UNITED STATES PATENT OFFICE.

STANLEY K. GREEN, OF BALTIMORE, MARYLAND.

METHOD OF TREATING OXIDIZED TINNED SHEETS OR SURFACES.

No. 813,147. Specification of Letters Patent. Patented Feb. 20, 1906.

Application filed September 29, 1905. Serial No. 280,709. (Specimens.)

To all whom it may concern:

Be it known that I, STANLEY K. GREEN, of Baltimore, Maryland, have invented a new and useful Method of Treating Oxidized Tinned Sheets or Surfaces, which invention is fully set forth in the following specification.

This invention relates to a process of treating the bodies of old tin cans for the purpose of rendering the same capable of commercial use for a variety of purposes.

In a great majority of cases the surface of the tinned sheet of which the can-body is composed has been subjected to the corrosive action of the acids contained in the fruits or other substances which have been preserved in the cans, and in addition to this corrosion the tinned surface has become oxidized from exposure to the weather and is still further oxidized as the result of the high degree of heat to which the cans are subjected in the act of melting the heads from the cans and opening the side seams for the purpose of recovering the bodies in a shape fit for commercial use. This corroded and oxidized condition of the tinned surface of the old can-body renders such bodies while in that condition of little or no practical value in the arts; and the object of the present invention is to provide a means whereby such bodies, corroded by the action of acids and oxidized by exposure to the weather and fire or heat, may have a bright non-oxidizable surface imparted thereto at a cost so low that articles made therefrom, although of superior quality to those made from ordinary tin, may, nevertheless, be sold at a less figure.

I have discovered that the acid-corroded oxidized tin-can bodies may be readily coated with an alloy of tin and lead by subjecting the said acid-corroded and oxidized can-bodies to the action of a bath consisting, substantially, of molten lead in the presence of a suitable flux—such, for example, as grease. Of course it will be understood by the expert in the art that after repeated dippings of the tin in the molten-lead bath have occurred more or less of the tin will unite with the lead in the bath, so that the bath would be one of a lead-and-tin alloy, consisting, substantially, however, of lead; but this will in no way affect the operation of the invention. In utilizing this discovery and in the practice of my invention I take old tin cans in the condition in which they are ordinarily recovered from the garbage-heap, corroded with the acids of the fruits and other materials which the cans may have contained and oxidized by the action of the weather, and subject said cans to the action of a sufficient degree of heat to melt off the heads of the cans and the solder from the side seams thereof, which heating action, as above mentioned, very greatly increases the oxidization of the tinned surface of the can-bodies. I then take the separated can-bodies, preferably opened out in the form of flattened sheets, and dip the same into a bath of molten lead in the presence of a suitable flux—for example, grease placed upon the surface of the molten lead. The result of this dipping process is the coating of the corroded and heavily-oxidized tinned surface with an alloy of tin and lead having a dull luster and practically non-oxidizable. This product is capable of use in the manufacture of cans for various forms of corroding chemicals, roofing-caps, and the like, and while it is produced at a price much below that of ordinary grades of tin it is, nevertheless, of superior quality to such tin.

I do not claim as my invention the process of subjecting new tinned sheets to the action of a bath of molten lead in the presence of a suitable flux, since this is old and well known in the art; but prior to my discovery it was not well known that corroded and oxidized tinned surfaces could be effectively provided with a coating of an alloy of tin and lead in the manner hereinbefore described without cleaning off or otherwise removing the oxids and other impurities.

What I do claim, therefore, is—

The method herein described which consists in subjecting oxidized or otherwise corroded tinned sheets to the action of a bath consisting substantially of molten lead in the presence of a suitable flux.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

STANLEY K. GREEN.

Witnesses:
E. B. ROBSON,
GEO. G. LEBER.