

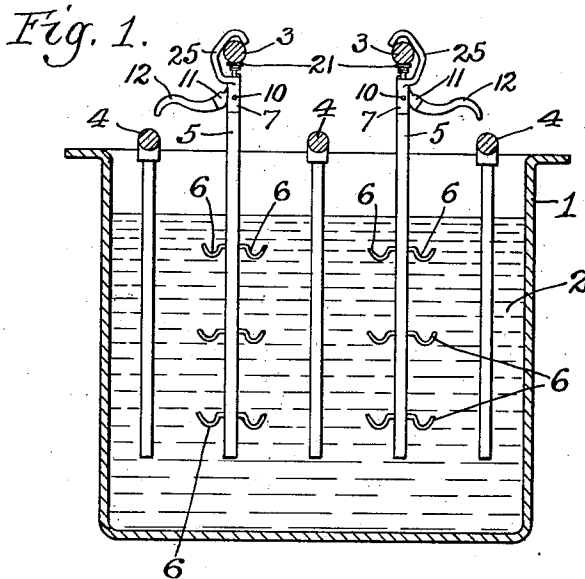
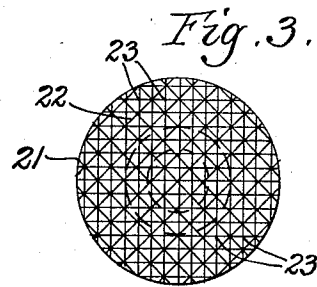
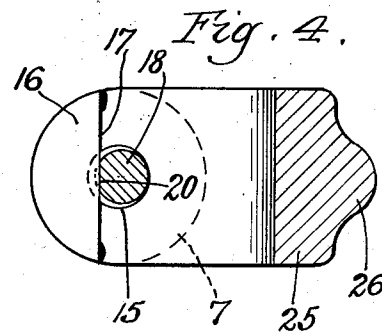
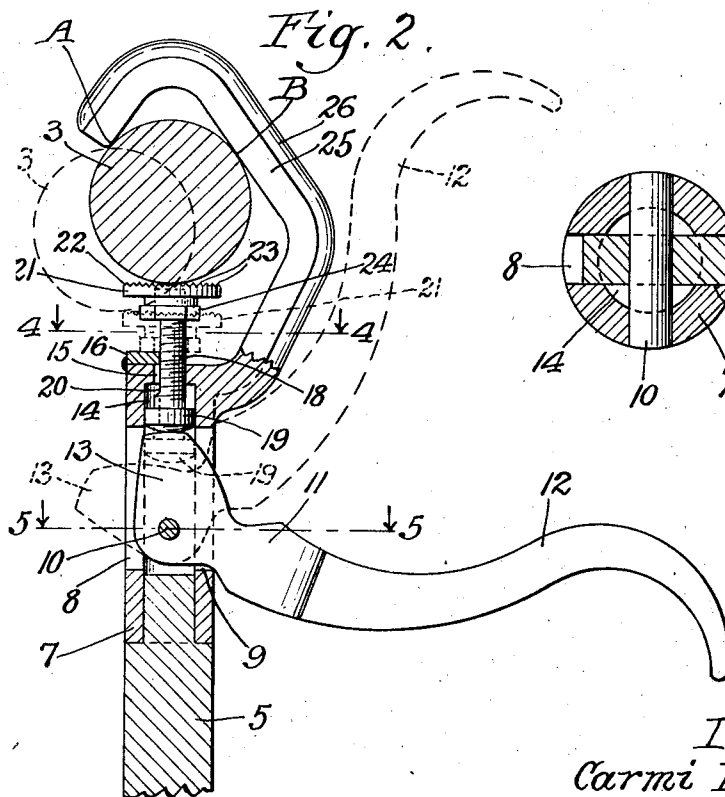
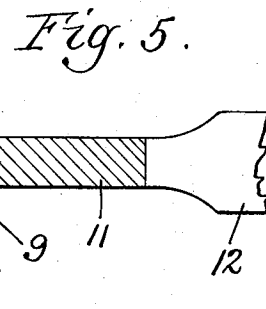
March 19, 1940.

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2,194,138

ELECTROPLATING SUPPORT

Filed Jan. 17, 1938



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UNITED STATES PATENT OFFICE

2,194,138

ELECTROPLATING SUPPORT

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Application January 17, 1938, Serial No. 185,261

2 Claims. (Cl. 204—5)

My invention relates to an improvement in electroplating supports and has for one purpose the provision of improved means for supporting articles in an electroplating bath.

Another purpose is the provision of a support for articles undergoing electroplating which has means for maintaining a firm conductive contact with the anode or cathode bar.

Another purpose is the provision of improved means for locking such a support on an anode or cathode bar in which a handle serves the combined purpose of actuating a locking means and of providing for manual lifting of the support when unlocked.

Other purposes will appear from time to time in the course of the specification and claims.

I illustrate my invention more or less diagrammatically in the accompanying drawing, wherein:

Figure 1 is a vertical transverse section;

Figure 2 is a partial vertical section through one of the supports on an enlarged scale;

Figure 3 is a plan view of part of the locking member;

Figure 4 is a section on the line 4—4 of Figure 2; and

Figure 5 is a section on the line 5—5 of Figure 2.

Like parts are designated by like symbols throughout the specification and drawing.

Referring to the drawing, 1 generally indicates any suitable container of any suitable material and 2 indicates an electroplating bath there-within. 3, 3 indicate cathode bars and 4, 4 indicate anode bars. It will be understood that my supporting means may be employed either in connection with anode or cathode bars. I illustrate it however as applied to a support which is secured to the cathode bar or rod.

5 indicates a depending supporting member having thereon a plurality of hooks 6 on which the work to be plated may be positioned. Secured to or associated with the upper portion of the bar 5 I illustrate a sleeve 7 having opposed slots or apertures 8, 9. 10 indicates a pivot member with which is associated a lever member 11 having a manual handle portion 12 and a locking toe or lug 13. 14 indicates a bore in the upper portion of the sleeve 7 having a reduced end aperture 15 partially closed by a plate 16 having a rectilinear edge 17. 18 is an axially movable pin having a guide 19 opposed to the toe 13 and having a squared or cut-away side 20 opposed to the plate 16 whereby rotation is made impossible.

Adjustably mounted on the upper end of the member 18 is a locking abutment 21 having any suitable anti-frictional or gripping surface 22 which may be herein shown as formed of a series of intersecting channels whereby points or gripping members 23 are provided. The member 21 may be made adjustable along the member 18, for example, by the employment of an adjusting nut 24. Herein shown as formed integral with the sleeve 7 is a supporting and clamping hook 25 which may have a reinforcing rib 26 which is shown as adapted to overhang the cathode bar 3 as shown in Figure 2. The member 5 may simply be hung on the bar 3 by hooking it over the bar with the portion 25 engaging the bar in a two-point contact as at A, B. The third or gripping contact is provided by the member 21.

When the handle 12 is in the dotted line position of Figure 2 the member 21 is moved to the dotted line position and there is ample room for slipping the hook over the rod 3. When it is hooked on the rod the operator simply presses down on the handle which raises the toe 13 into the locking position. The parts are so proportioned that when the handle 12 is moved to its bottom position the member 13 passes over center and the parts are automatically locked in position against unintended displacement. At the same time a very close gripping contact is provided between the rod 3 and the member 26 whereby a constant and adequate conductive connection is maintained. It will be noted that when the handle is in its lowest position it is generally horizontal and cannot penetrate far enough down to get into the bath even though the bath is very close to the top of the container 1.

It will be realized that whereas I have herewith shown and described a practical operative device, nevertheless many changes might be made in the size, shape, number and disposition of parts without departing from the spirit of the invention and I wish, therefore, that my showing be taken as in a sense diagrammatic.

My invention is particularly applicable to use with plating solutions that are agitated or in plating operations that employ a moving cathode. Recent developments in plating operations include the employment of agitated baths or moving cathodes and hence the maintenance of a proper contact between the cathode and the plating support is of particular importance.

I claim:

1. In an electroplating support, an elongated body portion adapted to depend within an elec-

trolytic plating bath, a cathode bar engaging hook in conductive relation with the upper end of said body portion and vertically aligned with the upper end thereof, a cathode bar gripping member axially movable in the upper end of said support, and including a portion opposed to said hook and adapted to engage a lower portion of the cathode bar, and handle means pivoted on said body portion about a horizontal axis, and including an outwardly extending handle portion, and a lever portion opposed to said gripping member, and adapted, in response to a downward movement of said handle portion, to thrust said gripping portion upwardly against the cathode bar, the space between the gripping portion and the hook, when the gripping portion is in withdrawn position, being sufficiently greater than the diameter of the cathode bar to permit the support readily to be positioned upon such bar, and limit means adapted to limit the upward movement of said handle portion, said handle portion including an element outwardly extending from the body portion when the handle portion is in upward position, whereby the sup-

port may readily be applied to or removed from the cathode bar.

2. In an electroplating support, an elongated body portion adapted to depend within an electrolytic plating bath, a cathode bar engaging hook mounted on and vertically aligned with the upper end thereof, an axially movable cathode bar gripping member at the upward end of the support, and including a portion opposed to said hook and adapted to engage a lower portion of the cathode bar, and handle means mounted adjacent the top of said body portion and including an outwardly extending handle portion and an inner portion adapted for operative relationship with said gripping member, and adapted, in response to manual actuation of said handle portion, to thrust said gripping portion upwardly against the cathode bar, the space between the gripping portion and the hook, when the gripping portion is in withdrawn position, being sufficiently greater than the diameter of the cathode bar to permit the support readily to be positioned upon or removed from said bar.

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