

E. R. JOHNSON.  
RECORD FOR TALKING MACHINES.  
APPLICATION FILED AUG. 30, 1904.

1,016,271.

Patented Feb. 6, 1912.

Fig. 1.

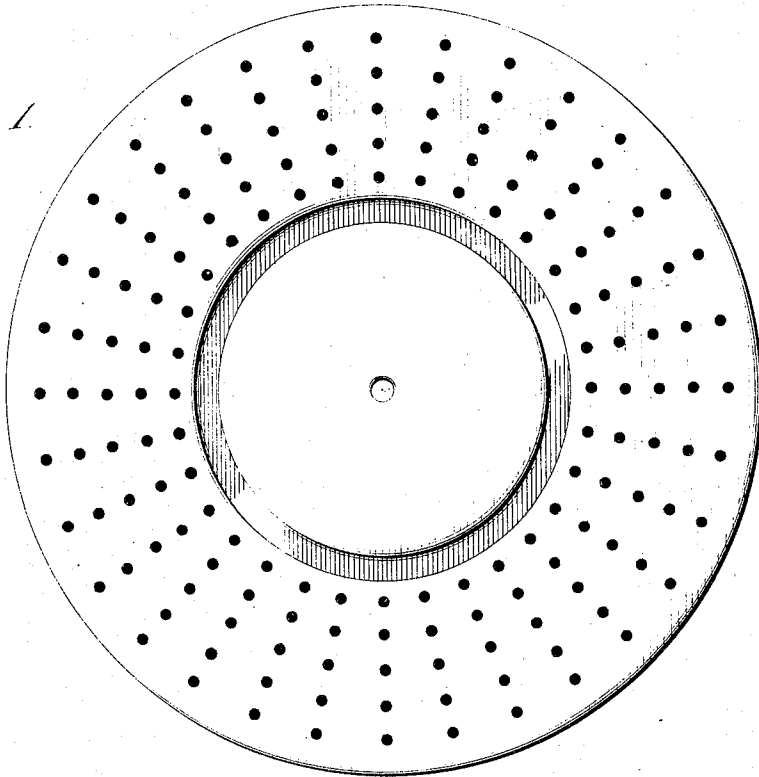


Fig. 2.

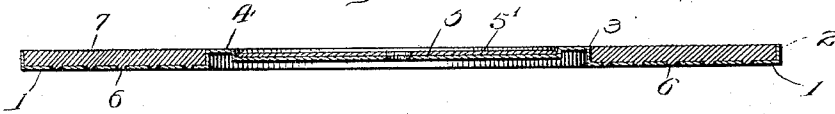
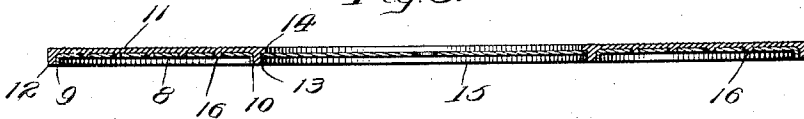


Fig. 3.



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# UNITED STATES PATENT OFFICE.

ELDRIDGE R. JOHNSON, OF MERION, PENNSYLVANIA, ASSIGNOR TO VICTOR TALKING MACHINE COMPANY, A CORPORATION OF NEW JERSEY.

RECORD FOR TALKING-MACHINES.

1,016,271.

Specification of Letters Patent.

Patented Feb. 6, 1912.

Application filed August 30, 1904. Serial No. 222,686.

To all whom it may concern:

Be it known that I, ELDRIDGE R. JOHNSON, a citizen of the United States, and a resident of Merion, county of Montgomery, State of Pennsylvania, have invented certain new and useful Improvements in Records for Talking Machines, of which the following is a full, clear, and complete disclosure of one form of my invention.

Heretofore in the manufacture of flat disk records for talking machines it has been the practice to stamp out the record disks from a suitable material by means of a die containing a matrix upon the surface of which has been engraved or otherwise placed the record grooves, which grooves, in connection with the sound box are adapted to reproduce the sounds impressed upon the original record. The record disks formed by so impressing the matrices have usually been of some durable material which softens under the influence of heat, but which is hard and firm under normal conditions of temperature. The material usually employed for making these records has been in the form of flat sheets which have been of uniform thickness throughout the entire extent of the disk with the possible exception of the central portion where the label has been impressed or countersunk into the material during the pressing or forming of the record. This material, in many instances, has been the substance called "duranoid" which consists of shellac and certain other coloring pigments and strengthening ingredients. Other similar materials which have been used are hard rubber and celluloid. It will be realized that these compositions are expensive when used in large quantities, especially in view of the fact that talking machine records now employed in this art have been steadily increasing in size.

The object, therefore, of my invention is to produce a record which may have all the advantages of a flat disk record of uniform thickness but which will at the same time be much lighter and, therefore, less expensive in original cost and also will be easier to handle and less expensive in transportation either by mail, freight, or express.

A further object of my invention is the production of a record which will have strengthening means applied in such a manner as to give a stiff and firm backing for the reproducing surface without the neces-

sity of employing the larger amount of material required in a disk record made entirely of duranoid or other similar substance.

Briefly, my invention comprises a disk record having upon its under side a metallic plate or backing made in different forms so as to retain the record material firmly in position and at the same time, to protect the record material from injury to which it would otherwise be liable owing to its reduced thickness. The metallic backing may also extend across the central portion of the record not occupied by the record grooves and may form a centering means for the record when placed upon the turntable. The central portion of the record may also be occupied by an independent disk of metal or other material which forms the centering means and which is fixed in position during the stamping or forming process.

For a full, clear and exact description of these forms of my invention reference may be had to the specification and to the accompanying drawings forming part thereof in which—

Figure 1 is a reverse plan view of a talking machine record having the strengthening plate applied thereto. Fig. 2 is a transverse sectional view of the form of record shown in Fig. 1 and Fig. 3 is a transverse sectional view of a modification showing the centering disk placed in position independently of the metallic backing.

Referring to the drawing the numeral 1 indicates a circular metallic plate having an outer flange 2, an inner flange 3, and a central portion 4, the greater part of the central portion being countersunk as indicated at 5 to form a seat or recess for the record label 5'. The annular portion of the plate 1 is provided with a series of holes or perforations 6 which are adapted to receive portions of the record material 7, which is included between the flanges 2 and 3 and thereby hold the same in position within the recess formed by said flanges. The record material 7 is placed in the annular trough or recess formed by the flanges 2 and 3 in any suitable manner but I prefer to place the same therein during the process of stamping or impressing the record grooves in said material so that part of the record containing the record grooves may be formed at a single operation.

55 the reproducing surface without the neces- 110

In the modification shown in Fig. 3 the function and result obtained are similar to those of the modification above described but instead of having the backing a continuous plate the same consists of an annular plate 8 having transverse flanges 9 and 10 at its edges. In this form the record material 11 is molded about the annular plate 8 so as to form outer and inner flanges 12 and 13. The flange 13 is also formed with an upper circular rib or flange 14 against which the disk 15 forming the means for centering the disk is seated.

The annular plate 8 is also preferably provided with the holes or perforations 16 for more intimately uniting the record material 11 with its backing.

The materials used in the backing for this form of record may be any stiff, durable substances in the form of a plate or may be stamped or molded into the required form, such metals as sheet iron or steel, brass, tin or aluminium being especially adaptable for this purpose.

The material which forms the surface for receiving the record grooves may be the material usually employed, provided it can be molded about the backing and provided it also may receive the record grooves during the operation of forming or stamping the record.

I do not wish to be limited to the exact form and arrangement of the parts shown and described herein, for the same may be varied in many ways without departing from the spirit and scope of my invention, but

What I claim and desire to protect by Letters Patent of the United States, is:—

1. A record for a sound recording and reproducing machine comprising a sheet metal disk having two concentric depressions,

the one being annular in shape located adjacent the periphery, and the other occupying the central portion of the disk and having a flat inner surface provided with a central aperture, and record material secured within said annular depression, the said disk having the part thereof between the said concentric portions formed into a ring substantially rectangular in cross section, having its outer face substantially flush with the surface of the record material, said ring being open upon one side.

2. A record for a sound recording and reproducing machine, comprising a sheet metal disk having an annular depression located adjacent to the periphery of the same, and record material secured within said annular depression, the said disk having the part thereof adjacent to the inner side of said depression formed into a rib substantially rectangular in cross section, having its outer face substantially flush with the surface of said record material, said rib being open on one side.

3. A record for a sound recording and reproducing machine comprising a sheet metal disk having an annular depression located adjacent to the periphery of the same, and record material secured within said annular depression, said disk having the part thereof adjacent to the inner side of said depression formed into a rib substantially rectangular in cross section and open on one side.

In witness whereof I have hereunto set my hand this 29th day of August, A. D., 1904.

ELDRIDGE R. JOHNSON.

Witnesses:

WILLIAM B. BREMAN,  
EDW. W. VAILL, JR.