

# UNITED STATES PATENT OFFICE

1,942,356

## ELECTRODEPOSITION OF CHROMIUM

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No Drawing. Refile for abandoned application Serial No. 734,193, August 26, 1924. This application July 9, 1931, Serial No. 549,800. Renewed October 25, 1933

1 Claim. (Cl. 204—1)

This invention relates to the electroplating of chromium, and provides improvements therein.

The baths and method of plating may be made up and practiced according to U. S. Letters Patent No. 1,581,188 to Fink.

We have discovered that in certain instances the type of plate desired is most readily obtained by having the surface of the object to be plated at approximately the same temperature as the plating bath before closing the electric switch completing the circuit through the bath, and thereby bring the surface of the object to be plated to cell temperature before beginning plating. This may be accomplished in any suitable manner, as by immersion in a liquid at the proper temperature.

The bringing of the surface of the object to be plated to the temperature of the bath is especially important for large objects to be plated where the temperature thereof is considerably different from that of the bath.

If the plating has been interrupted, as, for example, for inspection, the cathode should again be brought back to the cell temperature before closing the switch and a very low current strength (below the point at which plating occurs) applied

at first; and then the current is gradually brought up to its proper value. Without this precaution, after interruption of the plating, the brightness of the surface will be lowered, becoming bluish-gray or gray in color.

This procedure permits chromium to be deposited over chromium, and minimizes the tendency for peeling and thereby resulting in good adherence.

By the use of the invention, the obtaining of platings of uniform appearance is aided in those cases where by reason of temperature differences between the article and bath, the temperature at the surface of the article would be such as to affect the character of the deposit, and the invention hence increases the satisfaction and economy in the electroplating process.

This application is a renewal of our application, Serial No. 734,193, filed August 26, 1924.

What is claimed is:

In a process of electrodepositing chromium, bringing the object to be plated to the temperature of the bath prior to beginning the electrodeposition.

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