

No. 887,776.

PATENTED MAY 19, 1908.

C. E. DE LONG.
ELECTROPLATING APPARATUS.
APPLICATION FILED OCT. 4, 1907.

Fig. 1.

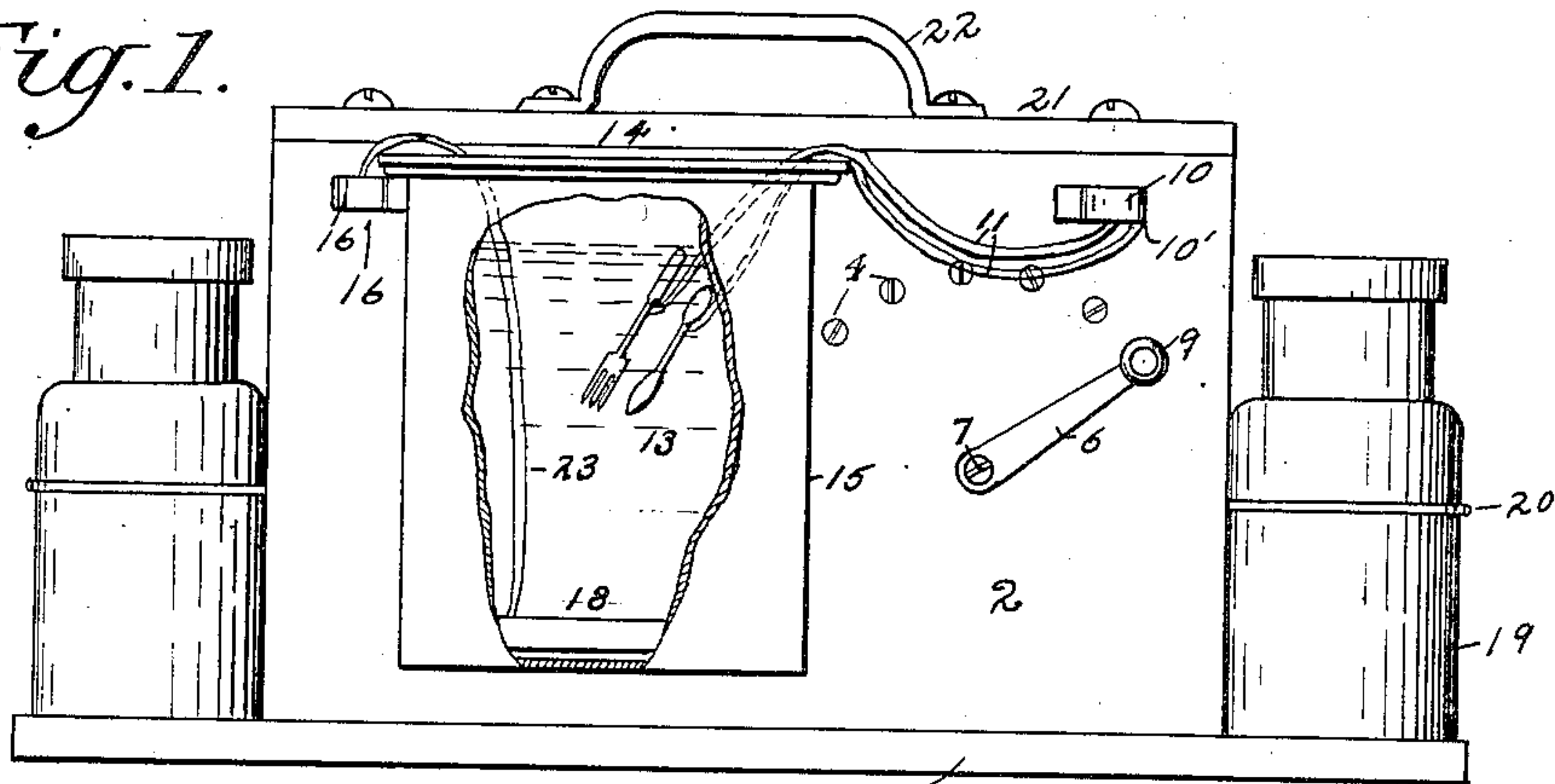


Fig. 2.

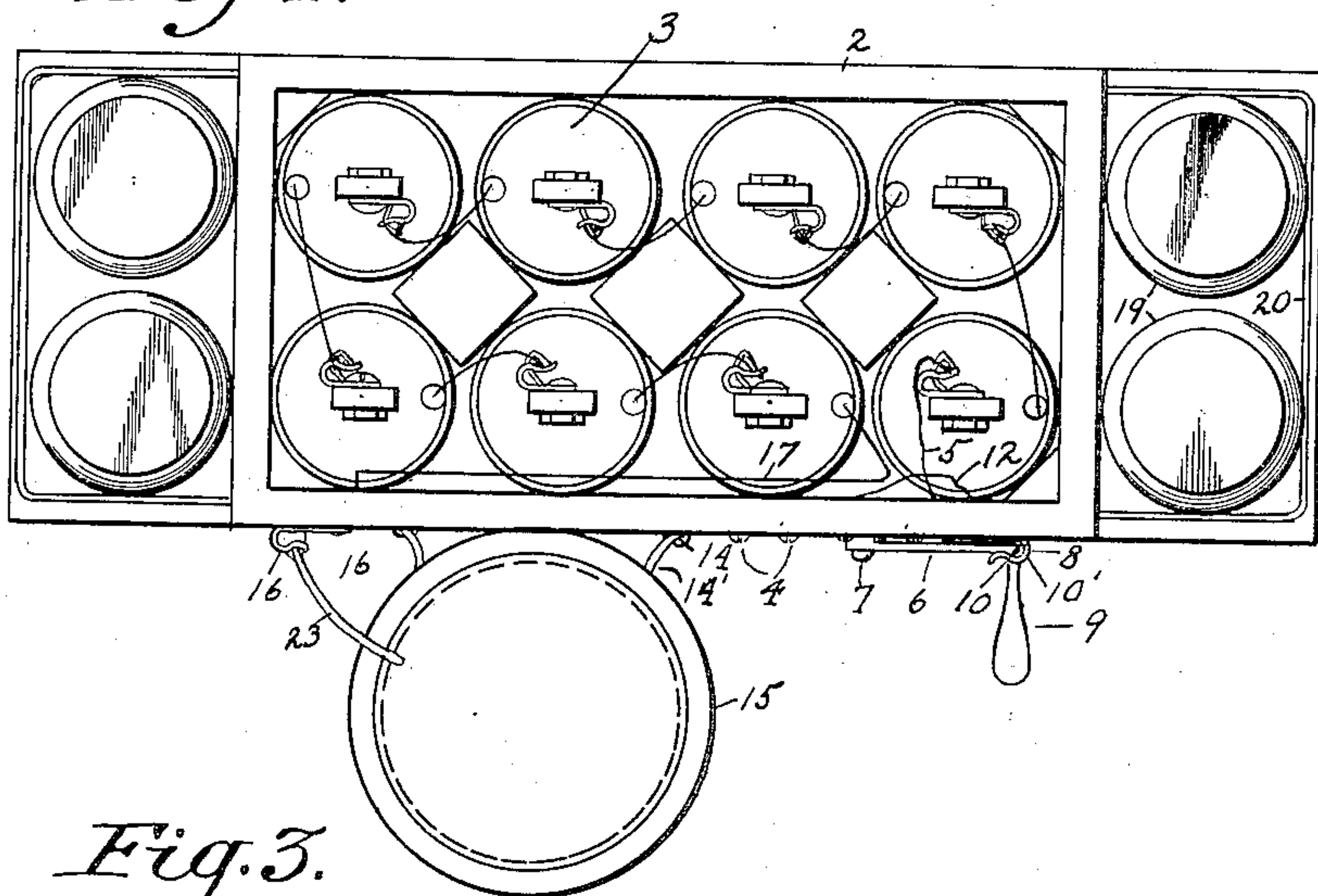
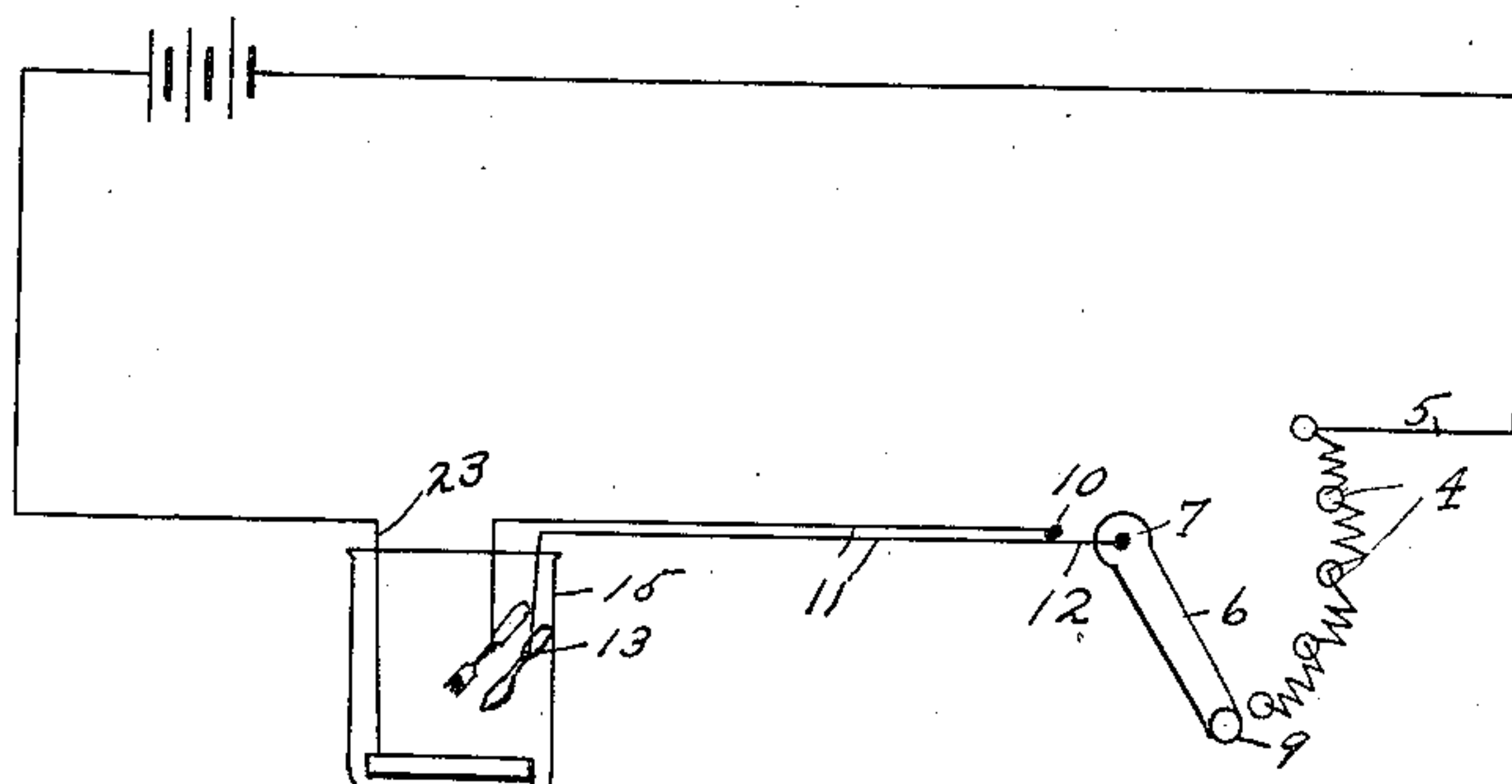


Fig. 3.



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ELECTROPLATING APPARATUS.

No. 887,776.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES E. DE LONG, a citizen of the United States, residing at Shreveport, in the parish of Caddo and State of Louisiana, have invented certain new and useful Improvements in Electroplating Apparatus; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to an electroplating apparatus, and has for its object to provide an apparatus of that class which is simple and economical in construction and comprises the improved details of structure which will presently be fully described and pointed out in the claims.

In the accompanying drawings,—Figure I is a view in side elevation of an apparatus constructed according to my invention, the electrolyte tank being broken to show the parts contained therein. Fig. II is a top plan view of same. Fig. III is a diagrammatic view of the generator circuit.

Referring more in detail to the parts,—1 represents a base upon which a casing 2 containing a suitable generator is mounted; the generator shown in the drawings consisting of a series of dry cell batteries 3, although any suitable means for supplying an electrical current may be substituted therefor.

On casing 2 is a suitable switch-board having the contact points 4, and connected with said switch-board is the negative pole 5 of the battery.

Adjacent to each of points 4 is an insignia indicating the metal requiring the current strength furnished at that point.

6 is a switch arm, which turns on a pin 7 and has a head 8 adapted for separate contact with each of the switch-board points 4, and a handle 9, by which it is manipulated.

10 is a contact head on which a number of cathode carrying wires 11 are mounted; the switch arm, and pin 7 being of conductive material and the pin and contact head being connected by a wire 12 so that a current may pass from the switch-board, through the switch arm, pivot pin, connect-

ing wire 12, head 10, and wires 11 to the cathodes 13, which are carried on wires 11.

Removably mounted in lugs 14 on case 2 is a bracket 14', which supports a tank 15 containing a suitable electrolyte.

16 is a contact head with which the positive pole 17 of the battery is connected.

The contact heads 10 and 16 are preferably looped as shown in Fig. II, and a spring clamp 10'—16' mounted adjacent to the respective heads, and each provided with a slot adapted to fit over said heads with a tension adapted to lock the connecting wires thereto.

Attached to head 16 is a wire 23 connected with a suitable anode 18, which is submerged in the electrolyte in tank 15.

Base 1 projects beyond the ends of the casing to form supports for receptacles 19 containing ingredients for the various electrolytes, and 20 are bands for holding receptacles 19 on their supports.

Covering casing 2 is a removable lid 21, provided with a handle 22, by which the entire apparatus may be carried.

When in use, the tank 15 is charged with a solution containing salts of the metal with which it is desired to plate the cathode, and an anode of the metal from which the plating is to be made is attached to wire 23, and suspended in the electrolyte. One or more of the articles which it is desired to plate are then attached to wires 11, and likewise suspended in the electrolyte.

The switch arm is then turned to the contact point indicating the necessary strength for decomposing the particular metallic salt used in the solution, the current passing through the solution between the two poles represented by the anode and cathode causing a covering of the metal carried in the solution to adhere to the cathodes, the process used with my apparatus being the ordinary process, well known in the art.

When the apparatus is not in use, the tank may be removed, and the wires 11 and 23 and bracket 14' may be detached and placed in the case, the parts being easily and quickly assembled when desired.

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

1. An electroplating apparatus comprising a case, a battery in said case, a switch board connected with said battery and having cur-

rent strength indicating points exposed to the exterior of said case, a switch arm adapted for movement in conductive relation to said switch board, and anode and cathode connecting means leading one to the battery and one to the switch arm, for the purpose set forth.

2. An electroplating apparatus comprising a case, a battery in said case, means on said case for supporting a solution tank, contact points connected with said battery and exposed to the exterior of said case, anode and cathode connections, and a switch arm in conductive relation to the cathode connections, and adapted for contact with said contact points, for the purpose set forth.

3. An electroplating apparatus comprising a case, a battery in said case, a removable bracket on the exterior of said case, a solution tank supported by said bracket, an anode in said tank connected with said battery, contact points connected with said battery and indicating current strength for work with different solutions, a contact head, cathode carrying wires connected with said

head, and a switch arm connected with said head, and adapted for engagement with said contact points.

4. An electroplating apparatus comprising a case having a base extended to form shelves at the ends of the case, a removable top on said case, a battery contained within said case, a switch-board connected with one pole of said battery and having contact points on the exterior of the case, a switch arm adapted for engagement with said points, contact heads on said case, one of said heads being connected with said battery and the other with said switch arm, anode and cathode connecting wires carried by said contact heads, and spring clamps having slots adapted to embrace said contact heads, all substantially as and for the purpose set forth.

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

CHARLES E. DE LONG.

Witnesses:

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ARTHUR H. CLARK.