

UNITED STATES PATENT OFFICE.

SOLOMON D. McMILLAN, OF ROCHESTER, AND CHARLES H. HAM, OF CHARLOTTE, NEW YORK.

LUBRICATING COMPOUND.

SPECIFICATION forming part of Letters Patent No. 311,347, dated January 27, 1885.

Application filed December 18, 1884. (No specimens.)

To all whom it may concern:

Be it known that we, SOLOMON D. McMILLAN, of the city of Rochester, in the county of Monroe and State of New York, and CHARLES H. HAM, of Charlotte, in the county and State aforesaid, have invented a certain new and useful Improvement in Lubricating Compounds; and we do hereby declare that the following is a full, clear, and exact description
10 of the same.

Our improvement relates to a lubricating compound in which plumbago is used for the purpose of increasing the lubricating qualities. Such oils are well known. The great
15 difficulty has been to hold the plumbago in suspension and prevent it from precipitating to the bottom, owing to its great weight. Various materials have been used for this purpose, the most common, as well as the most
20 effective, being some kind of wax—such as beeswax. This, however, is expensive; and it has been a great object to find a cheaper substitute that will answer the same purpose, and thus reduce the cost. We employ for this purpose
25 rosin-oil; and our invention consists of a lubricating compound composed of petroleum or equivalent oil, rosin-oil, beef-tallow, plumbago, and bicarbonate of soda, mixed in proportions substantially as hereinafter described.
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We prefer to use substantially the following proportions, although they may be varied as necessity requires, viz: Petroleum or equivalent oil, one gallon; rosin-oil, by weight, six
35 ounces; beef-tallow, four ounces; plumbago, three ounces; bicarbonate of soda, one-half ounce. The petroleum is heated in a suitable vat or tank by means of steam, and the other materials are then added, and the mass is thoroughly agitated or stirred from the time of
40 heating till the compound becomes cold.

Petroleum of any suitable grade may be used; but that known in the market as "reduced

black" is the best. The rosin-oil used is preferably from the middle of the run from the
45 still, and is semi-liquid and of a transparent and whitish cast, and is known in the market as "kidney" oil. It has the peculiar qualities and consistency of uniting with the particles of plumbago and floating them through
50 the body of petroleum, which a lighter grade might not have. It is as effective in this respect as many waxes which are much more costly and more difficult to obtain. In the
present market beeswax is worth about two
55 cents per ounce, while rosin-oil of the grade above described is worth but little over one-half a cent per ounce. This enables the compound to be made at such a cost as to be furnished for many uses where such an oil cannot
60 now be furnished at any profit.

We are aware that pitch, turpentine, and rosin, the base from which rosin-oil is produced, and also that certain grades of rosin-oil itself, have been used in lubricating
65 compounds; but, so far as we are aware, rosin-oil has never been used in combination with plumbago in a compound for holding the plumbago in suspension. Its value in this connection is so marked in the particulars above specified
70 as to produce a new and improved compound.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The lubricating compound herein described,
75 consisting of petroleum or other oil, rosin-oil, beef-tallow, plumbago, and bicarbonate of soda, in proportions substantially as specified.

In witness whereof we have hereunto signed our names in the presence of two subscribing
80 witnesses.

S. D. McMILLAN.
C. H. HAM.

Witnesses:

R. F. OSGOOD,
JACOB SPAHN.