No. 688,857. Patented Dec. 17, 1901.

W. JOHNSON.

METHOD OF REGULATING WEIGHT OF METAL BLANKS.

(Application filed Jan. 25, 1901.)

(No Model.)

Fig. 1.

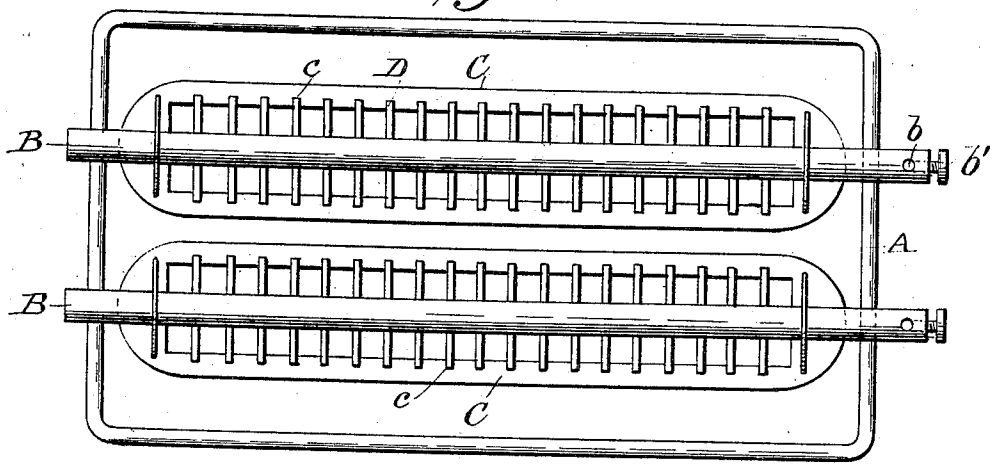


Fig. 2.

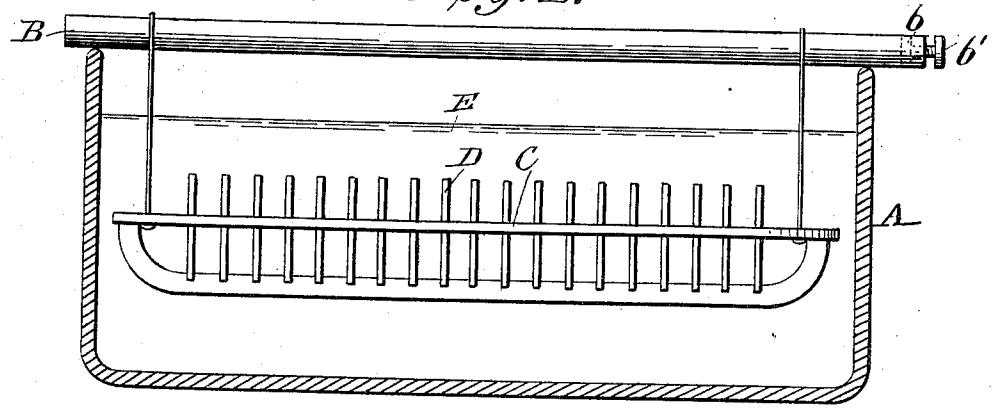
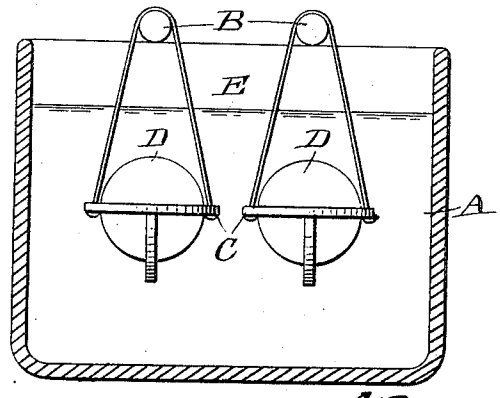


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

WARREN JOHNSON, OF NEW ORLEANS, LOUISIANA.

METHOD OF REGULATING WEIGHT OF METAL BLANKS.

SPECIFICATION forming part of Letters Patent No. 688,857, dated December 17, 1901.

Application filed January 25, 1901. Serial No. 44,756. (No model.)

To all whom it may concern:

Be it known that I, WARREN JOHNSON, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and useful Method of Regulating the Weight of Metal Blanks and Planchets Used in Coining Money; and I do hereby declare that the following is a full and clear explanation of the method employed by me.

My invention relates to an improvement in the method of regulating the weight of coin-blanks and planchets used in coinage, and has for its object to produce a more perfect blank and greatly reduce the expense in its production, as is hereinafter more fully set out and described.

Referring to the drawings, Figure 1 is a plan view of an ordinary glass jar used in electroplating, showing two racks suspended from rods holding coin-blanks. Fig. 2 is a side elevation of same, partly in section; and Fig. 3, an end view in elevation, also partly in section.

Referring to the drawings, in which like letters of reference denote like parts in all the views, A represents an ordinary construction of jar used in electroplating, and B B rods having holes *b b* near one end for the reception of wires connected with an ordinary battery or rheostat, (not shown,) the wires being held in place by the thumb-screws *b' b'*. Suspended on these rods are racks C C, having slots *c c* to receive the blanks D to be operated on.

E represents the solution used in the process hereinafter described.

The racks C C are made, preferably, of the same metal and of equal fineness as the blanks or planchets to be treated, though the racks may be made of a non-metallic and non-conducting material, if desired.

In the United States mints the metal that is to be coined is rolled out in strips to the thickness desired and is then taken to a punching-machine, where circular pieces are cut out of these strips, which are called "blanks." These blanks are required to be of a certain weight, and the practice has been that if the blank weighs too much sufficient metal is shaved or filed off the blank to reduce it to the required weight, which method results in a more or less imperfect coin, while if the blank is too light it is condemned and thrown back to be melted, and again goes through the same process as above described. This is unsatisfactory and very expensive, and my method is intended to avoid it and produce a more perfect and less expensive coin.

In practicing my method the blanks or planchets that are found to be heavy are separated from those that are below the required weight and are each placed in racks made either of the same metal as the blanks and planchets or of a non-metallic substance, as vulcanized rubber, glass, &c., and are immersed in a solution or bath such as is ordinarily used in electroplating and containing the metals in solution in the same relative proportion as the metals composing the blanks or planchets. The racks are then attached by means of wires to an electric battery or to a rheostat, which in turn is connected with the sheet wires or a dynamo, the positive pole being attached to the rack containing the heavy-weight coin-blanks or planchets, while the negative pole is attached to the rack containing the light-weight coin-blanks or planchets, said rheostat being of any ordinary construction, my invention not involving a particular construction of such parts. If the racks are made of metal, as above described, the wires are attached by suitable means to the racks; if of a non-metallic and preferably non-conducting material, wires of the same metal as the blanks or planchets are arranged in the racks so that each blank to be treated contacts with the wire and has electric connection with the battery or rheostat hereinbefore described. As soon as connection is made with the battery it will be readily seen that the coins connected with the positive pole of the battery become anodes, while those at the negative become cathodes and the operation of decreasing and increasing the weights of the blanks or planchets takes place, the cathodes being plated with the metal, while the anodes supply the solution above described with sufficient metal to keep it in its normal state. In other words, I use the ordinary process of electroplating to perform the double function of increasing and diminishing the weight of coin-blanks or planchets, treating the lights and heavies at the same time and bringing

both to their proper weight simultaneously, or I may perform my method upon lights or heavies separately by using a plate of the same metal as an anode for the lights or as a cathode for the heavies—as, for instance, when there is but one class of blanks (lights or heavies) to be treated. As soon as the blanks or planchets are brought to the required weight, which is determined by the length of time the pieces have been in the bath or by cutting off the electricity, removing a piece from the rack, and weighing it, they are removed from the bath and others requiring treatment substituted therefor.

In practice with my invention I ordinarily select blanks of the same relative degree of over and under weight to be treated at one time and use the same number of blanks for anodes and cathodes at the same operation. In event racks made of the same material as the blanks or planchets are used by alternately using the same rack as anode and cathode the dissolution of and deposition upon the racks are equalized, and they are kept near their normal weight and destruction prevented.

Having thus described my invention, what I claim is—

1. The method of regulating the weights of coin-blanks or planchets of a metallic alloy by inserting the heavy and light weight blanks in separate racks made of the same material and the same fineness as the blanks or planchets to be treated, immersing same in a solution of the same metals as those of the alloy comprising said blanks or planchets, and connecting the racks containing the heavy-weight blanks to the positive pole of an electric battery and the racks containing the light-weight blanks to the negative pole of the battery, substantially as described.

2. The method of decreasing the weight of coin-blanks or planchets of a metallic alloy by inserting them in a rack, suspending them in a solution of the same metals as those of the alloy comprising said blanks or planchets, suspending a bar of metal in the same solution, and connecting the rack to the positive pole of an electric battery and the bar to the negative pole of the battery, substantially as described.

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

WARREN JOHNSON.

Witnesses:
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