No. 47,708. PATENTED MAY 16, 1865.

T. FARNSWORTH.
MANGLE.

Fig. 1.

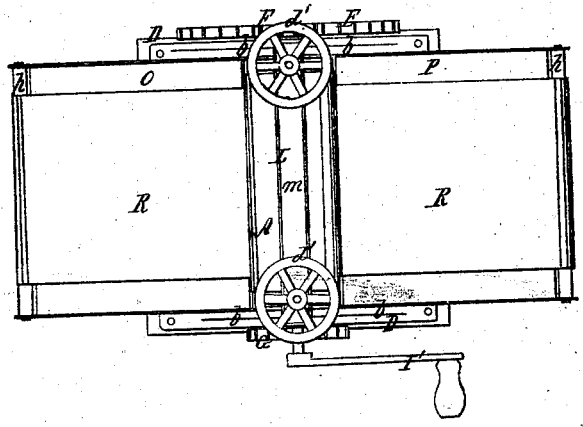


Fig. 4.

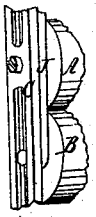


Fig. 2.

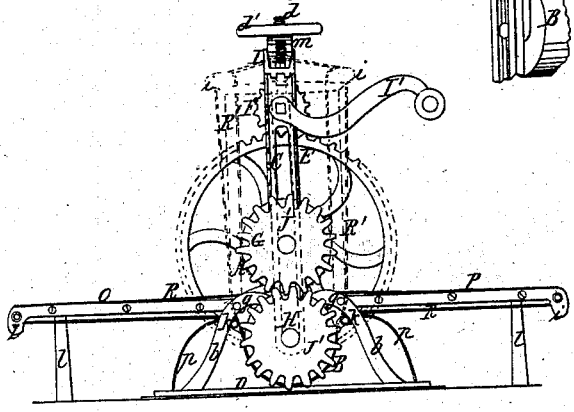
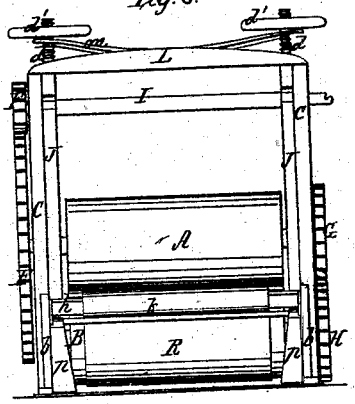


Fig. 3.



Witnesses;
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Inventor;
T. Farnsworth

UNITED STATES PATENT OFFICE.

THOMAS FARNSWORTH, OF CLEVELAND, OHIO.

IMPROVED MANGLE.

Specification forming part of Letters Patent No. **47,708**, dated May 16, 1865.

To all whom it may concern:

Be it known that I, THOMAS FARNSWORTH, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Mangling-Machines; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a top view of the mangle. Fig. 2 is a side view. Fig. 3 is an end view. Fig. 4 is a sectional view.

Like letters of reference refer to like parts in the several views.

The frame of the mangle consists of standards C C, secured to a frame, D, at the lower ends. From this frame extend up braces *b*, that are secured to the standards.

A and B are two rollers. The journals of the roller A have their bearings in the standards C, and on the journal at one end there is a gear-wheel, E, that is turned by a pinion, F, on the end of the countershaft I, by which the roller A is revolved, a crank, I′, being on the other end of the countershaft.

C is a gear-wheel on the journal at one end of the roller A, that works in a gear, H, on the journal at one end of the roller B, by which this roller is revolved.

The journals of the lower roller, B, have their bearings in hangers J, that extend down inside of the standards, as shown in Figs. 3 and 4 and indicated by the dotted lines J′ in Fig. 2. These hangers are slotted out in the middle the width of the journal-shafts, through which the journals of the roller A pass. The standard C are slotted out in a similar manner, excepting where the journals of the roller have their bearings, as represented in Fig. 4.

The journals of the roller B extend out through the slotted standards, which allow them to move either way. Between the standards at the top extends a cross-tree, L, secured to the standards. *m* is a spring connected to this cross-tree.

The upper ends of the hangers terminate in screws *d*, as seen in Figs. 2 and 3, that extend through the outer ends of the cross-tree and spring. On these screws are screw-wheels *d′*, against which the outer ends of the spring press. By turning the screw-wheels in one direction the pressure between the rollers can be increased, as it elevates the hangers, bringing the under roller in closer contact with the upper roller, and by reversing the set-screws the pressure can be decreased. The pressure at the same time is rendered elastic or yielding by means of the spring *m* under the screw-wheels, which allows the under roller to adjust itself to the bulk of material passing between the rollers.

The cogs or fingers of the gears G and H are so deep, and work in each other in such a way, that the roller B can be lowered as much as may be desired without putting them out of gear.

O and P are tables on each side of the rollers, supported at the inner ends by a shaft, *g*, extending along the end of the tables into the braces *b*, so as to allow the tables to be turned up out of the way, as indicated by the dotted lines R′ in Fig. 2. At the outer ends of the tables there are rollers *h*, that are supported and turn in pieces screwed along the sides of the tables, as represented. These pieces are formed into a catch, *i*, at the outer ends, over which a cord or strap is placed when the tables are turned up out of the way, as noted in Fig. 2, to retain them in that position. Over the tables, between the rollers A and B and under the roller B over the rollers *h*, at the ends of the tables, there is an endless apron, R, on which the clothes are placed to be guided between and from the rollers.

p p are springs, between which on each side of the roller B there is a rod, *k*, that extends along under the apron, keeping it at the proper tension over the rollers.

In practical operation, the clothes to be mangled are prepared and placed on the apron, by which they are carried between the rollers when the crank is turned, and brought out on the other side on the table pressed smooth. The amount of pressure on the clothes to be mangled is adjusted by the set-screws *d*, as before stated. The outer ends of the tables are supported by standards *l*, extending down from the sides.

In place of having the endless apron pass

under the rollers B, the mangle can be placed on a table, and the apron passed round the ends or sides of the table and underneath it.

What I claim as my improvement, and desire to secure by Letters Patent, is—

1. The arrangement of the hanger J and rollers A B, in combination with the spring *m*, screws *d*, and gearing G H, substantially as and for the purpose specified.

2. The springs P and rollers *k*, in combination with the tables O P and apron R, when arranged and operating in the manner and for the purpose described.

THOMAS FARNSWORTH.

Witnesses:
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