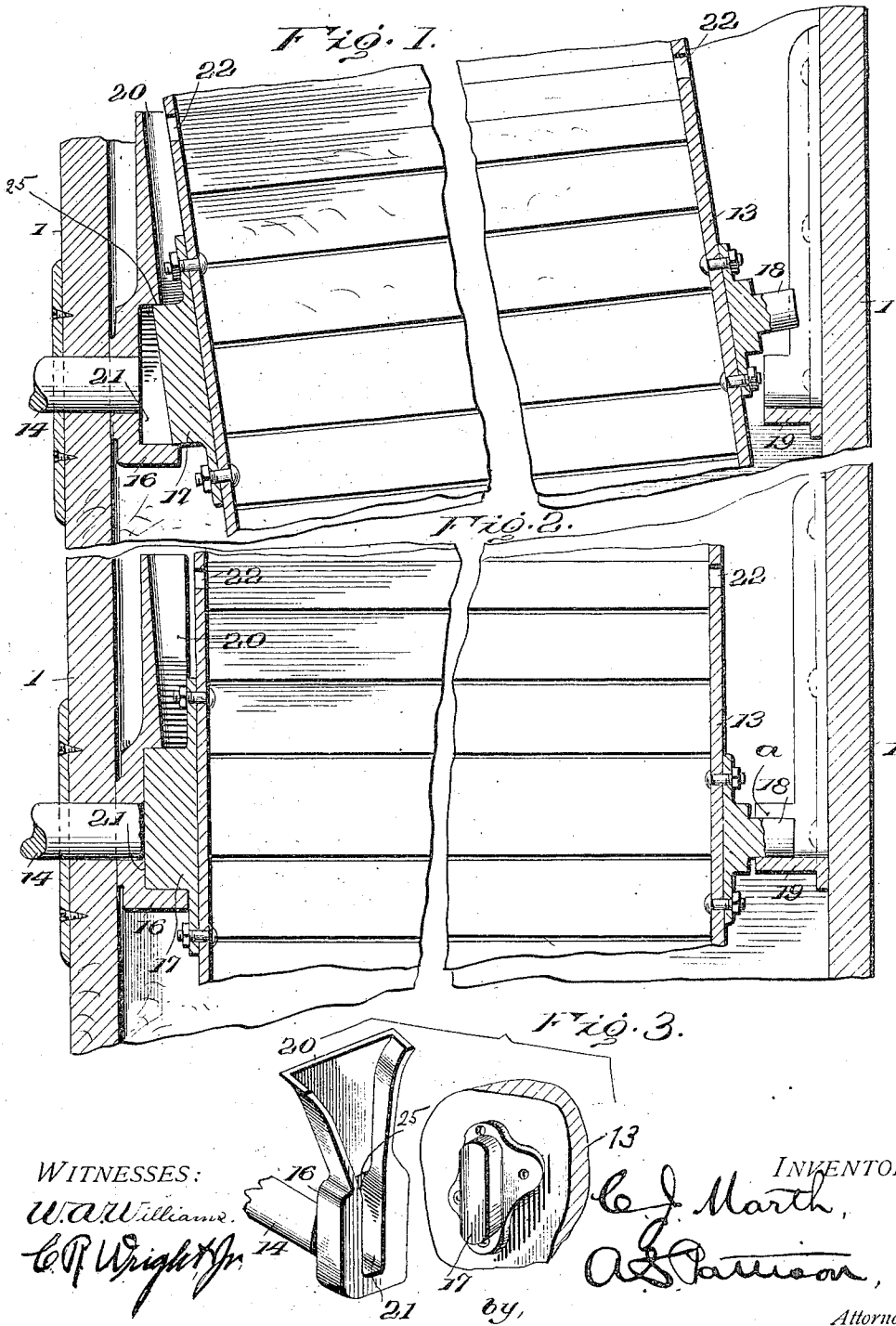


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 WASHING MACHINE.  
 APPLICATION FILED SEPT. 26, 1911.

1,023,746.

Patented Apr. 16, 1912.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

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WASHING-MACHINE.

1,023,746.

Specification of Letters Patent.

Patented Apr. 16, 1912.

Original application filed December 28, 1910, Serial No. 599,776. Divided and this application filed September 26, 1911. Serial No. 651,359.

*To all whom it may concern:*

Be it known that I, CHARLES J. MARTH, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in washing machines, and is a division of my co-pending application filed December 28th 1910, Serial No. 599,776.

The present invention pertains to the cylinder type of washing machines, and the particular improvement herein disclosed relates to the manner of detachably supporting the cylinder within the tub, and detachably connecting it with the member for rotating it by power or by hand.

In the accompanying drawing—Figure 1 is a sectional view through the tub, showing the position of the removable clothes cylinder when being placed within or removed from the tub. Fig. 2 is a similar view showing the removable cylinder in position within the tub. Fig. 3 is a detached perspective view of the driving socket for the cylinder and the cylinder projection or stud which enters the socket.

Referring now to the drawing, 1 is the wall of a suitably shaped tub, in which is placed the clothes cylinder 13. A socket 19 is attached to the inner side of one end of the tub 1, and this socket has an open top *a*, through which a stub shaft 18, attached to the adjacent end of the cylinder may pass and rest in said socket, as shown in Fig. 2. A suitable driving shaft 14 passes through the opposite end of the tub 1, and an elongated socket 16 is attached to the inner end of this shaft. This shaft 14 may be rotated or oscillated in any desired manner. The elongated socket 16 has its outer end provided with a flared groove 20, and its inner end with a socket 21, which is of a shape corresponding to the shape of an elongated stud 17 which projects from the adjacent end of the clothes cylinder 13, and receives the stud 17, as shown in Fig. 2.

Fig. 1 shows the position of the cylinder when either being placed within or removed from the tub, which permits the stud 17 to

pass through the flared groove 20 and to be seated in the recess 21. When the cylinder is in the position shown in Fig. 2, the stud 17 is held in the recess 21, and when the shaft 14 is rotated or oscillated the cylinder is correspondingly moved therewith, while at the same time it is readily removable from the tub, or placed in operative position therein. The shoulder 25 of the socket 21 prevents the stud 17 from falling out when the socket 21 and groove 20 are upside down, and hence the cylinder is retained in position at all times during its rotation. To facilitate the placing within and the removal of the cylinder from the tub, the ends of the cylinder are provided with finger openings 22, and these openings are so located that when the cylinder and the socket 16 are in position to permit the removal of the cylinder, they are accessible from the top of the tub.

While the stud 17 and the socket 21 are here shown of an elongated form, it will be understood that the specific shape of these two elements may vary so long as they are shaped to rotatively interlock, without departing from the scope of the disclosed invention.

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

1. In a washing machine, the combination with a tub, of a cylinder adapted to be placed therein, the cylinder and tub having detachable bearings at one end, an operating member passing through the opposite end of the tub, the inner end of the shaft of which has a stud supporting socket and a radiating groove leading to said socket, and a stud carried by the end of the cylinder adjacent said socket, the stud adapted to enter the socket through the groove, and the socket and stud adapted to rotatively interlock.

2. In a washing machine, the combination with a tub, of a cylinder adapted to be placed therein, the cylinder and tub having detachable bearings at one end, the opposite end of the cylinder having a stud, an operating shaft passing through that end of the tub adjacent said cylinder stud, the inner end of the shaft having a stud re-

ceiving and supporting socket having a surrounding horizontal stud supporting wall, and an arm projecting laterally from the wall of the socket, the arm having a groove  
5 radiating from the socket, the bottom of the groove being in a vertical plane outside of the end wall of said socket.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

CHARLES J. MARTH.

Witnesses:

E. NEUHAUS,

H. A. WORTHY.