

E. M. BERLINER.
RECORD FOR SOUND REPRODUCING MACHINES.
APPLICATION FILED OCT. 3, 1908.

936,976.

Patented Oct. 12, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

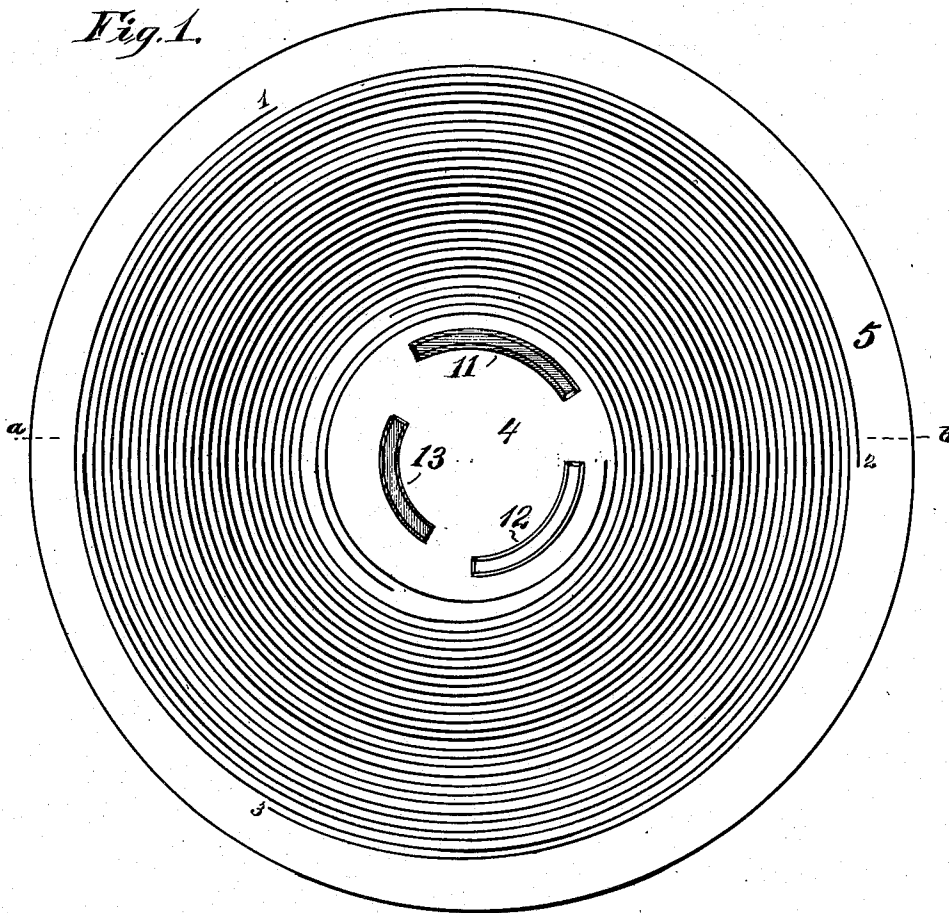


Fig. 2.



Witnesses
Thos. W. Needford
E. E. Keith

Inventor
Edgar M. Berliner,
By Eugene M. Johnson,
Attorney

E. M. BERLINER.
 RECORD FOR SOUND REPRODUCING MACHINES.
 APPLICATION FILED OCT. 3, 1908.

936,976.

Patented Oct. 12, 1909.
 2 SHEETS—SHEET 2.

Fig. 3.

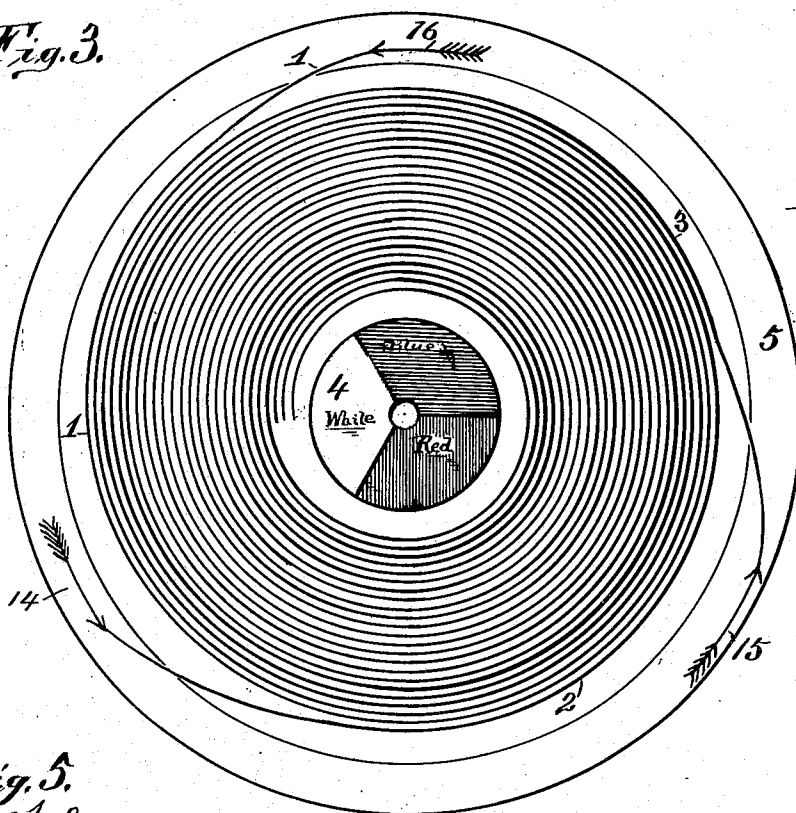


Fig. 4.



Fig. 5.

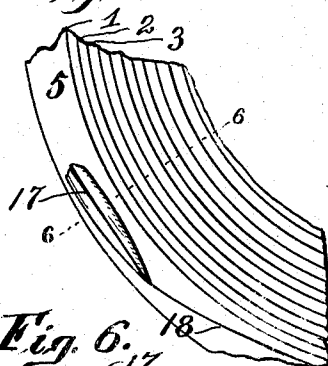


Fig. 6.

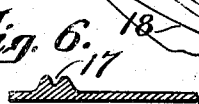


Fig. 7.

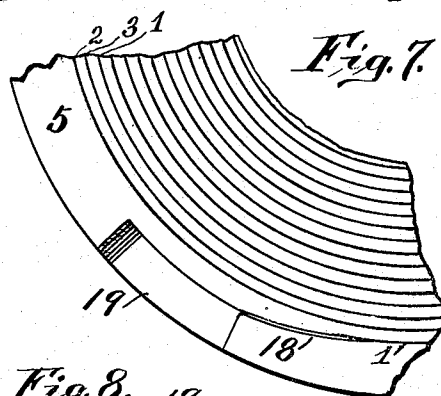


Fig. 8.



Inventor

Edgar M. Berliner,

By Eugene W. Johnson,
 Attorney

Witnesses
 Thos. W. Medford
 C. E. Stettin

UNITED STATES PATENT OFFICE.

EDGAR M. BERLINER, OF WASHINGTON, DISTRICT OF COLUMBIA.

RECORD FOR SOUND-REPRODUCING MACHINES.

936,976.

Specification of Letters Patent.

Patented Oct. 12, 1909.

Application filed October 3, 1908. Serial No. 456,082.

To all whom it may concern:

Be it known that I, EDGAR M. BERLINER, a citizen of the United States, and a resident of Washington, in the District of Columbia, have invented certain new and useful Improvements in Records for Sound-Reproducing Machines, of which the following is a specification.

This invention appertains to improvements in record disks and cylinders for sound reproducing machines, the purpose of the invention being to provide sound records with a plurality of sound grooves and to provide each groove with perceptible means for indicating where the style or needle should be placed to enter a particular sound groove or record track, the means being of such a character that the operator may distinguish, either by sight or by touch the position where the style or needle is to be placed in order that any one of the several selections on the record may be distinguished and played.

Prior to my invention it has been proposed to make records having a sound groove which is paralleled by a second sound groove, the same being known as a "puzzle record", for the reason that the operator would not know and could not determine which of the two records on the disk or cylinder would be played, and it is also old in the art to provide a record, having a single selection thereon, with an indented line or mark at the beginning or start of the sound groove, for the purpose of guiding the style or needle of the reproducer into the groove, such line or mark being so minute that it is not perceptible to the touch, nor of such a character that it may be readily distinguished by sight. My improvement is readily differentiated from such records as a multilinear record made in accord with my invention has thereon indicating means, whereby the operator may distinguish one groove or selection from another and so place the style or needle that it will enter a particular sound groove and reproduce the chosen selection, and in carrying my invention into practice, the perceptible means for distinguishing one sound groove or selection from another are differently colored and spaced and they are also positioned either above or below the plane of the sound grooves.

In the drawings Figure 1 is a plan view of a disk record made in accord with my in-

vention, the perceptible indicating means being within the space occupied by the sound grooves and positioned concentric to the center of the disk. Fig. 2 is a transverse section on the line *a-b*, of Fig. 1. Fig. 3 is a plan view of another form of my invention, the center of the disk being colored, and with this form of my invention the outer border will have raised indicators formed thereon. Fig. 4 is a side elevation of a part of the disk shown by Fig. 3. Fig. 5 is a fragmentary plan view of a further modification. Fig. 6 is a section on the line 6-6. Fig. 7 is a fragmentary plan view of another modification, and Fig. 8 is a side elevation of the construction shown by Fig. 7.

Referring to the drawings 1, 2, and 3 indicate the sound grooves of the record, such grooves being spiral and parallel, and in practice the inner and the outer margins 4 and 5, may be raised or above the plane of the face of the disk into which the sound grooves are impressed. The margins or "dead spaces" 4 and 5 are the portions of the disk or record upon which I apply the perceptible indicating means, each sound groove or selection having an indicator which differs as to position or appearance from the others.

Upon Fig. 1 of the drawings, the disk record is provided with sound grooves 1, 2, and 3 and upon the inner margin or dead space 4 of the disk I provide raised and differently colored indicating means 11, 12, and 13 they being concentric to the axis of rotation of the disk. The raised indicator 11 may be colored blue and is positioned relative to the commencement of the sound groove 1, so that the operator may place the style or needle upon the "dead space" to enter such groove and reproduce the selection recorded by such groove. The indicator 12 may be white, and the third one may be red. It will be observed that the indicators are out of line and being near the center of the disk, where the speed is the lowest, they may be readily seen when the disk is in motion, and if the style is placed upon the segment projected from the ends of the indicators it will enter the selected sound groove. By having the several indicators raised an operator may be able to distinguish in the dark, by his sense of touch, for the indicators are spaced apart and out of line relative to the axis of rotation of the disk. The disk shown by Fig. 1 may have a raised outer

border or margin, the surface thereof being on the same plane as the upper surface of the indicators 11, 12 and 13.

Fig. 3 shows a further form of my invention in which the center portion of the disk is colored, and upon the outer border 5 are raised portions 14, 15 and 16, one for each of the sound grooves. The raised portions 14, 15 and 16 are concentric to the center of the disk and are adapted to guide the style or needle to a groove that joins the sound groove. If desired the raised portions may be colored to correspond with the color in radial line therewith.

Fig. 5 shows another modification, and in this form of my invention the projecting portion has a longitudinal groove or recess 17 that guides the style to the groove 18 that joins one of the sound grooves, and each disk will be provided with as many of these raised portions as there are sound grooves or selections upon the disk, and the groove or recess 17 may be colored.

Fig. 7 shows a further modification of the invention, and in this example of my improvement, the border of the disk is cut away to provide depressions 19, the same having longitudinal and inward inclined bottom surfaces to lead the style or needle to a guide groove 18, and the bottom of the recesses may be colored by being painted or otherwise.

In practice the center space of the disk not occupied by the indicating means will carry a label having marks corresponding with marks or other indicia placed adjacent to the indicating means, set forth, and the indicating means are on a different plane from the surface of the "dead space" of the disk and are preferably located to be out of line in the direction of the travel of the disk, and by means of the invention set forth the record disk is provided with a plurality of indicators which will be perceptible to the touch and sight, and enables the operator to place the style or needle to play the desired selection or groove of the record in the dark.

My invention may be readily applied to sound record disks in which the sound grooves progress spirally outwardly, as shown in Patent No. 785,191 issued to Herbert S. Berliner, March 21, 1905.

I claim.

1. A sound record having thereon several different selections and means on different points of the record said means being perceptible to the eye and to the touch for indicating where the reproducing style is to be placed to enter a particular sound groove each of said indicating means being located at different points longitudinally of the record.

2. A sound record having a plurality of sound grooves and a like number of radially and circumferentially differently located

means upon the record for indicating where the reproducing style is to be placed to enter a particular sound groove.

3. A sound record having thereon a plurality of parallel sound grooves and a plurality of perceptible radially and circumferentially differently positioned means placed relative to each of the sound grooves for indicating where the reproducing style is to be placed to enter a particular sound groove.

4. A sound record having a plurality of substantially parallel sound grooves, perceptible indicating means upon the record each of which leads to a particular groove; the indicating means being located longitudinally out of line one with the other.

5. A sound record consisting of two or more sound grooves which are substantially spiral and parallel, perceptible means corresponding in number with the sound grooves; the same being located adjacent to the commencement of and out of line longitudinally one with the other each of said means leading to particular sound grooves.

6. A sound record having a plurality of grooves and provided with a plurality of indicating points positioned out of line with the plane of the grooves, for the purpose set forth.

7. A sound record having a plurality of sound grooves and provided with a plurality of indicating means positioned out of line with the plane of the grooves, each of the indicating means having a recess for directing the style of the reproducer to a particular groove, for the purpose set forth.

8. A sound record having a plurality of sound grooves and a plurality of marginally located indicating means positioned to be concentric to the axis of rotation of the record and above the plane of the record, for the purpose set forth.

9. A sound record consisting of two or more sound grooves and means perceptible to sight and touch for indicating the placing of a style of a reproducer; such means being provided with recesses for leading the style to a particular sound groove.

10. A sound record having two sound grooves which lie one within the other the starting points of each of the grooves being on radially different lines.

11. A sound record having thereon a plurality of substantially parallel sound grooves, each particular sound groove beginning at a point which is radially different from the point of commencement of another sound groove.

12. A sound record consisting of a plurality of substantially parallel sound grooves, each sound groove beginning at a point that is out of line longitudinally with the point of commencement of another sound groove.

13. A sound record having a plurality of

longitudinally parallel sound grooves each particular groove commencing at radially different points which are longitudinally out of line.

5 14. A sound record having two substantially continuous and parallel sound grooves which commence at points which differ circumferentially.

15. A sound record having different sound grooves therein each sound groove commencing at a point that is out of line with the commencing point of the other sound groove.

EDGAR M. BERLINER.

Witnesses:

EUGENE W. JOHNSON,
H. B. STRAIT.