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RUST ERADICATOR AND METHOD OF USING SAME

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1 Claim. (Cl. 252—136)

The present invention relates to the control of rust.

It is a major object of the present invention to provide a rust eradicator.

Another object of the invention is to provide a method for eliminating a coating of rust from the surface of a metal object and thereafter treating such object so as to prevent the formation of rust thereon for a considerable period of time.

Another object is to provide a rust eradicator which if used correctly is harmless to metals, foods or to human skin.

A further object is to provide a rust eradicator which may be readily prepared and without the use of costly equipment.

Yet a further object is to provide a method of controlling rust which does not require expensive equipment nor skilled technicians.

An additional object of the invention is to provide a rust eradicator which is composed of readily obtainable materials.

These and other objects and advantages of the present invention will become apparent from the following detailed description.

The preferred form of rust eradicator embodying the present invention is comprised of syrupy phosphoric acid, trisodium phosphate and zinc. It has been determined that one gallon of 85% solution syrupy phosphoric acid should be mixed with a small quantity (less than one ounce is adequate) of trisodium phosphate. For each gallon of phosphoric acid combined with trisodium phosphate approximately one ounce of zinc in the form of shavings, powder or globules should be added. This zinc will enter into solution with the phosphoric acid and trisodium phosphate. The resulting solution should be mixed thoroughly. It is not necessary to add heat during such mixing or thereafter.

A modified form of rust eradicator embodying the

present invention may comprise a 75% solution syrupy phosphoric acid together with a small quantity of trisodium phosphate. When a 75% solution of syrupy phosphoric acid is employed it is generally not necessary to add zinc. It has been determined that the preferred form utilizing phosphoric acid, trisodium phosphate and zinc, however, is faster in operation.

The above-described rust eradicator has been successfully employed in removing rust from metal objects such as grocery carts. In effecting such removal the metal object is first dipped into a tank of the rust eradicator. Thereafter, the metal object is removed and allowed to air-dry, the eradicator which remains on the surfaces of the object dripping into a receptacle for re-use. Next, after the object is completely air-dried it is cleaned with water or steam. Thereafter, the metal object is again permitted to air-dry. At the completion of this drying operation, the surfaces of the metal object are coated with a material which resists the formation of rust. It has been determined that tung oil applied by means of a spray gun is extremely satisfactory. After the tung oil has been sprayed upon the metal surfaces, they are again permitted to air-dry. Metal objects treated in this manner will resist the formation of rust for a comparatively long period of time.

It will be apparent that the rust eradicator and the method of use set forth hereinabove may be utilized with many metallic objects in order to remove rust therefrom and thereafter restrain its formation. It will also be apparent that various modifications and changes may be made with respect to the foregoing detailed description without departing from the spirit of the invention or the scope of the following claim.

I claim:

A rust eradicator consisting of an 85 percent solution of syrupy phosphoric acid, a small quantity of trisodium phosphate and a small quantity of zinc in globule form, said zinc being dissolved in said solution, and said ingredients being mixed in the approximate proportions of one ounce of trisodium phosphate and one ounce of zinc per gallon of phosphoric acid.

References Cited in the file of this patent

UNITED STATES PATENTS

919,031	Kronstein	Apr. 20, 1908
1,381,112	Emig	June 14, 1921
1,549,411	Gravell	Aug. 11, 1925
2,360,509	Morgan	Oct. 7, 1944
2,455,411	Franchi	Dec. 7, 1948
2,516,008	Lum	July 18, 1950