No. 741,274

PATENTED OCT. 13, 1903.

A. R. PRITCHARD.

APPARATUS FOR ELECTROPLATING.

APPLICATION FILED JUNE 23, 1903.

NO MODEL.

Fig. 1.

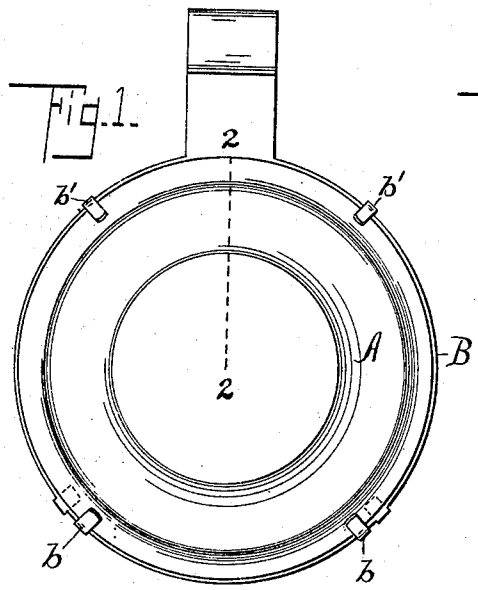


Fig. 2.

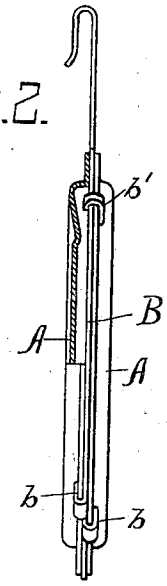


Fig. 3.

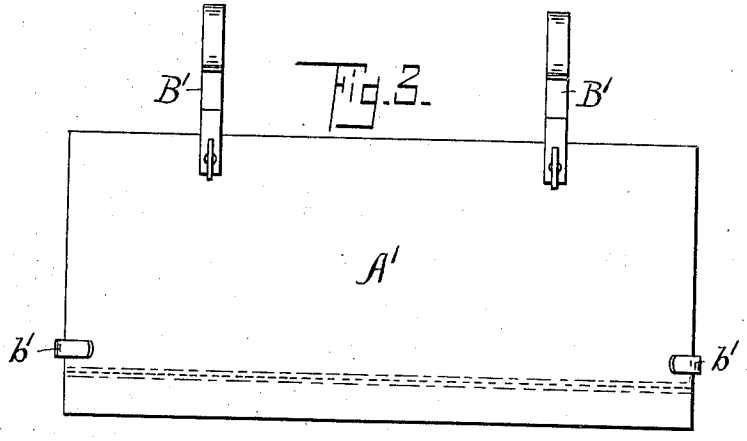


Fig. 4.

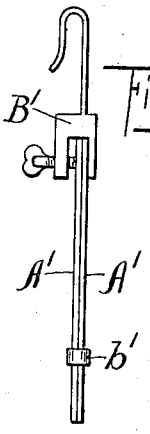
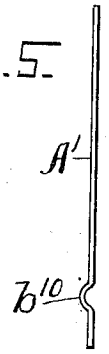


Fig. 5.



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No. 741,274. Patented October 13, 1903.

UNITED STATES PATENT OFFICE.

ALBERT R. PRITCHARD, OF ROCHESTER, NEW YORK.

APPARATUS FOR ELECTROPLATING.

SPECIFICATION forming part of Letters Patent No. 741,274, dated October 13, 1903.

Application filed June 23, 1903. Serial No. 162,743. (No model.)

To all whom it may concern:

Be it known that I, ALBERT R. PRITCHARD, a citizen of the United States, and a resident of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Means of and Apparatus for Electroplating, of which the following is a specification.

This invention relates to means of and apparatus for electroplating; and it consists in the subject-matter hereinafter described and claimed.

This invention has particular reference to means of an apparatus for plating sheets of metal on one side only, and at present is intended mainly for plating parts of sheet-metal-ware vessels on one side with a coating of electroplated zinc.

In the drawings, Figure 1 shows a vessel-bottom fastened on its supporting means and ready for insertion as a cathode into the plating-bath. Fig. 2 is an edge view, partly in section, showing two vessel-bottoms upon said supporting means. Fig. 3 is a front elevation of two sheets of metal with their supporting means and adapted for use as a cathode for the electrodeposition of a band of plating on one side of the lower edge or on the whole of one side of each sheet. Fig. 4 is an end elevation of the same; and Fig. 5 is an edge view of a detail, relating to one form of the sheets shown in Figs. 3 and 4.

In plating parts only of metal sheets it has been customary to use varnishes and the like for masking or covering portions of the object or sheet of metal on which another metal is to be electrodeposited, also to fasten together previously-manufactured sheets of the two metals by soldering or seaming together. This increases the manipulations and expense. The present invention is for the purpose of avoiding such additional expense and time of manufacture and to simplify the method and means of plating on one side only a sheet-metal-ware part, and in the case of zinc to make a uniform coating of high purity and without the spangle produced by galvanizing.

In Figs. 1 and 2, A A are two similar bottoms of a sheet-metal-ware vessel which are plated with suitable material, such as zinc. The plating is on one surface only of the bottom and on the side that will when the parts are put together bring the plating on the inside or the outside of the completed vessel, as may be desired. In order to exclude the other side of the sheet from receiving a coating in the plating-bath, the said sheets A A are fastened together back to back, so that when placed in the bath the lines of conduction from the anode to the sheets to be plated will make contact with the outer sides, as shown, and the backs of the two pieces being held firmly together will exclude the deposit of coating thereon, except possibly to such an extremely small degree as to be negligible. For this purpose, and for convenience in manipulation, a plate B, of suitable metal, such as iron or tin, constituting the supporting means, is provided with suitable sockets or lugs *b* and on one or both sides, in which the edges of a sheet A may be set. The lugs *b* may have such form and such capacity of pressure as to press the sheet A closely against the supporting-plate B. Temporary clamps *b'* may be put upon the parts after the sheet and the support B are set together, so as to clamp them firmly together and to the support, as shown. The sheet B is then inserted in the bath and hung upon its support, and the action of the current will be to carry the particles of metal with which the sheet A is to be coated to the outer side of the sheet; but, on account of the contact between the inner or back side of the sheet A against the supporting-plate B the particles of metal will not be carried to said inner or back side.

In Figs. 3 and 4 the two sheets of metal A' are clamped firmly together by means of the supporting means or clamps B' and the clamps *b'*, and the sheets being flat or in the same plane, at least around their outer edges, the particles of metal coming from the anode or from the solution of the bath will be prevented from passing to and deposited upon all but the exposed outer surfaces of the sheet.

It is intended as one application of this invention to coat only the lower edges of large sheets which are to be made up into the sides of washboilers and to use zinc as a plating material in order to have the effect of preventing rusting of tinware. Consequently the sheets are dipped in the plating-bath only to the heavy dotted line in Fig. 3, and the

plating will occur only on the outsides and not on the adjacent sides of the sheets A A. After the sheet has been plated a bead b^{10}, Fig. 5, may be rolled in it at the top of the zinc plating in order to make a suitable finish for the goods.

A packing (not shown) may obviously be inserted between the sheets A′ or between a sheet A and the supporting means B′ in order to exclude to a perfect degree the entrance of the plating fluid to the back of the sheet.

What I claim is—

1. A cathode for a plating-bath consisting of a sheet to be plated and supporting means therefor consisting of a plate against which said sheet fits and having lugs adapted to engage said sheet and press it against said supporting-plate, and means for clamping said sheet to said plate.

2. A cathode for a plating-bath consisting of a pair of sheets to be plated on the outer sides only, supporting and fastening means for fastening said sheets together whereby said sheets are, respectively, supported in the bath and the plating is excluded from the adjacent sides of the sheets.

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