

UNITED STATES PATENT OFFICE.

AUGUST WENDTLAND, OF BERLIN, GERMANY.

PROCESS OF REMOVING GREEN COLOR FROM PARAFFIN.

SPECIFICATION forming part of Letters Patent No. 618,307, dated January 24, 1899.

Application filed May 31, 1894. Serial No. 513,082. (No specimens.)

To all whom it may concern:

Be it known that I, AUGUST WENDTLAND, doctor of philosophy and analytical chemist, a subject of the Emperor of Germany, and a resident of Berlin, in the Kingdom of Prussia and German Empire, have invented a new and useful Process of Removing Green Color from Paraffin, Vaseline, and Lubricating-Oils, (patented in Germany May 7, 1894, No. 75,656, 10 October 15, 1894, additional patent, No. 78,126, and December 23, 1895, No. 85,000; in Austria October 19, 1894, No. 44/5,537; in Hungary September 24, 1894, No. 1,269; in England May 9, 1894, No. 9,179, and in Belgium May 15 31, 1894, No. 109,992,) of which the following is a full, clear, and exact description.

The object of my improved process is to decolorize the various classes of paraffin, vaseline, and lubricating-oils which have been 20 colored green by the presence of bodies containing oxygen.

The residues obtained in distilling petroleum when treated with sulfuric acid for the manufacture of thick lubricating-oils or viscous vaseline become colored green. To remove this coloring, I proceed in the following manner:

The residue after the usual treatment with sulfuric acid is treated with a soap solution, 30 preferably in the following manner: To one hundred kilograms of vaseline or lubricating-oil are added three to ten kilograms of fatty acid, preferably oleic acid, and the mixture is heated to a temperature sufficient to melt 35 the mixture for a period of eight hours, and then a six-per-cent. solution of alkaline oxid, hydroxid, or carbonate is slowly added in sufficient quantity to neutralize the fatty acid. I then allow the soap thus formed and 40 impurities to settle to the bottom, or, if desired, I may bring the separation about by the aid of centrifugal force. The supernatant oil, paraffin, or vaseline is then drawn off and washed several times with a solution of

barium chlorid to remove any small quantities of soap that may remain therein. The oil, paraffin, or vaseline has now been freed from the oxidized coloring-matter by the action of the oleic acid and the soap formed therefrom; but a further bleaching is still 50 desirable to remove the brown color of the natural product. This is effected by filtering through bone-black, and the difficulty is encountered that the presence in bone-black of occluded oxygen has a tendency to reoxidize 55 the deoxidized oil, and thus more or less restore the green color. To prevent this, I treat the bone-black before filtration of the oil or paraffin with a reducing agent, such as ethyl alcohol or its equivalent. 60

As a final step in my process, therefore, after the treatment of the oil with barium chlorid I filter the oil or melted vaseline or paraffin through bone-black which has been impregnated with ethyl alcohol, methyl alcohol, 65 or similar reducing agents.

In place of oleic acid in forming the soap to purify the oil or paraffin I may use any saponifying agent, such as any fatty acid or resin acid or even rosin. 70

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

A process for removing the green color from petroleum residues which have been treated 75 with sulfuric acid, which consists in treating the same with a soap composed of fatty acid and an alkaline solution allowing the soapy and oily matters to separate, treating the oily portion with barium-chlorid solution, and filtering such oily portion through bone-black 80 which has been impregnated with alcohol.

In witness whereof I have hereunto set my hand in presence of two witnesses.

AUGUST WENDTLAND.

Witnesses:

PAUL FISCHER,
HANS BAUERLEIN.