

UNITED STATES PATENT OFFICE

ARTHUR H. BRANSKY, OF CHICAGO, ILLINOIS, ASSIGNOR TO STANDARD OIL COMPANY,
OF WHITING, INDIANA, A CORPORATION OF INDIANA

SLUSHING GREASE

No Drawing.

Application filed March 2, 1925. Serial No. 12,799.

The present invention relates to improvements in slushing greases; that is, to greases, which, on application to iron and steel surfaces, effectively prevent rusting for long periods of time when exposed to the action of water, salt water and the like.

In accordance with the present invention, a mixture is made of a high melting point wax, such as Montan wax, carnauba wax, or compounds derived by the saponification of such waxes, and an oil soluble sulfonic compound derived from the treatment of heavy hydrocarbon oils with strong sulfuric acid (66° Baumé or fuming acid), the sulfonic compounds being present in proportions of from 20% to 60%.

In general, it is found convenient or advisable to add greater or less quantities of hydrocarbon oils, such as straw oil or lubricating oil. It is to be understood, however, that the oil may be omitted or may be used in any suitable proportions to secure the consistency desired in the final material.

As an example of a composition made in accordance with my invention, a slushing grease has been made containing 20% Montan wax, 40% sodium salts of sulfonic compounds derived from the treatment of heavy petroleum or lubricant oils with sulfuric acid, and 40% of oil. Such a grease is found to remain in a thick film on an iron or steel surface, even though allowed to drip for several hours in a temperature around 150° F., the resulting film resisting salt water spray for upwards of five days without permitting the formation of rust on the iron or steel surface. Instead of the sodium sulfonates, the sulfonic acid compounds themselves or other salts may be used, and instead of the Montan wax, sodium montanite, or carnauba wax, or other high melt point wax may be employed. Such waxes have melting points of about 140° F. or higher. Highly resistant greases may be prepared by using less quantities of the sulfonic compound and a denser material may be prepared by eliminating a greater or less proportion of the oil. It has been found that the essential constituents required in such a grease are

the heavy wax and the sulfonic compounds hereinbefore referred to.

I claim:

1. A slushing grease comprising a wax having a melting point not below that of Montan wax and sulfonic compounds derived from the treatment of hydrocarbon oils with strong sulfuric acid.

2. A slushing grease comprising Montan wax and oil soluble sulfonic compounds derived from the treatment of hydrocarbon oils with strong sulfuric acid.

3. A slushing grease comprising Montan wax with at least 20% of the oil soluble sulfonic compounds derived from the treatment of hydrocarbon oils with strong sulfuric acid.

4. A slushing grease comprising Montan wax, oil soluble sulfonic compounds derived from the treatment of hydrocarbon oils with strong sulfuric acid, and hydrocarbon oil.

5. A slushing grease comprising Montan wax, 20%, sodium soaps of sulfonic acid compounds derived from the treatment of hydrocarbon oils with strong sulfuric acid and 40% of lubricating oil.

6. The method of preventing the corrosion and rusting of ferrous metallic surfaces which comprises applying to the surface thereof a film containing a waxy body and a sulfonic compound derived from the treatment of hydrocarbon oils with strong sulfuric acid.

7. The method of preventing rusting and corrosion of ferrous metallic surfaces which comprises applying to the surface thereof a film containing a waxy body and a preferentially oiled soluble sulfonic compound derived from the treatment of hydrocarbon oils with strong sulfuric acid.

8. The method of preventing the corrosion and rusting of ferrous metallic surfaces which comprises applying to said surfaces a film comprising Montan wax and oil soluble sulfonic compounds derived from the treatment of hydrocarbon oils with strong sulfuric acid.

9. The method of preventing the corrosion and rusting of ferrous metallic surfaces which comprises applying to said surfaces

a film comprising Montan wax with at least 20% of the oil soluble sulfonic compounds derived from the treatment of hydrocarbon oils with strong sulfuric acid.

5 10. The method of preventing the corrosion and rusting of ferrous metallic surfaces which comprises applying to said surfaces a film comprising Montan wax, oil soluble sulfonic compounds derived from the treatment
10 of hydrocarbon oils with strong sulfuric acid, and hydrocarbon oil.

11. The method of preventing the corrosion and rusting of ferrous metallic surfaces which comprises applying to said surfaces a
15 film comprising Montan wax, 20% sodium compounds of sulfonic acid compounds derived from the treatment of hydrocarbon oils with strong sulfuric acid, and 40% of lubricating oil.

20 ARTHUR H. BRANSKY.

25

30

35

40

45

50

55

60

65