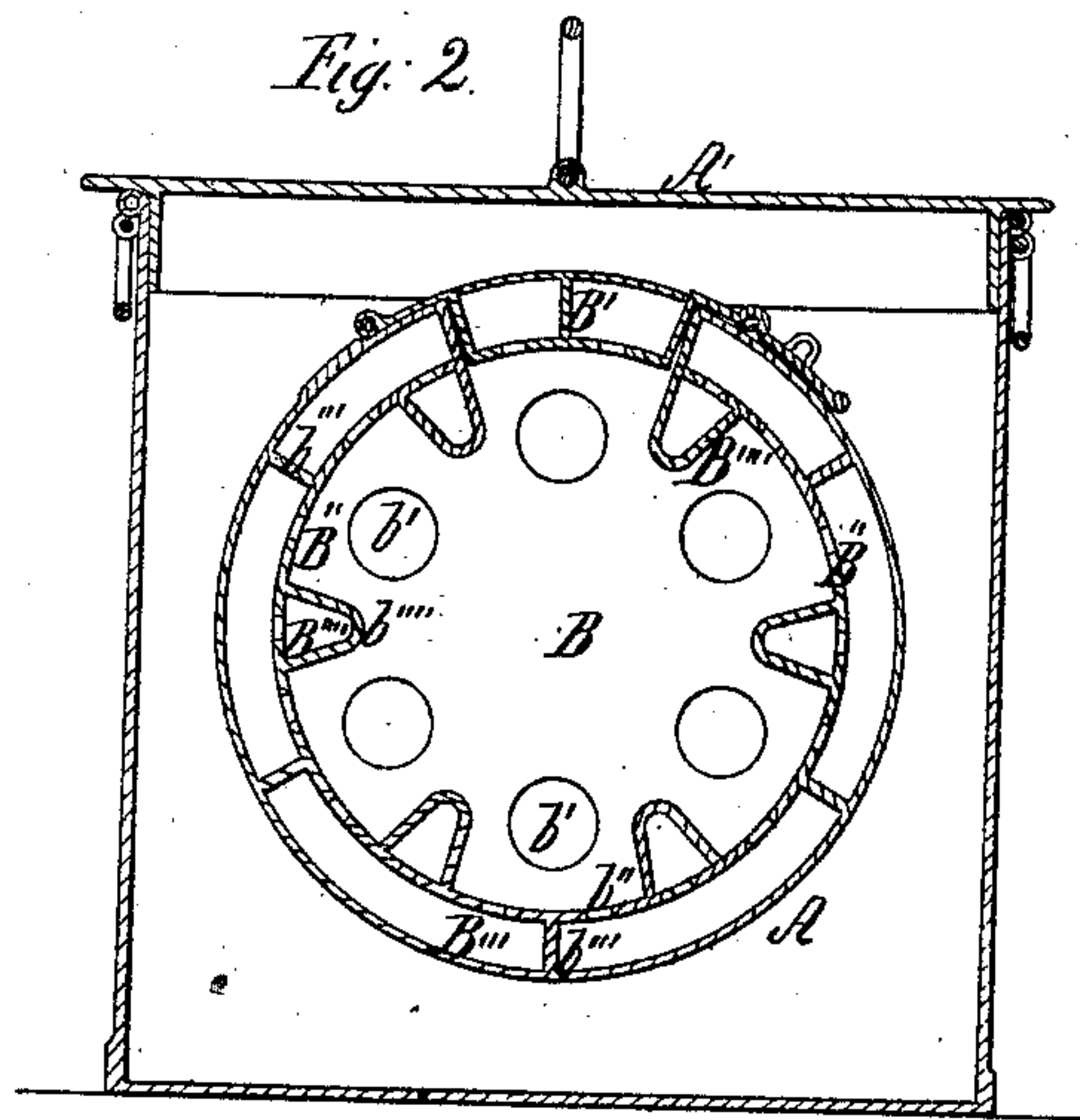
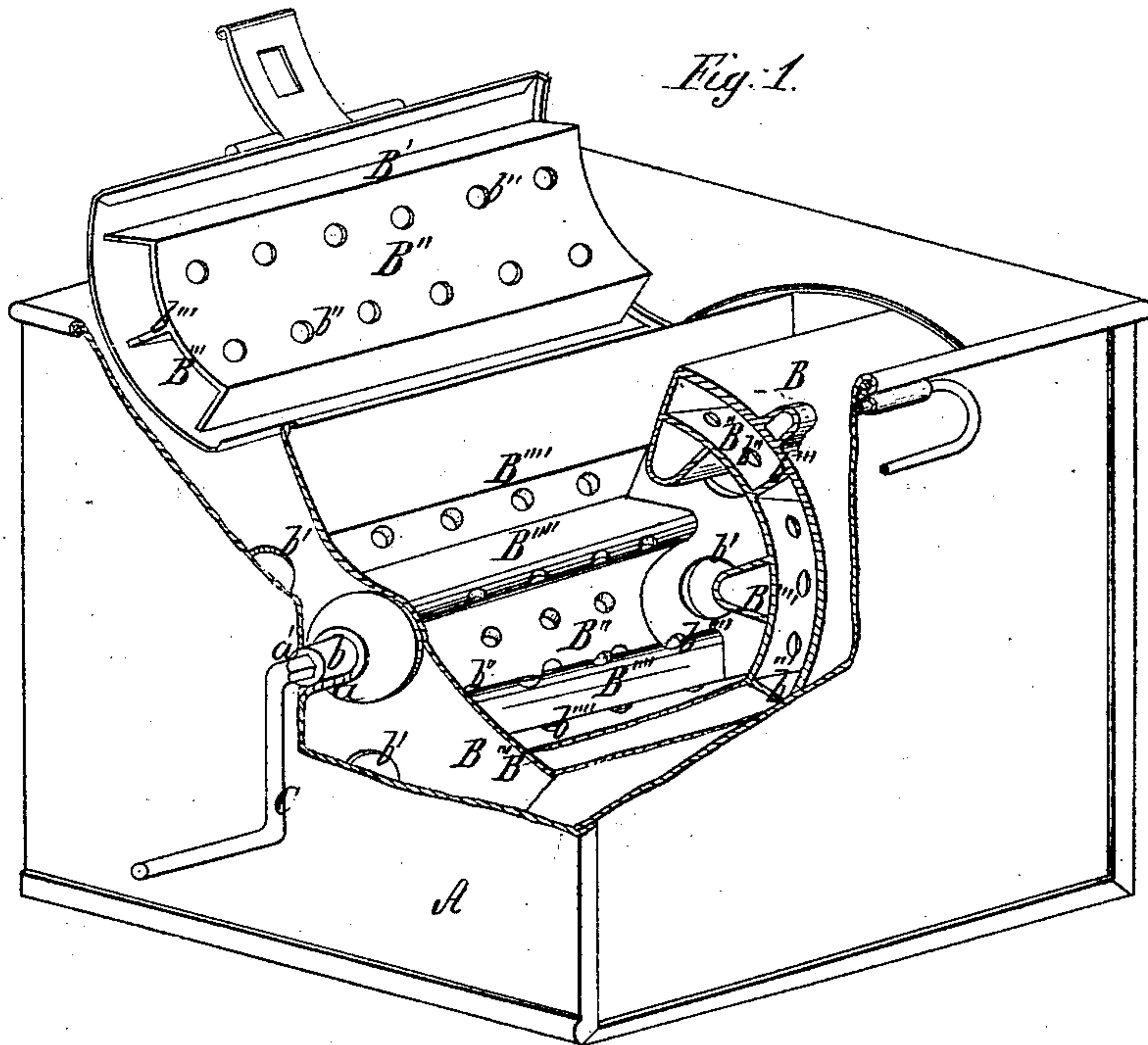


J. S. Ross.

Boiler Washing Mach.

N^o 90,309.

Patented May 18, 1869.



Witnesses;
H. B. Deming
John Pinnell.

Inventor;
J. S. Ross
by Knight & Co.
attorneys

United States Patent Office.

JACOB S. ROSS, OF BLOOMINGTON, ILLINOIS.

Letters Patent No. 90,309, dated May 18, 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, JACOB S. ROSS, of Bloomington, in the county of McLean, and State of Illinois, have invented a new and useful improved Washing-Machine; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form part of this specification.

My improved machine consists of a revolving cylinder, of novel construction, mounted in a suitable tub, preferably constituting a boiler, so as to perform the operation of boiling and washing at the same time, and adapted to receive the clothes within it, and subject them to the combined action of the hot suds and steam, to cleanse them, they being agitated, meanwhile, to expose their different surfaces.

My improvements consist in the peculiar construction of washing-cylinder, whereby the above-named results are accomplished, and the combination of such cylinder as constructed with a boiler, or a tub adapted to be placed over the fire, so as to perform the operations of boiling and washing at the same time.

To enable those skilled in the art to make and use my invention, I will proceed to describe it more particularly, with reference to the drawings, in which—

Figure 1 is a perspective view of a machine embodying my improvements, portions of the tub and cylinder being broken away to expose more fully their construction, and the lid of the former removed, and that of the latter opened, as in introducing the water or suds and clothes.

Figure 2 is a transverse vertical section of the machine, with the cylinder and tub closed, as during the operation of washing.

The tub A, as constituting also a boiler, is constructed of metal, as represented, of any suitable form, and provided with a removable or hinged lid or cover, A', fig. 2.

Its ends are provided internally and at suitable points with suitable bearings *a*, fig. 1, for the reception of the trunnions or pivots *b* of the cylinder B, one of said ends being further perforated, as represented at *a'*, fig. 1, for the reception of the crank C, by which the cylinder is rotated.

The crank C engages with a suitable angular socket in one of the trunnions of the cylinder, as represented, or in other suitable manner, and is preferably adapted to be withdrawn, to allow of the removal of the cylinder when desired, the bearings in which said cylinder is mounted being further made open for that purpose.

The cylinder B may be made of suitable sheet-metal, and is provided with a door, B', hinged at one side and provided with a suitable catch at the other, to retain it in its closed position, as shown, through which door the clothes to be washed are introduced. Its ends are perforated with a sufficient number of

holes *b'*, preferably of large area, as shown, to allow the water and steam from the tub to fill it.

It is further provided with an inner perforated shell, B'', extending entirely around it, including the door, and forming an annular space, B''', which is divided at suitable intervals, by longitudinal partitions *b''*, into a number of compartments or cells, each of which communicates with the interior of the cylinder by means of one or more rows of the perforations *b''* of the inner shell B''.

Attached to said inner shell, as represented in fig. 2, or formed thereby, are inwardly-projecting ribs or projections B''', preferably similarly perforated, as represented at *b'''*, to afford communication between the annular space of the cylinder and its interior, and so arranged, when attached to the inner shell B'', as to enclose one or more rows of its perforations, as shown, for that purpose.

In operation, the tub A, being supplied with a suitable quantity of water or suds, and the clothes to be washed introduced into the cylinder, which is also supplied with the water in the tub through the perforations *b'*, the tub is then, or previously, placed over the fire or on the stove, where it is allowed to stand until the water has begun to boil.

The steam arising from the water passes through the perforations *b'' b'''* in the inner shell B'' B''' into the compartments of the annular space B''' above the surface of the water, and fills them, being retained in them by the imperforate outer shell of the cylinder and the partitions *b''*.

Motion then being imparted to the cylinder by means of the crank C, or other suitable means, the compartments of the annular space containing steam are brought below the surface of the water, when the water, flowing into them, forces the steam out, thus causing it to rise through the clothes.

This operation is continually repeated during the rotation of the cylinder, and the clothes are turned and agitated by means of the ribs B''', thus constantly bringing new surfaces to its action.

By this means I am enabled to secure the use of the boiling suds, and also to subject the clothes to the superior cleansing-action of steam, by a simple and convenient apparatus. All rubbing and straining of the clothes are also thus obviated.

A wooden tub may, if desired, be substituted for the boiler, and the boiling suds poured into it. The cylinder may also be permanently mounted in the tub. Its door may be located in one end, and the agitating ribs or projections on its inner surface may be imperforate, if preferred.

Other similar modifications may also obviously be made without departing from my invention.

Having thus described my invention, the following is what I claim as new therein, and desire to secure by Letters Patent:

1. I claim the revolving cylinder B, constructed with the inner perforated shell B", partitioned annular space B'", and ribs or projections B'''', adapted to operate substantially as described for the purpose specified.

2. I claim the combination of the cylinder B, constructed as described and shown, with the boiler A, substantially as and for the purpose set forth.

To the above specification of my improved washing-machine, I have signed my hand, this 30th day of March, 1869.

JACOB S. ROSS.

Witnesses:

G. C. ROSS,
MARK ROSS.