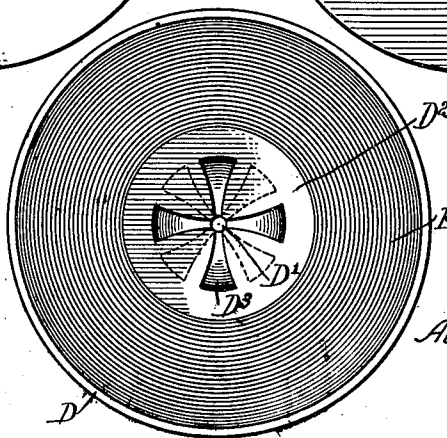
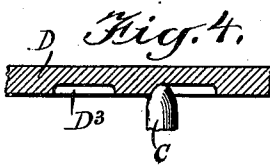
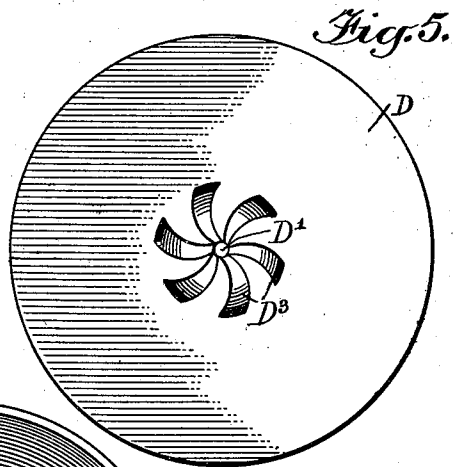
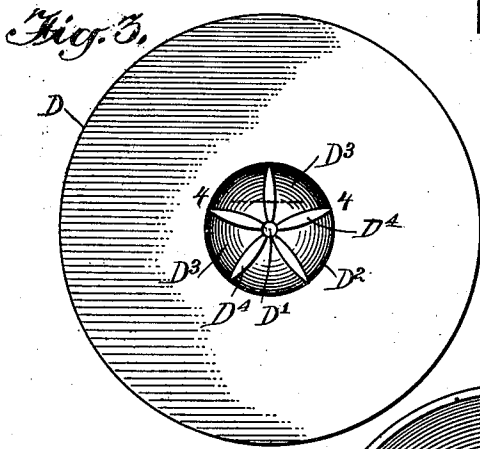
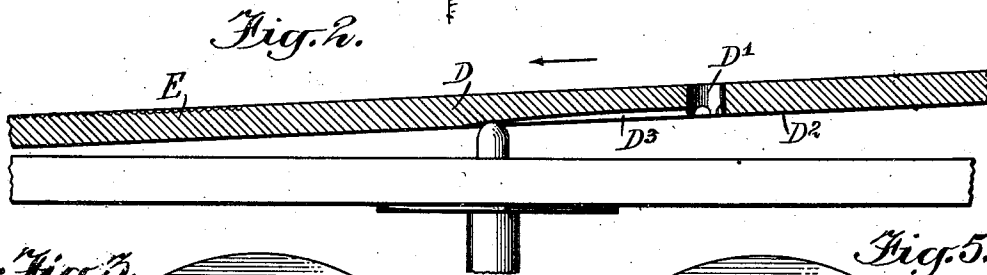
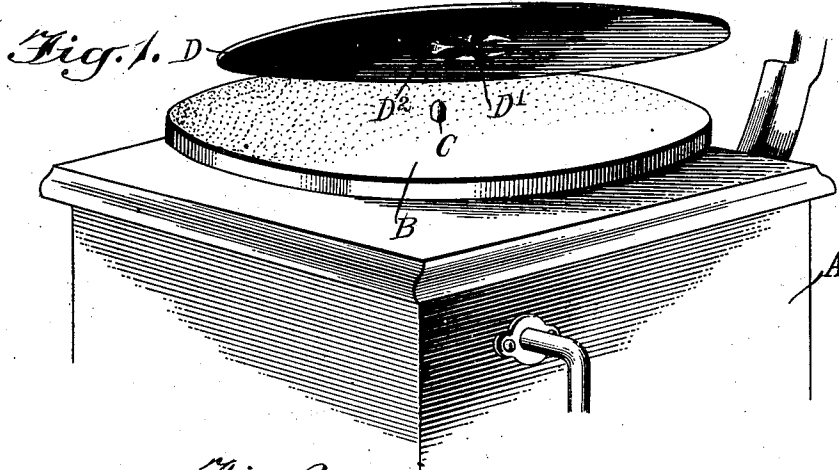


A. ETTLINGER.
RECORD DISK.
APPLICATION FILED FEB. 28, 1913.

1,150,020.

Patented Aug. 17, 1915.



WITNESSES

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UNITED STATES PATENT OFFICE.

ABRAHAM ETTLINGER, OF NEW YORK, N. Y.

RECORD-DISK.

1,150,020.

Specification of Letters Patent.

Patented Aug. 17, 1915.

Application filed February 28, 1913. Serial No. 751,274.

To all whom it may concern:

Be it known that I, ABRAHAM ETTLINGER, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Record-Disk, of which the following is a full, clear, and exact description.

The invention relates to graphophones and similar machines, and its object is to provide a new and improved record disk provided with means for quickly and accurately centering the opaque record disk on the centering pin of the revolving platform of the graphophone.

In order to accomplish the desired result use is made of a plurality of grooves formed in the central portion of the record disk and leading to the usual central opening adapted to engage the centering pin of the revolving platform of the graphophone.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of a record disk shown in conjunction with a graphophone of ordinary construction; Fig. 2 is an enlarged sectional side elevation of the record disk showing the manner in which the disk is placed in position on the centering pin of the graphophone; Fig. 3 is a reduced face view of a record disk of modified form; Fig. 4 is an enlarged sectional side elevation of the same on the line 4-4 of Fig. 3, and applied to the centering pin of the revolving platform; and Figs. 5 and 6 are face views of other modified forms of the record disk.

A graphophone A of any approved construction is provided with the usual revolving platform B having a centering pin C adapted to be engaged by a central opening D' formed in the record disk D to be supported on the revolving platform B and carried around by the same during the time the stylus of the graphophone is in engagement with a spiral groove E formed in the face of the record disk D and possessing a sinusoidal surface in accordance with the sounds desired to be reproduced. The record disk D is provided with the usual central portion D² provided with the usual legends indicating the maker's name, the title and other matter, and this central portion D² is pro-

vided with a plurality of guide grooves D³ leading to the central opening D'. The guide grooves D³ may be of various shapes, as indicated in the drawings, but in the main the grooves D³ gradually decrease in width on approaching the central opening D', and the grooves preferably increase in depth on approaching the central opening D', as plainly indicated in Fig. 2. The grooves are preferably radially disposed and are equally spaced apart, thus practically ornamenting the central portion of the record disk.

In the modified form shown in Figs. 3 and 4, the sides of the grooves D³ are defined by radial arms D⁴ arranged in the form of a star-like figure, the surfaces of the arms D⁴ being flush with the face of the record disk.

In using the record disk the operator engages the central portion of the record disk with the centering pin C and a slight movement given to the disk by the operator readily engages one of the grooves with the centering pin C, and then the operator on moving the disk with the centering pin in contact with the groove finally guides the disk into central position relative to the centering pin C so that the opening D' engages the centering pin C.

It is understood that for double record disks the grooves are on both faces of the disk, while for single record disks it is only necessary to provide grooves at the under face of the disk.

Although I have shown several forms of grooves in the drawings, it is evident that I do not limit myself to the particular shape shown, as the same may be varied without deviating from my invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. As an article of manufacture, a sound reproducing record disk provided with a central opening and with guide grooves leading to and grouped around the central opening.

2. As an article of manufacture, a sound reproducing record disk provided with a central opening and with guide grooves leading to and grouped around the said central opening; the said grooves gradually diminishing in width as they approach the central opening.

3. As an article of manufacture, a sound

reproducing record disk provided with a central opening and with guide grooves leading to and grouped around the said central opening, the said grooves gradually increasing in depth as they approach the central opening.

4. As an article of manufacture, a sound reproducing record disk provided with a central opening and with guide grooves disposed radially and grouped around and leading to the said central opening.

5. As an article of manufacture, a sound reproducing record disk provided with a central opening and with guide grooves at the central portion of the disk and leading to and grouped around the said central opening.

6. As an article of manufacture, a sound reproducing disk provided with a central opening and with a plurality of radial guide grooves having relatively narrow, deep inner ends, which lead to and are grouped

around the central opening, and having relatively shallow outer ends merging into the surface of the disk, the sides and bottoms of the grooves being gradually tapered between their said ends, all for the purpose described.

7. As an article of manufacture, a sound reproducing disk provided with a central opening and with a plurality of guide grooves grouped around the center thereof, radially of and leading to the said central opening, each of said grooves being gradually tapered in width and depth from one end to the other and being curved in its length, all for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

New York, N. Y., February 25th, 1913.

ABRAHAM ETTLINGER.

Witnesses:

R. W. NARES,
FREDERIC B. LOTT.