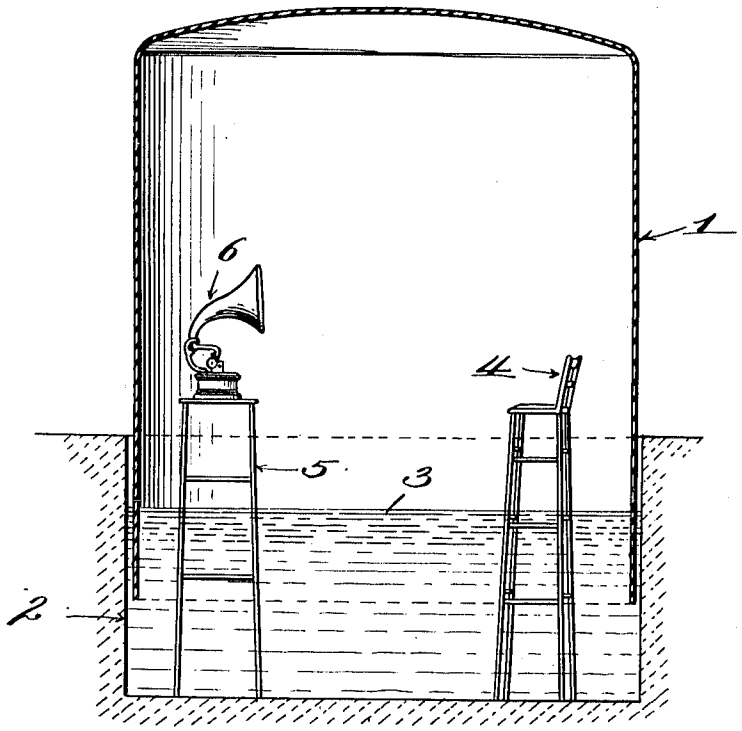
J. P. SNARE.

METHOD OF PRODUCING TALKING MACHINE RECORDS.

APPLICATION FILED MAR. 20, 1911.

1,035,057. Patented Aug. 6, 1912.



Witnesses.

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METHOD OF PRODUCING TALKING-MACHINE RECORDS.

1,035,057. Specification of Letters Patent. Patented Aug. 6, 1912.

Application filed March 20, 1911. Serial No. 615,624.

To all whom it may concern:

Be it known that I, JOHN P. SNARE, a citizen of the United States, residing at Modesto, in the county of Stanislaus and State of California, have invented new and useful Improvements in Methods of Producing Talking-Machine Records, of which the following is a specification.

The present invention has reference to the production of records for talking machines, and it comprehends, briefly, a method or process whereby the medium which transmits or carries the sound waves from the performer to the recording instrument is highly improved and rendered more efficacious for that purpose. To effect this object, the recording operation is carried out in a closed chamber wherein the contained air constituting the aforesaid transmitting medium is subjected to an appreciable degree of pressure, all extraneous disturbing influences which would otherwise affect such medium being at the same time removed, with the result that the voice of the performer is more perfectly reproduced than has heretofore been possible. This is due primarily to the fact that the condensation of the air produces a medium which transmits or carries the sound waves much more readily than air at normal or atmospheric pressure. In consequence, the slight strain to which the voice of the performer is subjected, (and this is particularly true of amateur recording, as opposed to professional recording in specially constructed and equipped laboratories), is avoided, and the sounds reproduced approach more nearly the natural tones actually sung or spoken. For the same reason, the lowest and softest tones may be perfectly recorded, and subsequently reproduced, and this holds good for both vocal and instrumental performances, which is a matter of considerable importance, inasmuch as at the present time many records of selections containing extremely low notes and pianissimo effects are more or less considerably spoiled by the flatting of a low note or the failure to record and reproduce all of the notes in a passage played or sung pianissimo. Finally, the recording is further facilitated to an appreciable extent both by constructing the chamber in part in the form of a bell made of sound-amplifying material, preferably metal, and in mounting such bell in much the same manner as the bell of a gas tank; that is to say, the bell is supported in a pit or stand partly filled with water, which latter will act not only as a seal to prevent entrance of extraneous disturbing influences, but also, to some extent, as a deflector for directing the sound waves toward the recording instrument.

A vertical sectional view of one form of apparatus for carrying out the invention is illustrated in the accompanying drawing, but it is to be understood that such illustration is intended merely as diagrammatic, and, moreover, that the term "talking machine", as employed both above and hereinafter, is used in its broadest sense, as covering the so-called phonographs, graphophones, gramophones and the like in general use at the present time, without restriction to the character of record utilized in connection therewith.

The bell 1 shown in said drawing is, as has already been stated, preferably similar in the main to the ordinary gas bell, and is mounted for vertical movement in a tank, pit or other supporting receptacle 2, which is filled or partly filled with water, as indicated by the numeral 3. Upon the floor of said receptacle rest a chair 4 for the performer, and a stand 5 for the recording instrument 6, both the chair and stand being inclosed within the bell and being of sufficient height to project a considerable distance above the water level.

Any suitable means or devices may be employed for obtaining ingress to and egress from the bell; for instance, the bell may be raised to an extent sufficient to enable the performer to step from the top wall of the receptacle to the chair, or it may be provided with a door through which the performer may enter, the door being so constructed as to fit tightly in its opening when closed, to prevent the entrance of air. In either instance, it will be apparent that the apparatus is closed after the performer is in place in his chair, thus producing a water sealed chamber due to the submergence of the lower end of the bell. Illustration of the means or devices for permitting such ingress and egress is, however, omitted, since the same form no part of the present invention.

The weight of the bell has the obvious effect of increasing the density of the air contained therein, and it is this condensed or compressed air which constitutes the im-

proved transmitting medium, the extent of condensation or compression being proportionate to the size and material of the bell, but under no circumstances reaching so high a point as to interfere with the comfort of the performer. The proper or necessary extent of such action may, in fact, be readily determined by experiments.

The actual recording operation is carried out in the usual manner, and, upon its conclusion, the recorded blank is removed from the machine and replaced by a fresh blank as is customary, the bell being raised or opened prior to the making of the new record if considered advisable.

It will be understood that the construction of the bell of material which will amplify the sound waves, preferably more or less resonant metal, tends to further improve the character of the record, and that a somewhat similar improvement is obtained by the employment of the water, owing to the latter's well known property of carrying or transmitting sounds. Finally, the disposition of the recording instrument and the performer within a closed chamber of the type described precludes any extraneous influence from acting on, absorbing, or otherwise disturbing or injuriously affecting the transmission of the sound waves.

I claim as my invention:

The process of recording sound waves which consists in compressing a transmitting medium contained in a closure which surrounds the recording instrument and the source of sound, and transmitting the sound waves through the compressed medium to said instrument.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN P. SNARE.

Witnesses:
A. R. VOGELMAN,
E. H. ZION.