UNITED STATES PATENT OFFICE.

IVAR AXEL BANG AND CHARLES ALBERT SANGUINETTI, OF MARSEILLES, FRANCE.

PROCESS OF DECOLORIZING VEGETABLE OILS.

SPECIFICATION forming part of Letters Patent No. 287,216, dated October 23, 1883.

Application filed August 23, 1883. (No specimens.)

To all whom it may concern:

Be it known that we, IVAR AXEL BANG, a subject of the King of Denmark, and CHARLES ALBERT SANGUINETTI, a subject of the King of Italy, and both residents of the city of Marseilles, France, have invented an Improved Process for Decolorizing Vegetable Oils, of which the following is a specification.

The means employed up to this time for decolorizing vegetable oils, so far as we are aware, all present grave inconveniences, which it is the purpose of our invention to avoid. All oxidizing agents, in destroying the coloring-matter, change the taste of the oils, and sometimes partially change their chemical constitution. Decolorizing agents which act by absorption in filtration—such as animal-black—all sensibly injure the oils in changing their taste. Alkaline decolorizing agents—such as caustic soda, milk of lime, &c.—are only employed with partial success. In operating with these the principal part of the coloring-matters combine with the base, and are precipitated with the mucilaginous matter, and a soap is formed under the influence of the base and water in excess. This precipitate injures the oil, and the residues—called "dregs of purification" (*pieds-d'epuratien*)—are sold at a very low price for the manufacture of cheap soaps. Our method, which is intended mainly for decolorizing edible oils, is designed to obviate these difficulties by precipitating the coloring-matters while only a trace of the oil is saponified.

Our method or process is based on the employment of earthy alkaline bases in the state of monohydrates. These are used in fine powder and without heat or water. We employ, by preference, the calcium monohydrate precipitated to an impalpable powder with but its molecule of water of hydration; but we may employ, also, magnesium, baryta, and strontium monohydrates with good results. The quantity of the calcium monohydrate employed will vary between one one-thousandth and two one-hundredth parts, according to the depth of color of the oil treated.

The operation is very simple: The monohydrate is mixed with a small quantity of the oil to be treated and allowed to stand a short time. This mixture is then poured into the main portion of the oil, and the whole stirred. For oils that are not highly colored—as oil of peanuts, oil of sesamum, &c.—it is only necessary to let the mixture stand for a few hours; but for cotton-seed oil it should stand for two or three days. After the mixture has been standing long enough, it should be filtered in a filter-press, when the oil will flow out colorless, and the residue will be found to consist of the coloring-matters and the base, with only slight traces of oil, if properly pressed.

We claim as our invention—

1. The herein-described process for decolorizing oils, which consists in mixing therewith an alkaline monohydrate in powder, and then filtering, substantially as set forth.

2. The herein-described process for decolorizing oils, which consists in mixing therewith dry calcium monohydrate in the state of powder while the oil is cold, and then filtering, substantially as set forth.

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

IVAR AXEL BANG.
CHARLES ALBERT SANGUINETTI.

Witnesses:
T. GILLY,
DURBECES.