

Aug. 30, 1932.

J. J. KUHN

1,874,550

PHONOGRAPH RECORD TURNTABLE

Filed Aug. 12, 1931

FIG. 1

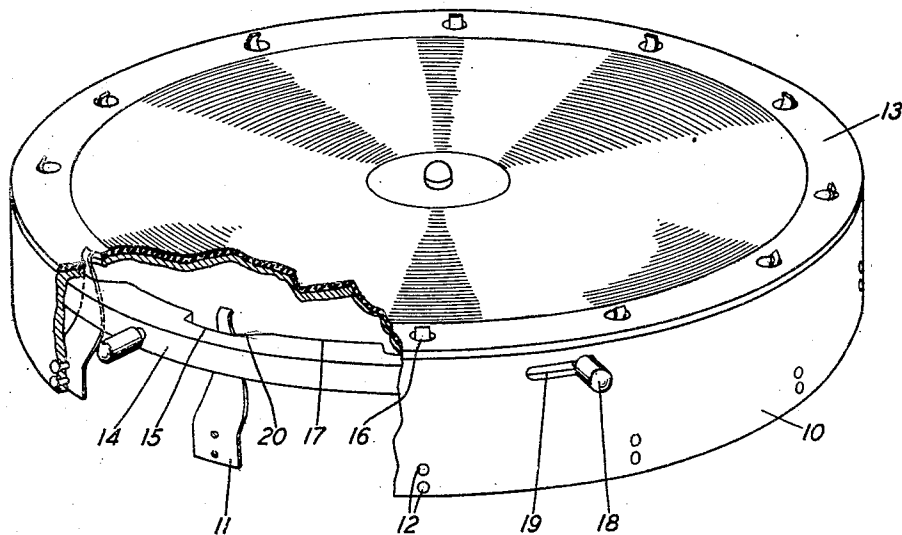
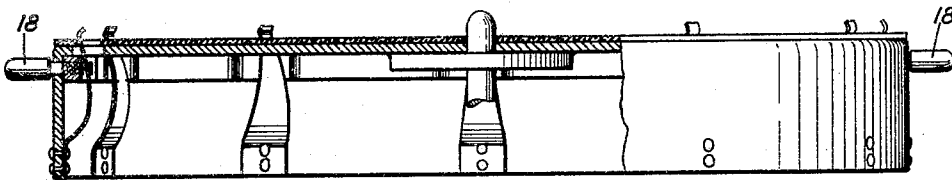


FIG. 2



INVENTOR
J. J. KUHN

BY

G. M. Campbell
ATTORNEY

UNITED STATES PATENT OFFICE

JOHN J. KUHN, OF ELIZABETH, NEW JERSEY, ASSIGNOR TO BELL TELEPHONE LABORATORIES, INCORPORATED, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK

PHONOGRAPH RECORD TURNTABLE

Application filed August 12, 1931. Serial No. 556,493.

This invention relates to phonographs and particularly to the turntables thereof.

The difficulty of making a flexible phonograph record lie flat on a turntable has been recognized as one of the principal drawbacks to its universal adoption. A scheme which has been proposed to overcome this difficulty comprises a turntable with vertical springs protruding through suitable apertures in the record to stretch the record and thus cause it to lie flat.

This invention, in general, is of the nature of an improvement in the aforesaid turntable and has for its object the provision of means whereby the record can be more easily and quickly placed on the turntable or removed therefrom.

In its preferred form, the invention comprises a ring cam which when rotated through a small angle, engages the springs and forces them radially inward, thus simultaneously relieving the pressure of each spring on the record and maintaining the springs inoperatively positioned until the record has been removed and a new one put in its place.

To illustrate more clearly a preferred form of the invention reference is made to the accompanying drawing in which Fig. 1 is a perspective of the turntable with a portion cut away to show the cam and springs and Fig. 2 is a side elevation of the turntable, also partly sectioned.

Referring now to Fig. 1, 10 is a flanged disc which comprises the main portion of the turntable. It is made suitably heavy to absorb some of the vibration usually occurring in the drive mechanism. Around the side of the flange are a number of equally spaced leaf springs 11 which are secured to the flange by means of rivets 12. A convenient form for the spring is that of a bow bent outward near the free end, to hold the record flat on the turntable. Around the periphery of the record 13 is a blank space in which are located openings to fit the springs. Normally, the springs 11, 11 are bent toward the flange and out of reach of the openings so that a record cannot be placed on the turntable. To force the springs inward a ring cam 14 is used. The inner surface of the cam is recessed at

each spring 11 to a point 15 which is free of the spring when the latter is in contact with the outer edge 16 of the openings in the record. The surface proper 17 is extended sufficiently so that when the springs are in contact with it the record is free of the springs. Between the surfaces 16 and 17 is an oblique portion 20 which serves to guide the springs onto the extended portion.

The cam is supported by four pins 18 extending through slotted openings 19 in the flange. The pins serve as handles by means of which the cam can be rotated to engage the springs. The slots are made long enough to insure a proper radial displacement of the springs.

To place a record on the turntable the handle 18 is moved clockwise to its extreme position to displace the springs simultaneously radially inward. The record is slipped over the springs and the handle returned to its former position to release them. Any desired pressure up to the maximum available in the springs can be obtained by properly positioning the handle between its extreme positions.

Although the invention has been described with reference to a particular embodiment for the purpose of illustration its scope is not to be limited thereby but is to be determined by the appended claims.

What is claimed is:

1. A turntable for phonograph records, a flexible record mounted thereon, springs secured to the turntable to stretch the record, and means integral with the turntable for simultaneously controlling the pressure of the springs on the record.

2. A turntable for phonograph records, a flexible record thereon, apertures around the periphery of the record, a plurality of vertical springs secured to the turntable and extending through the apertures to stretch the record radially, and means integral with the turntable comprising a ring cam for simultaneously controlling the pressure of the springs on the record.

3. A flanged turntable for phonograph records, a flexible record mounted thereon, apertures in the record and vertical leaf springs extending through the apertures to stretch

the record radially, said springs being equidistantly spaced about the flange and supported thereby, a ring cam supported by the flange and adapted to displace the springs simultaneously radially.

4. A flanged turntable for phonograph records, a flexible record mounted thereon, spring means secured to the flange for stretching the record, a ring cam for simultaneously operating said spring means, support for the cam comprising members secured to the cam and extending through slotted openings in the flange, said members comprising the means for operating the cam.

In witness whereof, I hereunto subscribe my name this 10th day of August, 1931.

JOHN J. KUHN.

20

25

30

35

40

45

50

55

60

65