H. Cramer,

Washing Machine.

No. 96,780. Patented Nov. 16, 1869.

Fig: 1.

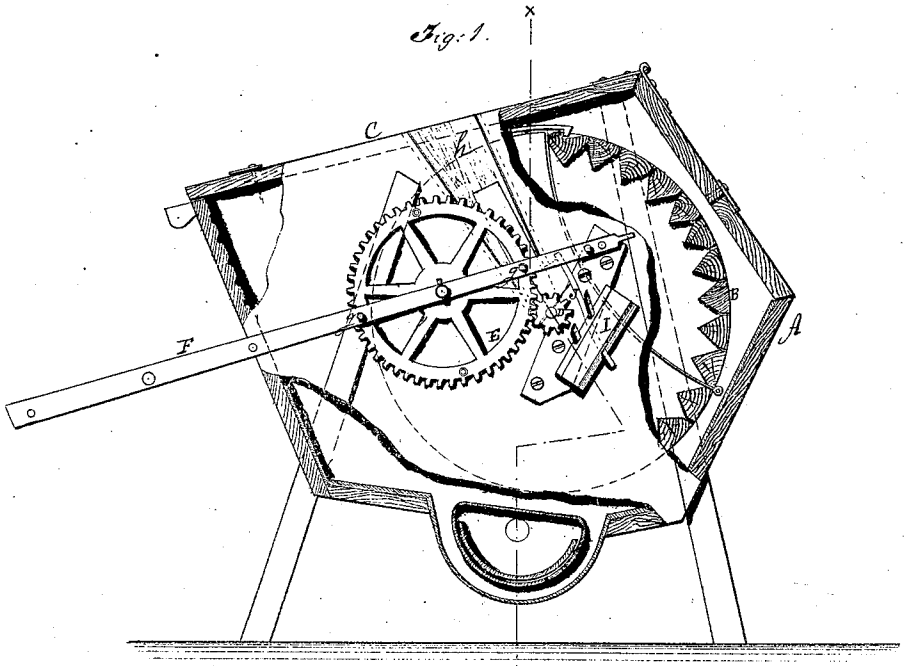
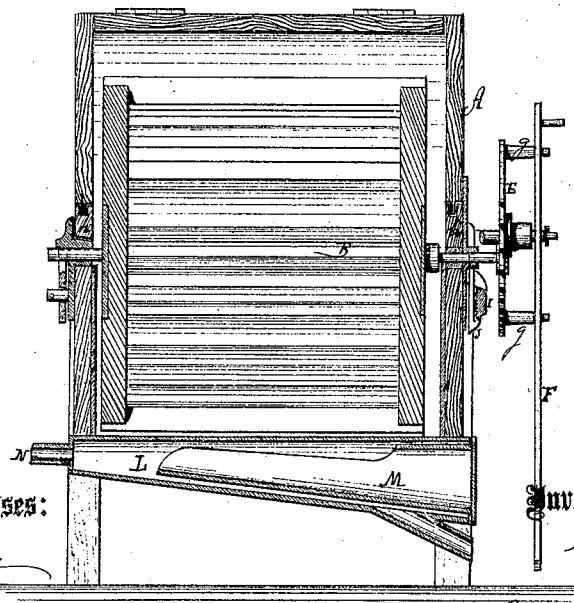


Fig: 2.



Witnesses:

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United States Patent Office.

HERRMANN CRAMER, OF SONORA, CALIFORNIA.

Letters Patent No. 96,780, *dated November* 16, 1869.

IMPROVED WASHING-MACHINE.

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, HERRMANN CRAMER, of Sonora, in the county of Tuolumne, and State of California, have invented a new and useful Improvement in Washing-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 drawings, forming part of this specification.

This invention relates to new and useful improvements in machines for washing clothes, and consists in a hollow revolving cylinder, with open rim, serrated on its inner surface, in a suitable tub, with a heating-furnace connected therewith, the whole being constructed, arranged, and operated as hereinafter more fully described.

In the accompanying drawing—

Figure 1 represents a side view of the machine, showing the gearing and lever, by which motion is imparted to the cylinder, with a portion of the side of tub broken away to show the cylinder.

Figure 2 is a vertical section of fig. 1, through the line *x x*.

Similar letters of reference indicate corresponding parts.

A is the tub, which may be circular or angular in form, in which the cylinder revolves.

B represents the cylinder.

This cylinder is composed of two circular heads, covered with slats or staves, which are angular or V-shaped on their inner sides, so that the inner surface of the circumference or rim of the cylinder is serrated, as seen in fig. 1.

The clothes to be cleansed are placed in this cylinder, a suitable hinged door, in the rim, being provided for this purpose, and the portion *c* of the tub being also hinged, for closing the machine when the cylinder is in motion.

D is a pinion, on the end of the cylinder-shaft, and

E is a gear-wheel, which is revolved on a stud-pin on the side of the tub.

The cylinder is given a partially-revolving or vibrating motion by means of the lever F, which passes over the stud-pin of the wheel, and takes hold of the rim at one or more points, as seen at *g g*.

By this back-and-forth motion, the clothes are thrown against the serrated rim of the cylinder, on which they roll and rub, by which operation the dirt is readily expelled. This motion may be given by hand, or by any other convenient power.

The cylinder revolves partially immersed in water, and there being open spaces between the staves, the water passes readily into the cylinder, while the dirt removed settles down on the bottom of the tub.

The cylinder is removed from the tub by drawing out the grooved slides *h h*, which confine the cylinder-journals to their boxes.

These slides, *h h*, may be held down to their places by any suitable device.

In fig. 1, I is a key, and J is a hook, attached to the slide *h* for that purpose.

Beneath the bottom of the tub, (which is made of metal,) I arrange a furnace, K, composed of a tapering cylinder or flue, L, and a sliding fire-place, M.

N is the flue, through which the smoke escapes.

By means of this furnace, the water in the machine may be boiled, and the clothes being, at the same time, agitated in the cylinder, as before stated, the laborious operation of washing is rendered easy.

Having thus described my invention,

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

In combination with the tub A, and the cylinder B, the furnace, composed of the parts L and M, all constructed and arranged as and for the purposes specified.

Witnesses: HERRMANN CRAMER.

WM. ROTHER,

J. L. HOSKING.