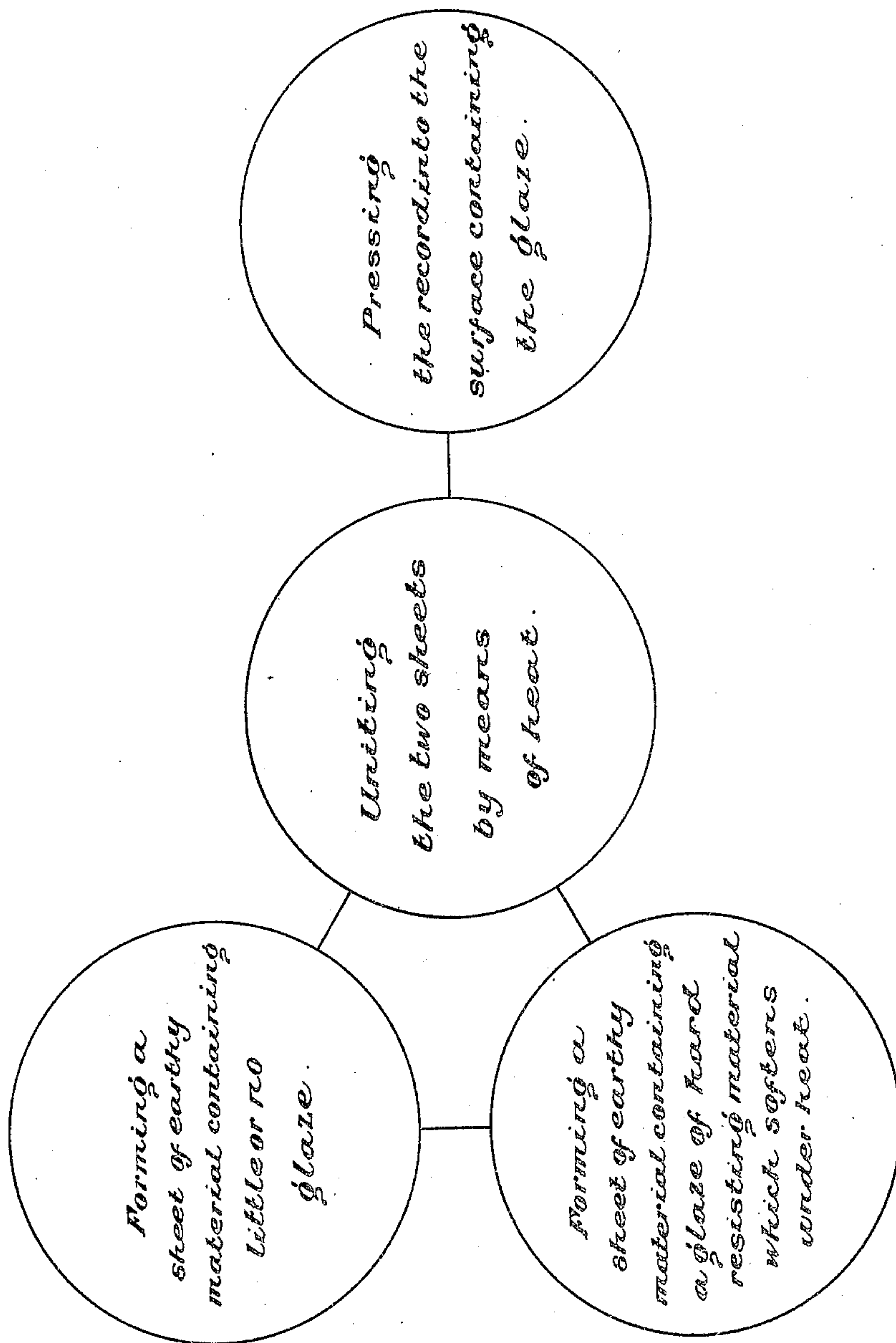


No. 808,842.

PATENTED JAN. 2, 1906.

W. H. HOYT & W. J. GAVEN.
MANUFACTURE OF SOUND RECORDS.

APPLICATION FILED JUNE 11, 1904.



Inventor

Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM H. HOYT AND WILLIAM J. GAVEN, OF BRIDGEPORT, CONNECTICUT, ASSIGNORS TO THE BURT COMPANY, OF HACKENSACK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

MANUFACTURE OF SOUND-RECORDS.

No. 808,842.

Specification of Letters Patent.

Patented Jan. 2, 1906.

Application filed June 11, 1904. Serial No. 212,216.

To all whom it may concern:

Be it known that we, WILLIAM H. HOYT and WILLIAM J. GAVEN, of Bridgeport, county of Fairfield, State of Connecticut, have invented a new and useful Improvement in the Manufacture of Sound-Records, which is fully set forth in the following specification.

This invention has reference to the production of pressed or molded sound-records—that is to say, of sound-records which are made by impressing the undulations corresponding to sound-waves upon a suitable tablet in the form of a disk, cylinder, or other suitable form.

Heretofore pressed or molded records have generally been formed upon tablets of homogeneous material, having the same coefficient of expansion and contraction throughout their mass. For this purpose various materials or compositions have been used with commercially satisfactory results. For making cylindrical records compositions of a wax-like character have been most commonly used. For making disk records compositions of earthy material compacted under pressure by means of a suitable binder, such as shellac, have been commonly used. These articles must have a mass or thickness sufficient to give them the strength required to withstand the incidents of handling and transportation, and in order to reduce the cost it has been proposed to make the body of the tablet of a relatively cheap substance (such as pasteboard or papier-mâché) and to spread thereupon a surface of the sound-recording composition. In such cases, however, the inconveniences arising from tablets composed of two substances differing in respect of their coefficient of expansion have prevented the lasting or successful use thereof. Records have also been made of a very thin shell of celluloid, xylonite, and like materials backed up by a thicker shell of pasteboard or the like without causing the adjacent surfaces of the two materials to adhere, so that each can expand and contract at its own natural rate.

The present invention has for its object to reduce the cost of the production of sound-records without any injurious effect upon the quality of the surface and without sacrifice of the strength of the tablet and without

incurring the objections which exist in composite tablets.

The invention is applicable to compositions which are for all practical purposes homogeneous throughout, but which contain an ingredient whose presence is necessary to give to the surface the hard glazed finish and other qualities absolutely indispensable for proper sound reproduction. For example, in the compositions of earthy material now commonly employed in the production of disk records an ingredient such as shellac is necessary to give the proper finish to the surface. This ingredient serves also as a binder and in making these compositions (whether for sound-records or other purposes) has always been distributed uniformly throughout the mass. This ingredient will be herein termed the "glaze." Specifically we have discovered that a pressed sound-record formed of earthy material and containing the glaze only on the surface—that is to say, in a relatively small part of the entire thickness of the tablet—the body of the tablet being formed of a similar composition containing an ordinary binder has not only all the acoustical qualities of the sound-records as now made, but practically the same strength and resistance to shock and the same coefficient of expansion and contraction throughout its mass. Inasmuch as the glaze is the expensive ingredient in the composition, the invention materially diminishes the cost of production of these articles.

The invention may be applied in various ways. Practically we have found the following process to give good results, and it constitutes the best way in which we have contemplated applying the principle of the said invention. We form two batches of the plastic composition. One of these contains the usual ingredients mixed with an ordinary binder, such as Manila gum. The other contains the same (or like) ingredients with shellac instead of Manila gum. The two batches are rolled into sheets, that which is to form the surface of the tablet being quite thin relatively to the thickness of the sheet which is to form the body of the tablet. These two sheets when heated unite strongly together. The combined sheet is used as in the ordinary process of pressing records, the side containing the glaze being applied to the

matrix. The pressure impresses the sound-record upon the tablet and compacts the whole into what is practically a homogeneous tablet. A great many plastic compositions of the kind referred to herein are in common use, and the preparation thereof is well understood. Such composition may be formed of terra alba ten parts, barytes ten parts, and flock four parts, (by weight,) with Manila gum for the ordinary stock and shellac for the surface stock. A suitable pigment may be added.

The process is graphically illustrated in the accompanying diagram.

The novel sound-record tablet herein disclosed is not claimed in the present application, since such sound-record tablet forms the subject of our application, Serial No. 265,325, filed June 15, 1905, which is a division of the present application.

Having now fully described our invention, what we claim is—

1. The process of making pressed sound-

records which consists in forming a sheet or tablet of a layer of earth material containing a glaze of hard resisting material which softens under heat, and a layer of similar material containing little or no glaze, heating the two layers together, and pressing the record in the face containing the glaze.

2. The process of making pressed sound-records which consists in forming a sheet of earthy material containing shellac, and another sheet of like material containing little or no shellac, uniting the two layers by means of heat, and pressing the record into the surface containing the shellac.

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

WILLIAM H. HOYT.
WILLIAM J. GAVEN.

Witnesses:

PHILIP MAURO,
W. R. MILLER.