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UNITED STATES PATENT OFFICE.

ZACHARIAS OLSSON, OF NEW YORK, N. Y.

LUBRICANT.

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To all whom it may concern:

Be it known that ZACHARIAS OLSSON, a citizen of Sweden, and resident of the city of New York, in the county of Richmond and State of New York, has invented certain new and useful Improvements in Lubricants, of which the following is a specification.

The present invention relates to lubricants, and more particularly to greases.

In the manufacture of ordinary greases, mineral oils are artificially thickened by dissolving soap or other organic colloids therein, to form at ordinary temperature a consistent grease. The colloids act as emulsifying agents, constituting an intermediary between the oil and water, both constituents of the grease. It is a well known fact that soap and similar colloids form the most expensive ingredient of the grease.

The main object of the present invention is to reduce the cost of manufacture of greases by substituting for the organic colloids a colloidal clay, such as bentonite, or in other words an inorganic matter, and to obtain a grease having perfectly neutral constituents.

Another object of the invention is to produce a grease which may be readily dissolved in water and still maintain its emulsified character, thereby rendering the same capable for use as a cutting compound or cutting lubricant.

The improved grease consists of a mixture of lubricating material, such as mineral oil, a colloidal clay or colloidal mineral, such as bentonite, and water.

The ingredients are mixed in substantially the proportions named by weight:

Lubricant, 40 parts, colloidal clay, 10 parts, water, 50 parts. The bentonite is placed into the lubricant and ground therein, the bentonite being reduced to fine particles. The water is then added to the mixture, the mass being forcibly agitated until a consistent compound is obtained. While the proportions above given are found from experiment to be those best adapted for producing a high grade grease, it is obvious that the same may be varied without departing from the invention.

The grease so obtained contains absolutely neutral constituents, is inexpensive by reason of the low cost of the colloidal clay, possesses high lubricating properties and is not liquefied even at comparatively high temperature. It is capable of being mixed with water without losing its emulsified character; it is thus adapted for use as a cutting compound.

What I claim is:—

1. A grease composed of a lubricant, bentonite, and water.

2. A grease composed of a lubricant, water, and a sufficient quantity of bentonite to form a perfect emulsion between the lubricant and water.

3. A lubricating compound composed of a lubricant, water, and a sufficient quantity of bentonite to form a perfect emulsion between the lubricant and water, said compound when diluted with any amount of water maintaining its emulsified character.

Signed at New York, in the county of New York and State of New York, this 27th day of April, A. D. 1921.

ZACHARIAS OLSSON.