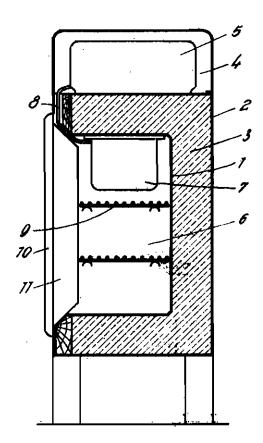
PUBLISHED
APRIL 27, 1943.
BY A. P. C.

R. HINTZE ET AL REFRIGERATORS Filed April 18, 1941 Serial No. 389,130





ALIEN PROPERTY CUSTODIAN

REFRIGERATORS

Rudolf Hintze, Berlin-Charlottenburg, and Ru-dolf Schinn, Mühlhelm A. D. Ruhr, Germany; vested in the Alien Property Custodian

Application filed April 18, 1941

This invention relates to refrigerators, and more particularly to refrigerator cabinets equipped with a refrigerating apparatus.

In refrigerator cabinets it is customary to design the metal parts exposed to the cooling chamber air in such a manner as to be absolutely resistant to corrosion. To fulfill this requirement, the evaporators of refrigerating apparatus mounted in refrigerator cabinets have hitherto been made of sheet brass, sheet copper or of 10 stainless steel. The initial cost of such evaporators is very high and the manufacture thereof is therefore very expensive. Steel is a material which has sufficient strength for evaporators and offers also sufficient resistance to the usual re- 15 frigerants. However, when using steel, particular means must be employed in order to prevent a corrosion of the surface exposed to the cooling chamber air. It has already been proposed to coat the metal surface exposed to the cooling 20 chamber air with synthetic resin varnish. Also the electroplating method has already been employed to render the metal surface resistant to corrosion. However, these methods are not suitable for a production of refrigerator cabinets on 25 a large scale.

The object of the present invention is to provide an improved refrigerator, particularly a refrigerator cabinet equipped with a refrigerating apparatus. This may be accomplished according 30 to the invention by the fact that the single parts exposed to the cooling chamber air consist of sheet metal, whose outer side exposed to the air is alloyed in such a manner with chrome as to obtain a rust-proof surface. Especially the 35 evaporators of the refrigerating apparatus are manufactured in this manner. The economical and easily weldable deep drawn sheets may therefore be employed for the evaporators. After the evaporator has been formed of these sheets, the 40 obtain a rust-proof surface. latter are alloyed at the outer side exposed to the atmosphere with chrome. In this way the sheets

are provided with an outer coating of an alloy containing such a high percentage of chromium that this surface layer is completely rust-proof. While the evaporator material proper consists of deep drawn sheet metal the outer surface consists of a rust-resistant sheet metal which absolutely withstands the influences of the cooling chamber air. Besides the evaporator, all other parts required for a refrigerating apparatus or refrigerator cabinets and which are liable to be corroded may be treated in the manner described above. Consequently, the invention may be used to advantage for conduits, valves, shelves and inner casings for refrigerator cabinets, sheet metal for the inner lining of cooling chambers. Also trays for the production of ice, containers for storing articles of food to be cooled and the constituents thereof may be manufactured according to the above-described method.

In the accompanying drawing is shown by way of example a domestic refrigerator equipped with a refrigerating apparatus. I denotes an inner casing, 2 the outer cabinet lining and 3 the insulating material arranged therebetween. 4 is a machine compartment in which the parts 5 of the refrigerating apparatus are accommodated outside the cooling chamber. In the cooling chamber 6 is secured the evaporator 7. 8 denotes the refrigerant conduits which connect the evaporator with the parts 5. The cooling chamber is subdivided in the usual manner into food storage compartments by shelves. 10 denotes the door for the cooling chamber.

The outer parts exposed to the cooling chamber air, that is to say the inner surface of the inner casing I, the inner surface of the door lining II consisting of sheet metal, the shelves 9 and the outer surface of the evaporator 7 are so alloyed with chrome in the manner described above as to

> RUDOLF HINTZE. RUDOLF SCHINN.