

W. D. JONES.  
ELECTRIC WASHING MACHINE.  
APPLICATION FILED DEC. 11, 1911.

1,020,828.

Patented Mar. 19, 1912.

Fig. 1,

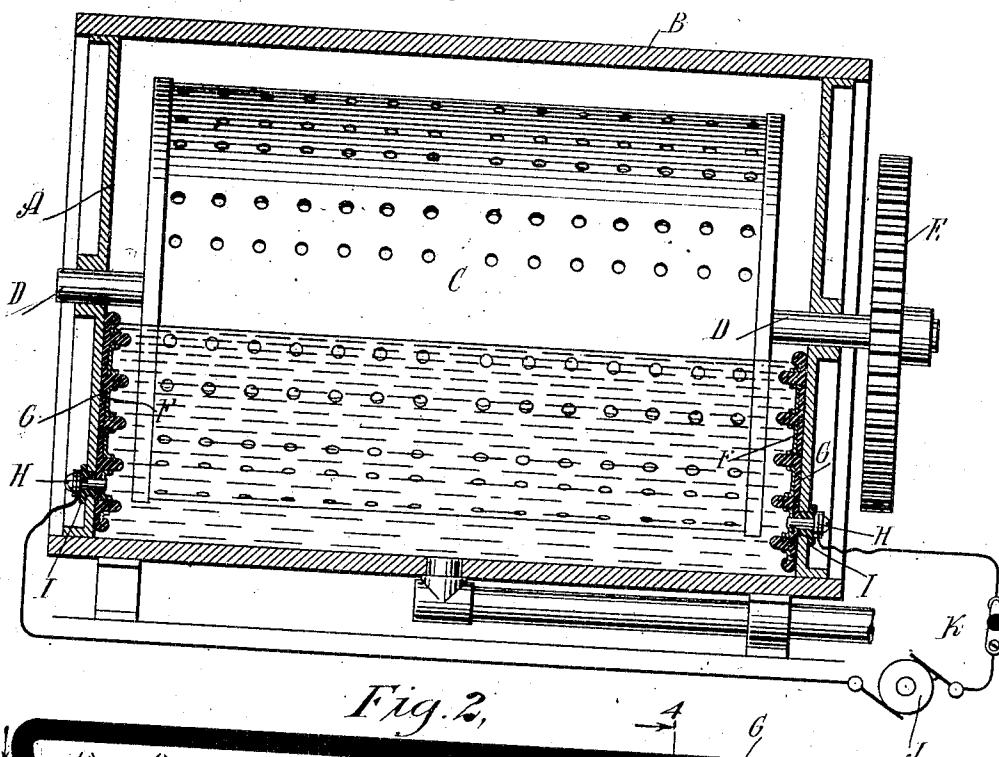


Fig. 2,

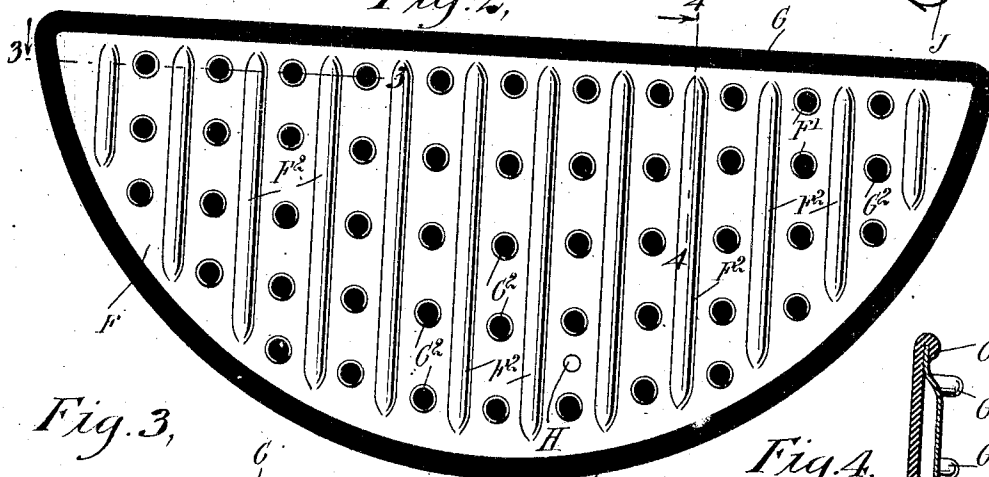


Fig. 3,

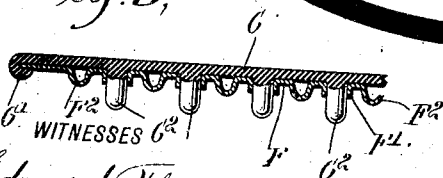
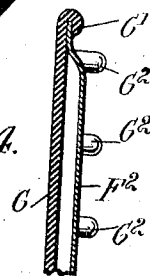


Fig. 4,



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WILLIAM D. JONES, OF NEW YORK, N. Y., ASSIGNOR OF ONE-THIRD TO WILLIAM A. REES AND ONE-THIRD TO RICHARD L. REES, BOTH OF NEW YORK, N. Y.

## ELECTRIC WASHING-MACHINE.

1,020,828.

Specification of Letters Patent.

Patented Mar. 19, 1912.

Application filed December 11, 1911. Serial No. 665,029.

*To all whom it may concern:*

Be it known that I, WILLIAM D. JONES, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Electric Washing-Machine, of which the following is a full, clear, and exact description.

10 The invention relates to washing machines in which an electric current is passed through the washing liquid from one electrode to another.

15 The object of the invention is to provide a new and improved electric washing machine having electrodes arranged in the tank or vat, in such a manner as to insure the passage of the electric current through the washing liquid without danger of it 20 passing from one electrode to the other by way of the walls of the tank or vat, to prevent stray or extraneous matter of the articles to be washed from coming in contact with the electrodes, and to reduce the danger of an operator coming in contact with 25 an electrode to a minimum.

In order to produce the desired result the electrodes are mounted on insulating plates provided with protecting members projecting 30 beyond the faces of the electrodes.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate 35 corresponding parts in all the views.

Figure 1 is a longitudinal central section of the electric washing machine; Fig. 2 is an enlarged face view of one of the electrodes and its supporting or carrying plate of insulating material; Fig. 3 is a sectional plan 40 view of the same on the line 3—3 of Fig. 2; and Fig. 4 is a cross section of the same on the line 4—4 of Fig. 2.

45 The tank or vat A is adapted to contain water or other washing liquid and is provided on the top with a cover B and within the tank or vat A is arranged a receptacle C for containing the clothes to be washed and preferably made in the form of a cylinder 50 having a perforated rim. The shaft D of the receptacle C is journaled in suitable bearings arranged on the ends of the tank or vat A, and one outer end of the shaft D is provided with means connected with other 55 machinery for imparting a reversing rotary

motion to the receptacle C, the said means being preferably in the form of a gearing E connected with a motor of any approved construction. Electrodes F are arranged within the tank A, preferably at the ends 60 thereof, and the said electrodes F are in the form of plates attached to the faces of attaching plates G, of rubber or other insulating material, and secured to the inner faces of the ends of the tank or vat A. Each 65 of the insulating plates G is provided with marginal overhanging flanges G' for receiving the edges of the electrode F, so as to hold the same in place on the carrying plate G, at the same time protecting the edges of the 70 electrodes against contact by the operator. Each of the electrodes F is provided with apertures F' through which pass lugs G<sup>2</sup> formed integrally on the carrying plate G and projecting beyond the face of the corre- 75 sponding electrode F so as to prevent an operator reaching into the tank A from coming in contact with the electrode F. The apertures F' and the protecting lugs G<sup>2</sup> are preferably arranged in vertical rows located 80 between ribs F<sup>2</sup> struck up from the electrodes F so as to increase the surface thereof. By reference to Figs. 3 and 4 it will be noticed that the protecting lugs G<sup>2</sup> project 85 beyond the ribs F<sup>2</sup> and hence the operator's hand on reaching into the tank A is not liable to come in contact with the electrode F.

In electric washing machines of the type mentioned use is made of an electric current 90 which may run from 110 to 500 volts, and hence the operator is protected against shock from the electric current. It will also be noticed that by having the insulating carrier plates G the electric current is not liable to 95 pass from one electrode to another by way of the metallic casing A, but the current passes through the washing liquid contained in the tank or vat A. It will further be noticed that by having the protecting lugs G<sup>2</sup>, stray 100 matter, such as buttons, pins, hooks and other stray matter, is prevented from coming in contact with the electrodes.

Contact points H are arranged in bushings I of an insulating material and held in 105 the ends of the tank or vat A, the inner ends of the contact points H being soldered or otherwise connected with the corresponding electrodes F. The outer ends of the points H are connected by the usual circuit wires 110.

or conductors with a source of electric supply J, and a switch K is arranged in the circuit for turning on or shutting off the electricity.

5 Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A washing machine, comprising a tank adapted to contain a liquid, a perforated  
10 revoluble receptacle in the said tank, electrodes, and plates of insulating material carrying the said electrodes and attached to the said tank at the inside thereof, the  
15 said insulating plates being provided with members projecting beyond the faces of the said electrodes.

2. A washing machine, comprising a tank adapted to contain a fluid, a perforated  
20 revoluble receptacle in the said tank, insulating plates attached to the inner faces of the ends of the tanks and provided with lugs projecting from the faces of the plates, and electrodes in the form of plates over-  
25 lying the said insulating plates, the said electrodes being provided with apertures through which extend the said lugs beyond the faces of the electrodes.

3. A washing machine, comprising a tank adapted to contain a fluid, a perforated  
30 revoluble receptacle in the said tank, insulating plates attached to the inner faces of the ends of the said tanks and provided with marginal overhanging flanges, and electrodes in the form of plates overlying  
35 the said insulating plates and fitting at their edges under the said overhanging flanges.

4. A washing machine, comprising a tank adapted to contain a fluid, a perforated  
revoluble receptacle in the said tank, insu-

lating plates attached to the inner faces of  
40 the ends of the said tanks and provided with marginal overhanging flanges and with integral lugs projecting from the faces of the said plates, and electrodes in the form  
45 of plates overlying the said insulating plates and fitting at their edges under the said overhanging flanges, the said electrodes hav-  
50 ing spaced ribs and apertures between adjacent ribs and said lugs projecting through the said apertures.

5. An electric washing machine provided with electrodes in the form of plates having  
apertures, and supporting plates for the  
said electrodes and made of insulating ma-  
55 terial, the said supporting plates having integral lugs passing through the said aper-  
tures and projecting beyond the faces of the electrodes.

6. An electric washing machine provided with electrodes in the form of plates having  
60 integral struck up ribs, and apertures between adjacent ribs, and supporting plates for the said electrodes made of insulating  
65 material, the supporting plates being provided with marginal overhanging flanges for receiving the edges of the said elec-  
70 trodes, and the said supporting plates being provided with lugs passing through the said apertures and projecting beyond the faces of the electrodes.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM D. JONES,

Witnesses:

ALFRED H. WILLIAMS,  
MERRITT J. SMITH.