## Renovating Damaged Coffees

Sophistication has often been resorted to in order ostensibly to improve damaged or cheap coffee. Glazing, coloring, and polishing of the green beans was openly and covertly practiced until restricted by law. The steps employed did not actually improve the coffee by any means, but merely put it into condition for more ready sale. An apparently sincere endeavor to renovate damaged coffee was made by Evans when he treated it with an aqueous solution of sulphuric acid having a density of 10.5° Baumé. After agitation in this solution, the beans were washed free from acid and dried. In this manner discolorations and impurities were removed and the beans given a fuller appearance.

The addition of glucose, sucrose, lactose, or dextrin to green coffees is practiced by von Niessen and by winter, with the object of giving a mild taste and strong aroma to "hard" coffees. The addition is accomplished by impregnating, with or without the aid of vacuum, the beans with a moderately concentrated solution of the sugar, the liquid being of insufficient quantity to effect extraction. When the solution has completely disseminated through the kernels, they are removed and dried. Upon subsequent roasting, a decided amelioration of flavor is secured.

Another method developed by von Niessen comprises the softening of the outer layers of the beans by steam, cold or warm water, or brine, and then surrounding them with an absorbent paste or powder, such as china clay, to which a neutralizing agent such as magnesium oxide may be added. After drying, the clay can be removed by brushing or by causing the beans to travel between oppositely reciprocated wet cloths. In the development of this process, von Niessen evidently argued that the so-called "caffetannic acid" is the "harmful" substance in coffee, and that it is concentrated in the outer layers of the coffee beans. If these be his precepts, the question of their correctness and of the efficiency of his process becomes a moot one.

A procedure which aims at cleaning and refining raw coffee, and which has been the subject of much polemical discussion, is that of Thum. It entails the placing of the green beans in a perforated drum; just covering them with water, or a solution of sodium chloride or sodium carbonate, at 65° to 70° C.; and subjecting them to a vigorous brushing for from 1 to 5 minutes, according to the grade of coffee being treated. The value of this method is somewhat doubtful, as it would not seem to accomplish any more than simple washing. In fact, if anything, the process is undesirable; as some of the extractive matters present in the coffee, and particularly caffeine, will be lost. Both Freund and Harnack hold briefs for the product produced by this method, and the latter endeavors analytically to prove its merits; but as his experimental data are questionable, his conclusions do not carry much weight.