E. T. FRANKEL.

TALKING MACHINE RECORD.

APPLICATION FILED MAR. 22, 1916.

1,222,381.

Patented Apr. 10, 1917.

Fig. 1.

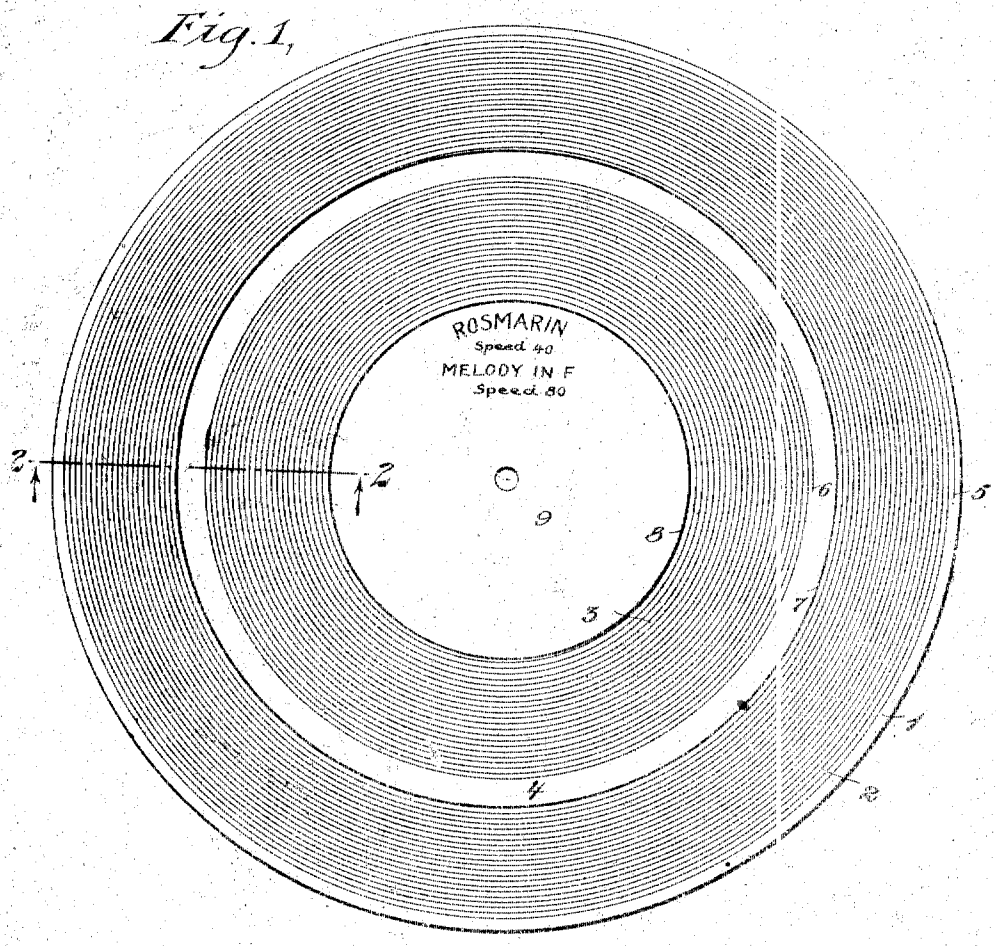
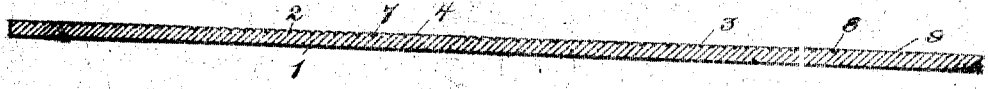


Fig. 2.



WITNESSES

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TALKING-MACHINE RECORD.

1,222,381. Specification of Letters Patent. Patented Apr. 10, 1917.

Application filed March 22, 1916. Serial No. 85,923.

To all whom it may concern:

Be it known that I, EDWARD T. FRANKEL, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Talking-Machine Record, of which the following is a full, clear, and exact description.

This invention relates to disk records for talking machines, and has for its general object to improve the record in a simple and inexpensive manner so as to increase the effective record space or the duration of the sound reproduction for a given area.

A more specific object of the invention is the provision of a plurality of concentric record grooves which are acoustically unrelated and each is a separate piece, and the pieces are recorded and reproduced at different rotative speeds, but the rotative speed of each piece is uniform throughout, and consequently within a given area a larger number of sound undulations can be obtained than the maximum possible with the ordinary records, as can be mathematically demonstrated, and on each disk will be the titles of the pieces and the speeds at which they are to be reproduced, so that the user can, by adjusting the speed regulator of the machine, play the pieces at the proper speeds. Each piece ends in a circular groove so that it is impossible for the needle to pass from the groove of one piece to the groove of the adjacent piece, and the smooth space between the grooves will guide the user in properly placing the needle for the desired selection.

With such objects in view, and others which will appear as the description proceeds, the invention comprises various novel features of construction and arrangement of parts which will be set forth with particularity in the following description and claims appended hereto.

In the accompanying drawing which illustrates one embodiment of the invention and wherein similar characters of reference indicate corresponding parts in both the views,

Figure 1 is a plan view of the record disk; and

Fig. 2 is an enlarged sectional view on the line 2—2, Fig. 1.

Referring to the drawing, the disk 1 is made in the usual manner, except as far as the record grooves are concerned. One or both faces of the disk has a plurality of record grooves 2 and 3 occupying different concentric portions or areas of the disk. The groove areas are separated by a narrow smooth surface 4, so that it is impossible for the needle or stylus to pass automatically from the finishing end of one groove to the beginning of the next groove. In the present instance the beginnings 5 and 6 of the record grooves 2 and 3 are outermost, so that the needle will travel inwardly as the record plays; and the inner ends of the grooves terminate in deep circular grooves 7 and 8, so that the needle will remain engaged in the grooves if the record continues to rotate after the end of the piece is reached, and thus there is no danger of the needle passing from the record groove 2 to the record groove 3. The central space 9 is utilized for advertising purposes in the usual manner and also for bearing the titles of the pieces on the record, and associated with each title is the notation of the speed at which the disk should turn for the reproduction of such piece, as indicated in Fig. 1. The sound vibrations of the inner record groove are recorded at a higher rotative speed than that required for the outer record, so that within a comparatively small area a piece of considerable length can be recorded, and as a result, two or more complete pieces can be recorded in the area usually employed for a single piece, according to the common method of sound recording and reproduction. It is to be understood that although only two record grooves are shown, the number may be varied, and furthermore, the grooves may be reversely arranged to those shown, so that the needle will travel outwardly. The record differs from that type of disk records which has a plurality of sound grooves for the simultaneous reproduction of sound by reproducers operating in connection with the respective grooves.

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

1. A disk record having separate concentric portions provided with sound grooves recorded at different rotative speeds.

2. A disk record having spiral sound rec-

ord grooves occupying different concentric portions on the face of the disk, there being an ungrooved circular portion on the face between the grooved areas, the said grooves being recorded at different rotative speeds, and the rotative speed for each groove being maintained uniform from beginning to end.

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

EDWARD T. FRANKEL.

Witnesses:

C. BRADWAY,

PHILIP D. ROLLHAUS.