XLVII. Observations on the possibility of collecting a certain quantity of succinic acid during the process of making amber varnish, without lessening the property of the varnish

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washed and soaped there do not remain a red spot, which is called *mordant*, the anatto is considered as of no value.

Such is the process employed for the fabrication of anatto. The author of the memoir remarks that this tedious, laborious, and unhealthful operation gives an uncertain product of a bad quality. He proposes merely to wash the seeds till they are entirely freed from the colour, which is placed at the surface; to make the water pass through fine sieves, to separate the remains of the bark, to precipitate the colour by means of vinegar or lemon juice, and to bake it in the usual manner, or to make it drain in bags, as is practised for indigo*. This process is founded on this circumstance, that, as the colour is entirely at the surface of the seeds, it is needless to bruise the latter, and to reduce them to a state of putrefaction. This method would be advantageous to the planter who may wish to save hands; to the merchant, who would gain in regard to the freight; and to the dyer, who, being sure of the quality of his colouring matter, would be enabled to determine with exactness the quantity necessary for his purpose. If the planters of Guyana refuse to change their process, it might be advantageous to send to Europe the seeds without preparation. The saving in the manipulation would be equal to, and even surpass, the expense of carriage. The annual consumption of anatto amounts to 240 tons. When the crop exceeds 280, the price of this article, the use of which is limited, falls so much that the cultivation of it ceases to be advantageous.

XLVII. *Observations on the Possibility of collecting a certain Quantity of Succinic Acid during the Process of making Amber Varnish, without lessening the Property of the Varnish.* By M. PLANCHE, Member of the Pharmaceutical Society of Paris†.

HAVING had occasion to assist some time ago in the preparation of amber varnish on a large scale, I observed that

* Jussieu, Desfontaines, Cels, and Vauquelin, commissioners of the National Institute, have verified the excellence of this new process. The anatto which thence results is less mixed with impurities, and consequently of a finer tint; so that one part of the anatto extracted by simple washing produces the same effect as four of common anatto. This fact is confirmed by a certificate from C. Ducuret jun. and Genet, dyers at Paris. They add also that this anatto is more easily employed; that it requires less solvent, and gives a purer colour.

† From the *Annales de Chimie*, No. 145.

during

during the operation, and until the heated substance had acquired the proper degree of fluidity, a great deal of succinic acid was disengaged.

Every artist has had an opportunity of making the same remark; but whether they mistook the real nature of this salt and its properties, or considered it only as essentially inherent in the quality of the varnish, no one has hitherto attempted, as far as I know, to derive any advantage from it. Those, however, would be in an error who should infer from what has been said, that good varnish ought to be free from succinic acid: on the contrary, it is very probable, that on the addition of drying oil and essence, which ought to increase the fluidity of the amber, this matter can still furnish some of it, and even in abundance.

I should deviate from the real object I have proposed in this notice, were I to relate the different processes employed in the preparation of this varnish: I shall only observe, that as this operation is performed for the most part with the contact of the air, and over an open fire, and in varnished earthen vessels, the aperture of which is from four to five inches in diameter,—when the matter is sufficiently penetrated by caloric, a part of the succinic acid, become free, is exhaled as mere loss into the atmosphere, while a very large quantity is fixed to the sides of the matrass, under the form of very fine delicate needles, sufficiently white to have no need of purification*. Each matrass, containing twenty-four ounces of amber, (a common dose,) can furnish from eighty to ninety grains of acid, without in any manner lessening the quality of the varnish†. It is proper to observe also, that one ought to seize the moment when the succinic acid is disengaged, to separate it; and this disengagement takes place a little time before the addition of the oxygenated or drying oil. If the operation be deferred, the greater part of the product will be lost. The motion indeed necessary to be given to the spatula, to effect the mixture of the oil with the amber, detaches a great deal of volatile salt. All hope, therefore, of collecting it must be lost when essence of turpentine is added; as this oil, vaporized by the

* The acid obtained by the first operation is indeed very pure when the vessel is new, but in the subsequent operations it becomes more coloured. Recourse may be had to the processes of purification indicated by Pott. Artists will find it of advantage to employ matrasses of copper: as these vessels are easily cleaned, they will always furnish the same product.

† I ascertained this fact by several experiments, performed both in my own laboratory and in that of M. Tonneller, coach-painter, who is exceedingly well versed in this branch of the arts.

heat of the mixture, which sometimes swells so as to run over the vessels, causes the succinic acid to disappear entirely.

However minute the means I employed to extract the succinic acid may appear, I thought it necessary to describe them. I first conceived the idea of separating it with a card: this process succeeded pretty well; but in this case one is exposed to the danger of being burnt. I employed with more advantage a spoon of tinned iron, which is different from the usual form only in being semicircular, not so concave, and proportioned to the size of the vessel. It terminates behind in a thin plate of iron, which, exceeding the edge by some lines, represents a sort of band, from which arises, at right angles, a handle of the same substance, fifteen inches in length. This form appeared to me most convenient; first, because, by applying it exactly against the sides of the vessel, it prevents the salt, which is detached by instantaneously removing it, from being mixed with the fused amber; secondly, because it offers to the artist the means of operating, without being so much incommoded by the vapours disengaged from the matter.

It results from what has been said, that artists who prepare amber varnish may in future, without making any change in the apparatus or in their process, obtain a considerable quantity of succinic acid, which, though hitherto confined to medicinal purposes, may soon be rendered useful in the arts. Some trials already give reason to hope that an alcoholic solution of it may be employed for imitating the colour of certain valuable kinds of wood.

XLVIII. *Notices respecting New Books.*

The Painter and Varnisher's Guide; or, A Treatise, both in Theory and Practice, on the Art of making and applying Varnishes; on the different Kinds of Painting; and on the Method of preparing Colours, both simple and compound, &c. By P. F. TINGRY, Professor of Chemistry, &c. in the Academy of Geneva. 8vo. 540 Pages. Kearsley, Fleet-street.

WE have perused this work with great satisfaction; it contains much new, useful, and interesting information on the different subjects which it embraces, and cannot fail to be highly serviceable to artists. We think the publisher has rendered