UNITED STATES PATENT OFFICE.

JOHN H. STEVENS, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE CELLULOID COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

WATERPROOF FABRIC.

SPECIFICATION forming part of Letters Patent No. 615,319, dated December 6, 1898.

Application filed May 16, 1898. Serial No. 680,837. (No specimens.)

To all whom it may concern:

Be it known that I, JOHN H. STEVENS, of the city of Newark, county of Essex, and State of New Jersey, have invented certain new and useful Improvements in Waterproof Fabrics, of which the following is a specification.

Compounds of pyroxylin used for spreading on flexible sheets of other substances—such as paper, cloth, or leather, for instance—are usually made of the proper flexibility by means of oils. These oils are subject to chemical changes, resulting in a condition of rancidity, which imparts an objectionable odor to the pyroxylin coating on the cloth or other substance. I find that the presence of naphthol in the pyroxylin compound containing oils prevents or retards such tendency to rancidity. The principal oil used for these purposes is castor-oil, and I have found naphthol, especially the beta variety, useful in connection with castor-oil.

In practice I form the solutions of pyroxylin according to the usual methods and find that a small proportion of the naphthol is sufficient for the purpose. A good formula for a coating solution for cloth or leather is as follows: soluble pyroxylin, one hundred parts; camphor, one hundred parts; castor-oil, two hundred parts; beta-naphthol, two to four parts, and wood-spirit sufficient to make a solution of the proper fluidity for spreading. The operator will find that this solution after being dried and given the test of time will possess little or no rancidity when compared with the same solution minus the naphthol. I find also that the naphthol forms a peculiar combination with the camphor, which enables it to increase the flexibility of compounds containing it—that is, a mixture of pyroxylin, beta-naphthol, and camphor will be highly flexible, depending on the proportion used, although all three ingredients are ordinarily solids in a separate state. The naphthol therefore in my compounds performs a double office—that of retarding rancidity and adding to the flexibility.

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

A fabric waterproofed by a pyroxylin compound which contains pyroxylin, oil, camphor, and naphthol, substantially as described.

JOHN H. STEVENS.

Witnesses:
WALTER P. LINDSLEY,
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