F. LENTON.

RECORD DISK.

APPLICATION FILED MAR. 9, 1921.

1,417,339. Patented May 23, 1922.

Fig. 1.

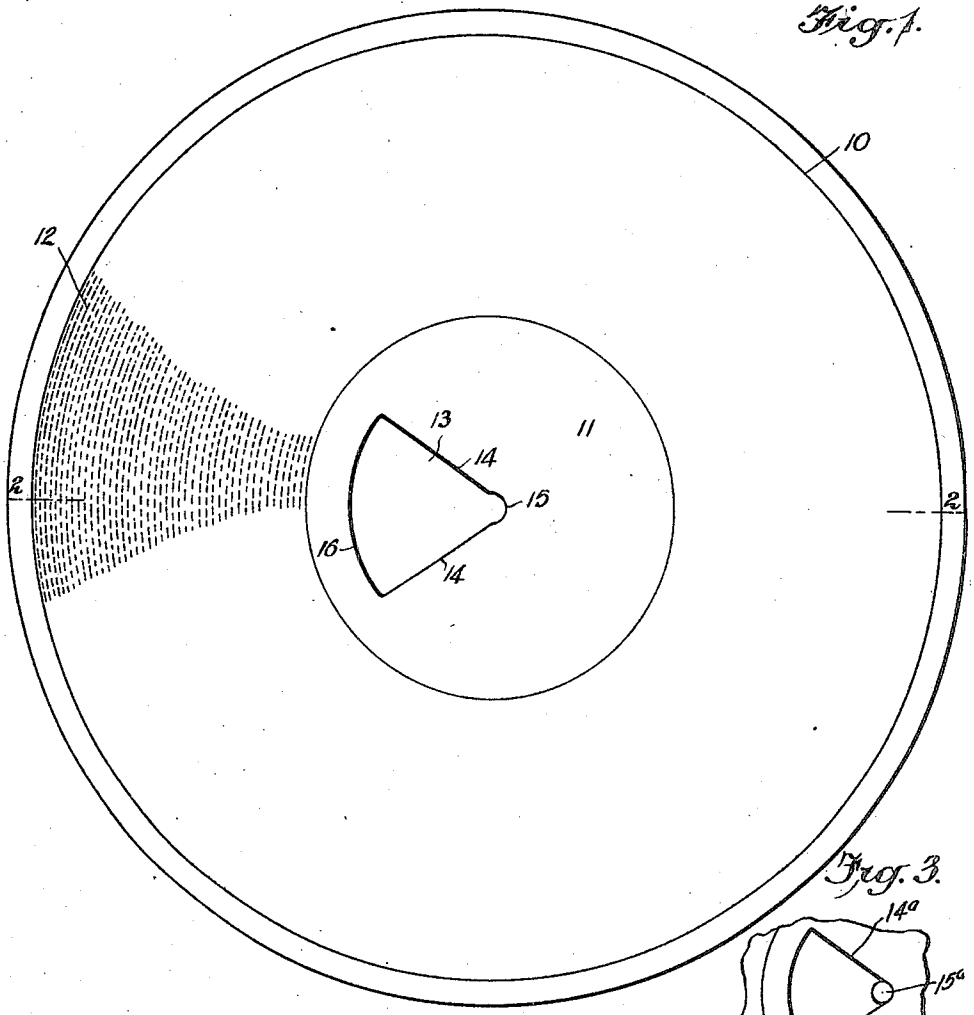


Fig. 3.

Fig. 2.

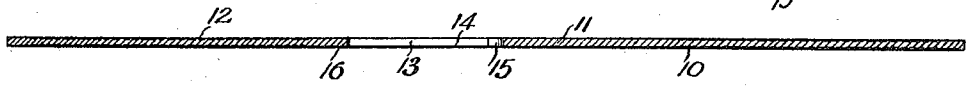
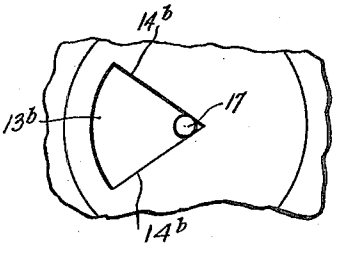


Fig. 4.



WITNESSES

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RECORD DISK.

1,417,339. Specification of Letters Patent. Patented May 23, 1922.

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To all whom it may concern:

Be it known that I, FRANK LENTON, a subject of the King of Great Britain, and a resident of the city of New York, (borough of Manhattan), in the county of New York and State of New York, have invented a new and Improved Record Disk, of which the following is a full, clear and exact description.

This invention relates to improvements in disk records for graphophones, and seeks for its principal object to provide a simple and inexpensive means for facilitating the application of the record to the turn-table or revolving platform of the machine.

A further object of the invention resides in the production of a record provided with means of the character described which insures the proper centering of the record in order that the center of rotation thereof will coincide with the center of rotation of the turn-table or revolving platform.

It is a further object of the invention to produce a record of the character described which does not add to the expense of manufacture and which does not necessitate any alteration to the graphophone proper.

With the above recited and other objects in view, some of which will appear hereafter, as the nature, purpose and operation of the invention is more fully understood, reference is had to the following specification, the appended claims, and the accompanying drawings, in which;

Figure 1 is a plan view of a record disk constructed in accordance with the invention.

Figure 2 is a transverse sectional view therethrough taken approximately on the line 2—2 of Figure 1.

Figure 3 is a fragmentary plan view illustrating a modified form in which the opening may be made.

Figure 4 is a similar view of a further modification.

Referring to the drawings by characters of reference, 10 designates a record disk having the usual centrally disposed portion 11 around which the spirally arranged sound reproducing grooves 12 are disposed. In the common form of records a centrally or axially disposed centering opening is provided which is designed to co-act with the centering pin provided on the turn table or revolving platform of the graphophone. By this method a great deal of difficulty is experienced and unnecessary delay is occasioned in the registering of the centering opening with the centering pin. In order to obviate this difficulty a sector-like opening 13 is formed in the central portion, the same being provided with converging side walls 14 which connect with a semi-circular end wall 15 the radius of which is struck from a center substantially coincident to the center of revolution of the record. The radius of said semi-circular wall is substantially equal to the radius of the centering pin provided on the turn table of the graphophone. The outer end wall 16 may be of arcuate or any other suitable formation depending on the fancy of the manufacturer. By this arrangement it is obvious that the opening 13 will afford a clear viewing space through which the centering pin of the graphophone will be visible in placing the record on the machine. When the record is placed on the turn table with the opening 13 arranged over the centering pin, it is only necessary to push the record in a general direction to advance the inner end of the opening toward the centering pin. Either one of the converging side walls 14 will function to properly guide the record to a centered position where it will be retained by the frictional contact of the under surface of the record with the turn table. The maximum speed at which the revolving platforms or turn tables of graphophones are now rotated is not sufficient to effect displacement of the record through centrifugal force but in event of a substantial increase in the speed of rotation, it is possible to dispose the semi-circular inner end wall slightly eccentric to equalize the weight on the opposite sides of the center of rotation to preclude any possibility of centrifugal force displacing the record.

In the modified form illustrated in Figure 3 of the drawings, the converging side walls 14^a of the opening 13^a are arranged at a tangent to the arcuate inner end wall 15^a. In this instance the use and operation of the opening as a means for facilitating the centering of the record is identical with that described in the preferred embodiment.

In the modification illustrated in Figure 4 of the drawings, the opening 13^b is sector-shape, the converging side walls 14^b thereof connecting with each other at a point eccentric to the center of revolution of the record. The center of the record will coincide with the center of rotation of the

table when the side walls 14[b] tangentially contact with the periphery of the centering pin 17.

From the foregoing it will be seen that an extremely simple and inexpensive means for facilitating the application of the record to the turn table is provided, which comprises an opening in the record, the inner end of which co-acts with the centering pin to cause the center of rotation of the record to coincide with the center of rotation of the turntable.

While there has been illustrated and described several preferred shapes in which the opening may be formed, no limitation is necessarily made thereto as it is to be understood that the right is reserved to modifications or embodiments other than those set forth, to the fullest extent indicated by the general meaning of the terms in which the claims are expressed and by variations in the phraseology of the same.

I claim:

1. As a new article of manufacture, a sound reproducing record disk provided with an opening therethrough having a pin receiving portion at its inner end located at the center of the record disk and constituting means adapted for engagement with the centering pin of a graphophone turntable to effect the coincidence of the center of rotation of the record with the center of rotation of the graphophone turntable, the major portion of the opening serving as a means for visualizing the pin through the disk and facilitating the application of the disk to the turntable.

2. As a new article of manufacture, a sound reproducing record disk provided with a sector shaped opening therethrough having a restricted end disposed at the center or axis of the record to constitute a receiving portion for the centering pin of a graphophone turntable whereby to effect the coincidence of the center of rotation of the record with the center of rotation of the turntable.

3. As a new article of manufacture, a phonograph disk record having a central pin receiving portion and a relatively wide opening connecting therewith, two walls of said opening converging to said pin receiving portions.

4. As an article of manufacture, a sound reproducing record disk having an opening extending therethrough, one end of said opening being disposed at the axial center of said disk to constitute a receiving portion adapted for engagement with the centering pin, the remainder of said opening serving as a means for visualizing the pin to facilitate the application of the record to the turntable.

FRANK LENTON.