectangular aperture, i', is made in the table B, and a table, P, hinged to the table B at j', extends across the aperture i', and rests upon screws k', that pass through the table B, at the sides of the aperture i'.

The hinges of the table P are adjustable so that the table may be raised or lowered by the screws k'. The said table is recessed to receive an elastic pad, and in it a transverse groove, m', is made for receiving the end of the ironing cloth n', which is clamped therein by the wedge o'. The opposite end of the ironing cloth is carried under the free end of the table P, and secured by paste or starch.

A rib, p', projects upward from the table B at the free end of the table P, and a similar rib, q', projects from the table B, a small distance from the hinged end of the table P, and Q is a bar that is hinged to table B, and is capable of folding down between the table P and rib q'.

The operation of my improved machine is as follows: The shirt, the front of which is to be ironed, is drawn over the table P, when the latter is folded down upon the table B, and the bar Q is closed down, clamping the shirt between the rib q' and hinged end of the table P. The table is now moved along the track b until the finger g' is engaged by the stud h', which carries the table forward until the racks O are engaged by the wheels r, and the table is carried under the rolls D, which are heated by gas, and are rotated as the shirt is slowly carried through the machine. When it reaches the last roll, the stud f' will have carried the finger s so far that lever N is carried over its fulcrum, and by the pin d, that projects from its arm c', it releases one of the latches l n', and moves the lever H so as to shift the clutch G from one of the wheels F to the other, thus reversing the action of the machine, carrying the shirt back to the position whence it started.

While this process is going on a shirt is being arranged at the opposite end of the machine, so that when the first one is discharged from the rolls, the second one is ready to be operated upon, and is introduced under the rolls while the machine is running in the reversed direction. Shirts are thus introduced into the machine first at one end and then at the other in alternation.

It is obvious that the machine may, if required, be worked with a single table.

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

1. In an ironing-machine, the combination of the sliding rod M having finger t, with the reciprocating table, the slotted and weighted elbow-lever N having pin d, the forked lever H, shifting-clutch, and geared shafts E and L, all as shown and described, to operate as specified.

2. In an ironing-machine, the combination of the table traveling beneath the ironing-rolls, and provided with racks, the finger g', and the gear r having stud h', substantially as shown and described, for the purpose specified.

3. In an ironing-machine, the combination of pivoted locking-levers l n l' n' with the pivoted lever H, clutch-reversing mechanism, and a vibrating lever provided with an arm or pin, d, for engaging said lever H, substantially in the manner shown and described, for the purpose specified.

4. In an ironing-machine, the levers k l', lever H, lever N, rod M having the finger t, in combination with the tables B and clutch G, substantially as shown and described.

5. In an ironing-machine, the board or table proper P, constructed with a recess to receive an elastic pad, as shown and described.

6. In an ironing-machine, the hinged and recessed table P, the hinged bar Q, and the table B having the aperture i', ribs p' q', and adjusting-screws k, in combination, substantially as herein shown and described.

HENRY MONK.

Witnesses:
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JOHN BIGELMAN.