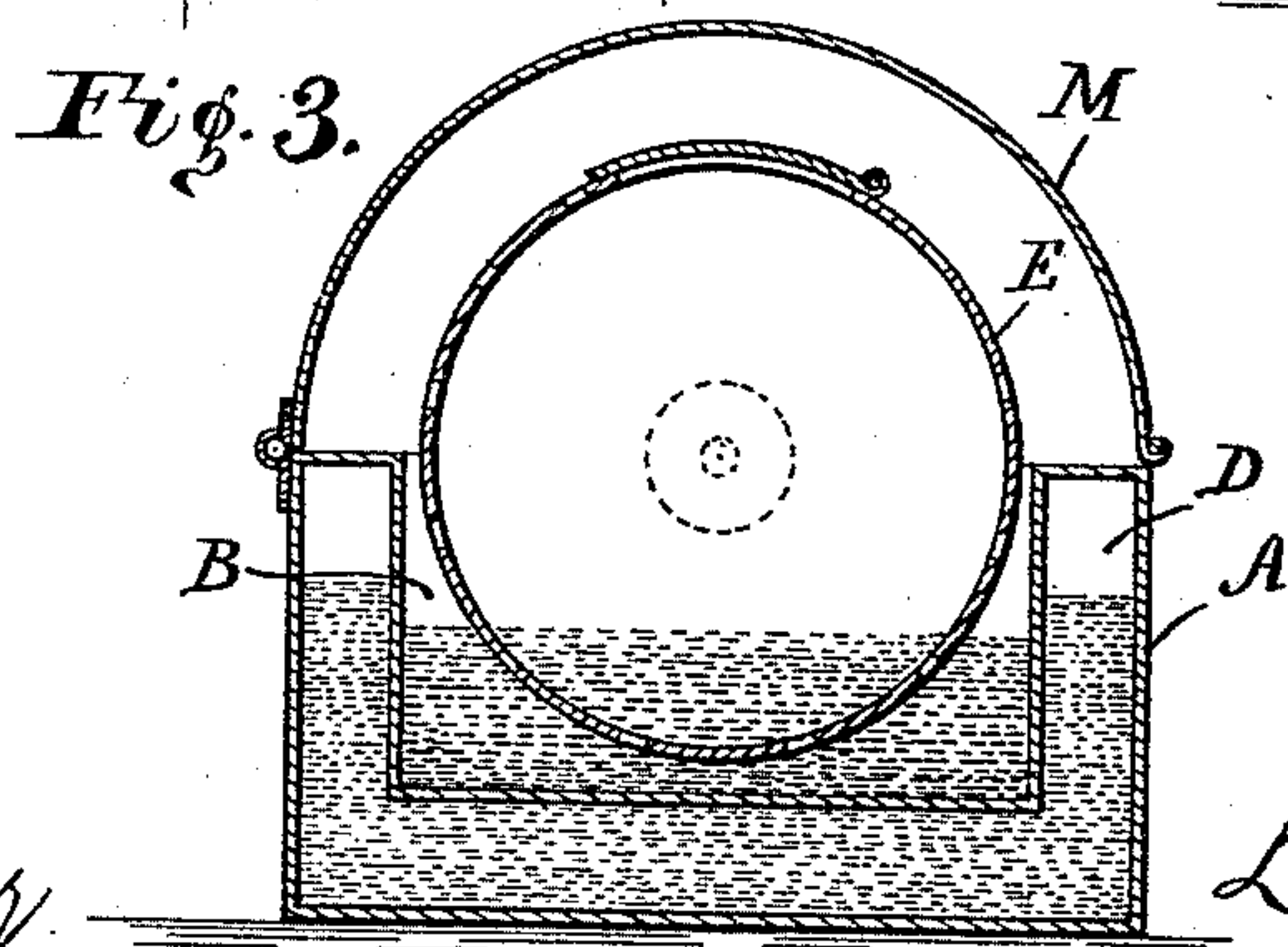
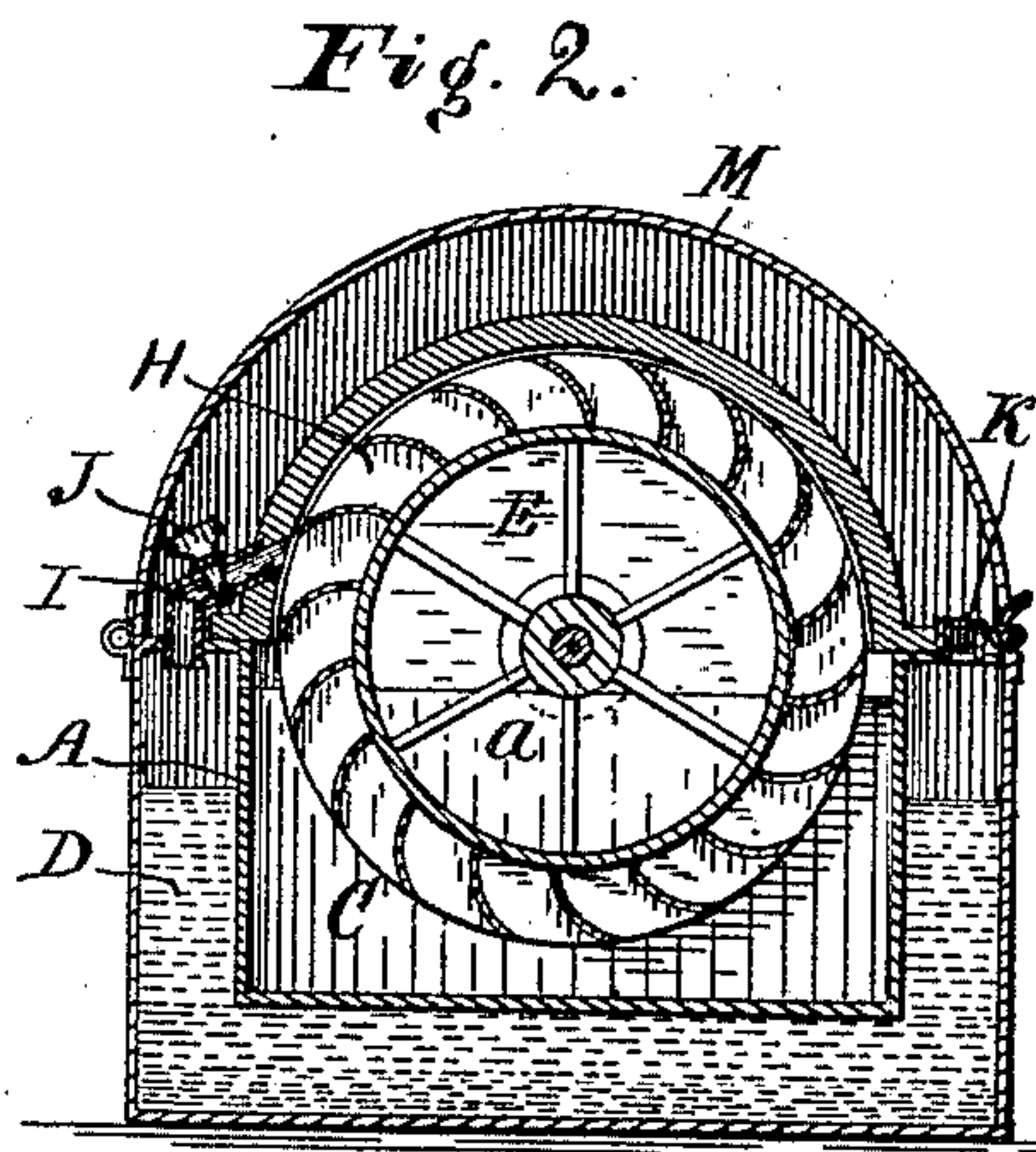
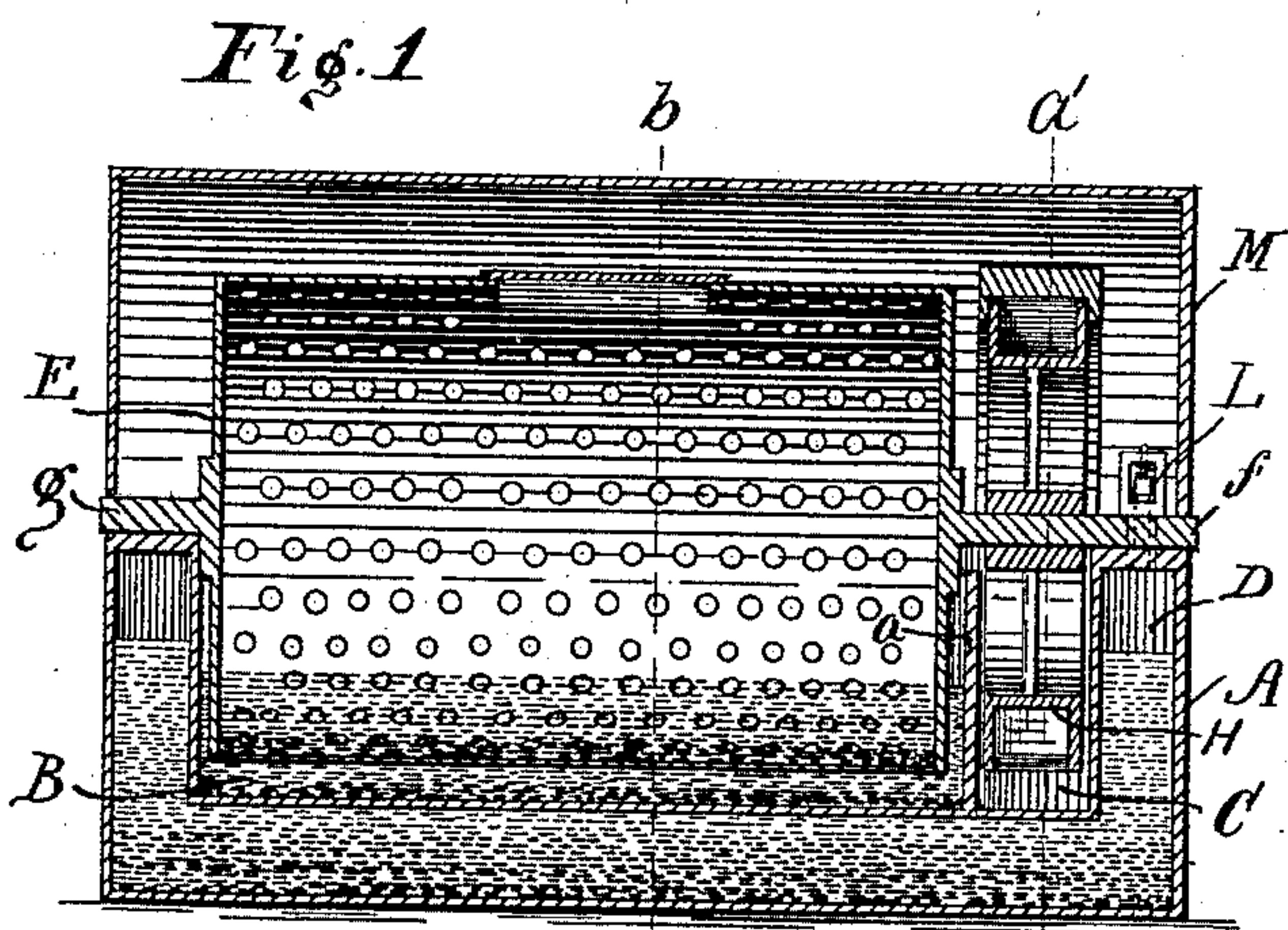
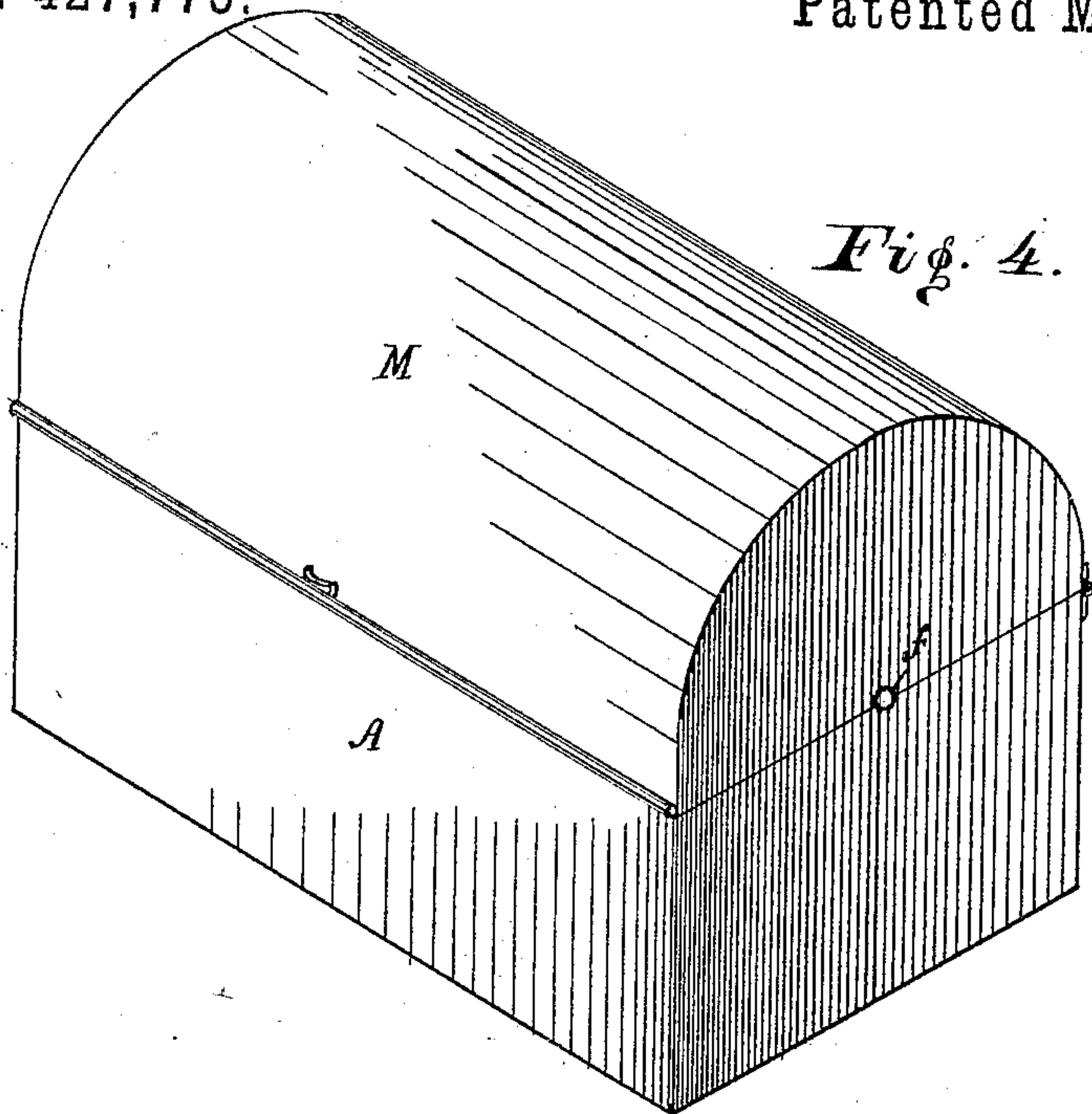


(No Model.)

L. LOGAN.
WASHING MACHINE.

No. 427,775.

Patented May 13, 1890.



WITNESSES:

E. M. Hood.

W. P. Meyer.

INVENTOR:

Leonard Logan

By E. P. Hood
Atty.

UNITED STATES PATENT OFFICE.

LEONARD LOGAN, OF PLYMOUTH, INDIANA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 427,775, dated May 13, 1890.

Application filed September 2, 1889. Serial No. 322,657. (No model.)

To all whom it may concern:

Be it known that I, LEONARD LOGAN, a citizen of the United States, residing at Plymouth, in the county of Marshall and State of Indiana, have invented a new and useful Improvement in Washing-Machines, of which the following is a specification.

My invention relates to that class of washing-machines in which the clothing to be washed is placed in a perforated cylinder partly immersed and arranged to revolve in hot suds.

The object of my improvement is to provide a washing-machine of the class mentioned arranged so as to set on an ordinary kitchen-stove, and containing in a compact form the washing-cylinder and its water-tank, a steam-motor, and a steam-generator, all as hereinafter fully described.

The accompanying drawings illustrate my invention.

Figure 1 represents a central longitudinal section of the machine; Fig. 2, a transverse section at *a'*, Fig. 1; and Fig. 3 a similar section at *b*, Fig. 1. Fig. 4 shows a view in perspective of the complete machine.

A is an oblong rectangular hollow vessel adapted to set on a kitchen-stove and having double walls and a double bottom and a transverse partition *a*, thus forming the open interior compartments B and C and an annular steam-tight compartment D.

E is the washing-cylinder, which is constructed, in the usual manner, with perforated walls, and provided at each end with short shafts *f* and *g*, which rest in suitable bearings in the ends of vessel A, the cylinder nearly filling compartment B.

H is a steam-motor mounted in compartment C and secured to or connected with shaft *f*, so as to rotate the washing-cylinder E. I have illustrated one of the simpler forms

of rotary engines as a motor; but I do not wish to be understood as confining myself to this particular form of motor.

I is a steam-pipe provided with a stop-cock J, and connecting the annular compartment D with the motor.

K is an opening for introducing water into compartment D.

L is a safety-valve.

M is a cover for inclosing the working parts.

The operation of my device is as follows: Compartment B is nearly filled with water having soap in solution, and compartment D is partly filled with clear water through opening K, which is then tightly closed. The articles to be washed are placed in cylinder E, and heat is then applied to the bottom of vessel A. The water in compartment B heats more slowly than in compartment D, so that by the time the water is hot in compartment B a steam-pressure sufficient to run the motor has been generated in compartment D. Steam is now admitted to the motor through pipe I, and the motor being started the washing-cylinder is rotated, the steam being exhausted into compartment C, and passing from thence over partition *a* into compartment B.

I claim as my invention—

In a washing-machine, the following elements, namely: a vessel having double walls with an annular closed space between them, and two interior compartments, a perforated horizontal cylinder arranged to rotate in one of said interior compartments, and a steam-motor arranged in the other compartment and connected with said annular closed space, all combined and arranged to co-operate substantially as and for the purpose specified.

LEONARD LOGAN.

Witnesses:

H. P. HOOD,
V. M. HOOD.