

UNITED STATES PATENT OFFICE.

WILLIAM C. SALISBURY, OF SOUTH SIOUX CITY, NEBRASKA, ASSIGNOR TO
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PROCESS OF DEFECATING SACCHARINE JUICES.

SPECIFICATION forming part of Letters Patent No. 748,313, dated December 29, 1903.

Application filed February 25, 1903. Serial No. 145,084. (No specimens.)

To all whom it may concern:

Be it known that I, WILLIAM C. SALISBURY, a citizen of the United States, residing at South Sioux City, in the county of Dakota and State of Nebraska, have invented new and useful Improvements in Processes of Treating Saccharine Juices and Syrups, of which the following is a specification.

This invention relates to a certain new and useful process of clarifying and bleaching saccharine juices and syrups; and the primary object thereof is to provide a simple, inexpensive, efficient, and rapid process of clarifying and bleaching saccharine juices.

The process further aims to eliminate the major portion, if not all, of the natural taste of the juices, thereby preventing fermentation, and, furthermore, the retarding and prevention of crystallization.

A further object of the process is to remove all organic non-sugar matter without introducing damaging removing agents or the employment of complex or expensive operations.

An example showing the manner of carrying out my new and improved process of clarifying and bleaching saccharine juices and syrups is as follows: One hundred gallons of saccharine juice obtained in any manner is placed in a suitable open vessel and boiled or cooked, either by fire or steam, for substantially an hour, and at the beginning of the boiling or cooking of the juices a suitable defecating agent is incorporated therein, preferably pulverized alum, in proportions depending upon what degree of clarifying and bleaching is desired. If a certain degree is desired, one ounce of alum is admixed with one hundred gallons of the juice, and, as before stated, this admixing of the alum with the juices is not made during the period of cooking and boiling, but before. If a greater degree is desired, the proportion of the defecating agent (alum) is increased according to the following ratio: substantially one-half teaspoonful of alum to a gallon of juice. During the cooking or boiling the mass is thoroughly stirred and skimmed until sufficiently clarified and bleached.

The action of the alum causes the separation of the coloring-matter, dregs, foreign substances, and insoluble impurities and also

causes said separated matters to rise to the surface of the liquid, so they can be removed by skimming.

Because of the power of the alum to separate the coloring-matters and insoluble impurities from the saccharine juices only a small quantity of the alum need be used, and much of the alum is removed with the coloring-matters, insoluble impurities, and other substances when skimming, and the saccharine juices are consequently purer and less likely to ferment or crystallize, or, in other words, by the process herein set forth in making syrup the defecating agent used is thoroughly efficient and is removed from the juices by boiling and skimming, and no objectionable results are left in the syrup by the defecating agent. By the process hereinafter set forth a major portion of, if not all, the natural taste of the juices is eliminated, and, as before stated, fermentation and crystallization is prevented.

The action of the defecating agent is such that all of the organic non-sugar matter is removed, and as such action is obtained by the single defecating agent it does not necessitate the employment of damaging removing agents for such purpose, and, furthermore, owing to the simplicity of the process hereinbefore described it overcomes the employment of complex or expensive operations.

It is thought the many advantages of my new and useful process of clarifying and bleaching saccharine juices and syrups can be readily understood from the foregoing description, and it will, furthermore, be evident that in carrying out the process the steps and proportions can be modified without departing from the spirit of the invention or sacrificing any of its advantages, and I therefore do not wish to restrict myself to the specific steps and proportions hereinbefore described, but reserve the right to make such changes, variations, and modifications as come properly within the scope of the protection prayed.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A process of clarifying and bleaching saccharine juices and syrups consisting of in-

incorporating in the juices pulverized alum in the proportion of one ounce of alum to one hundred gallons of juices, then boiling the juices for substantially an hour, agitating the juices while they are being boiled and skimming off the impurities separated by the action of the alum upon the juices during the boiling and agitating thereof.

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

WILLIAM C. SALISBURY.

Witnesses:

C. W. TAYLOR,
PERCY BAIRD.