

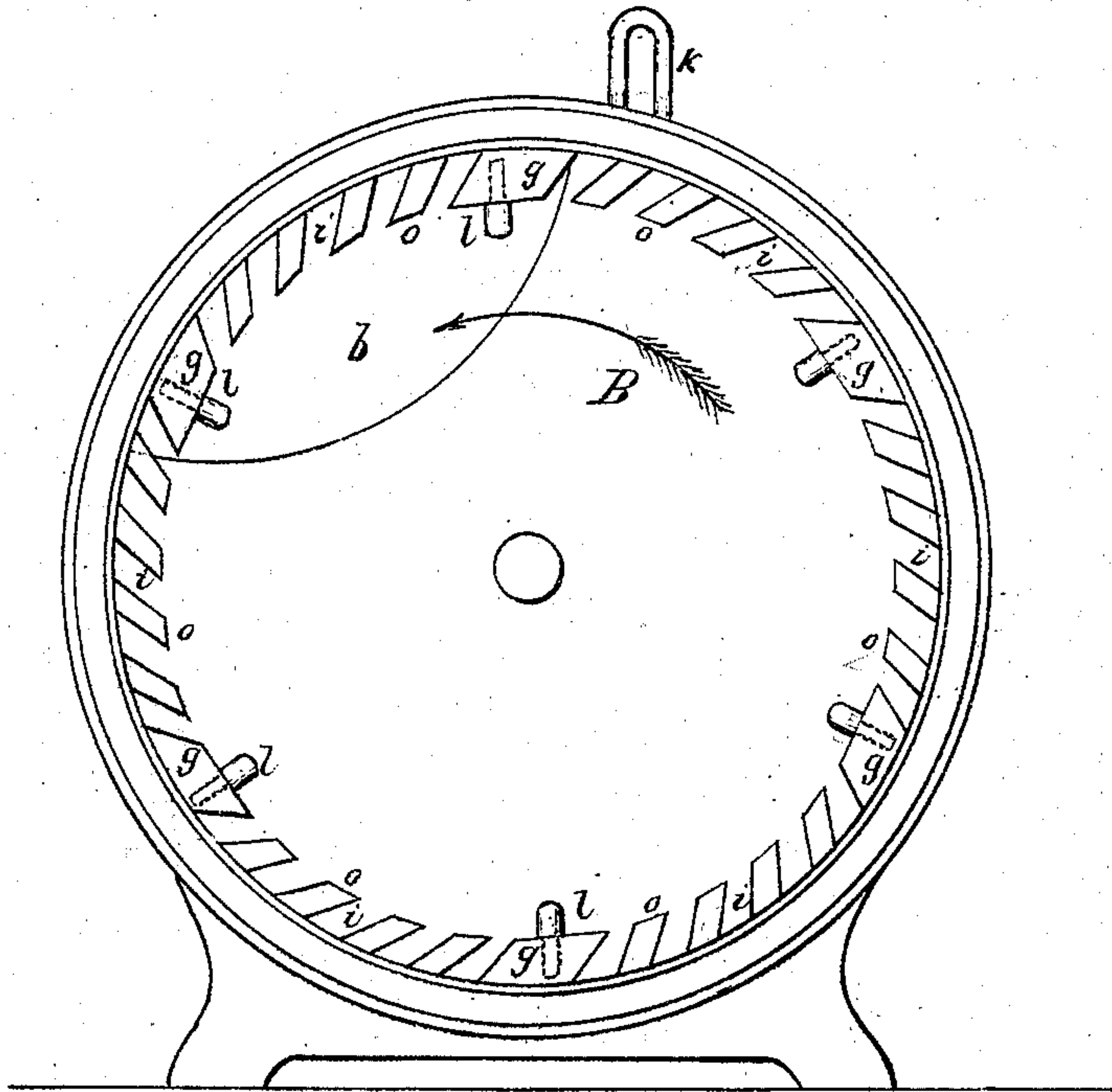
GEO. LEACH.

*Improved Washing Machine.*

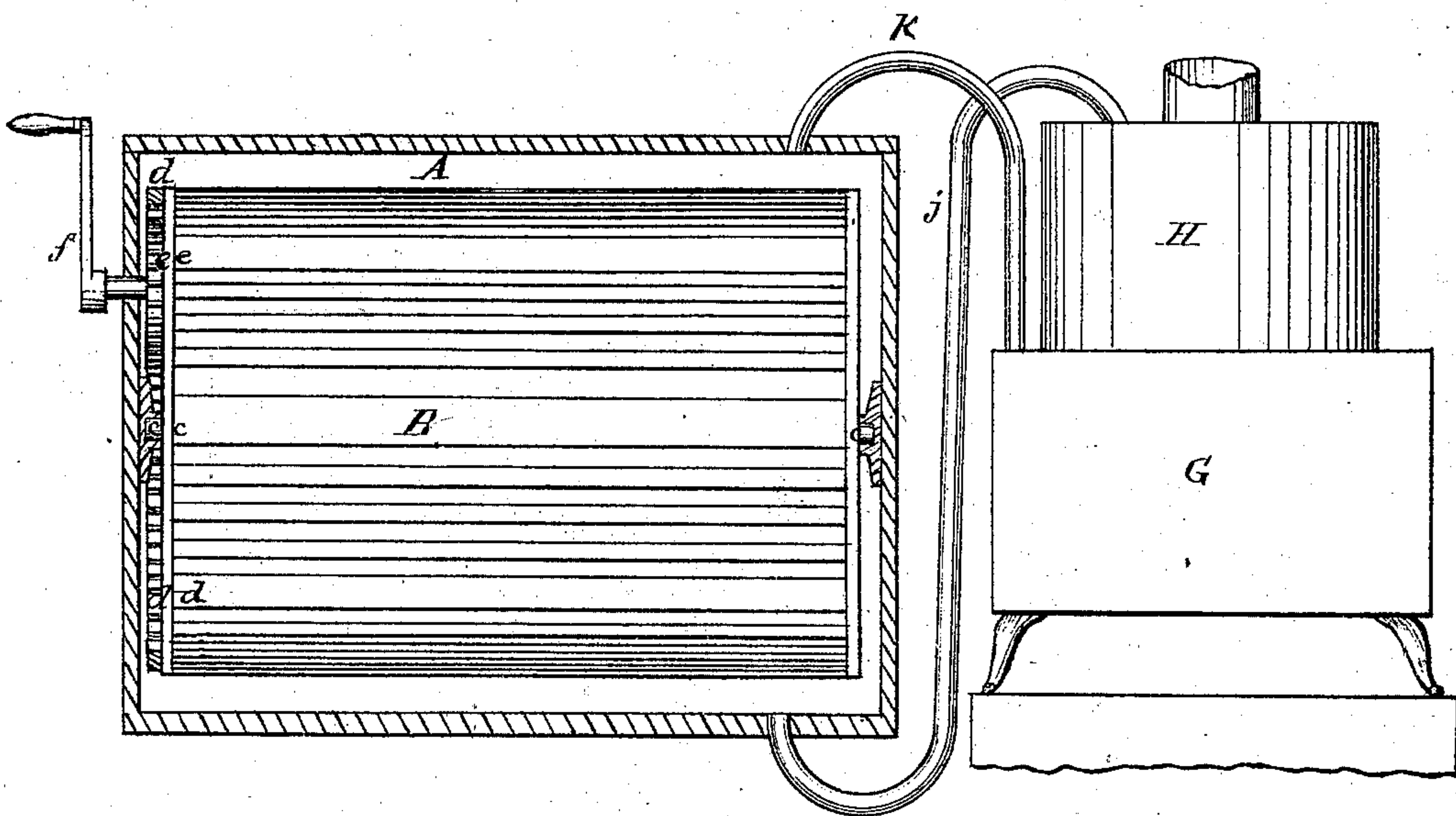
No. 120,286.

*Fig. 1.*

Patented Oct. 24, 1871.



*Fig. 2.*



*Witnesses:*

*James L. Morris,*  
*Parter H. Sweet, Jr.*

*Inventor:*

*George Leach,*  
*Per Burke, Fraser & Osgood, attys.*

# UNITED STATES PATENT OFFICE.

GEORGE LEACH, OF UNION, NEW YORK.

## IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 120,286, dated October 24, 1871.

*To all whom it may concern:*

Be it known that I, GEORGE LEACH, of Union, in the county of Broome and State of New York, have invented an Improved Washing-Machine, of which the following is a specification:

My improvement consists of a rotating cylinder inclosed within a tight case, said cylinder being constructed with solid ends connected by a series of longitudinal bars of diamond or rhomboidal shape, provided in their inner sides with pins or knobs pointing inwardly, and the space between said bars being composed of slats of diamond shape in section, with intervals or spaces of corresponding size, said slats and bars with the alternating spaces forming the sides of the cylinder.

As represented in the drawing, Figure 1 is a transverse sectional elevation and Fig. 2 a longitudinal elevation of my apparatus, in which—

A is the case and B the cylinder, the ends of which are connected by the diamond bars *g g* and slats *o o*, and have journals *c c* running in boxes attached to the ends of the case. One end of the cylinder is provided with an annular gear, *d*, with which the driving-pinion *e* meshes. Motion is given to the latter by the crank *f*, or in any other suitable manner. The disks forming the ends of the cylinder have each a segment, *b*, cut from them, which, being hinged or otherwise secured to admit of opening or closing the cylinder, enables the clothes to be inserted and removed. A furnace or stove, G, and boiler H, furnish steam, which is inducted by the pipe *j* into the case at the bottom for heating and boiling the suds and clothes, and a pipe, *k*, leads the vapor from the cylinder into the stove to prevent it from escaping into the room.

The operation is as follows: The soiled clothes

are placed in the cylinder B, the case or reservoir A partially with suds, either hot or heated by the steam, when motion is given to the cylinder by the crank in the direction shown by the arrow in Fig. 1. This motion, being in the direction of the inclined slots *i i* between the bars and slats, forces the suds to enter the cylinder and remain with the clothes so long as the rotation continues, leaving the case nearly empty, while the clothes are constantly agitated and changing position by means of the internal pins *l l*, which convey them up and allow them to fall by their weight at each revolution, which pounds them and creates great friction. After a few turns in this direction the motion is reversed, when the effect is just the opposite, causing the water to leave the interior and crowd into the case outside of it. The alternation of the motion by successively saturating the clothes with the suds and expelling it mechanically produces the same result as by hand rubbing and squeezing.

For ordinary family use the boiler may be dispensed with and the water and suds heated before being placed in the reservoir.

The machine is simple, cheap, and effective, while it is operated with the greatest ease.

I claim as my invention—

The cylinder B with sides formed of the diamond-shaped slats *o o* and bars *g g* with internal projections *l l*, in combination with the inclosing-reservoir A and gearing *d e*, with or without the connected boiler H, substantially as and for the purposes set forth.

GEORGE LEACH.

Witnesses:

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