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LUBRICANT COMPOSITION

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2 Claims. (Cl. 252—35)

This invention relates to a superior lubricant for intricate mechanisms having a large number of bearing surfaces, said lubricant having as its base a separated fraction of micro-crystalline wax obtained from petroleum, said fraction being entirely of the non-straight-chain fractions of the wax. The separated fraction is mixed, as desired, with pertoleum oil of about 150 Saybolt Universal seconds viscosity at 100 degrees Fahrenheit, and with a small amount of a metallic soap, such as aluminum stearate, to control the dropping point of the lubricant.

The wax fraction, in an amount of 18%, by weight, mixed with the mentioned oil in an amount of 78%, by weight, of oil and 4%, by weight, of aluminum stearate, forms a grease which will not pour until it reaches a temperature of about 180 degrees Fahrenheit and still maintain its lubricating characteristics at 0 degree Fahrenheit.

Heretofore, the aforesaid intricate mechanisms have been disabled by binding of the parts due to increased viscosity of the lubricant at low temperatures or by the dropping of the lubricant from the bearing surfaces at relatively high temperatures.

If it is desired to have a liquid lubricant that can be sprayed or otherwise applied to the mechanism, as by dipping, or by dropping the liquid from an oil-can, the foregoing compound may be dissolved in an evaporable solvent, such as a low-boiling petroleum fraction, carbon tetrachloride, toluene, and equivalents.

The specific example so far given may be dissolved with an equal volume of a solvent which is a petroleum fraction having a boiling range of from 300 to 400 degrees Fahrenheit.

The liquid product will revert to the grease as soon as the solvent has evaporated, leaving it at the desired points of the mechanism in its preferred form.

As an example of preparing the wax fraction of the grease, 10 parts, by weight, of the micro-crystalline wax is dissolved in 90 parts, by weight, of xylol, and 100 parts, by weight, of the resulting solution has dispersed therein 40 parts, by weight, of finely-divided urea crystals (which

is an excess). The resultant mixture is stirred uniformly, the temperature being kept so that the wax remains in solution, the temperature being held below the melting point of the urea.

To the stirred mixture is added, by weight, 2 to 5 parts of water or similar solvent for the urea to aid it in combining with the straight-chain components of the micro-crystalline wax to the exclusion of the non-straight-chain components of said wax, the latter being the fraction of the wax that it is desired to keep. The result is a crystalline powder xylol dispersion of the urea-modified straight-chain fraction of the original wax with any unused or excess of the urea. The non-straight-chain fractions of the original wax remain dissolved in the xylol. The dissolved non-straight-chain fractions of the original wax are separated by filtration and evaporation of the solvent from the filtrate.

So far, preferred forms of the lubricant and their preparation have been described. However, the principal improvement in the lubricant is caused by the elimination of the straight-chain fractions of the micro-crystalline wax and the use of the remaining non-straight-chain fractions with selected amounts of a compatible oil as desired to provide for easy application, and selected amounts of a flow-resistant agent such as the metallic soaps.

What is claimed is:

1. A lubricant composition consisting of a mixture of the following ingredients, in parts, by weight:

Petroleum oil having a viscosity of approximately 150 Saybolt Universal seconds at 100 degrees Fahrenheit	78
Non-straight chain fractions of micro-crystalline petroleum wax	18
Aluminum stearate	4

2. The lubricant composition of claim 1 dissolved in at least an equal amount of petroleum distillate having a boiling point range of from 300 to 400 degrees Fahrenheit at atmospheric pressure.

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