UNITED STATES PATENT OFFICE.

HENRY C. CROWELL, OF NEW LONDON, CONNECTICUT.

IMPROVEMENT IN COMPOSITION VEHICLES FOR PAINT, &c.

Specification forming part of Letters Patent No. **192,056**, dated June 19, 1877; application filed October 4, 1876.

To all whom it may concern:

Be it known that I, HENRY C. CROWELL, of New London, in the county of New London and State of Connecticut, have invented an Improvement in Oleaginous Compounds for Lubrication and Paint Vehicles; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention has for its object the production of a solution and its admixture with oils and other liquid hydrocarbons, which is much cheaper than oils in general, and which may be advantageously added to oils of either vegetable or animal origin or liquid hydrocarbons, the resulting mixtures or compounds being more valuable for certain purposes than the said oils or hydrocarbons in a pure state, among which purposes may be named lubrication and the use of said mixtures as a vehicle for paints when said mixtures are prepared from siccative oils.

When the said solution is added to animal or vegetable oils, or to the liquid mineral hydrocarbons, a permanent liquid is obtained denser than the oils employed, having a straw-yellow color, the shade varying somewhat with the variety of oil employed and the proportion of the solution added. The products of such admixture have the following valuable industrial qualities, which have been proved by a series of thorough experiments:

In lubrication the said product of oil admixed with my solution reduces the coefficient of friction between rubbing or sliding surfaces somewhat more than the unmixed oil, and it lasts longer, bulk for bulk, than such unmixed oil. It is, therefore, industrially more valuable, bulk for bulk, than either pure sperm or lard oil or the so-called lubricating-oils of mineral origin.

The admixture of my solution with linseed-oil forms a vehicle for paints which, having been thoroughly tested by practical painters, proves to work easier under the brush than pure linseed-oil, the covering power of which is one-fourth ($\frac{1}{4}$) greater, bulk for bulk, than that of the unmixed oil, and which dries as readily and produces as durable a coating as linseed-oil used in the ordinary manner.

My solution is made in the manner and in about the proportions which follow: I take of salt of tartar (pure carbonate of potash) two and one-half ($2\frac{1}{2}$) ounces; of freshly-slaked (caustic) lime, two (2) pounds; of carbonate of magnesia, three and one-half ($3\frac{1}{2}$) ounces; and of water, forty-five (45) gallons. I dissolve the solid ingredients in the water, to make a clear solution.

The solution prepared may be mixed with oils in the maximum proportion of an equal quantity of the solution (by measure) to any given quantity of oil, and in such proportion the product of the admixture will possess the physical qualities hereinbefore enumerated. But a smaller proportion of the solution may be used, and I do not confine myself to the exact proportion in which the said solution is admixed with any particular oil or hydrocarbon, as the same may be varied somewhat without materially affecting the resulting product. And while I have given the proportions of the ingredients in the solution which I have so far found to operate to the best advantage, I do not limit myself to the exact proportions named, as they may be varied some what without materially affecting the result.

I claim—

A composition of matter for admixture with vegetable or animal oils or liquid hydrocarbons, for lubricating purposes or as a vehicle for paint, consisting of salts of tartar, caustic lime, carbonate of magnesia, and water, substantially as set forth.

HENRY C. CROWELL.

Witnesses:

REUBEN LORD, Jr.,

EDWARD T. BROWN.