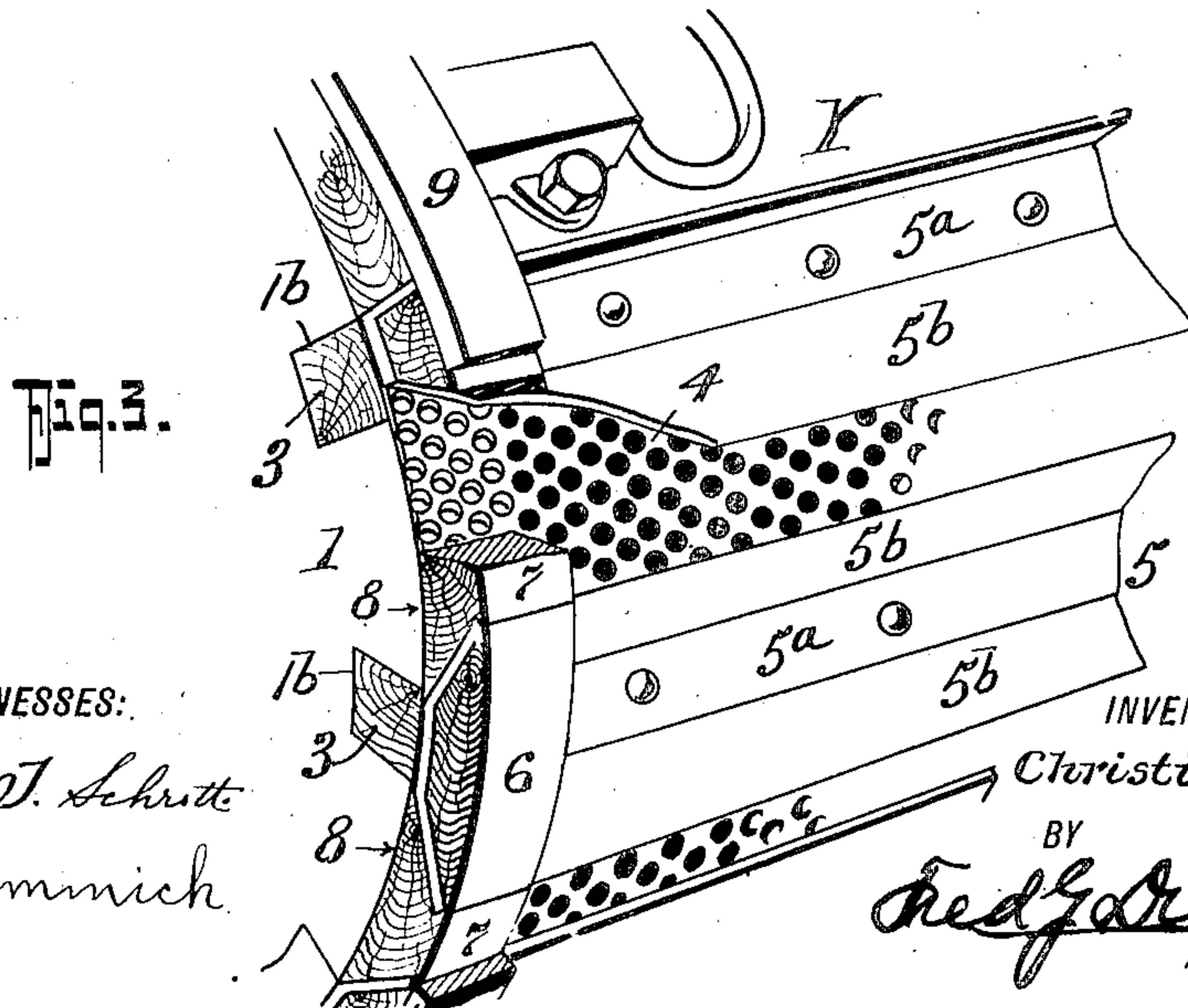
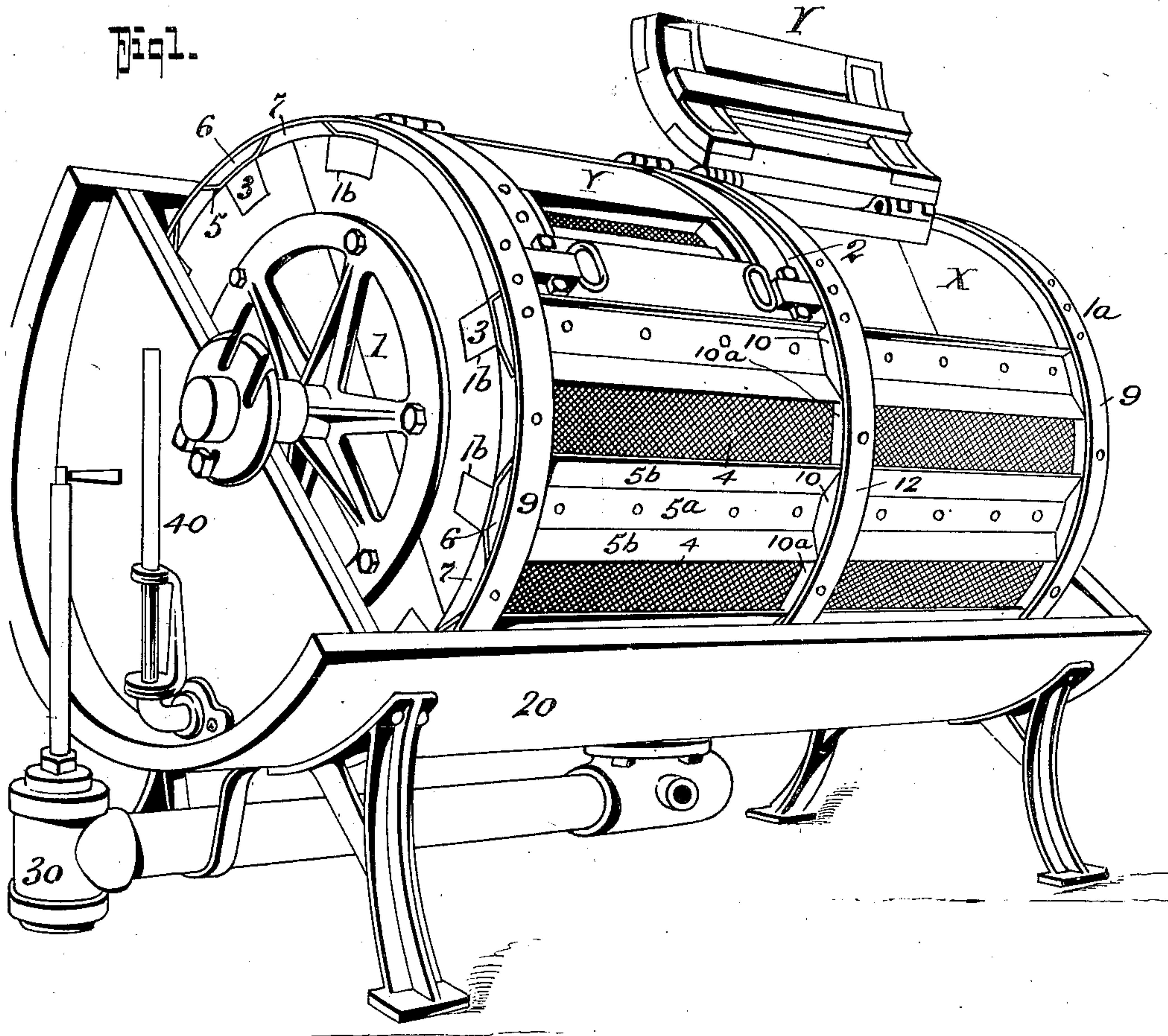


C. JENSEN.
 WASHING MACHINE CYLINDER.
 APPLICATION FILED JULY 30, 1908.

934,971.

Patented Sept. 21, 1909.

2 SHEETS—SHEET 1.



WITNESSES:

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 Mae E. Immich

INVENTOR

Christian Jensen

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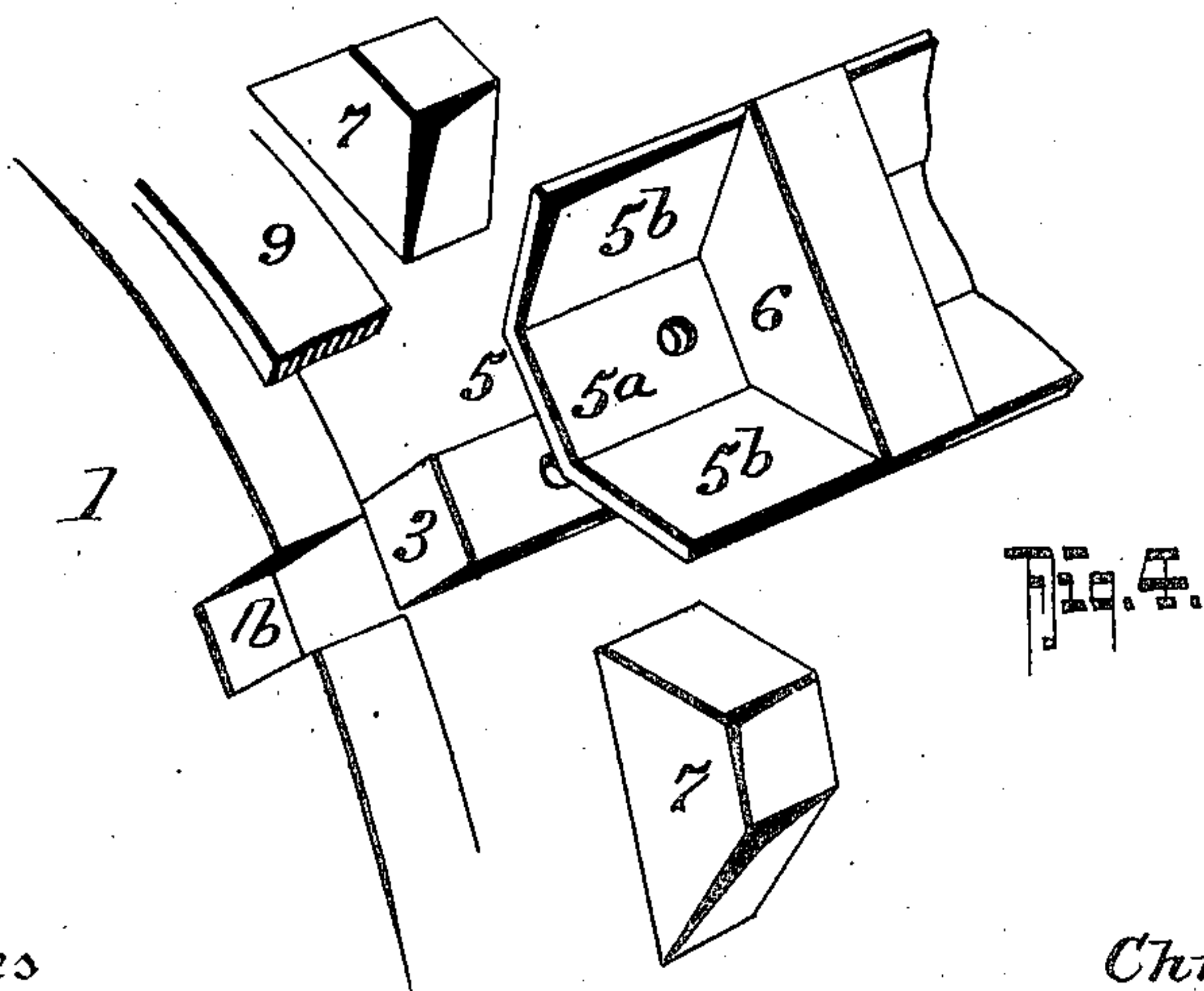
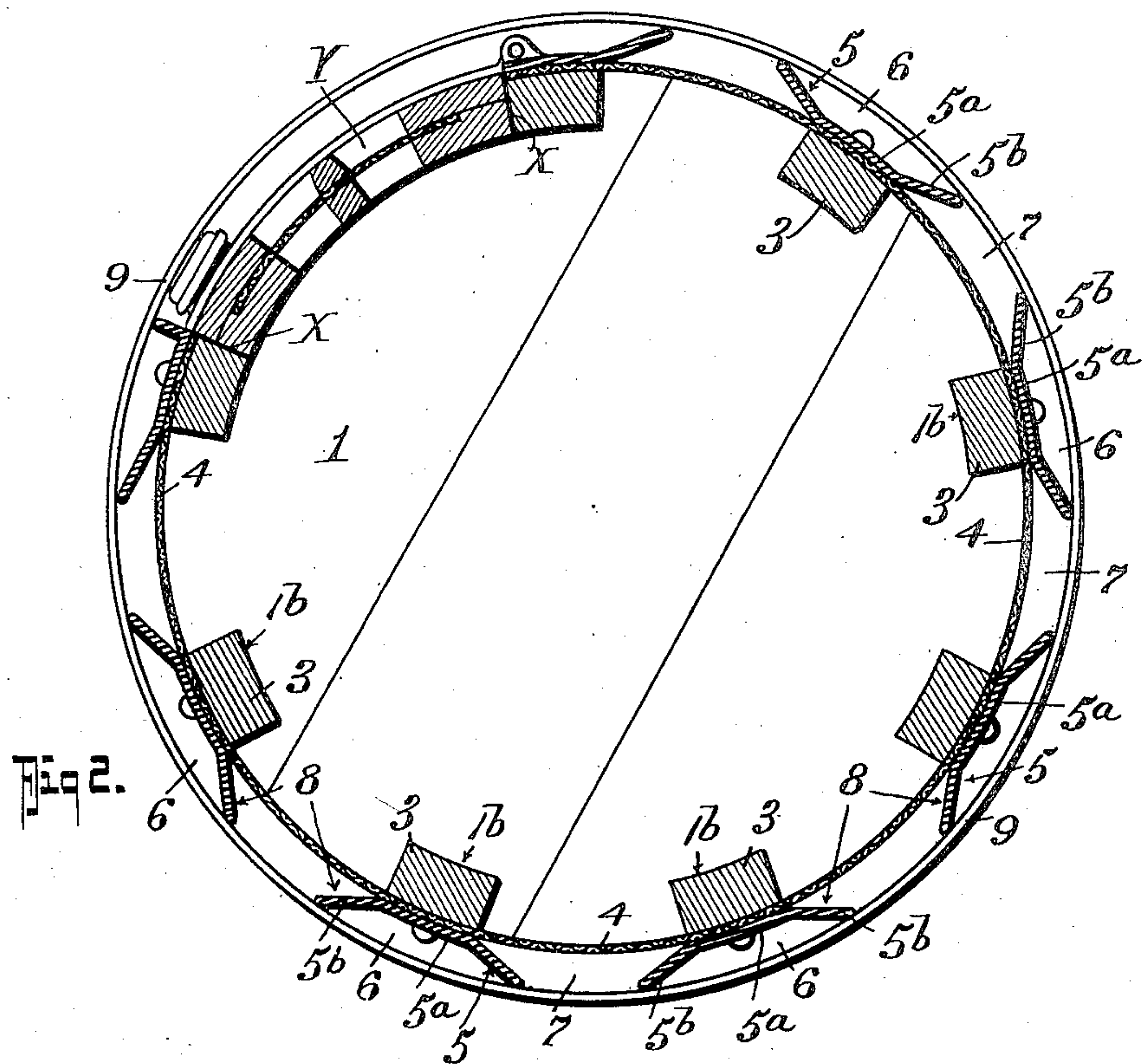
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Witnesses

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UNITED STATES PATENT OFFICE.

CHRISTIAN JENSEN, OF PALMYRA, NEW JERSEY.

WASHING-MACHINE CYLINDER.

934,971.

Specification of Letters Patent. Patented Sept. 21, 1909.

Application filed July 30, 1908. Serial No. 446,104.

To all whom it may concern:

Be it known that I, CHRISTIAN JENSEN, residing at Palmyra, in the county of Burlington and State of New Jersey, have invented certain new and useful Improvements in Washing-Machine Cylinders, of which the following is a specification.

My present invention has for its object to provide certain new and useful improvements in the type of washing cylinder disclosed in my co-pending application No. 390,756 filed August 30, 1907 and No. 419,549 filed March 6, 1908, and patented Sept. 29, 1908, Patent No. 899,988 and it comprehends generally, a cylinder having a pair of heads joined by a series of peripherally arranged ribs or bars, spaced apart to permit of the passage of water therebetween, upon each of which is mounted a member having a substantially dove-tailed scoop form in cross section, and whose opposite edges are inclined and disposed relatively to each other that they form agitator blades and also lift members for constantly keeping the water under agitation during the operation of passing the water up around in and through the cylinder.

In its more detailed arrangement, my present invention consists in certain details of construction and novel arrangement of parts, all of which will be hereinafter fully described, specifically pointed out in the appended claims, and illustrated in the accompanying drawings, in which:—

Figure 1, is a perspective view of my complete washing cylinder that embodies my present improvements. Fig. 2, is a transverse section of the same, and Fig. 3, is a detail view of one of the combined metal scoop and agitator members, and illustrates the manner in which the filler or spacing blocks are combined therewith. Fig. 4, illustrates in detail the several parts constituting one complete scoop portion of the cylinder.

In the preferred form, the cylinder is composed of two independent chambers formed by the end heads 1 and 1^a and an intermediate head or partition 2 which is connected with the end heads by the series of equidistantly spaced longitudinal and peripherally arranged bars 3—3 that extend the full length of the cylinder, pass through peripherally disposed sockets in the intermediate

head 2 and seat at the ends in like sockets 1^b—1^b in the end heads, as shown. 55

The outer surfaces of the bars 3 are curved on the arc of a circle and they form the bearing on which the screen covering 4 for the washing compartment is mounted as clearly shown in Fig. 2 by reference to which 60 it will be also seen that on each of the bars 3 is fixedly held a combined scoop and agitator, which, in my present invention, consists of a stout sheet metal member the full length of the machine so as to extend over 65 both compartments when the machine is arranged as shown.

The member 5 consists of a bottom portion 5^a of a width substantially that of the bars 3 to which it is securely fastened in any suitable manner, and two side wings 5^b—5^b that extend outwardly at obtuse angles from the bottom portion 5^a. In the extreme ends of the combined scoop and agitator members 5 are closure or filling blocks 6—6, substantially dove-tailed in cross section and in annular alinement with the said blocks 6—6 75 other and likewise formed blocks 7—7 arranged reversely to blocks 6 are mounted on the periphery of the end heads 1—1^a, the 80 blocks 7 forming end closures for the pockets 8, formed between each adjacent pair of members 5, the said blocks 6 and 7 being firmly secured by fastening them to the bars 3 and by the hoop bands 9—9. Similar 85 blocks 10 and 10^a are provided at the middle or division head 2 that are held down by the hoop band 12.

By constructing the several parts, as shown and so far described, each compartment of the cylinder is formed with two distinct sets of annular and longitudinally extended pockets outside of the screen or perforated covering, the end walls of one set being beveled or inclined inwardly and the 95 end walls of the other or alternate pockets inclined outwardly. This arrangement of the pockets I have found very advantageous since when the cylinder is revolved within the casing 20 first in one direction and then 100 in the other, the water is not only thoroughly agitated but is partly lifted and is thrown out by centrifugal force against the wall of the casing by the closed bottom scoop and at the same time is dashed inwardly through 105 the other or screened or perforated bottom

pockets. Since the side walls of the screened bottom pockets incline inwardly it follows that when the cylinder is rotated in either direction, the water as it is ejected through the screen, is instantly caught up by the overhanging side walls or ribs and dashed back onto the screen, a thorough lifting and further agitation of the water being constantly effected by the open or solid bottom scoops or pockets.

In my construction of washing cylinder, each compartment has a feed opening X and a closure member Y therefor, which may be arranged as shown, or in any other suitable manner, and the cylinder is mounted in the casing or water tank 20 (the upper section of which is omitted in the drawing) and may be geared up with driving power for imparting reverse rotary motion thereto in the manner well-known in the practical application of washing cylinders.

One of the important advantages in my present form of cylinder is that I obtain the desired agitation and lifting of the water and yet expose a larger surface of the screen covering than is possible in the types of cylinders disclosed in my co-pending application and patent hereinbefore referred to.

It will be understood that my present invention is applicable to a single compartment cylinder or a cylinder having two or more compartments extended in longitudinal alinement.

30 designates a controlling valve for the water to the casing and tank and 40 a gage glass for the tank. These form no part of my present invention, they being present, however, in the complete form of my latest improved washing cylinder.

Having thus described my invention what I claim and desire to secure by Letters Patent, is:—

1. A screened washing cylinder having two distinct sets of water scoops annularly arranged on the screen, the scoops of one set being arranged to lift and force the water outwardly and the other set to lift and force the water inwardly.

2. A reversely rotatable screened washing cylinder having two distinct sets of scoops annularly and alternately disposed on the screen, one set of scoops being arranged to lift and force the water outwardly and the other set arranged to simultaneously lift and force the water inwardly.

3. A rotary cylinder for washing machines, having a screened covered compartment, alternating sets of water scoops that extend lengthwise of the compartment and are annularly mounted on the screen, one set of scoops having a closed bottom, the other and alternating set of scoops having the screens as their bottoms.

4. A rotary washing cylinder that comprises solid end heads and an intermediate

head, a series of longitudinal bars mounted in the peripheral edge of the several heads that extend the full length of the cylinder, a screen covering mounted over the said bars, metallic scoops that extend the full length of the cylinder said scoops comprising a solid bottom and side flanges that extend outwardly at an obtuse angle from the bottom and means for securing the said scoops on the said bars.

5. In a washing cylinder, the combination with the end heads and the longitudinal bars that extend from the periphery of one head to the periphery of the other head, a screening covering that takes over the said bars; of a scoop member secured on each of the longitudinal bars, said scoop member including a solid bottom and side flange that project outwardly at an obtuse angle from the bar, closure members mounted on each end of the scoops, other closure members for the spaces between the scoop and means for holding the scoop members to their position.

6. In a washing cylinder, the combination with the end and middle head; of the longitudinal bars that join the said heads, a screen covering for the bars, of a series of metallic scoops that fit on the longitudinal bars, a series of dovetailed filling pieces located on the ends of the scoop, having a flat bottom and outwardly inclined side flanges, other dove-tailed filling pieces mounted on the outer edges of the several end and middle heads and hoop irons passed over said filling pieces, all being arranged substantially as shown and described.

7. A screened washing cylinder having two distinct sets of water scoops annularly arranged on the screens, the said scoops being fixedly held on the cylinder and with respect to each other, the scoops of one set being formed to lift and force the water outwardly and the scoops of the other set formed to lift and force the water inwardly.

8. A reversely rotatable screened washing cylinder having a series of radially projected scoops fixedly mounted on the screened peripheries of the cylinder and extending lengthwise thereof, and having such shape so that one part acts to lift and force the water outwardly away from the screen and the other acts to lift and force the water inwardly through the screen.

9. A rotary cylinder for washing machines having a screen covered compartment, alternate sets of water scoops that extend lengthwise on the compartment and are annularly and fixedly mounted on the screen, one set of scoops having a closed bottom, the other and alternate set of scoops having the screen as their bottom.

10. A reversibly rotatable screened washing cylinder having a series of longitudinal bars over which the screen covering is mounted, a metal scoop fixedly secured to

each of the said bars, each of the scoops consisting of a flat bottom mounted on the cylinder bars and outwardly bent ends projected at an obtuse angle from the bottom
5 whereby to form spaces between the two edges of each scoop for lifting and deflecting the water outwardly under either direction of rotation of the cylinder and whereby to form spaces between the adjacent edges of

a pair of scoops for lifting and deflecting 10 the water inwardly through the screen, the latter forming the bottom of the last mentioned spaces.

CHRISTIAN JENSEN.

Witnesses:

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