

UNITED STATES PATENT OFFICE.

HENRY A. CLARK, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN TREATING LINSEED-OIL.

Specification forming part of Letters Patent No. 201,992, dated April 2, 1878; application filed January 14, 1878.

To all whom it may concern:

Be it known that I, HENRY A. CLARK, of Boston, county of Suffolk, State of Massachusetts, have invented a certain new and useful Improvement in Treatment of Linseed-Oil with Sulphur; and that the following is a full, clear, and exact description of the same.

This invention relates to an improved process of treating vegetable oils, particularly linseed-oil, which have, by previous treatment with sulphur, been brought to a gummy condition, and have a resemblance to india-rubber, and to be used as a coating for cloths, which coating shall be water-proof, flexible, elastic, and unsusceptible to either heat or cold.

Gum more or less resembling india-rubber has been reduced from such oils in various ways—as, for instance, with sulphur and heat, as described in the Letters Patent of the United States issued to me, dated October 28, 1876, No. 184,341—and in such gum reduced from vegetable oils more or less of their oily and greasy nature was removed or obliterated; but, so far as I am aware, and as experience under said Letters Patent shows, this removal or obliteration of the oily and greasy nature of the oils has never been secured to the extent desired and necessary to render the product practical for the use intended for it.

Therefore, the principal object of this invention is to practically and substantially remove and obliterate all traces of the oily and greasy character left in the oil after it has been reduced to a gum, as aforesaid, and, again, to then reduce the production thus obtained to a suitable consistency to be applied to cloth, and make a water-proof, elastic, and flexible coating thereto.

For these purposes the invention consists in treating vegetable oils, such as linseed-oil which has been reduced to a gum, as aforesaid, with benzine, otherwise known as "petroleum-naphtha," and then, after having allowed it to stand, removing the same, and adding benzole, also known as "coal-tar naphtha," or turpentine or camphene—benzole be-

ing preferable—all substantially as hereinafter described.

In carrying out this invention, I take six (6) gallons of the gummy product from linseed-oil, &c., produced by treating it with sulphur and heat, as described in my aforesaid patent, or otherwise, and to it I add one to six gallons, or thereabout, of benzine or petroleum naphtha—the greater the quantity of benzine or petroleum naphtha the quicker the work hereinafter described is accomplished—and, having thoroughly mixed the two together, I allow the mixture to stand some time—that is, at least two days—preferably applying a gentle heat to it while it so stands, and then, having poured off the benzine or petroleum naphtha, I add from two to five per cent., or thereabout, of benzole or coal-tar naphtha, and, having thoroughly mixed the two, the product produced is ready for use.

The benzine or petroleum naphtha at first assimilates with the gum; but after standing for a time—say, from two to ten days, according to the degree of heat to which it (the gum) is subjected—it separates the grease or oil left in the gummy product therefrom, which, with the benzine or petroleum naphtha, gathers upon the top, and when the benzine or petroleum naphtha is poured off, as described, the grease is poured off with it.

The benzole or coal-tar naphtha cuts the gummy product previously treated with the benzine or petroleum naphtha, and reduces its consistency, so that it is capable of being applied to cloth to coat the same.

The use of benzine or petroleum naphtha may be repeated as often as may be necessary; and, again, benzole or coal-tar naphtha is preferable to either turpentine or camphene, for the reason that the latter (more especially turpentine) is somewhat greasy or oily in its nature.

The benzine or petroleum naphtha and grease which are poured off, as aforesaid, I separate from each other by distillation, and thus both are economized, the benzine or petroleum naphtha to use again, as aforesaid, and the grease to use as a lubricator.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The process of treating vegetable oils which have, by previous treatment with sulphur, been brought to a gummy condition, said process consisting, first, in mixing benzine or petroleum naphtha with said gummy oils, allowing the mixture to settle, and then pouring off

the benzine; second, mixing with the residuum benzole or coal-tar naphtha in sufficient quantity to bring the same to a consistence for application, as desired, and as hereinbefore set forth.

HENRY A. CLARK.

Witnesses:

GEO. H. EARL,
EDWIN W. BROWN.