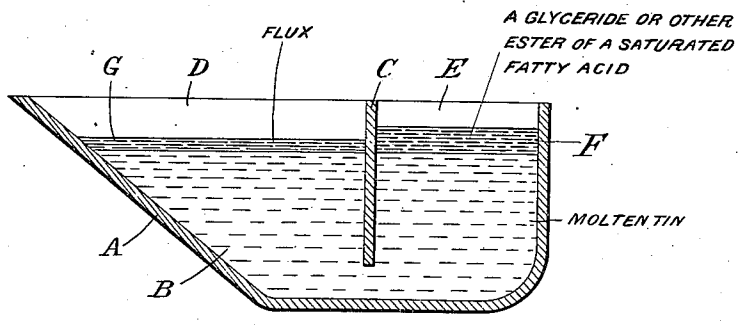
C. DREYMANN.

PROCESS OF TINNING METAL PLATES AND OTHER ARTICLES.

APPLICATION FILED MAY 15, 1916.

1,242,532. Patented Oct. 9, 1917.



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PROCESS OF TINNING METAL PLATES AND OTHER ARTICLES.

1,242,532. Specification of Letters Patent. Patented Oct. 9, 1917.

Application filed May 15, 1916. Serial No. 97,507.

To all whom it may concern:

Be it known that I, CARL DREYMANN, a subject of the German Emperor, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Processes of Tinning Metal Plates and other Articles, of which the following is a full, clear, and exact description.

In plating sheet iron with tin the bath of molten tin is covered with a layer of palm-oil so that as the tin-coated plate leaves the tin it passes through the oil.

In the process indicated the oil used is consumed in large amount, and I have discovered that this is due chiefly to decomposition and polymerization of the unsaturated fatty acid and glycerid. This decomposition and polymerization increases as the oil is heated, especially when heated to 250° C. or above, the temperature at which the plating with tin is effected. With a glycerid or other ester of a saturated fatty acid, polymerization and decomposition do not occur, or only to a slight extent.

My present invention is based on the above discoveries. In my improved process the "oil" used is a glycerid or ester of a saturated fatty acid; as for example oleo-stearin, all kinds of hydrogenated oils and fats, and artificial esters produced from palmitic acid, stearic acid or other saturated acids.

In the accompanying drawing the figure shows diagrammatically a tank or vat A containing molten tin B. The vessel is divided by a partition C which terminates above the bottom, thereby dividing the vessel into two communicating compartments, D, E. On the molten tin in the latter compartment is a body of glycerid or other ester F, and in the former a layer G composed of the usual flux, such as ammonium chlorid and zinc chlorid.

In carrying out the invention in the preferred manner, the iron plate or sheet previously cleaned in any suitable manner, is passed into the molten tin B in compartment D of the vessel A, then under the partition C into compartment E, and thence out through the layer of glycerid or other ester F.

The tin plate is equal in every respect to that produced by the palm-oil process, with the important advantage that my process has a much larger output for the same amount of "bil" consumed. In other words, my process is more economical. Experience has shown that the output is at least twenty-five per cent. greater with the same consumption of oil.

What I claim is:

1. In a process of tinning metal plates and other articles, the step comprising passing the plate through a bath of molten tin and out through a layer consisting essentially of an ester of a saturated fatty acid, floating on the molten tin.

2. In a process of tinning plates and other articles, the steps comprising dipping the plate into a bath of molten tin, and taking the plate out of the bath through a layer or body consisting essentially of hydrogenated oil.

In testimony whereof I hereunto affix my signature.

CARL DREYMANN.