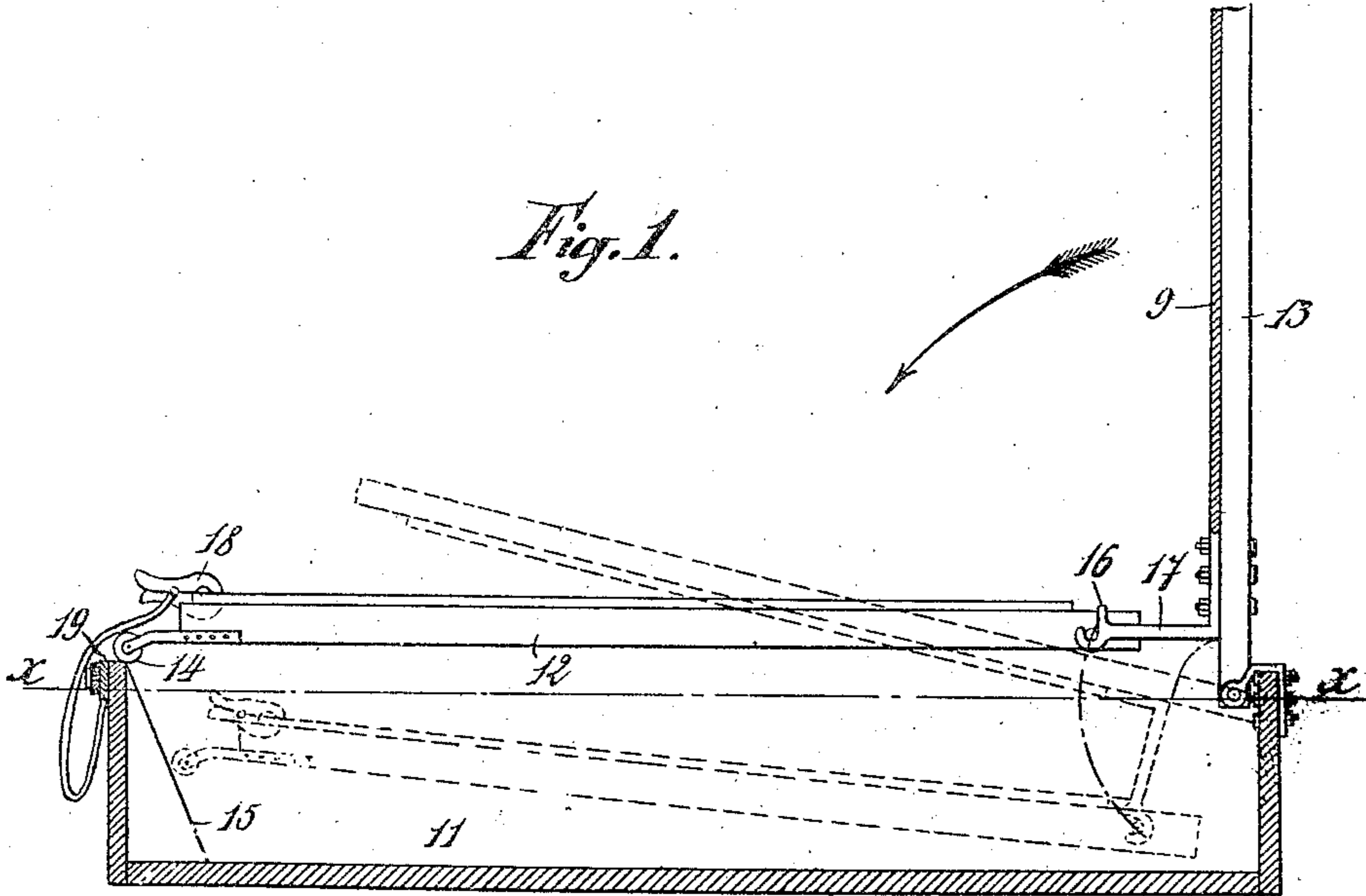


E. HOORICKX.  
MANUFACTURE OF SILVERED GLASS MIRRORS.  
APPLICATION FILED JUNE 22, 1909..

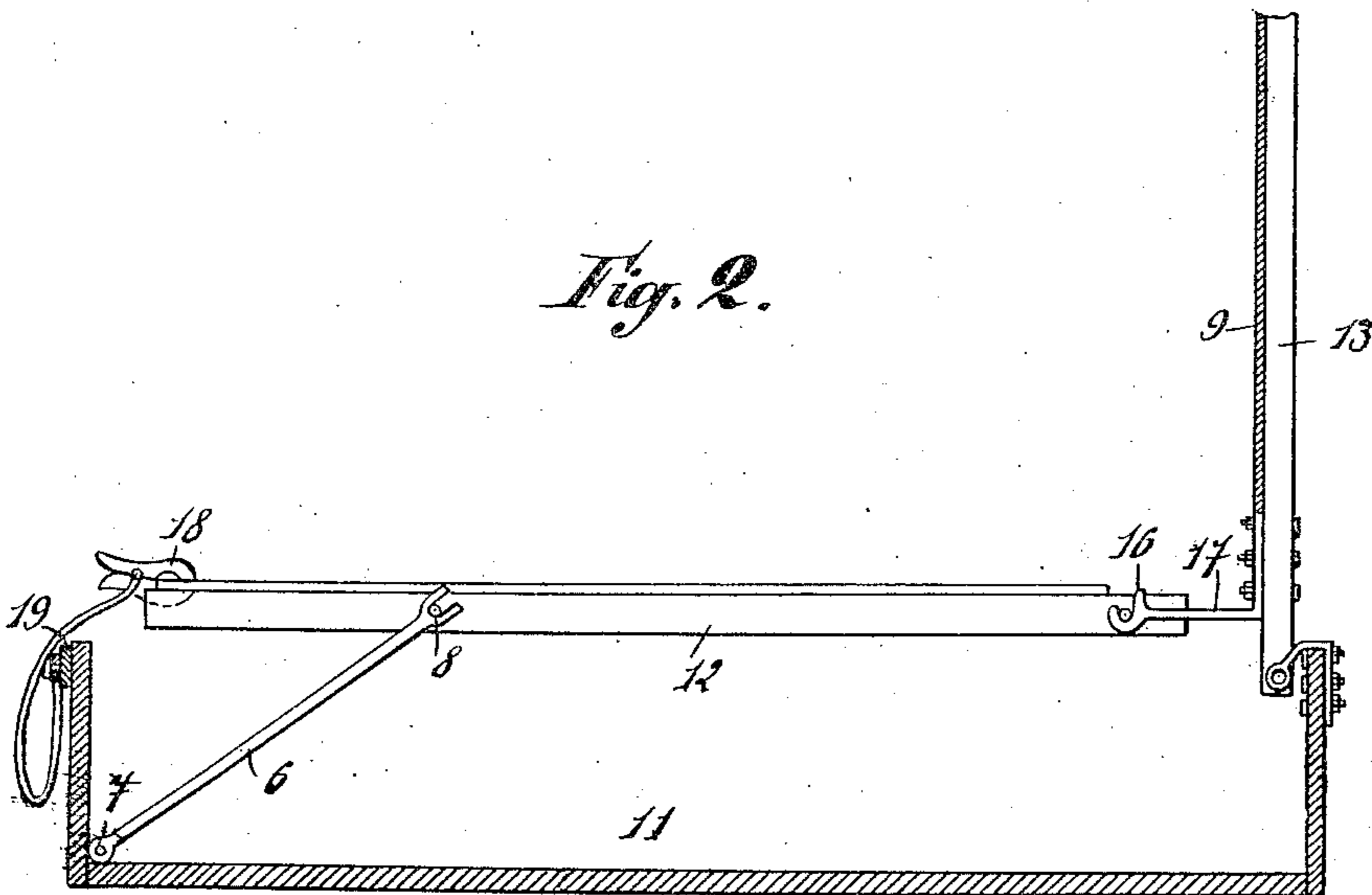
966,097.

Patented Aug. 2, 1910.

*Fig. 1.*



*Fig. 2.*



INVENTOR

WITNESSES

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# UNITED STATES PATENT OFFICE.

EMILE HOORICKX, OF BRUSSELS, BELGIUM.

MANUFACTURE OF SILVERED-GLASS MIRRORS.

966,097.

Specification of Letters Patent. - Patented Aug. 2, 1910.

Application filed June 22, 1909. Serial No. 503,708.

*To all whom it may concern:*

Be it known that I, EMILE HOORICKX, subject of Belgium, residing at 308 Rue des Palais, Brussels, Belgium, have invented  
5 new and useful Improvements Relating to the Manufacture of Silvered-Glass Mirrors; and I do hereby declare the following to be a full, clear, and exact description of the same.

10 The present invention relates to a process of depositing on silvered mirrors a protecting layer of copper or some other suitable metal by electrolysis.

It has for its object to provide a mechanism for immersing the mirrors in the electrolytic bath. This mechanism is so constructed that by a single manipulation the frame carrying the mirrors and that carrying the anode are immersed in the electrolytic bath  
15 in such a manner that the mirrors travel obliquely into the bath and are completely immersed therein before the frame carrying the anode has entered the bath. The oblique passage of the mirrors into the bath avoids  
25 the disturbance of the liquid which occurs when the mirrors enter the liquid normally to the surface thereof. On the other hand, the fact that the mirrors are completely immersed before the frame carrying the anode  
30 has begun to enter the bath, has the important result that there can be no localization of the current on a small portion of the silvering of the mirror and a burning thereof as occurs if the mirrors are only partially  
35 immersed in the bath when the anode comes in contact with the latter.

In the accompanying drawings: Figure 1 is a vertical section through a vat provided with a device for immersing the mirrors  
40 horizontally; Fig. 2 a vertical section of a modification.

Referring to Fig. 1, 11 is the electrolytic vat, 12 a frame supporting the mirror or mirrors, 13 a frame carrying the anodes.  
45 The frame 13 is hinged to one of the sides of the vat so that it may be folded down to bring it parallel to the bottom of the vat and therefore to the mirrors during the depositing process; on the other hand when the apparatus is to be put out of work the frame 13 may be brought into the vertical position; the frame 12 is constructed to descend into the vat while remaining horizontal, or approximately so, when the frame  
50 13 is turned downward so that a single operation serves to put the whole apparatus

in working condition. For this purpose the frame 12 has at one end rollers 14, adapted to roll on an inclined plane 15 fixed at that side of the bath which is opposite to the  
60 hinges carrying the frame 13. At the other end the frame 12 carries pins or the like adapted to engage in hooks 16 on the ends of rods 17 fixed rigidly to the frame 13. One limb of the hook 16 is longer than the  
65 other to facilitate introduction of the pin carried by the frame 12. It will be obvious that when frame 13 is lowered into the horizontal position, frame 12 will accompany it descending into the vat 11, and that in order  
70 to raise the frame 12 from the vat it is only necessary to lift the frame 13 into the vertical position.

The dotted lines, Fig. 1, show the relative positions of the frame carrying the mirrors  
75 and that carrying the anode at a certain time of the manipulation of the mechanism. As shown by these dotted lines the mirrors are completely immersed before the anode  
80 9 has begun to enter the bath, whose level is indicated by  $x-x$ .

The current is conducted to the silvered surface by means of any suitable device such as the clamp 18, connected by a flexible conductor, through a copper bar 19 fixed to the  
85 outer surface of the wall of the vat, with the negative pole of the current generator while the frame carrying the anode is connected with the positive pole.

The connection of the flexible conductor  
90 with the bar 19 may be any that is suitable, thus the end of the conductor may be inserted beneath the screw or into a spring blade contact.

The frames 12 and 13 may be of any suitable dimensions being limited merely by the  
95 dimensions of the vat. When the latter is of very large dimensions it is preferable in practice to combine one vat with two or more frames, 12 and 13, so that the latter  
100 may not be of very large dimensions requiring powerful machines for moving them.

In the modification shown in Fig. 2 instead of rollers 14 rolling on an inclined plane 15 the frame 12 has pins 8 or the like  
105 adapted to engage in hooks on the ends of levers 6 pivoted at 7 in the vat.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be per-  
110 formed, I declare that what I claim is:—

1. In apparatus for electroplating mir-

rors, a vat, an anode pivoted on said vat, a mirror carrying frame, pivoted at one end on said anode, at a suitable distance from the latter, and means for supporting and  
5 guiding the other end of said mirror carrying frame, substantially as described.

2. In apparatus for electroplating mirrors, a vat, an anode pivoted on said vat, a mirror carrying frame, pivotally supported  
10 at one end on said anode frame and at a suitable distance from the latter, rollers mounted on the other end of the mirror carrying frame and an inclined plane along which the rollers are adapted to roll for sup-  
15 porting and guiding said frame, substantially as described.

3. In apparatus for electroplating mirrors, a vat, an anode pivoted on said vat, a mirror carrying frame, pivotally supported on one end on said anode frame, at a suitable distance from the latter, and levers, pivoted on said vat, and the free ends of which engage suitable devices carried on the frame, substantially as described. 20

In testimony whereof, I have signed my  
name to this specification in the presence of  
two subscribing witnesses. 25

EMILE HOORICKX.

Witnesses:

CHARLES RENOTTS,  
JAMES M. G. FAY.