

No. 870,545.

PATENTED NOV. 12, 1907.

G. W. CLOUGH.
PLATING DEVICE.
APPLICATION FILED OCT. 10, 1906.

Fig. 1

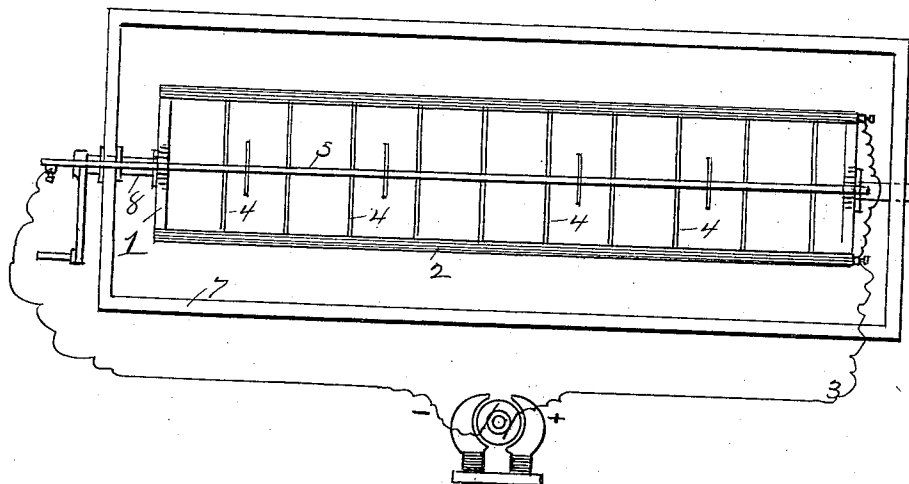


Fig. 2

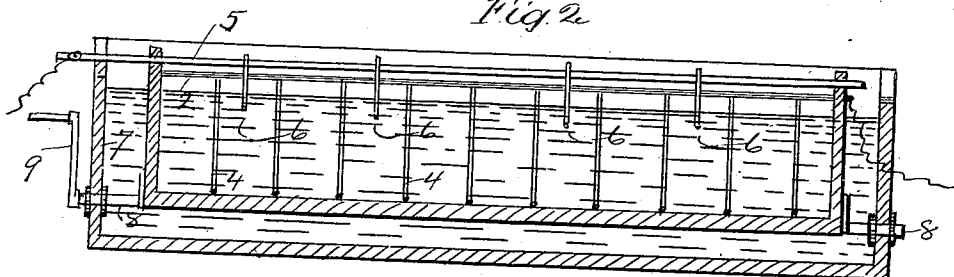


Fig. 3

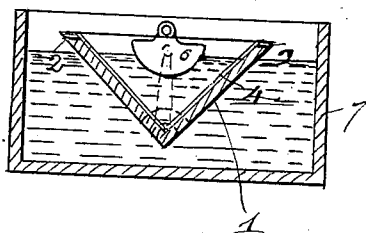
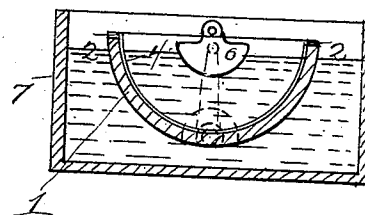


Fig. 4



Witnesses
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UNITED STATES PATENT OFFICE.

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PLATING DEVICE.

No. 870,545.

Specification of Letters Patent.

Patented Nov. 12, 1907.

Application filed October 10, 1906. Serial No. 338,202.

To all whom it may concern:

Be it known that I, GEORGE W. CLOUGH, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, State of Ohio, have invented certain new and useful Improvements in Plating Devices, of which I hereby declare the following to be a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

The objects of the invention are to provide a rocking receptacle for holding metal articles while they are immersed in a plating liquid heavily charged with metal in solution, and through which the electric current is passed to decompose it and liberate the included metal and deposit it upon the articles.

The invention is designed for use especially with larger articles which from their weight rest heavily against one another or against the sides of the tank and hence spots are formed which are uncoated with the plating metal.

To avoid the blank places and provide a coating of uniform thickness over the articles a slight rocking movement is imparted to the receptacle, by means of which the articles are rolled or tumbled about and consequently repeatedly change their positions and do not rest upon one part more than another or rest in any one position long enough to produce a blank or uncoated surface. To obtain this result I employ the forms of receptacle and instrumentalities for imparting a rocking movement to the same, as exemplified in the accompanying drawings, hereinafter described and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of a trough shaped receptacle having its upper edge provided with a margin of conducting metal, and having connecting contact wires arranged at close intervals upon the inner surface of the trough; Fig. 2 is a longitudinal section thereof; Fig. 3 shows an angular form of trough and Fig. 4 shows a trough having a rounded bottom.

In these views, 1 is the trough, having preferably an angular bottom to assist in tumbling the articles resting thereon. It has been found by experiment that an angle of 45° or greater has the greatest efficiency in tumbling the articles about when tilted. A curved bottom however such as shown in Fig. 3 may be used if desired.

To make contact with the metal articles in the tank metallic margins 2 are provided which are included within the electric circuit 3, and are connected by the wires or contact strips 4 which lie upon the sides and

bottom of the receptacle and are closely spaced together so that the metal articles will always make contact with them and with each other. These contact strips or cathodes convey the current to the metal articles and the marginal bars are connected together and to the positive end of the electric circuit or to the proper electrode a metal conducting bar 5 is supported centrally and longitudinally upon the receptacle and upon this bar are supported the anodes 6 preferably of circular or semi-circular form. These anodes are immersed in the fluid and convey the current to the negative end of the circuit.

To insure a plentiful supply of fluid or solution the receptacle 1 is immersed in a tank 7 filled with the plating fluid and is mounted upon trunnions 8 at either end supplied with a rock arm 9 by means of which, and any suitable operating mechanism, it can be oscillated, thus keeping all the articles therein in motion until all the surfaces are thickly coated as may be required.

Having described the invention what I claim as new and desire to secure by Letters Patent is:

1. In a plating device, a reservoir, a pivoted receptacle therein, said receptacle having upper sides which at their edges are provided with a margin of conducting metal, a series of contact strips arranged across the sides and bottom of said receptacle and being secured at their ends to said margins to connect the latter, an anode bar secured to the receptacle, a series of downwardly projecting vertically disposed anodes secured to said bar at their upper ends and a source of electrical supply connected to said margins and to said anode bar.

2. In a plating device, a reservoir, a pivoted receptacle therein, said receptacle having two longitudinal metal parts, a series of contact strips arranged across the sides and bottom of said receptacle and connecting said metal parts, an anode bar secured to the receptacle, a series of depending anodes of semi-circular form secured to said anode bar, said anodes being disposed on said bar to align with the space between said contacts of said receptacle, and electrical connections to said metal parts and to said anode bar.

3. In a plating device, a reservoir, a pivoted receptacle therein, cathode strips along the sides and bottom of said receptacle, an anode bar secured to the receptacle, anodes of plate-like form secured at their upper ends to said bar and extending downwardly in said receptacle so as to have their length disposed transverse of the length of said bar, means for connecting the ends of said cathodes, and electrical connections for said means and said anode bar.

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Witnesses:

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