UNITED STATES PATENT OFFICE.

SILAS M. BROOKS, OF BURLINGTON, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO CHARLES A. HART AND PHELPS F. SMITH, OF CANTON, CONNECTICUT, AND WILLIAM E. SIMONDS.

GRAFTING-WAX AND PROCESS OF MAKING SAME.

SPECIFICATION forming part of Letters Patent No. 545,940, dated September 10, 1895.

Application filed September 13, 1893. Serial No. 485,406. (No specimens.)

To all whom it may concern:

Be it known that I, SILAS M. BROOKS, a citizen of the United States of America, residing at Burlington, in the county of Hartford and State of Connecticut, have invented a new and useful Compound and Process for Producing the Same, of which the following is a description.

The ingredients of the compound are styrax—also called "storax," or bird-lime—and a vegetable drying-oil, (one that thickens on exposure to the air through absorption of oxygen), the preferred oil being linseed-oil. The preferred proportions are a pound, by weight, of styrax to a gallon of linseed-oil. Both ingredients should be practically pure.

To prepare the compound the oil is first heated with, what is for the oil, a high and long continued heat, which can be done in a kettle or caldron suspended over a fire. The heat must not be too high or the oil will take fire. A practical test is to insert in the hot oil from time to time a dry quill or a splinter of dry pine wood. When the oil will char the quill or the dry pine the heat is as high as is safe. If the heat be kept approximately at this charring-point, the oil generally attains a certain desired condition in ten or twelve hours. A lower heat requires longer time. This desired condition of the oil may be practically determined as follows: Put a few drops of the oil on a cold plate, which, of course, will cool it. Then, when by dipping the finger into it and and raising the finger the oil will spin out from the finger in a thread, abandoning its tendency to fall in drops, it is in the desired thready condition. After the oil has attained this thready condition the fire may be withdrawn from beneath it and the oil allowed to cool to that degree that the styrax may be safely added thereto, for it cannot, for the purposes of this improvement, be added when the heat of the oil is at the charring-point. The point of cooling when the styrax may be added to the oil is reached when on putting in a small bit of styrax the oil does not foam and the odor of the styrax remains nearly or quite its normal odor. On adding the whole amount of the styrax to the oil the mixture is stirred for a little time, thoroughly mixing and incorporating together the two ingredients. Then the mixture is allowed to cool wholly, when it will have about the fluidity of ordinary molasses, and will retain that fluidity unchanged for years.

Among the uses of this compound is that of treating, by varnishing it over the same, the wounds and cuts—such, for instance, as "girdling"—of trees. It seems to supply the place of a natural bark until the bark grows again. It has other uses possibly as valuable as this.

The description hereinbefore pertains to the mixing and compounding of a vegetable oil, preferably linseed, with styrax. Bird-lime may be substituted for the styrax without change of the process, and the result will be the same in kind, though possibly not quite so good in degree. If there are other substances known, or which questioned by known methods may be known, to possess the same characteristics, chemical and mechanical, as styrax, they, like bird-lime, are within the scope of this improvement when treated as described.

I know of no other method than that herein described for intimately compounding styrax or any equivalent therefor with a vegetable oil with the result hereinbefore set forth.

I claim as my invention—

1. A compound of styrax and vegetable drying oil substantially as described.

2. A compound composed of a vegetable oil reduced by heat to a "thready condition" with styrax added thereto at a suitable heat, substantially as described.

3. The process of preparing a compound of a vegetable oil and styrax which consists in first reducing the oil by heat to a "thready condition" and thereafter adding the styrax at a suitable heat, substantially as described.

SILAS M. BROOKS.

Witnesses:
CHARLES A. HART,
JASPER H. BIDWELL.