

J. H. MALONE.
Washing-Machines.

No. 158,506.

Patented Jan. 5, 1875.

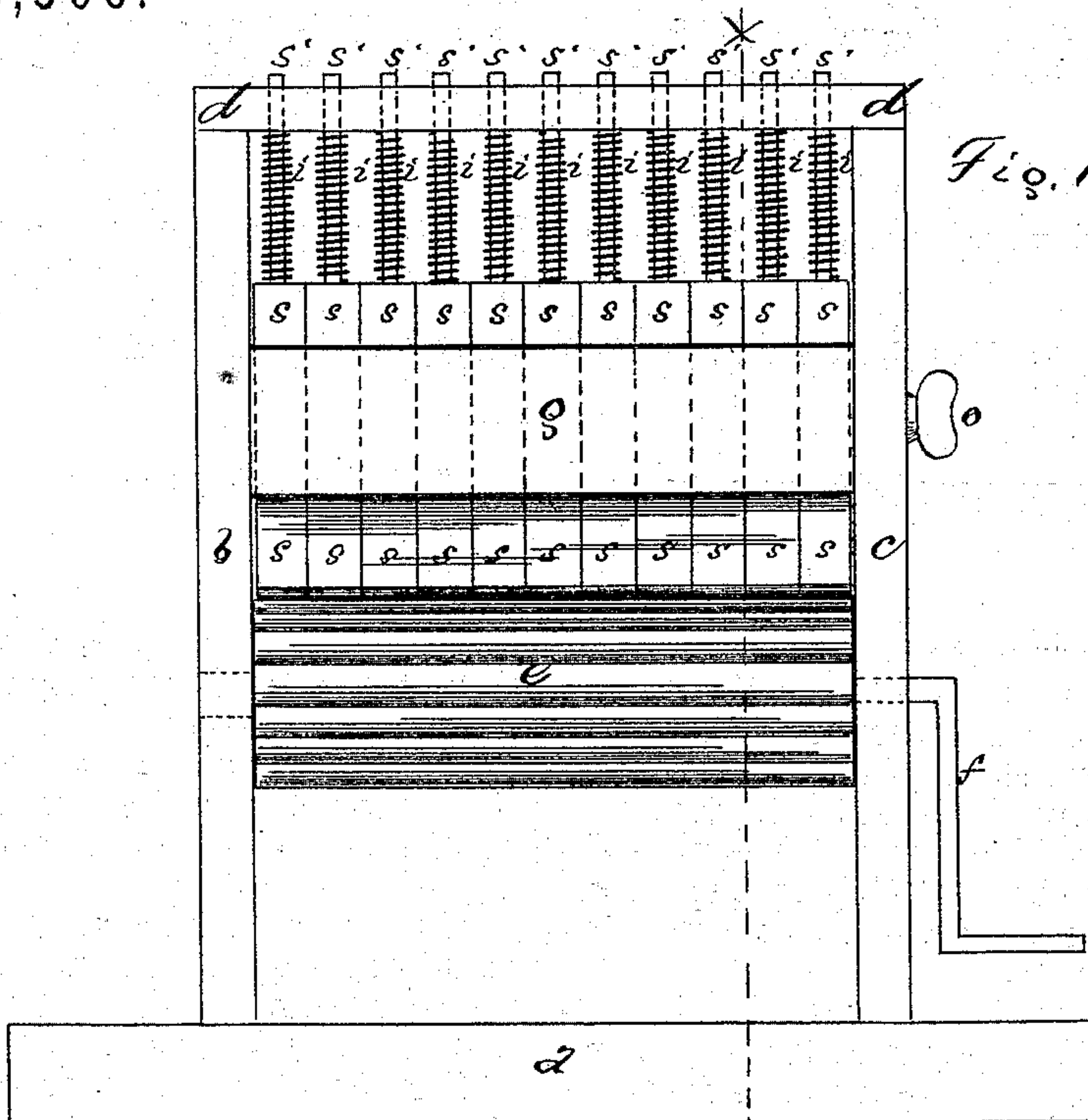


Fig. 1

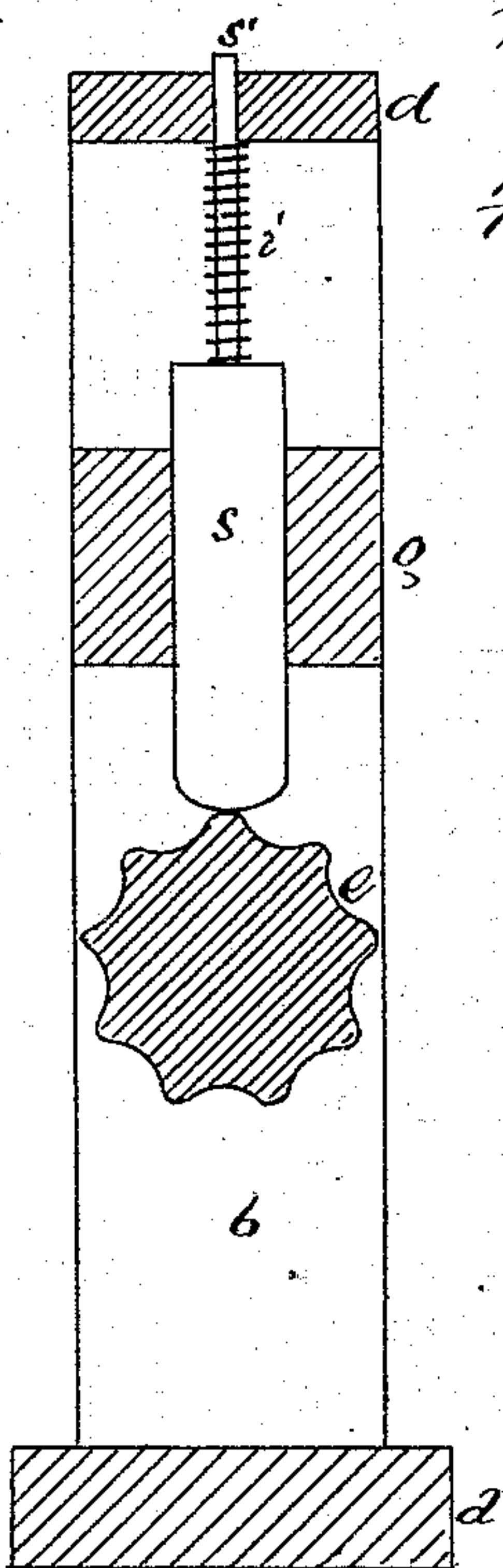


Fig. 2

Witnesses

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UNITED STATES PATENT OFFICE

JOHN H. MALONE, OF SOUTH MANCHESTER, CONNECTICUT.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **158,506**, dated January 5, 1875; application filed March 16, 1874.

To all whom it may concern:

Be it known that I, JOHN H. MALONE, of South Manchester, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements pertaining to Washing-Machines and Wringing-Machines, of which the following is a specification, reference being had to the accompanying drawings, where—

Figure 1 is a front view of a machine embodying my said improvements. Fig. 2 is a view of the same in cross-section, in the plane indicated by the dotted line *x x*.

The improvement consists in combining, with a rotatory roll, a series of stationary rubbers pressing on the roll.

The letter *a* indicates the base of the machine, *b c* side standards, and *d* a cross-bar at the top. The letter *e* indicates the roll, which may be longitudinally fluted, and, for washing purposes, I prefer it should be thus fluted. This roll is rotated by means of the crank *f*. Over the roll there is a series of rubbers, *s*, having up-and-down play in the rack *g*, with rods *s'* attached to the upper ends of these rubbers, running up into or through the cross-bar *d*. These rods play up and down with the rubbers. It is possible, perhaps, to make the rubbers heavy enough for rubbing or washing work without springs, but I prefer to put springs *i* on the rods *s'*, resting on the rubbers and against the under side of the cross-bar *d*, by means of which springs any desired pressure can be given to the rubbers. The cross-bar *d* can be made adjustable up and down, so as to regulate the pressure of the springs.

The lower ends of the rubbers are rounded. The making of these rubbers in a separable series maintains an equal, or nearly equal, press-

ure on the clothes passed through the machine along the whole length of the roll, while if they were made all in one piece this would not be so. For rubbing purposes the longitudinal flutes may well be omitted from the roll, and small rolls or wheels placed in the lower ends of the rubbers.

The roll and rubbers are, by preference, made of metal coated with zinc or tin, so as not to be rusted by the water; but any proper material may be used.

A screw, *o*, may be used in one of the side standards, so as to keep the series of rubbers pressed together, not tightly enough, however, to interfere with their separate play.

I have been made aware of a washing-machine having a fluted roll and one rubber pressing upon the roll along its entire length, and this I do not claim, it being an essential feature of my invention to have a series of rubbers, *s s*, covering the length of the roll, each rising and falling independently of the others, so that if the cloth passing through the machine is thicker at some one point than at other points, only the rubber or rubbers immediately overlying the point of greater thickness is raised to an extra height, leaving the other rubbers undisturbed in their action upon the cloth where it is of less thickness.

I claim as my invention—

The combination of the roll *e* with the series of independent rubbers *s* pressing upon the roll along its length, all substantially as shown and described.

JOHN H. MALONE.

Witnesses:

WM. EDGAR SIMONDS,
JOHN POLLITT.