

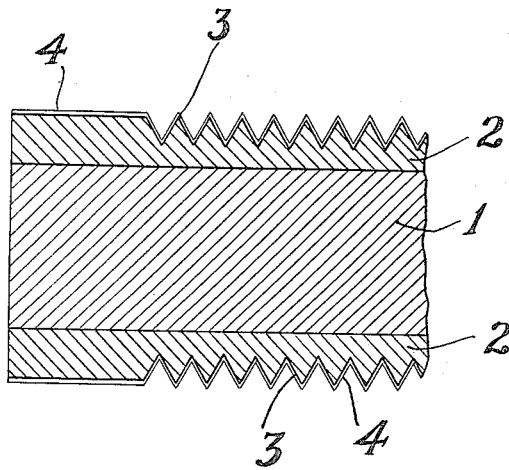
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T. A. EDISON

SOUND RECORD

Filed Feb. 11, 1922



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# UNITED STATES PATENT OFFICE.

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## SOUND RECORD.

Application filed February 11, 1922. Serial No. 535,959.

*To all whom it may concern:*

Be it known that I, THOMAS A. EDISON, a citizen of the United States, and a resident of Llewellyn Park, West Orange, in the county of Essex and State of New Jersey, have made certain new and useful Improvements in Sound Records, of which the following is a description.

My invention relates to sound records and more particularly to Edison disc sound records in which the surfaces or outer record receiving portions are formed in part at least of a final hardened phenolic condensation product. It is to be understood, however, that my invention is also applicable to other types of sound records.

Several types of sound records now on the market are finished with glossy, light-reflecting surfaces, and in order to prevent the destruction or serious impairment of the glossy, light-reflecting character of these surfaces during the reproduction of the records, it has heretofore been necessary to impart a high, smooth finish or polish to the tracking surfaces or points of the reproducing styli. For example, in the case of Edison disc records it has heretofore been necessary in order to preserve the glossy character of the surfaces of the records, to polish the tracking points of the diamond styli employed for reproducing such records to a very high degree. To thus polish these diamond styli entails a good deal of labor, time and expense.

The principal object of my invention is to render it unnecessary to impart such a high degree of finish or polish to reproducing styli as has heretofore been required in order to preserve the glossy, light-reflecting character of the surfaces of sound records when the latter are played or reproduced.

I have discovered that the foregoing object may be attained by applying to the surfaces of sound records a very thin coating or film of stearin, and my invention resides in an improved form of sound record having such a film or coating applied thereto, and also in the method of applying this coating or film of stearin to sound records.

In applying this thin film or coating of stearin to a sound record, I preferably proceed as follows: The stearin is first dissolved in a suitable solvent therefor, preferably alcohol. The proportions of stearin and solvent may be varied considerably but

I find the best results are obtained by dissolving substantially three grams of stearin in one litre of the solvent therefor. A thin coating of this solution is then spread over the surface of the record to be treated, as by brushing, and the solvent is then allowed to evaporate. Upon the evaporation of the solvent an extremely thin film of stearin is left on the surfaces of the record and adheres very strongly thereto, especially in the case of an Edison disc record in which the outer surface portion comprises a final hardened phenolic condensation product.

Sound records thus provided with thin films of stearin on their surfaces will retain their high surface gloss for a long period of time even though the styli used in reproducing the same are not highly finished or polished. For example, Edison disc records which have been thus coated with thin films of stearin, show no disturbance or change whatever in the character of their light-reflecting surfaces after many reproductions, even though the diamond styli used in reproducing the same are polished to a much less degree than has heretofore been customary and necessary.

In the drawing accompanying and forming a part of this specification, the single figure is an enlarged, fragmental, sectional view of a disc record of the Edison type showing stearin applied thereto in accordance with my invention.

Referring to the drawing, the disc record shown comprises a somewhat thermo-plastic base or backing member 1 formed of a suitable filler, such as a mixture of wood flour or powdered chalk combined with a comparatively small amount of a suitable binder such as a shellac or resin. To each side of the base 1 is applied a surface layer 2 of a phenolic condensation product in which the record grooves 3 are impressed, the latter being shown greatly exaggerated. The phenolic condensation product used for the surface layers 2, 2 is preferably made in the form of a varnish and may be applied to the base 1 by brushing. Reference characters 4, 4 represent the thin films of stearin applied as described above to the surfaces of the layers 2, 2 of the record receiving material and of the record grooves 3, 3 therein.

Having now described my invention, what I claim and desire to protect by Letters Patent is as follows:

1. A sound record having a thin coating or film of stearin applied to the surface of the portion thereof containing record grooves, substantially as described.
- 5 2. A sound record having a outer portion containing record grooves and comprising a phenolic condensation product, and a thin film or coating of stearin applied to the surface of said portion, substantially as described.
- 10 3. The method which consists in dissolving stearin in a suitable solvent, applying solution thus produced to the surface of a sound record, and permitting the solvent to evaporate, substantially as described.
- 15 4. The method which consists in dissolving stearin in alcohol in the proportion of substantially three grams of stearin to one litre of alcohol, applying solution thus produced to the surface of a sound record, and 20 permitting the alcohol to evaporate, substantially as described.

This specification signed this 8th day of February, 1922.

THOS. A. EDISON.