May 13, 1930. P. J. F. BATENBURG ET AL 1,758,682

PAD FOR ELECTROPLATING DEVICES

Filed July 13, 1925

FIG. 1

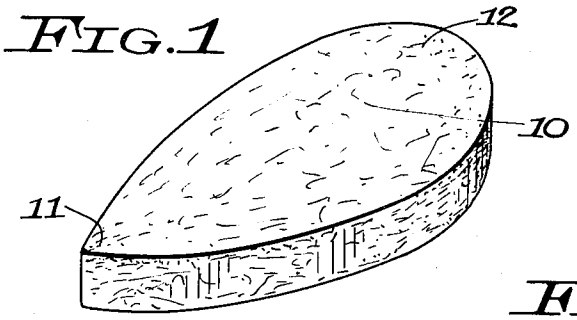


FIG. 2

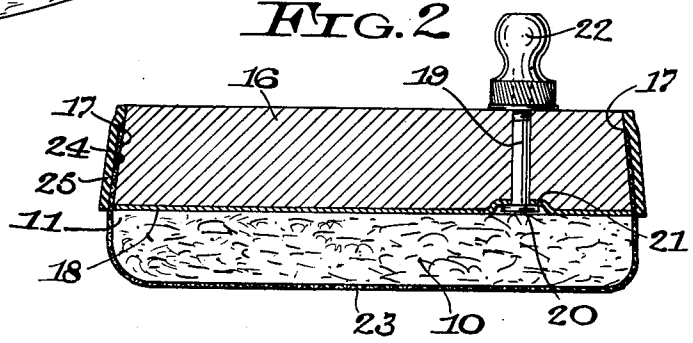


FIG. 3

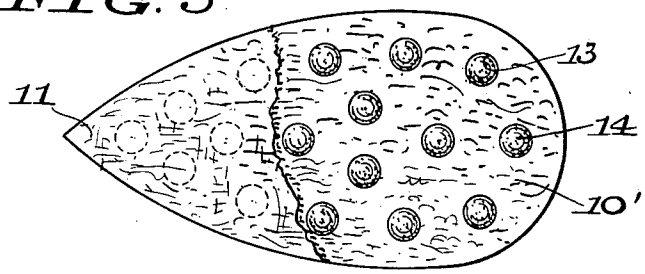


FIG. 4

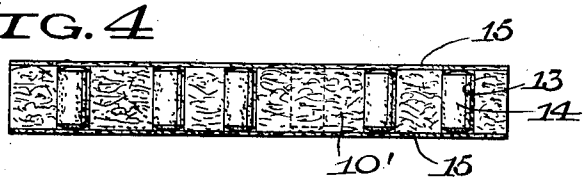
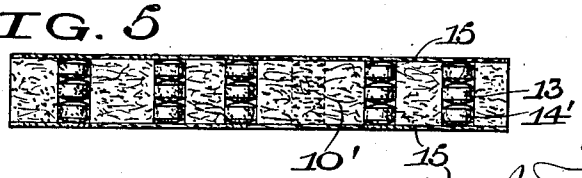


FIG. 5



WITNESSES

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UNITED STATES PATENT OFFICE

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PAD FOR ELECTROPLATING DEVICES

Application filed July 13, 1925. Serial No. 43,316.

The invention relates to electro-plating devices and more particularly to the pads adapted to be secured to holders and carrying metal salts for depositing a plating film on a metallic surface.

An object of the invention is to provide a pad of this character which may be readily applied to a holder and which may be readily charged with metal salts.

The invention further consists in the several features hereinafter set forth and more particularly defined by the annexed claims.

In the accompanying drawings, Fig. 1 is a perspective view of a pad embodying the invention;

Fig. 2 is a longitudinal sectional view of the pad and a holder to which it is secured;

Fig. 3 is a plan view of a modified form of pad, parts being broken away;

Fig. 4 is a longitudinal sectional view of the pad of Fig. 3; and

Fig. 5 is a longitudinal sectional view of the pad showing another manner of charging the pad.

In these drawings, the numeral 10 indicates a flat yielding porous pad, preferably of almond shape to afford a wedge-shaped front end 11 and rounded rear end 12. The pad is constructed of a suitable absorbent material, such as felt, and is charged or impregnated with metallic salts by soaking it with or immersing it in a super-saturated solution of suitable metal salts appropriate to the kind of plating to be accomplished.

In the modified form of the invention shown in Figs. 3 and 4, a felt pad 10′ is provided with a plurality of transverse openings 13 in which are placed molded cylinders 14 of the salts. The salt cylinders are preferably rounded at their ends and are retained in the pad by porous covers 15 secured, as by pasting, to opposite sides of the pad.

In Fig. 5 the salt cylinders are each replaced by a plurality of pills 14′ preferably having rounded ends to localize the contact between adjacent pills.

By moistening the pads of both Figs. 3 and 5, the salts become partially dissolved and are disseminated throughout the felt, the longitudinal contraction of the salt masses incident to solution of surface material preventing any hard points of contact near the surface of the pads.

The pads are adapted to be secured to a holder including an anode engageable with the pad, a suitable form of holder being illustrated in Fig. 2. The holder 16, here shown, is formed of some molded material and consists of a flat slab of almond shape similar to that of the pad, the side walls 17 of the holder being preferably slightly inclined to produce a downward flare. The anode 18 is formed of a flat plate of suitable metal having the same shape as the holder and is secured to the bottom surface of the holder, the securing means including a stud 19 having its headed end 20 soldered or otherwise suitably secured to a counter-sunk portion 21 of the anode, and the stud projecting through the holder and secured at its upper end by ball nut 22 which serves as a terminal. The pad is placed in contact with the anode 18 and is there held by a porous envelop or shallow bag 23 having its upper walls 24 surrounding the sloping walls 17 of the holder and retained thereon by a wide elastic band 25. The elastic band 25 serves to hold the pad-enclosing envelop snugly on the sloping walls of the holder but is readily removed to permit the renewal of the pad. The holder herein disclosed is more particularly disclosed and described in our co-pending application Serial No. 43,315, filed July 13, 1925.

When in use a conductor is connected to the terminal nut 22. The other end of the conductor leads to a suitable source of direct current supply while the other side of the source is connected to the object to be plated, as is well understood in this art. The device is then dipped in water to moisten the absorbent metal-salt-impregnated pad and the envelop is then placed in contact with the object to be plated. While the current is on, the envelop is slowly rubbed over the metallic surface to deposit a film of metal which is simultaneously burnished by the envelop. The pointed forward end 11 of the pad affords facility for reaching corners and recesses, while the broad rear end permits good coverage to large

plane surfaces. The pad, although of yielding and resilient character, is sufficiently firm so that it will retain its shape, thereby insuring that the envelop will remain in snugly-fitting relation about the pad to present a proper burnishing surface, and keep the pointed forward end 11 of the pad in effective condition.

After the pad is exhausted it may be readily replaced by a fresh pad after removing the envelop from the holder. The pad is of simple and inexpensive construction and will retain its activity for a long period of time.

What we claim as new and desire to secure by Letters Patent is:

1. A pad for electro-plating devices comprising a body of yielding absorbent material, and molded masses of metal salts disposed within said body.

2. A pad for electro-plating devices comprising a body of yielding absorbent material having a plurality of recesses, and concentrated salt masses disposed in said recesses larger than the interstices of the absorbent material.

3. A pad for electro-plating devices comprising a substantially flat body of yielding absorbent material having a plurality of recesses, molded masses of metal salts disposed in said recesses, and means for retaining said salt masses within said recesses.

4. A pad for electro-plating devices comprising a substantially flat body of yielding absorbent material having a plurality of transverse openings, molded masses of metal salts disposed in said openings, and sheets of absorbent material secured to the opposite sides of said flat body for retaining said salt masses within said openings.

5. A pad for electro-plating devices comprising a firm relatively thick almond-shaped body of fabric charged with metal salts and having a flat anode-engaging face.

In testimony whereof, we affix our signatures.

PETER J. F. BATENBURG.
CYRIL J. ATKINSON.

CERTIFICATE OF CORRECTION.

Patent No. 1,758,682. **Granted May 13, 1930, to**

PETER J. F. BATENBURG ET AL.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 2, lines 24 and 25, claim 2, strike out the words "larger than the interstices of the absorbent material" and insert the same to follow after the word "recesses" in line 22, same claim; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 24th day of June, A. D. 1930.

M. J. Moore,
Acting Commissioner of Patents.

(Seal)