

T. H. MACDONALD.
RE-PRESSING DISK SOUND RECORDS.
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1,022,100.

Patented Apr. 2, 1912.

Foundation (old disc record) composed
in part of inferior record material.

Apply to face of record a quantity
of shellac-containing material.

Subject coated record to heat.

Apply a quantity of inferior record
material to the back of record.

Press record of sound in surface of
shellac-containing material in
heated mold.

Inventor

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Witnesses
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UNITED STATES PATENT OFFICE.

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RE-PRESSING DISK SOUND-RECORDS.

1,022,100.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THOMAS H. MACDONALD, a citizen of the United States, and a resident of Bridgeport, Connecticut, have invented a new and useful Improvement in Re-Pressing Disk Sound-Records, which improvement is fully set forth in the following specification.

This invention relates to disk sound-records and has for its object to utilize old disk records.

In the manufacture of disk records by the American Graphophone Company, with whom I am now operating, two materials are employed known respectively as ingredient No. 1 and ingredient No. 2. These ingredients consist of the ordinary material or stock employed in making such articles, namely, earthy matter and a binder consisting of a gum or gums. What we call ingredient No. 1 contains a considerable amount of shellac, which is desirable for giving the proper surface to the sound-record; whereas ingredient No. 2 contains little or no shellac, but has the equivalent therefor in the form of a cheaper gum or gums as the binder. Ingredient No. 2 is employed for the main body of the disk, and ingredient No. 1 constitutes the surface.

In carrying out my invention, I proceed as follows: The old record disk is placed with the record-surface, which usually contains a printed label, uppermost, and is covered with finely powdered ingredient No. 1. In practice, $\frac{1}{2}$ ounce or $\frac{3}{4}$ of an ounce is sufficient to coat a ten inch record. The coated record is then subjected to heat until it has become pliable, when it is subjected to compression against the desired record-matrix. In practice, I have found it desirable in heating the dusted record, to place it upon a piece of muslin or canvas about twelve inches square for a ten inch record, and lay on a steam table. A cover may be used for the record, if necessary, to confine the heat so as to expedite the process. When the old record has become pliable, the powder (ingredient No. 1) will have become adhesive, and the whole is then lifted by the muslin or canvas and placed face downward upon the matrix. The cloth is then removed by peeling it from the softened disk, and a small quantity of ingredient No. 2 (about one-fourth of the amount used in making a complete record *de novo*, or say about $1\frac{1}{2}$

ounces for a ten inch record) is placed upon top of the old material, and the back of the die (preferably a little hotter than usual) is put in place and then pressure applied in the usual manner. The excess of stock will be squeezed out leaving the finished article of the usual dimensions. There is no "flowing" of the material over the face of the matrix, consequently the matrix-surface will not be injured.

The article just prepared is, so far as sound-record qualities are concerned, equally as good as any other superior record; and in physical respects it is less liable to break or warp, and, because of the presence of more hard material on its surface, it will withstand more reproductions than heretofore believed possible.

Changes in the detail of procedure may be made without departing from the spirit of my invention.

The diagrammatic drawing annexed hereto for convenient reference indicates the successive steps in my process, as practiced. I have set forth these steps with some particularity, but the invention is not limited to the precise forms and details disclosed; nor is this drawing to be understood as indicating the scope of the invention, reference being had to the appended claims for this purpose.

Having thus described my invention, I claim:

1. The process of utilizing or repressing old disk records, which consists of covering the surface thereof with suitable material in powdered form, applying heat, placing additional material at the back, and compressing the same against a record-matrix.

2. The process of utilizing or repressing old disk records, which consists of applying suitable materials at the front and back thereof respectively, and subjecting the same to heat and pressure against a record-matrix.

3. The process of pressing a sound-record, which consists in taking a tablet composed of inferior material capable of being rendered plastic by heat, and having one surface or side composed of superior shellac-containing material, applying to said shellac-containing surface a layer of powdered shellac-containing record material, heating the said tablet and said powdered layer until they become plastic, applying a sound-record

matrix to said heated powdered layer, and subjecting the whole to pressure.

4. The process of pressing a sound-record, which consists in taking a tablet composed in part of an inferior material capable of being rendered plastic by heat, and having a superior record surface containing shellac, applying to said superior record surface a layer of superior shellac-containing record material also capable of being rendered plastic by heat, subjecting the whole to heat, applying a sound-record matrix against said last-named layer, and subjecting the whole to pressure.

5. The process of pressing a sound-record, which consists in taking a tablet composed in part of an inferior material capable of being rendered plastic by heat and having a shellac-containing surface of superior material, applying in powdered form a shellac-containing material to said superior surface, subjecting the whole to heat until the said layers become united and plastic, placing a body rendered plastic by heat to the back of said inferior layer, applying a sound-record matrix to said powdered shellac-containing surface, and subjecting the whole to pressure.

6. The process of pressing a sound-record, which consists in taking a tablet composed in part of an inferior material capable of being rendered plastic by heat and having a shellac-containing surface of superior material, applying a shellac-containing material to said superior surface, subjecting the whole to heat until the said layers become united and plastic, placing a body rendered plastic by heat to the back of said inferior layer, applying a sound-record matrix to said shellac-containing surface, and subjecting the whole to pressure.

7. The process of pressing a sound-record, which consists in taking a tablet composed in part of inferior material capable of being rendered plastic by heat and having a superior shellac-containing surface, applying to said shellac-containing surface a layer of shellac-containing material capable of being rendered plastic by heat, subjecting the

whole to heat, applying a sound-record matrix to said shellac-containing surface and also applying to the back of said first-named inferior layer a second layer of inferior material rendered plastic by heat, and subjecting the whole to pressure.

8. The process of pressing a sound-record, which consists in taking a tablet composed in part of inferior material capable of being rendered plastic by heat and having a surface of superior shellac-containing material also capable of being rendered plastic by heat, applying a shellac-containing body of plastic material to the face of said superior shellac-containing layer, subjecting the whole to heat, applying to the back of said inferior layer a body of inferior material rendered plastic by heat, placing said shellac-containing body in contact with a sound-record matrix, and subjecting the whole to pressure.

9. The herein described method of making molded articles, which consists in applying to the upper surface of a foundation which becomes plastic under the influence of heat, a layer of powdered material having like properties, exposing both the foundation and the applied powdered layer to heat to cause them to unite, and thereupon transferring the entire article to a mold and subjecting it to pressure therein while hot.

10. The herein described method of molding sound-records, which consists in applying to the upper surface of a foundation which becomes plastic under the influence of heat, a layer of powdered shellac-containing material which also becomes plastic under the influence of heat, exposing both the foundation and the applied powdered layer to heat, and then subjecting the whole to pressure while hot and with said powdered layer in contact with a sound-record matrix.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

THOMAS H. MACDONALD.

Witnesses:

A. B. KEOUGH,
R. T. PITT.