UNITED STATES PATENT OFFICE.

FREDERICK NIEDERHEITMANN, OF AIX-LA-CHAPELLE, PRUSSIA.

IMPROVEMENT IN COMPOSITIONS TO BE APPLIED TO WOOD FOR SOUNDING-BOARDS OF MUSICAL INSTRUMENTS.

Specification forming part of Letters Patent No. **150,074**, dated April 21, 1874; application filed March 26, 1874.

To all whom it may concern:

Be it known that I, FREDERICK NIEDERHEITMANN, of Aix-la-Chapelle, in the Kingdom of Prussia, have invented a new and Improved Composition to be Applied to the Sounding-Boards of Pianos, Violins, Violoncellos, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same.

The invention relates to a novel composition of matter whereby those properties of wood which adapt it to use for the sounding-boards of pianos, guitars, and other musical instruments may be preserved for an indefinite period, sounding-boards not only retaining their peculiar quality, but undergoing an actual change for the better.

The invention will first be fully described in connection with all that is necessary to a full understanding thereof, and then pointed out in the claim.

My composition consists of turpentine, four parts; boiled linseed-oil, one part; Canada balsam, one part. These ingredients should be of the finest quality and greatest purity to produce their maximum effect, although those of an inferior quality, and in somewhat varying proportions, will embody the principle of my invention, and evolve an effect different only in degree.

After a thorough intermixture of the ingredients the composition is warmed and applied (preferably with a brush) on the sounding-board or the wood out of which it is to be prepared, the board or wood being also heated to about 70° centigrade (Celsius.) After the first coat is completely dried, a second one is in like manner applied. After this dries, the operator will perceive that the pores of the wood have been pretty well filled, and a shiny face has been to some extent already formed. This is made homogeneous by a third coat.

The invention has been practically exemplified to the satisfaction of those engaged in the manufacture of sounding-boards in this country and in Europe, many of these parties having recently adopted and put it in practice.

The effect of displacing air and other elements, and causing this preparation to permeate the pores of wood, is to provide it with a homogeneous sounding medium. The latter is durable, while the deadening effect of wood decreases with time, the instrument being thus found actually to improve with time and age. The pores being filled also by a practically water-and-air-proof material, the natural elasticity of fiber is unimpaired by the absorption of moisture or any other deleterious element, while changes of temperature cease to exercise any perceptible effect.

The manufacturer has been heretofore compelled to exercise great care in the selection of his material, and even then to discard from eighty to ninety per cent. of his wood, while with my process fully ninety per cent. of the same carefully-selected wood can be readily employed. Another advantage of my composition is, that it renders unnecessary the usual coat of varnish, which always, more or less, injures the sounding qualities of the wood.

Having thus described my invention, what I claim as new is—

A composition of turpentine, boiled oil, and Canada balsam, prepared and applied to sounding-boards or the wood from which they are to be made, as and for the purpose specified.

The above specification of my invention signed by me this 19th day of February, A. D. 1874.

FREDERICK NIEDERHEITMANN.

Witnesses:

LOUIS BERTEL,

ALFRED NAUS.