

UNITED STATES PATENT OFFICE.

ELI F. BURCH, OF LAUREL SPRINGS, NEW JERSEY, ASSIGNOR TO CREW-LEVICK COMPANY, A CORPORATION OF PENNSYLVANIA.

LUBRICATING COMPOUND.

1,246,869.

Specification of Letters Patent. Patented Nov. 20, 1917.

No Drawing.

Application filed June 6, 1916. Serial No. 101,950.

To all whom it may concern:

Be it known that I, ELI F. BURCH, a citizen of the United States, residing at Laurel Springs, in the county of Camden and State of New Jersey, have invented certain new and useful Improvements in Lubricating Compounds, of which the following is a full, clear, and exact specification.

This invention relates to lubricating oils, and its object is to produce a lubricating oil which will readily combine with water and form a permanent oily emulsion.

In carrying out my invention, I combine a mineral oil (any suitable neutral mineral oil, but preferably one of the paraffin series) with a soap of a monobasic unsaturated fatty acid, preferably oleic acid.

As an example, 9% of oleic acid is mixed with 2% of a saturated water solution of borax at a temperature of approximately 100° F. Into this mixture I then introduce 85% of a neutral mineral oil, preferably of the paraffin series, and mechanically stir the mixture. I then add 4% of a saturated alcoholic solution of caustic soda. Under agitation, the mixture clears up into a clear, bright, permanent oily liquid of apparently colloidal character.

In lieu of caustic soda and borax for effecting the neutralization of the oleic acid, I may employ potash, or other suitable "soft" soap producing neutralizing agent.

When mixed with water, the liquid forms a permanent emulsion, thus making it especially useful as a lubricant in certain hydraulic machinery in places where the water is used over and over again, as the fluid serves not only as a lubricant but also as a rust preventative.

Having thus described my invention, I declare that what I claim as new and desire to secure by Letters Patent is:—

1. The process of preparing a lubricant which consists in mixing an unsaturated fatty acid with a water solution of borax, then adding a neutral mineral oil, then agitating the mixture mechanically, then adding a saturated alcoholic solution of caustic soda, and further agitating the mixture mechanically until it clears to a bright permanent oily liquid of apparently colloidal character.

2. The process of preparing a lubricant which consists in mixing oleic acid with a water solution of borax, then adding a neutral mineral oil of the paraffin series, then agitating the mixture mechanically, then adding a saturated alcoholic solution of caustic soda, and further agitating the mixture mechanically until it clears to a bright permanent oily liquid of apparently colloidal character.

3. The process of preparing a readily emulsifiable lubricant which consists in mixing oleic acid and borax solution, then adding mineral oil, then adding caustic soda, and agitating the mixture until it resolves into a clear bright permanent oily liquid of apparently colloidal character.

In testimony whereof I affix my signature, in presence of two witnesses.

ELI F. BURCH.

Witnesses:

C. V. EDWARDS,
WILLIAM F. PALMER.