

No. 672,259.

Patented Apr. 16, 1901.

W. N. CARTER.  
WASHING MACHINE.

(Application filed Dec. 10, 1900.)

(No Model.)

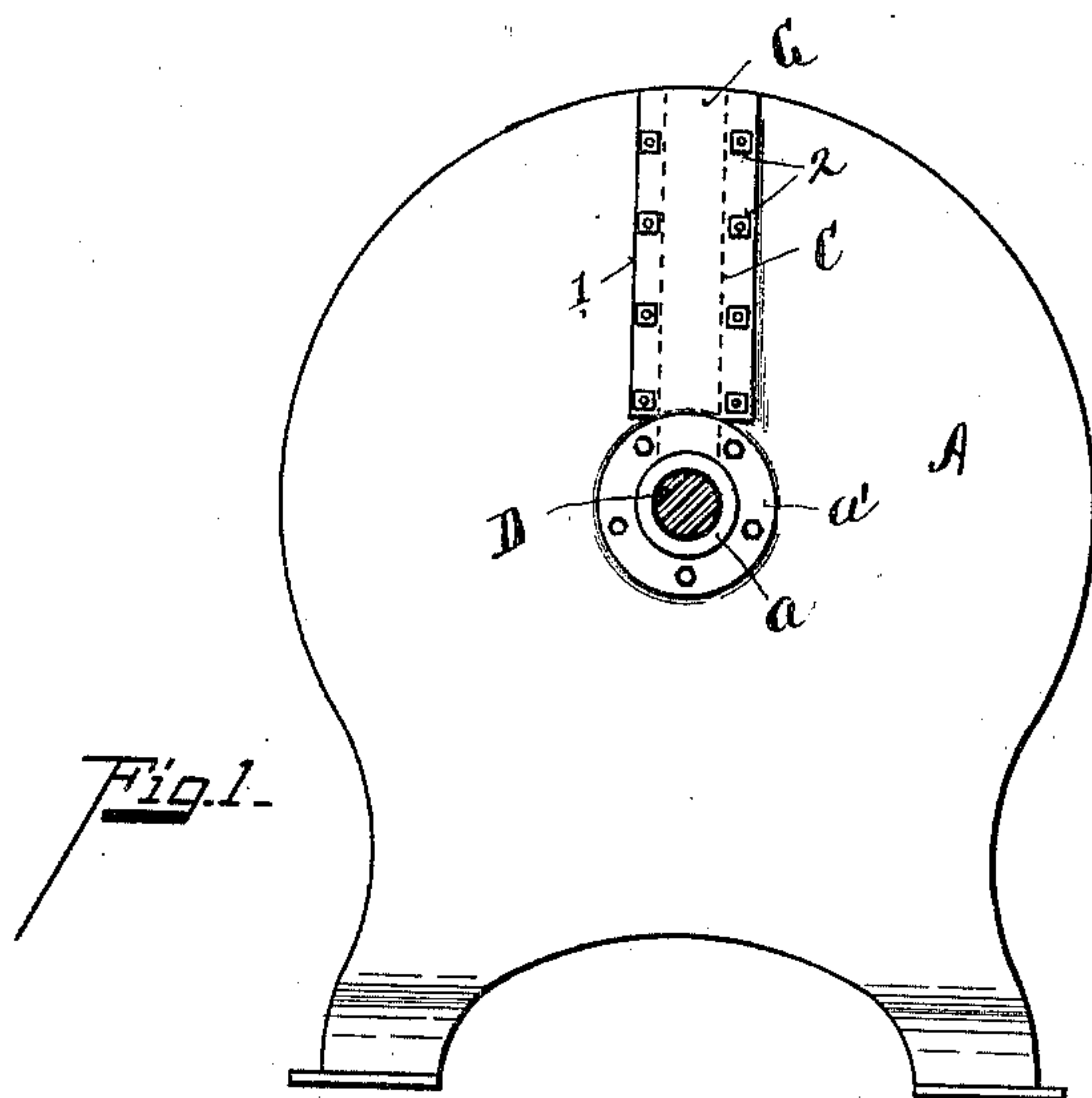


Fig. 1.

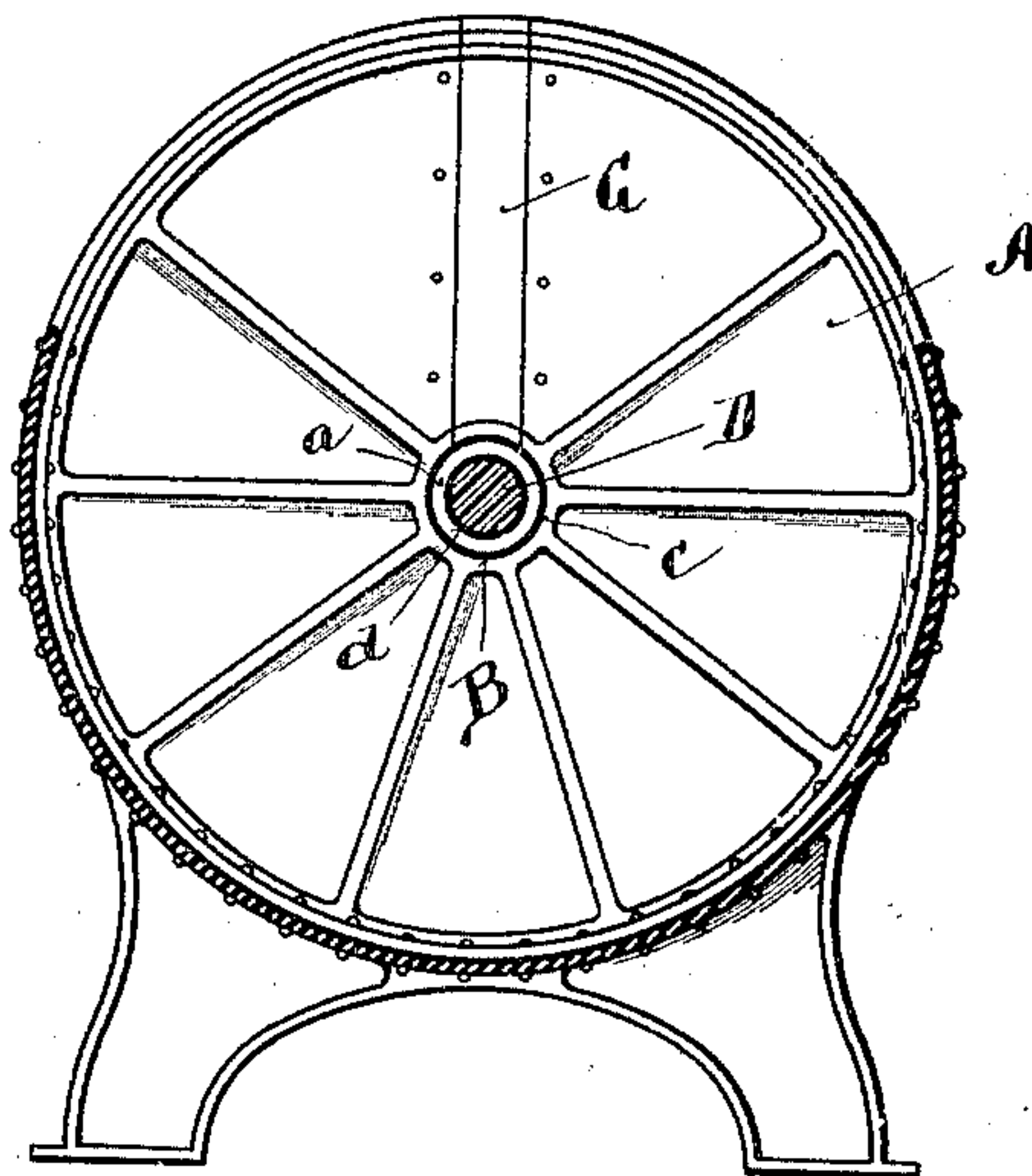


Fig. 2.

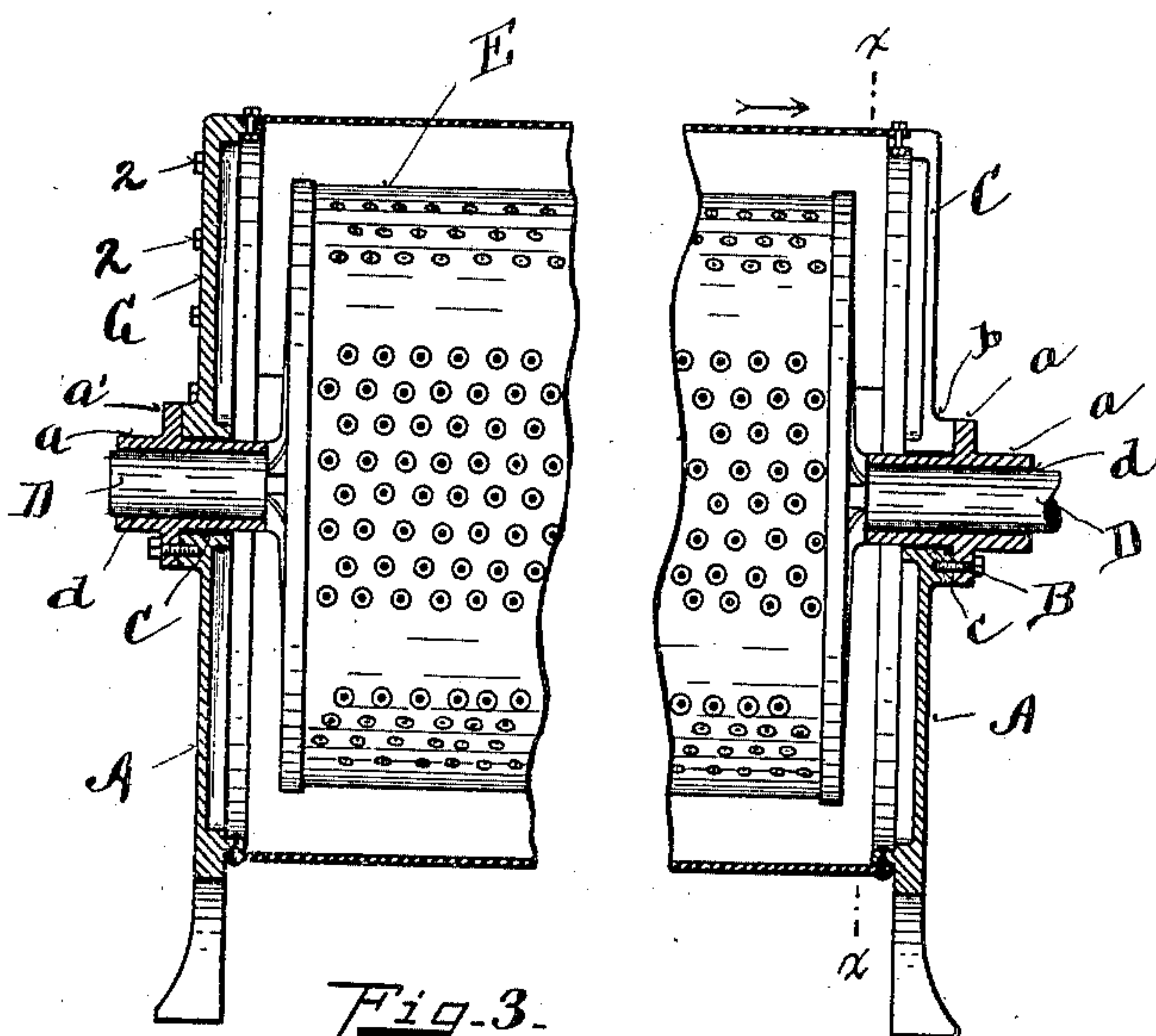


Fig. 3.

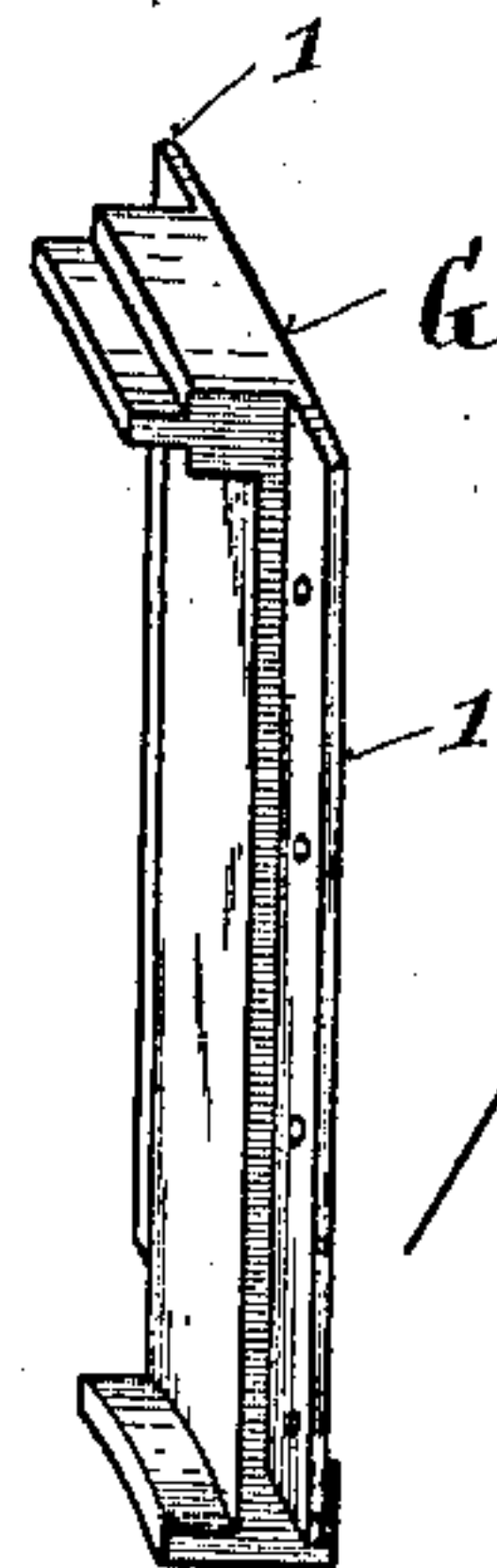


Fig. 4.

Witnesses  
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# UNITED STATES PATENT OFFICE.

WARREN N. CARTER, OF CINCINNATI, OHIO, ASSIGNOR TO AMERICAN  
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## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 672,259, dated April 16, 1901.

Application filed December 10, 1900. Serial No. 39,297. (No model.)

*To all whom it may concern:*

Be it known that I, WARREN N. CARTER, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification.

My invention relates to an improvement in the construction of washing-machines of that type in which an inner perforated cylinder is revolved in an outer tub-cylinder.

The invention relates to improved constructional features which cheapen the cost of production and add to the convenience of attaching and detaching and result in a more efficient machine.

The features of my invention are more fully set forth in the description of the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an end elevation of the washing-machine, disclosing the head of the outer cylinder. Fig. 2 is a section on line  $x x$ , Fig. 3. Fig. 3 is a longitudinal vertical section. Fig. 4 is a detached perspective view of the gate.

My invention consists of the following particulars:

A represents the head of the outer cylinder. It is a solid head having a central journal-orifice B. This head has a radial slot C of a sufficient width to admit of the passage of the projected ends of the shaft D of the inner perforated cylinder E. The outer cylinder has a detachable or pivoted door above its center line in horizontal plane, forming an opening of sufficient dimensions to allow the inner cylinder to be removed.

$a$  represents a journal-sleeve which fits into the journal-orifice B of the outer-cylinder head. This journal-sleeve has a flange  $a'$  fitting the hub  $b$  of the outer-cylinder head.

$c$  represents a space between the outer-cylinder hub and the journal-sleeve  $a$  for the reception of Babbitt metal, by means of which the sleeve may be properly centered into the opening in the outer-cylinder head.

$d$  represents a space between the journal-sleeve and the shaft D for journaling the shaft D of the perforated inner cylinder.

G represents a detachable gate fitting into the radial slot C. It is a true section of the outer-cylinder head, but has the overlying flanges 1, through which tap the bolts 2 for securing this detachable gate to the cylinder-head.

It is frequently desired to remove the inner cylinder either for renewal or for repairs, and in order to do this the outer-cylinder door is opened, Fig. 2 showing the opening area, and the journal-sleeve is pulled out at each end, when the inner cylinder may be raised out of the outer cylinder, the ends of the shaft D passing through the radial slots C. The reinsertion is simply the reverse of this operation. By having a solid head there are no joints save at the radial slots. The outer cylinder may be made of wood or metal, as desired; also, the journal-sleeve makes a very convenient method of centering the inner cylinder and also forms a tight joint, and as these journal-sleeves are all interchangeable new ones can be readily inserted when the old are worn.

It will be observed that the journal-orifice is greater in diameter than the width of the slot, so that when the sleeve made to fit the orifice is inserted the inner cylinder is locked against removal.

Having described my invention, I claim—

In a washing-machine, an outer cylinder, an inner cylinder provided with stub-shafts projected beyond the heads of the outer cylinder, the outer-cylinder heads being provided with journal-orifices for said shafts, each head of the outer cylinder having a radial slot leading from the journal-orifices outwardly adapted to pass the said stub-shafts, the said slots being of less width than the diameter of the journal-orifices, a sleeve adapted to be inserted longitudinally into each journal-orifice over the ends of the stub-shafts, and a gate for each of said radial slots, substantially as specified.

In testimony whereof I have hereunto set my hand.

WARREN N. CARTER.

Witnesses:

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