

UNITED STATES PATENT OFFICE.

E. DE BASSANO AND A. BRUDENN, OF BRUSSELS, BELGIUM.

IMPROVEMENT IN THE MANUFACTURE OF STEARIC ACID.

Specification forming part of Letters Patent No. **33,135**, dated August 27, 1861.

To all whom it may concern:

Be it known that we, EUGENE DE BASSANO, gentleman, and ADOLPHE BRUDENN, civil engineer, subjects of France, and residing in Brussels, in the Kingdom of Belgium, have invented Improvements in the Manufacture of Stearine; and we do hereby declare that the following is a full and exact description thereof.

The nature of our invention consists in manufacturing stearine in the following manner and by the following means, first observing that according to the modes heretofore adopted of treating grease or fatty matters in the manufacture of stearine the quantity of stearine obtained fit for making such candles varies from forty-five to forty-eight per cent. by the process called "Calcareon's saponification." By the system of acidification by means of sulphuric acid, and also by distillation, the yield in stearine is carried to fifty-two and even as far as fifty-five per cent. The increased yield of stearine obtained by the process of distillation is in a great measure due to the presence of elaidic acid, formed at the expense of the oleine or oleic acid, and of the sulphurous acid gas produced by the double decomposition which takes place in treating grease or fatty matters with sulphuric acid. In fact, the sulphuric acid, which develops and disintegrates the various component parts of fatty matters, forms simultaneously glycerine and sulphoglyceric acid and carbonizes or chars a portion of the glycerine. The charred substance disengaged by the reducing action of the sulphuric acid causes some portions thereof to be transformed into sulphurous acid, which then reacts on the oleine and gives rise to elaidic acid. The principle of our invention is based on these reactions, and the results are a considerable increase in the quantity of elaidic acid formed, without any sensible difference in the cost of the ordinary operations of the manufacture.

In the present mode of manufacturing stearine, when the reaction takes place the charred substance is not formed in a sufficiently simultaneous ratio with the disintegration of the fatty matters, and the sulphurous gas escapes before the oleine or oleic acid is disengaged; and in order to explain our said invention as completely as possible, we now proceed to de-

scribe the best means we are acquainted with for carrying the same into practical effect—that is to say: Our invention consists in adding to new or virgin acidified fatty matters to be subjected to distillation, carbonaceous or charred matters, by preference pulverized charcoal, as being free from empyreumatic oil and other substances contained in animal charcoal, lamp-black, and mineral coal. We also propose to employ carbonaceous or charred matters, produced either directly or indirectly from the combustion of glyceric residue fatty matter, the residue of burned wood, feculæ, and, in short, the residue arising from the combustion of any substance containing carbon. We add to the fatty matters, after they have been subjected to the acidifying process, a small quantity of carbonaceous or charred matter, as previously described—say from one-quarter to one-half per cent. of the weight of the sulphuric acid used, there having previously been added to the fatty matters one-fifth or one-sixth, or even more, of oleine or oleic acid, or other oleaginous substances capable of producing elaidic acid, the quantity being in proportion to the quantity of concrete fatty acid which it is desired to obtain. By this invention a larger quantity of stearine is obtained from a given quantity of fatty matters than by the means heretofore employed of manufacturing stearine.

Having now fully described and set forth our invention, we hereby declare that what we claim as our invention, and desire to secure Letters Patent for, is—

The use of carbonaceous or charred matters or substances, with additional oleine or such equivalent substance, in the manufacture of stearine, as above stated and substantially as herein described, as constituting improvements in the manufacture of stearine.

E. DE BASSANO.
AD. BRUDENN.

Witnesses:

A. CROOY,
JOHN PIDDINGTON.

Witness as to Adolph Brudenn:

GEO. HUTTON,

Witness as to Ad. Brudenn:

H. W. SPENCER.