

H. E. SMITH.
 WASHING-MACHINE.

No. 175,186.

Patented March 21, 1876.

Fig. 1.

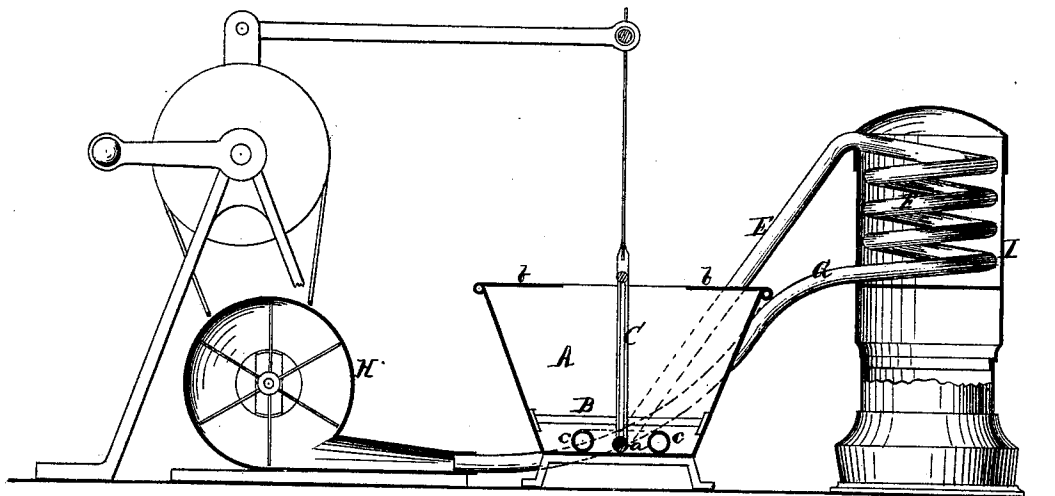
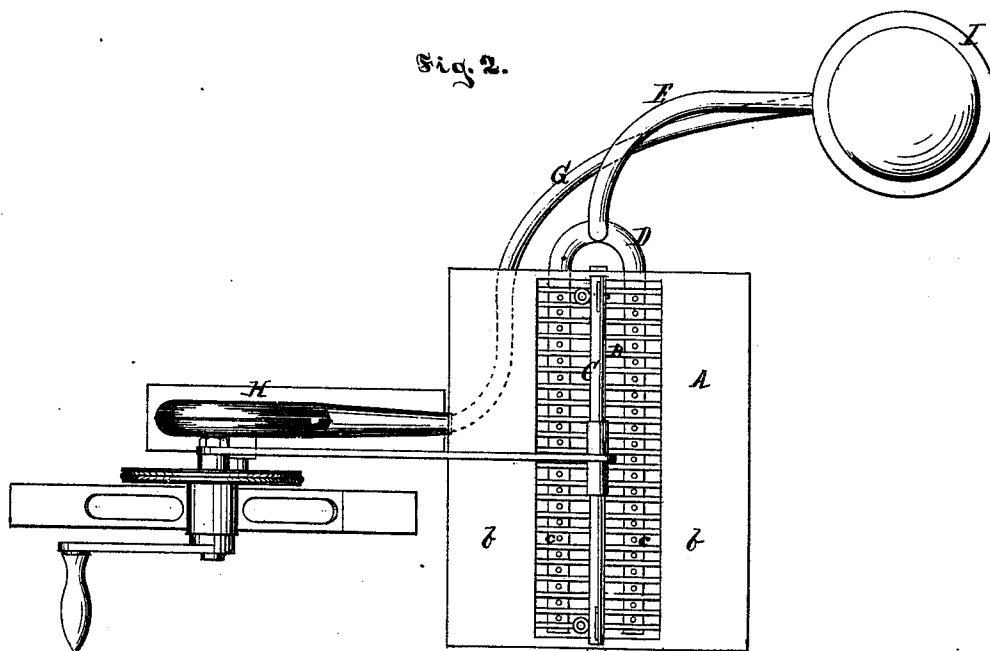


Fig. 2.



Witnesses.

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HAMILTON E. SMITH, OF NEW YORK, N. Y.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **175,186**, dated March 21, 1876; application filed September 15, 1875.

To all whom it may concern:

Be it known that I, HAMILTON E. SMITH, of the city, county, and State of New York, have invented a new and Improved Washing-Machine, which invention is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a longitudinal vertical section. Fig. 2 is a plan or top view.

Similar letters indicate corresponding parts.

This invention consists in the combination of an air-forcing apparatus with the tub of a washing-machine, and with an agitating and squeezing device contained in said tub, so that, while the articles to be washed are being agitated in the liquid contained in the tub and squeezed, they are exposed to the action of currents of atmospheric air, whereby the process of washing is materially facilitated. With the elements above specified is also combined an air-heating apparatus, whereby the detergent effect of the air injected among the articles to be washed is still further improved.

In the drawing, the letter A designates the tub of my washing-machine, which is made of sheet metal, or any other suitable material, and in the interior of which is placed a grate, B, at some distance above its bottom. Beneath said grate is situated a rock-shaft, *a*, which has its bearings in the ends of the tub, and from which rises a squeezer, C, composed of a series of rods between the bars comprising the grate B. The rock-shaft *a* is situated in the middle of the tub, so that the squeezer, when brought in a vertical position, divides said tub in two equal compartments. Each of these compartments is partly covered by a fixed plate, *b*, and the squeezer receives an oscillating motion by any suitable mechanism. Beneath the grate B, and parallel to the rock-shaft *a*, extend the two branches *c c* of a bent pipe, D, which communicates by a pipe, E,

with the top end of a coil, F, the bottom end of which connects by a pipe, G, with a fan-blower, H, or with any other suitable air-forcing apparatus. The coil F is situated in the interior of a drum, I, which can be heated by the direct action of a flame, or by any other suitable means. The branches *c c* of the air-pipe D are perforated, so that when the air-forcing apparatus is started a large number of jets of air are injected into the tub A. Said tub is partly filled with soap-suds, or other suitable liquid; the articles to be washed are distributed on both sides of the squeezer C, and then the squeezer and the air-forcing apparatus are set in motion. By the action of the squeezer the articles to be washed are agitated and then squeezed, while at the same time the jets of air thrown in through the pipe D pass up through the liquid, and in close contact with the articles to be washed, and thereby the process of washing is facilitated. The air injected into the wash-tub may be heated or cold, according to the nature of the articles to be washed.

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

1. The combination of an air-forcing apparatus with the tub of a washing-machine, and with an agitating and squeezing device contained in said tub, all constructed and operating substantially as shown and described.

2. The combination of an air-heating apparatus with an air forcing apparatus, and with an agitating and squeezing device contained in the tub of a washing-machine, all constructed and operating substantially as set forth.

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Witnesses:

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