

Sept. 17, 1940.

W. A. HESSE
ELECTROPLATING PAD
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2,215,102

Fig. 1.

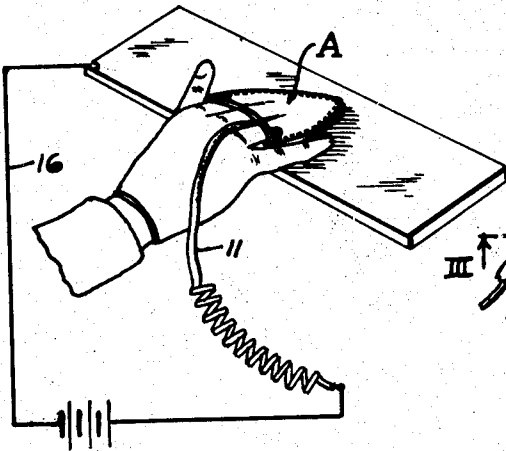


Fig. 2.

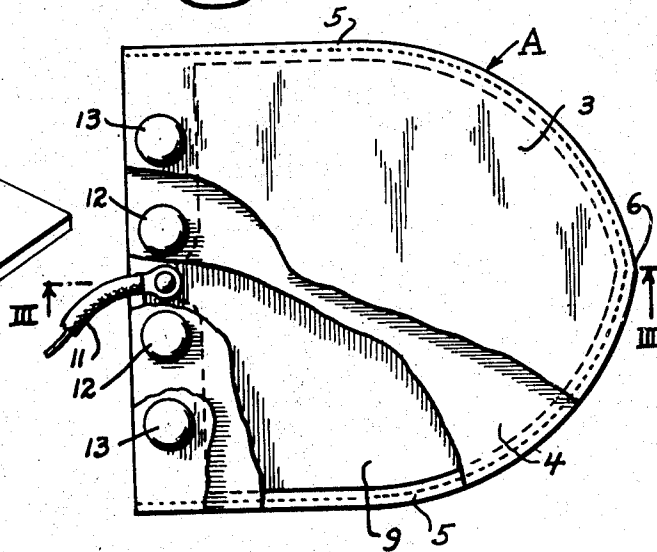


Fig. 3.

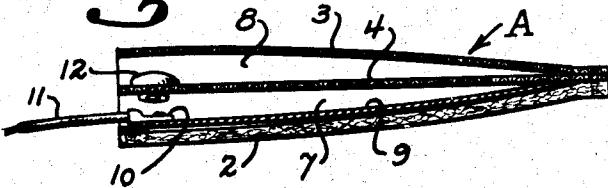


Fig. 4.

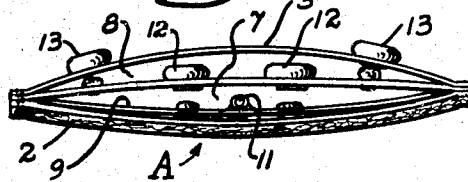


Fig. 5.

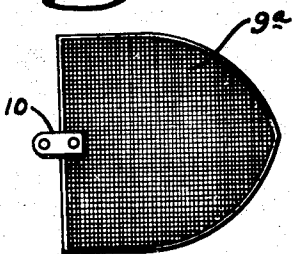


Fig. 6.

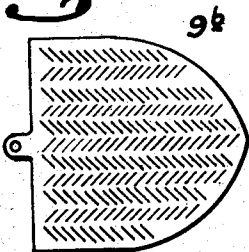
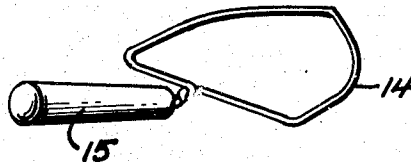


Fig. 7.



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ELECTROPLATING PAD

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Application April 7, 1937, Serial No. 135,429

2 Claims. (Cl. 204—5)

This invention relates to a portable device for effecting rapid electrodeposition of one metal on another.

The object of the present invention is to generally improve and simplify the operation of electroplating; to provide a plating device which is portable to permit it to be readily used, for instance in the plating of the radiator, head lights and other parts of an automobile without removing the parts from the automobile; to provide a plating device for effecting rapid electrodeposition of metals such as nickel, copper, silver, etc., which at the same time permits burnishing and polishing of the metal being deposited while deposition is taking place; to provide a plating device in the form of a flexible porous pad which is adapted to contain a flexible anode; to provide a pad of the character described which is particularly useful in plating both flat and irregular surfaces; and further, to provide a pad which may be held and manipulated by the fingers of the operator, or which may be applied to a holder when large flat surfaces are to be plated.

The invention is shown by way of illustration in the accompanying drawing in which—

Fig. 1 is a diagrammatic perspective view showing the electroplating pad in use, and also showing the electric circuit;

Fig. 2 is a plan view of the plating device partially broken away;

Fig. 3 is a vertical longitudinal section taken on line III—III, Fig. 2;

Fig. 4 is an end view of Fig. 2 showing the snap buttons whereby the pockets in the pad may be closed;

Fig. 5 is a plan view showing one form of a flexible anode;

Fig. 6 is a plan view showing another form of a flexible anode; and

Fig. 7 is a perspective view showing a holder for the pad.

Referring to the drawing in detail, and particularly Figs. 1 to 4, inclusive, A indicates in general a pad consisting of a base section 2 constructed of mohair, felt, or a like porous and liquid-absorbing material. Sewed or otherwise secured to the mohair are two layers of rubberized fabric such as indicated at 3 and 4. The pad shown in this instance is shaped somewhat like a shield, and the seams securing the fabric sections 3 and 4 to the mohair pad 2 extend from opposite sides, as shown at 5 in Fig. 2, to the point indicated at 6, thus forming two pockets 7 and 8 above the porous pad. The lower pocket 9 is provided for reception and retention of a flex-

ible anode plate 9, while the upper pocket serves to receive the fingers of the operator, as shown in Fig. 1, or to permit the insertion of a holder of the type shown in Fig. 7.

The anode plate of course will be made of the metal to be deposited, for instance nickel, copper, silver, etc. It should be as flexible as possible so as to yield and conform to the pad 2 when passing over undulating or irregular surfaces, and may accordingly consist of thin metal which is sufficiently flexible, or it may be constructed of a wire mesh as shown at 9a in Fig. 5, or from a thin plate which is provided with a series of slots as shown at 9b in Fig. 6. A terminal lug 10 will be soldered or otherwise secured to one end of the anode plate, and this will be connected to a wire 11 with one pole of a battery or similar source of direct current supply as shown in Fig. 1.

In order to secure the anode plate against removal from the pocket 7 when in use, two or more clasp or snap buttons may be employed as indicated at 12 in Fig. 4. Similar buttons 13 are employed in conjunction with the upper pocket 8. They are not required when the fingers of the operator are inserted therein, as shown in Fig. 1, but they will be required when a holder of the type shown in Fig. 7 is inserted. This holder merely consists of a piece of wire bent into the shape shown at 14. The wire ends are suitably attached to a handle 15 disposed at an angle thereto. The holder is inserted in the upper pocket 8, and is retained therein by clasping the buttons 13.

In actual practice, it will be understood that the metal to be plated will be cleaned in the usual manner. Thereafter, one terminal of the battery or other source of current supply is connected therewith, for instance by means of the wire 16, the other terminal being connected through wire 11 with the anode 9. The pad 2 is then saturated by dipping or otherwise applying the proper electrolyte. Thereafter, it will be necessary only to apply the pad to the surface to be plated and to rub it back and forth over the surface. During this operation the metal of the anode is decomposed by the action of the electrolyte and the current from the battery, and as such is deposited on the surface being plated. The rubbing of the pad back and forth over the surface will at the same time burnish and polish the metal as it is being deposited, and by continuing the operation long enough, a coat of practically any thickness may be applied.

While this and other features of the present invention have been more or less specifically described and illustrated. I wish it understood that various changes may be resorted to within the scope of the appended claims, and similarly, that the material and finish of the several parts employed may be such as the manufacturer may decide, or varying conditions or uses may demand.

10 Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A device for electrolytic plating comprising a porous flexible pad adapted to be saturated with an electrolyte, a pair of fabric members secured on top of the pad to form two pockets above the same, an anode inserted in the pocket adjacent the pad so as to contact the pad, said anode being made of a flexible metal adapted to conform to the shape of the pad when the pad is in contact with an uneven surface to be plated, means for connecting the anode with a source of current supply, other means for retaining the anode against removal from the pocket, a holder inserted in the other pocket, means for securing

the holder against removal, and a handle on the holder and projecting from the pocket.

2. A device for electrolytic plating comprising a pad-like member, one surface of which is composed of a flexible fabric adapted to be saturated with an electrolyte, and the other surface of which is covered with a fabric impervious to the electrolyte, said fabric sections being sewed together around their edges except at one side to form a pocket between the fabric sections, with an opening at one side thereof, a metal anode plate inserted in the pocket and retained therein, said anode plate being sufficiently thin to flex and bend in unison with the saturated fabric when this is rubbed over an undulating surface to be plated, means for connecting the anode plate with a source of electric current supply, a second section of fabric impervious to the electrolyte sewed on top of the first named impervious fabric, said second named fabric forming a pocket on top of the first named pocket to permit insertion of an operator's fingers when utilizing the pad.

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