

# UNITED STATES PATENT OFFICE.

GEORGE G. MUNGER, OF ROCHESTER, NEW YORK.

## IMPROVEMENT IN LUBRICATING COMPOUNDS.

Specification forming part of Letters Patent No. **205,124**, dated June 18, 1878; application filed November 7, 1877.

*To all whom it may concern:*

Be it known that I, GEORGE G. MUNGER, of the city of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Lubricating Compounds; and I do hereby declare that the following is a full, clear, and exact description of the same.

My improvement relates to liquid compounds in which plumbago is used for the purpose of increasing the lubricating qualities; and consists of a compound of petroleum oil, plumbago, palm-oil, and soda.

The proportions of the ingredients may be varied as circumstances may require; but for ordinary purposes I prefer the following: Petroleum oil, one gallon; plumbago, six ounces; palm-oil, four ounces; soda, one ounce.

For the manufacture of this compound the above-named ingredients are mixed together and heated to a simmering heat, or, say, 180° Fahrenheit, and actively stirred all the time. For a few moments during the operation the mixture should touch boiling-point. The heat should be kept applied one hour, or thereabout. About twenty-four hours after cooling the mass should be again thoroughly agitated, and then allowed to stand a few hours before use or shipment.

The petroleum oil forms the body of the compound. The palm-oil serves the purpose of holding the plumbago in permanent suspension in the oil, which it does by floating it throughout the same. It is also an excellent lubricator in itself, being used alone to a large extent in Great Britain, and to a considerable

extent in this country, for lubricating machinery and railway-journals. The soda has a tendency to assimilate the various ingredients with one another and to render more complete the chemical union of them in the compound. The soda, palm-oil, and the aqueous matter in the oil subject the mass to a saponifying process, in which the palm-oil is a very efficient agent.

I find from experiment that palm-oil possesses different properties from any other substance used for suspending solid matters in oil. Its suspensive power is great, and it possesses a high degree of unctuousness.

In this connection I have contemplated the use of tallow. The unctuousness of the compound would be thereby increased, and there would be a commingling of animal and mineral oils in the mixture, which, on some accounts, would be preferable to either of them alone. The use of the tallow, however, is not essential for any suspensive effect, and it may be dispensed with. If used, four ounces of it would be proper with the foregoing formula.

What I claim as my invention, and desire to secure by Letters Patent, is—

The compound consisting of petroleum oil, plumbago, palm-oil, and soda, as herein described, and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

GEORGE G. MUNGER.

Witnesses:

R. F. OSGOOD,  
CHAUNCEY NAST.