

UNITED STATES PATENT OFFICE.

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PYROXYLIN COMPOUND.

961,360.

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To all whom it may concern:

Be it known that I, WILLIAM GODSON LINDSAY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Pyroxylin Compounds, of which the following is a full, clear, and exact specification.

This invention relates to improvements in pyroxylin compositions.

More particularly this invention relates to a new composition of matter comprising nitro-cellulose and benzyl benzoate, said composition of matter being substantially inodorous; and further relates to the process of forming my substantially inodorous pyroxylin compound.

The most prominent pyroxylin compound heretofore proposed contains nitro-cellulose, camphor and alcohol or other liquid solvents, but for many purposes this camphor-pyroxylin compound presents certain objections, chief among which is the odor imparted by the camphor. Camphor has been used so extensively in forming previous pyroxylin compounds principally for the reason that the camphor performs the important function of giving plasticity to the resultant pyroxylin compound, a feature of high practical value.

According to my invention a pyroxylin compound can be made without the use of camphor and having any desired degree of plasticity and, in addition, having the property of being substantially inodorous.

Other features of my invention will appear from the description which follows.

My invention may be carried out by dissolving or softening the nitro-cellulose by means of a solvent formed of suitable mixtures of benzyl benzoate with one or more additional solvent substances, such as alcohol, wood spirit, amyl acetate, or related liquid menstrua. It will be readily understood by anyone skilled in the art, that the pyroxylin must be sufficiently soluble to be capable of easy manipulation, and the liquid menstrua must be selected qualitatively and quantitatively to fulfil these requirements. I have found that the proportion of benzyl benzoate may be varied in accordance with the flexibility required in the final product.

For hard compounds the proportion of 20 parts of benzyl benzoate to each 100 parts of pyroxylin gives excellent results; for very flexible compounds the proportion of benzyl benzoate may be chosen as 150 parts to each 100 parts of pyroxylin. It will be understood, however, that these relative parts are given to indicate specific proportions of definite mixtures which I have made in accordance with this invention, and that my process and the product formed in accordance with this invention are not limited to the exact proportions enumerated above.

My new compound may be made in the form of stiff masses or viscous solutions, and coloring matter or other ingredients may also be added, as will be readily understood. The mechanical operations of mixing and manipulating are analogous to those regularly employed in forming compounds of similar character. In carrying out my invention the operator must keep in view the fact that benzyl benzoate is of lower solvent power than camphor, and that the addition of other solvents assists in effecting the complete combination.

It is well known that benzyl benzoate possesses some odor; however, I have discovered that combinations of nitro-cellulose with benzyl benzoate after thorough seasoning give out substantially no odor. The final compound made in accordance with this invention is plastic under heat and can be readily cut, carved, bent and polished in the usual way. By reason of the property of my pyroxylin compound of being inodorous, articles made from my new composition of matter offer, in this respect, a great contrast to articles made of camphor-pyroxylin combinations and at the same time possess the desirable characteristics of the latter. Accordingly, my invention is of great value in increasing the applications of plastic pyroxylin compounds.

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

1. The process of forming a substantially inodorous pyroxylin compound which comprises combining nitro-cellulose with benzyl benzoate.

2. The process of forming a substantially

inodorous pyroxylin compound comprising treating a substance containing nitro-cellulose with benzyl benzoate.

3. The process of forming a substantially
5 inodorous pyroxylin compound comprising treating nitro-cellulose with a solution of benzyl benzoate.

4. A composition of matter containing nitro-cellulose, and benzyl benzoate.

5. A composition of matter containing 10 nitro-cellulose, benzyl benzoate and a solvent for the same.

In testimony whereof I affix my signature, in presence of two witnesses.

WILLIAM GODSON LINDSAY.

Witnesses:

C. V. EDWARDS,
GEO. N. KERR.