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J. KRONSEIN

2,047,418

ELECTROPLATING OF METALLIC ARTICLES

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Fig. 1.

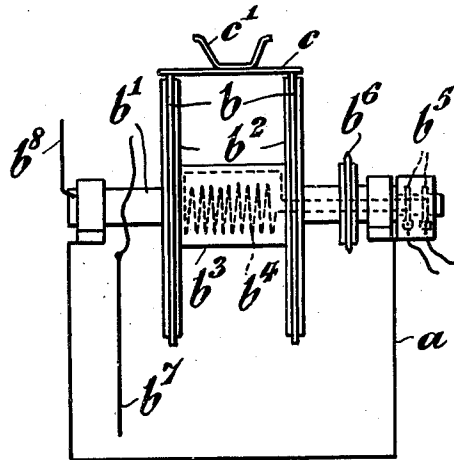


Fig. 2.

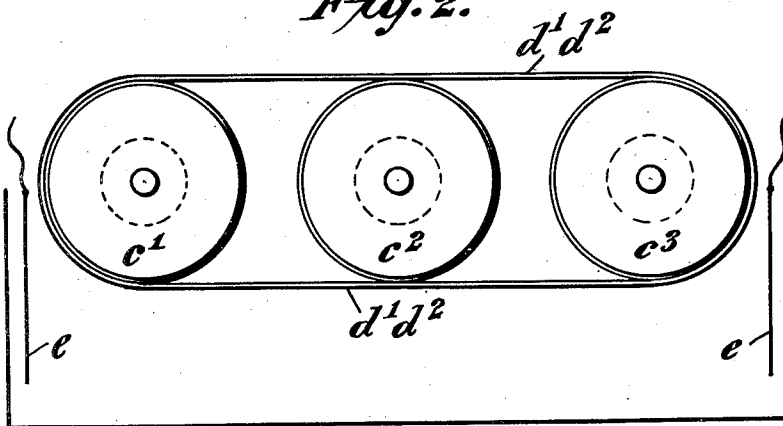
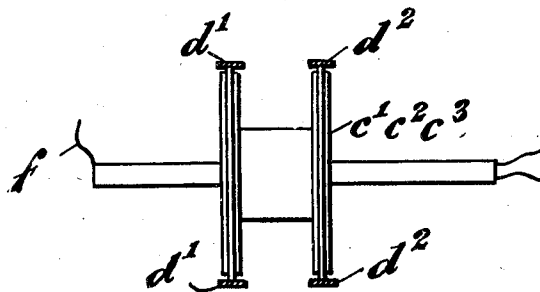


Fig. 3.



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ELECTROPLATING OF METALLIC ARTICLES

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2 Claims. (Cl. 204—5)

This invention is for improvements in connection with the electro-plating of metallic articles, and more particularly refers to the mounting and supporting of such articles for the electro-depositing operation within the vats.

According to the present invention there is provided apparatus for electro-plating metal articles comprising an electrolytic vat, a metallic disc or discs, wheel or wheels, rotatably mounted therein with the lower half or halves submerged in the electrolyte, means for mechanically rotating the disc or discs, wheel or wheels, and means for electrically magnetizing the same whereby articles may be attached by magnetic attraction to an exposed peripheral part to be submerged and afterwards exposed for removal.

Two or more pairs of discs or wheels may be used with one vat and an endless flexible iron belt or belts placed over the discs or wheels so that the articles to be treated may be attached to the belts by magnetic attraction derived from the discs.

In order that the invention may be clearly understood and readily carried into practice, reference may be had to the appended explanatory sheet of drawings, which illustrates more or less diagrammatically embodiments of the present invention.

Figure 1 illustrates in diagrammatic elevation an electrolytic vat having immersing means constructed according to the present invention.

Figures 2 and 3 illustrate diagrammatically a modification hereinafter referred to.

In that embodiment of the invention shown in Figure 1 of the drawing, a rotating disc or wheel mechanism is disclosed. *a* indicates the vat, *b* two metallic discs or wheels of magnetic material mounted on a shaft *b*¹. *b*² are insulating discs on each side of each metallic disc or wheel *b*, and *b*³ is a soft iron core whereon a coil *b*⁴ is wound constituting a solenoid, the extremities of the coil being taken to brush contacts *b*⁵. *b*⁶ is a sprocket wheel by means of which the primary

discs or wheels *b* may be slowly rotated. *b*⁷ is the anode connection and *b*⁸ the cathode connection.

In operation any small articles to be treated are placed against the peripheral parts of the magnetized discs or wheels *b* and are submerged by the rotation of said discs or wheels, and removed from the other side of the apparatus, this operation being capable of being performed in a particularly expeditious manner. In the case of non-ferrous articles requiring treatment, a metallic bar *c* may be used spanning the magnetic discs or wheels *b*, the said bar *c* having any appropriate means *c*¹ for securing the non-ferrous articles.

In the Figures 2 and 3 *c*¹, *c*², *c*³ illustrate magnetic wheels similar in construction to that shown in Figure 1, endless flexible iron bands *d*¹ and *d*² being placed over the discs or wheels. The articles to be treated are attached to the bands *d*¹, *d*² by magnetic attraction influenced from the discs or wheels *c*¹, *c*², *c*³. *e* is the anode and *f* the cathode.

What I claim as my invention and desire to secure by Letters Patent is:—

1. Apparatus for electro-plating metal articles, comprising an electrolytic vat, two metallic wheels of magnetic material rotatably mounted upon a horizontal spindle with the lower halves submerged in the electrolyte, a solenoid interposed between the wheels for electrically magnetizing the same, insulating discs attached to the faces of the wheels, and means for mechanically rotating the wheels.

2. Apparatus for electro-plating metal articles, comprising an electrolytic vat, metallic wheels of magnetic material rotatably mounted thereon with the lower halves submerged in the electrolyte, means for mechanically rotating the wheels, means for electrically magnetizing the same, and an endless metallic belt placed over the wheels for the location of articles by magnetic attraction derived from the wheels.

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