S. Williams,

Mangle.

No. 109,699. Patented Nov. 29. 1870.

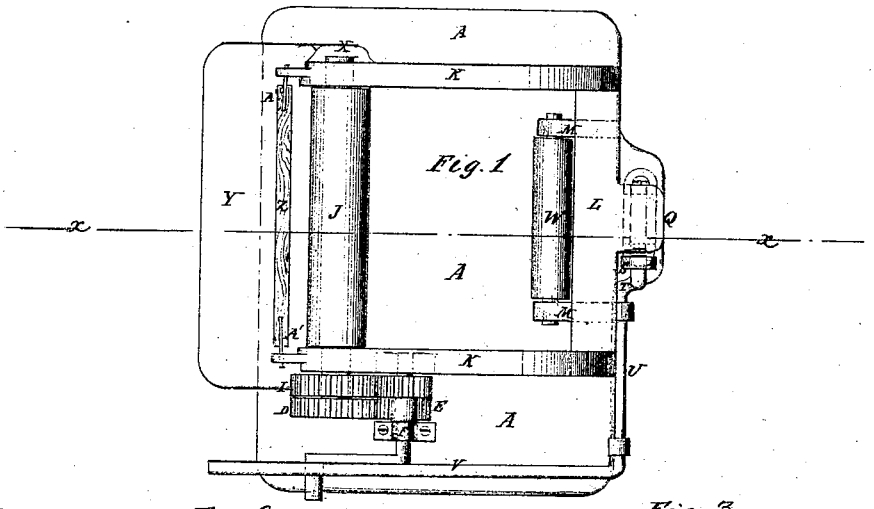

Fig. 1

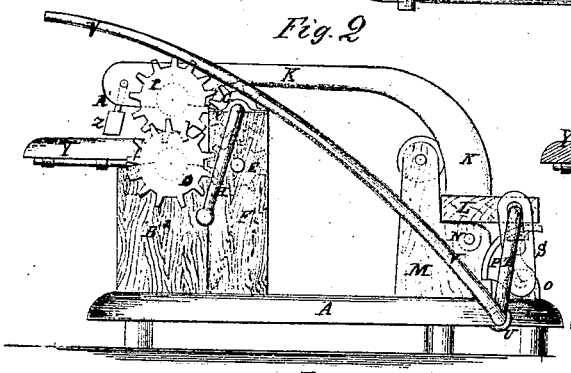

Fig. 2

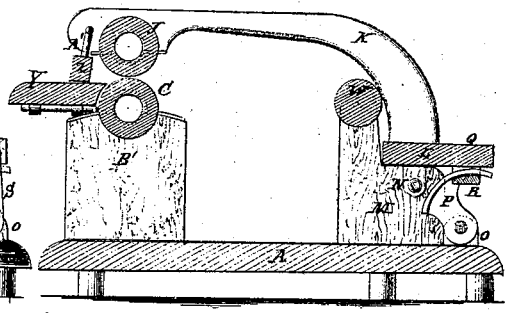

Fig. 3

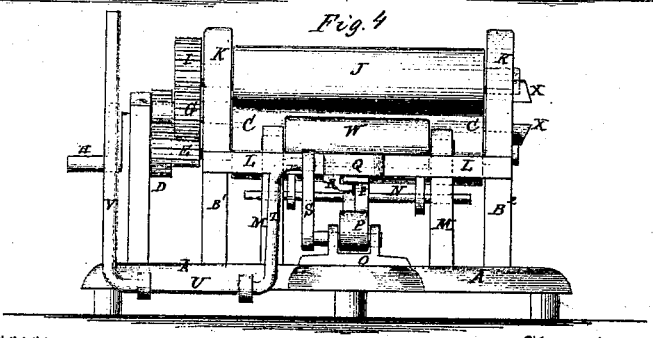

Fig. 4

Witnesses:

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STEPHEN WILLIAMS, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 109,699, dated November 29, 1870.

IMPROVEMENT IN MANGLING AND IRONING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, STEPHEN WILLIAMS, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Mangling and Ironing-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a top view of my improved machine.

Figure 2 is a side view of the same.

Figure 3 is a detail vertical section of the same, taken through the line *x x*, fig. 1.

Figure 4 is a rear view of the same.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved machine for mangling and ironing clothes and other cloths, which shall be simple in construction and effective in operation, applying the same pressure steadily to the clothes whatever may be their thickness; and

It consists in the construction and combination of the various parts of the machine, as hereinafter more fully described.

A is the bed-plate or platform of the machine, to the forward part of which, near its ends, are attached the lower ends of the standards B^1 B^2, in the upper ends of which are formed the bearings, in which revolve the journals of the lower roller C.

To the projecting end of one of the journals of the roller C is attached a gear-wheel, D, the teeth of which mesh into the teeth of the gear-wheel E, one of the journals of which revolves in bearings in the rear part of the standard B^2, and its other or outer journal revolves in bearings in the standard F, the lower end of which is secured to the bed-plate A.

The gear-wheel E is made long, so that while the teeth of the gear-wheel D are meshing into its teeth near one end, the teeth of the gear-wheel G may mesh into its teeth near the other end.

The journals of the gear-wheel G revolve in bearings in the upper ends of the standards B^2 and F, and to the end of its outer journal is attached, or upon it is formed, the crank H, by means of which the machine is operated.

The teeth of the gear-wheel G mesh into the teeth of the gear-wheel I, attached to the journal of the upper roller J.

By this construction and arrangement of the gearing, the rollers C and J will both be revolved by operating the crank H at whatever distance apart the said rollers may be.

The rollers C and J are made hollow, and open at one end for the convenient insertion of the heaters.

The journals of the roller J revolve in bearings in the forward ends of the crane or curved arms K, the rear ends of which are attached to the ends of the cross-bar L.

The cross-bar L is pivoted to the standards M, attached to the rear part of the bed-plate A by means of the rod N, which passes through the said standards and through the eye-bolts or staples attached to the said cross-bar L.

To the middle of the rear part of the bed-plate A is secured a socket, O, to which is pivoted the journals of the cam P, which rest against the under side of the arm Q, formed upon or attached to the middle part of the cross-bar L, so that by the operation of the said cam the upper roller J may be pressed down upon the clothes between it and the lower roller C, the said cam being so formed that the pressure may be equal whatever thickness of clothes may be passing between the said rollers.

Upon the side of the cam P is formed a curved flange, upon which a toe, R, attached to the arm Q of the cross-bar L, takes hold, so that by moving the said cam P back, the upper roller J will be raised for convenience in putting in the clothes.

To the journal of the cam P is attached a crank-arm, S, which is slotted longitudinally, and in the said slot works a pin formed upon or attached to the crank-arm T, formed upon or attached to the end of the rod U, which works in bearings attached to the rear part of the bed-plate A, and to the other end of which is attached the rear end of the lever V, which curves upward and forward, bringing its forward end into such a position that it may be conveniently reached and operated from the forward part of the machine.

W is a roller, placed just in front of the cross-bar L, and pivoted to supports M attached to the rear part of the bed-plate A.

The roller W is only used when the cloth to be operated upon has a thick seam, in which case a board is placed upon the lower roller C, beneath the said seam, and cloth and board are run together between the rollers C J.

X are caps, attached to or formed upon the bearings at the open ends of the hollow rollers C J, so that cloth wider than the length of said rollers may be protected while passing through the machine from being burned by the projecting ends of the heaters.

Y is a table, upon which the clothes to be operated upon by the machine are placed, and from which they are fed to the rollers.

The table Y is detachably attached to the forward parts of the upper ends of the standards B^1 B^2.

Z is a bar, which is held down upon the table Y, or upon the cloth placed upon said table by the spring arms A′, by which it is pivoted to the ends of the curved arms K, that support the upper roller J.

The bar Z is designed to smooth out the wrinkles from the cloth before it passes to the rollers C J.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. The combination and arrangement of the crank H and gear-wheels D E G I with the rollers C J, and pivoted frame K L, substantially as herein shown and described, and for the purpose set forth.

2. The curved arms or bars K, and pivoted cross-bar L, in combination with the rollers C J, substantially as herein shown and described, and for the purpose set forth.

3. The cam P, in combination with the bed-plate A, frame Q L K, and rollers J C, substantially as herein shown and described, and for the purpose set forth.

4. The combination of the lever V, horizontal rod or shaft U, crank-arm T, and slotted crank-arm S with each other and with the bed-plate A, cam P, frame Q L K, and rollers J C, substantially as herein shown and described, and for the purpose set forth.

5. The horizontal rod U, in combination with the slotted crank-arm S, for operating the device for raising the upper roller for the introduction of the cloth to be operated upon, substantially as herein shown and described.

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Witnesses:

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