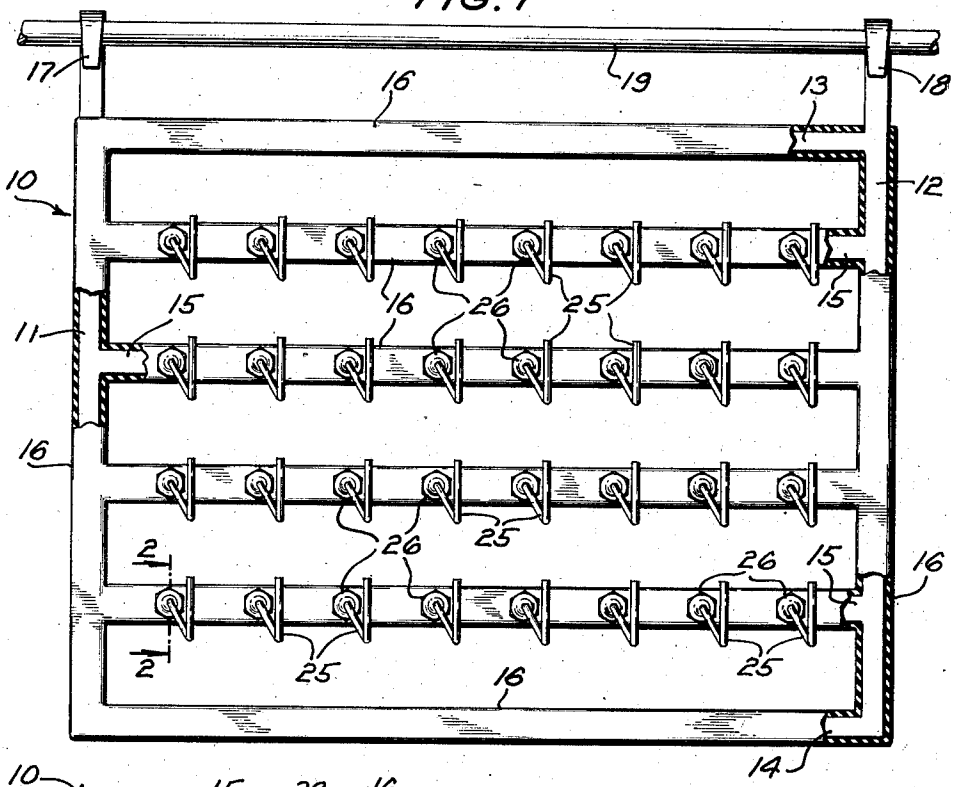
April 6, 1948. L. E. SCHROEDER 2,439,190

ELECTROPLATING RACK

Filed July 13, 1944

FIG. 1



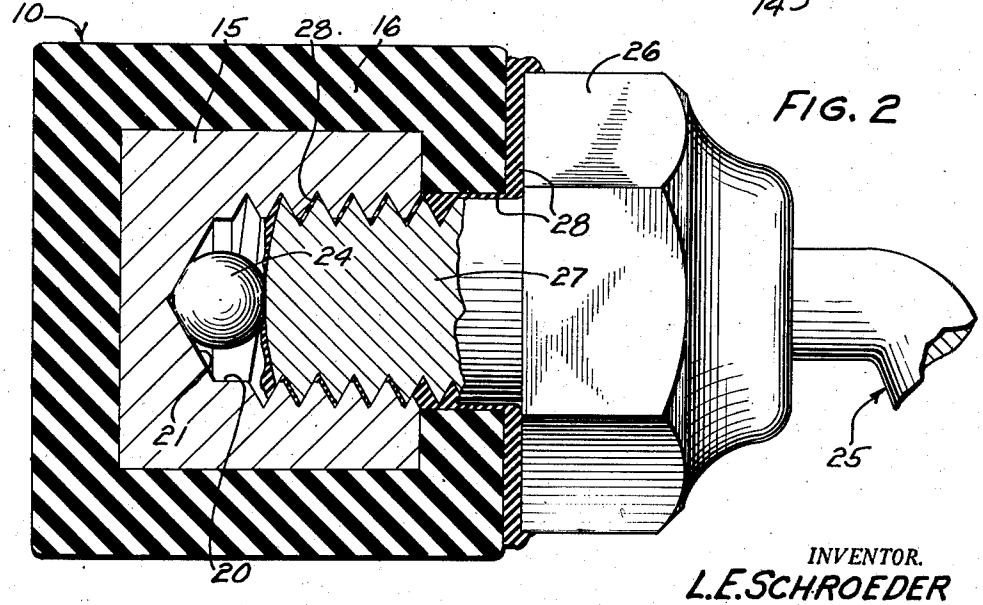


FIG. 2

INVENTOR.
L.E.SCHROEDER
BY
Harry L. Duffy
ATTORNEY

Patented Apr. 6, 1948 2,439,190

UNITED STATES PATENT OFFICE

2,439,190

ELECTROPLATING RACK

Leroy E. Schroeder, Elmwood Park, Ill., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York

Application July 13, 1944, Serial No. 544,771

2 Claims. (Cl. 204—297)

1

This invention relates to article supporting apparatus and more particularly to plating racks for holding articles during the electro-plating thereof and a method of making such a rack.

Objects of the invention are to provide a simple, practicable and efficient plating rack whereby a positive and permanent electrical contact between each individual article support and a conducting frame is insured and the connection between the support and frame are protected against acid corrosion.

In accordance with the above objects, the present invention, in one embodiment thereof, comprises a rubber coated frame of conducting metal having side, top and bottom members with article supporting and conducting cross bars arranged between the top and bottom members and connected to the side members, the cross bars being provided with spaced screw-threaded cavities, each of which carries, at its inner end wall, a silver pellet, and an article supporting and conducting hook screw-threaded into each cavity and pressed against the silver pellet to deform it, thus providing a positive and permanent electrical contact between each individual hook and its supporting bar. For the purpose of protecting the screw threads of the hook and cavity from acid corrosion, the hook threads have liquid rubber latex or a suitable rubber substitute applied thereto.

Other objects and advantages of the invention will be apparent from the following detailed description taken in conjunction with the accompanying drawing, in which

Fig. 1 is a front elevational view, partly in section, of a plating rack embodying the features of the invention and

Fig. 2 is an enlarged vertical detail section taken on the line 2—2 of Fig. 1.

Referring to the drawing, the numeral 10 indicates, in general, a rectangular framework or plating rack composed of uprights 11 and 12 interconnected by top and bottom horizontal bars 13 and 14 and a plurality of interconnecting horizontal cross bars 15. The entire framework, including the cross bars, may be of brass or other suitable conducting material, which is preferably rubber coated throughout, as indicated at 16, for insulating and protective purposes. Extensions from the uprights 11 and 12 above the top bar 13 are bent, as shown at 17 and 18, to form hangers, by means of which the described rack may be suspended from a bus bar 19 of a conventional electroplating apparatus in an electrolyte (not shown).

2

Each of the cross bars 15 is formed with a plurality of suitably spaced horizontally extending screw-threaded cavities 20 (Fig. 2), each terminating in a cone-shaped depression 21 in its inner end wall. Inserted or dropped into each of the cavities 20 is a deformable contact member 24, which may take the form of a normally spherical pellet of silver or any good electrical conducting material. Article supporting hooks 25 of suitable electrical conducting material, each having a nut-shaped intermediate portion 26 and a screw-threaded shank portion 27, are each dipped or otherwise suitably treated by applying a liquid rubber later, indicated at 28, and immediately screw-threaded into the cavities 20 and with sufficient tightness to press the contact member 24 into the cone-shaped depression 21 forming the inner end wall of the cavity. The members 24 may become slightly deformed in threading the hooks 25 into position and thus they provide positive and permanent electrical contacts between each individual article supporting hook 25 and the conducting frame cross bars 15 and, consequently, a conducting path to the article to be electroplated and suspended from the hook is positively completed. In screw-threading the hook 25 into the cavity 20 and against the deformable contact member 24, which becomes slightly deformed, the latex on the inner end face of the hook, where it engages the member 24, is removed therefrom by an abrading action as the hook is threaded into position under compression. The liquid rubber latex or other suitable material 28 applied to the screw-threaded shank portion 27 of the hook 25 positively seals the cavity 20 and the screw threads from contact with the acid of the bath and thus corrosion is prevented.

The pressure of the pellet 24 against the end of the shank 27 also tends to force the internal and external threads together to more effectively seal and exclude electrolyte from the cavity, into which the shank is threaded.

What is claimed is:

1. An article supporting rack for electroplating comprising an insulation coated frame of electrical conducting material, an insulation coated cross bar thereof having a screw-threaded cavity terminating in a cone-shaped inner end wall, a deformable contact pellet of conducting material engaging in the cone-shaped inner end wall, and an article supporting and electrical conducting hook having a screw-threaded portion fixedly threaded into the cavity under compression against and deforming said contact pellet to in-

sure a positive electrical contact between said bar and hook.

2. An article supporting rack for electroplating comprising an insulation-coated frame of electrical conducting material, a cross bar on said frame also coated with insulation and having a screw-threaded cavity therein terminating in a cone-shaped inner wall, an article supporting and electrical conducting hook having a threaded portion threaded into said cavity, and a deformable metallic contact pellet interposed between the cone-shaped inner wall and an end of the conducting hook and compressed to provide an appreciable area of contact between the cross bar and hook for insuring a positive electrical contact therebetween, said threaded portion of the hook having a coating of relatively fluid insulation thereon which is partially removed by the abrasive action of threading the hook into the cross bar to deform the deformable contact pellet.

LEROY E. SCHROEDER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
731,453	Hargreaves et al.	June 23, 1903
799,861	Meaker	Sept. 19, 1905
1,281,983	Liebknecht	Oct. 15, 1918
1,895,845	D'Halloy	Jan. 31, 1933
2,177,453	Donald	Oct. 24, 1939
2,275,382	Smith	Mar. 3, 1942

FOREIGN PATENTS

Number	Country	Date
14,133	Great Britain	1902
288,813	Great Britain	Apr. 19, 1928
362,756	Great Britain	Dec. 10, 1931
690,318	France	June 16, 1930

OTHER REFERENCES

Alien Property Custodian publication No. 290,026, July 13, 1943.