Patented Mar. 13, 1928. 1,662,574

UNITED STATES PATENT OFFICE.

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PROCESS OF COLORING FOIL.

No Drawing. Application filed October 26, 1925. Serial No. 65,052.

This invention relates to a process whereby tinfoil is given a gold color and the manner in which such operation is carried out.

The objects of the invention include, among others, the production of a gold colored foil, a process for converting the present tin foils into gold colored foil, and in the provision of a means whereby conventional foil is converted into a new product possessing the characteristics of tin foil or alloyed foil but having a golden color.

These objects, and such other objects as may later appear, are obtained by the novel process which is hereinafter outlined, step by step, in the manner in which such steps are arranged, and the product resulting from such process.

In carrying out the process, tin foil or alloyed foil is prepared in the usual manner. Such tin foil, after its manufacture, in any of the conventional methods now known in the art, is washed. Such washing is for the purpose of freeing the surfaces of the foil from impurities. During the course of manufacture, grease or soap may come in contact with and adhere to the upper or lower surfaces of the foil sheet.

The preferred washing of the foil is accomplished by passing the foil through a wash mill. Gasoline is the most desired washing medium, and both surfaces of the tin foil sheet are thoroughly cleansed therewith. Other materials for this cleansing operation could be employed, but at the present time, gasoline of standard quality apparently produces superior results.

When the foil has been washed to the extent indicated, it is either spooled or cut to size. It is, of course, thoroughly dried of the gasoline, or other cleansing fluid, by evaporation or other process. The spools of foil, or the packages of cut foil, if it has been cut to size, are then placed in an oven where the foil is heated to a temperature of three hundred ninety to four hundred degrees Fahrenheit, or perhaps a little higher. The foil is held at the temperature indicated, which temperature is kept uniform, for a period of four to twelve hours. The higher the temperature, within specific limits, the deeper the shade of gold color which will be produced.

The time which the foil is kept in the oven, hereinbefore referred to as from four to twelve hours, depends generally upon the width of the foil which is under treatment. The wider the foil, the longer it must be kept under the heat of the oven.

A test to determine whether the foil is ready for removal from the oven is the uniformity of the gold color upon the surfaces thereof. The heat treating process should be continuous until there is a uniformity in the coloring across the entire surface of the foil, both front and back.

The process is understood to be one of oxidation. The oxidation of the surface of the tin foil, or of the tin foil alloyed with other metals, produces the gold color which is desired, and after a uniformity of coloring upon both surfaces of the foil is had, the foil is retained in the oven, from which the heat is cut off, the oven being allowed to cool off slowly, such slow cooling completing the coloring operation.

When the oven shall have become cooled, and foil under treatment will likewise become cool, it is then ready for removal. As previously stated, whether the temperature was three hundred ninety degrees Fahrenheit, four hundred degrees Fahrenheit, or somewhat above the last mentioned degrees, will determine the tone of the gold color imparted to the foil. The higher the temperature, within certain limits, the deeper the color of gold.

It is quite manifest that the process of coloring foil by means of heat treatment may be accomplished in some apparatus other than an oven; and that the specific temperatures, or the time of the exposure to heat may be modified to produce the result heretofore obtained. It is therefore my intention to claim the invention as a process of changing the color of tin and alloyed foil to gold by the application of heat thereto in an oven or other heating apparatus and the product obtained thereby, it being understood at this time that the process involved is one of oxidation.

Where the words "foil" and "tinfoil" are used in the appended claims, a foil of pure tin or of tin and alloys is meant.

I claim:

1. A process of converting tin foil of a silver color into a gold colored foil by the application of heat thereto for a predetermined period of time.

2. The process of changing the color of tin foil by oxidizing the surfaces thereof while

contained in a heat producing apparatus at a predetermined intensity of heat.

3. The process of converting tin foil of a silver color into a gold colored foil by the application of a low heat thereto for a predetermined period of time and in the presence of oxygen.

4. A process for changing the color of tin foil which consists in baking it in a heat producing apparatus at a temperature of approximately three hundred ninety to four hundred degrees Fahrenheit.

5. A process for the production of a gold colored tin foil from tin foil which consists in washing such foil, baking the cleansed foil in a heat producing apparatus, at a temperature of three hundred ninety to four hundred degrees Fahrenheit, and allowing the heated foil to cool slowly.

6. A process of changing the color of tin foil which consists in washing the foil, exposing it to elevated temperatures, and allowing such foil to cool slowly.

7. A process of producing a colored tin foil which consists in washing said foil, and the heating thereof followed by a slow cooling of the foil.

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