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PICTURE EXHIBITOR FOR TALKING MACHINES

Filed Dec. 14, 1923

2 Sheets-Sheet 1

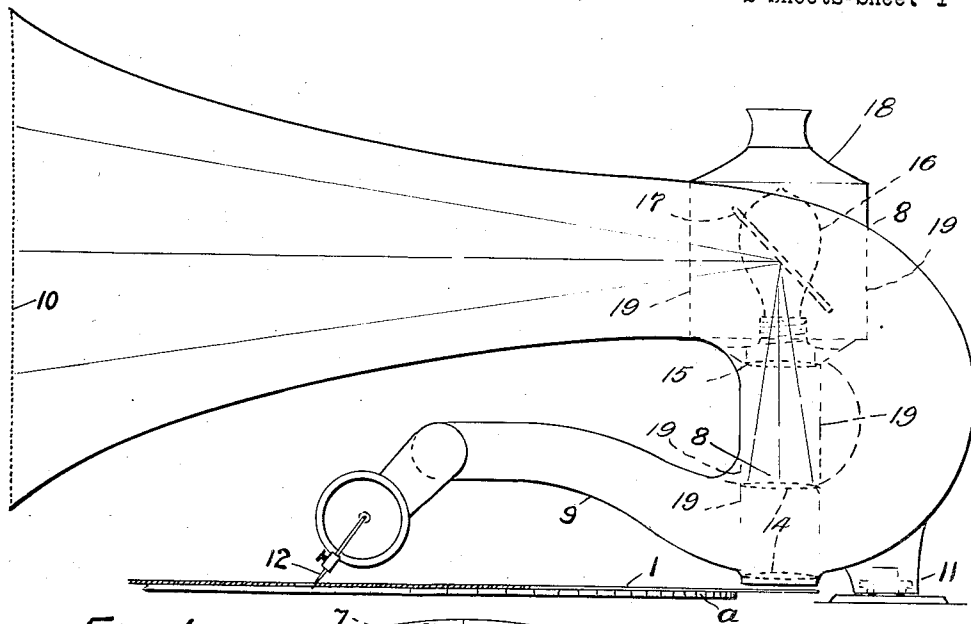


FIG. 1.

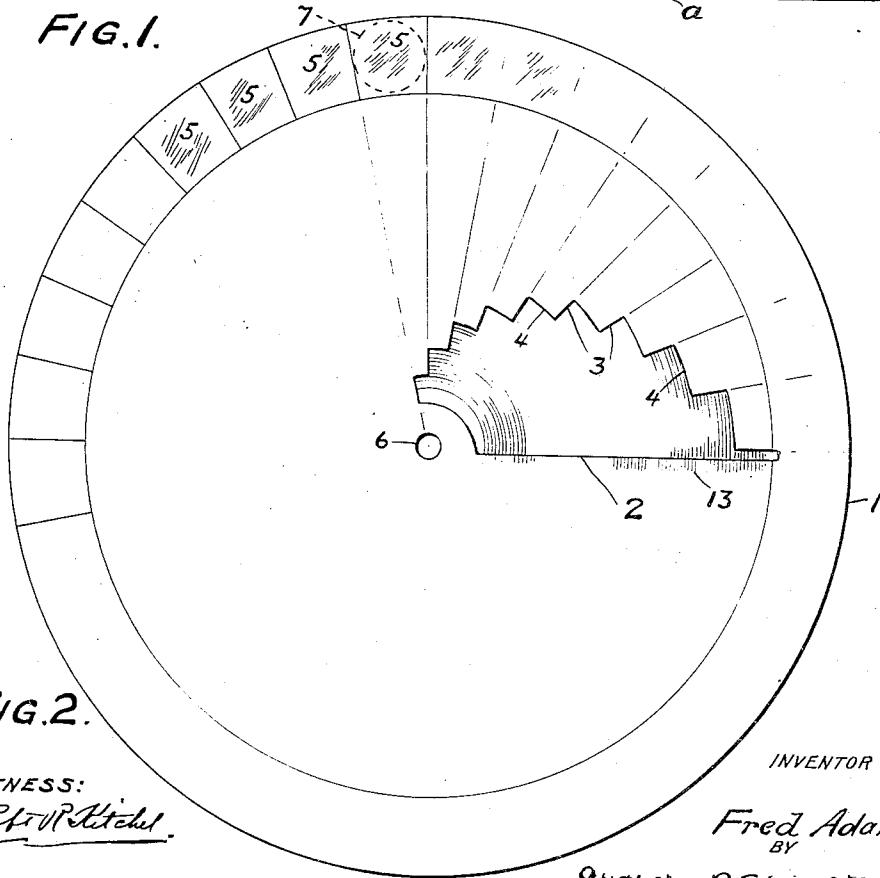


FIG. 2.

WITNESS:

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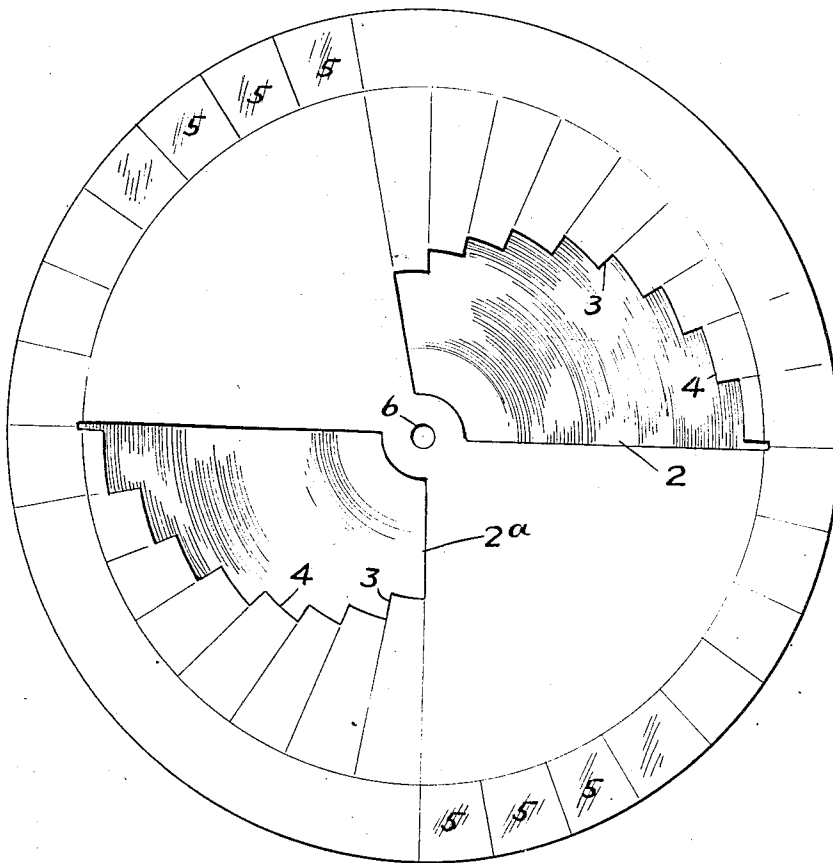
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2 Sheets-Sheet 2

FIG. 3.



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PICTURE EXHIBITOR FOR TALKING MACHINES.

Application filed December 14, 1923. Serial No. 680,693.

The principal object of the present invention is to provide a simple, reliable and comparatively inexpensive means for exhibiting pictures in synchronism with talking machine reproductions; to embody such means in a form in which they constitute attachments for disk record talking machines; and to insure synchronism between the pictures exhibited and the reproduction.

In one of its aspects the invention may be said to comprise a slip-disk adapted to be frictionally driven in contact with a disk record and slotted to expose sound grooves and provided with a marginal row of pictures and with a radially and circumferentially disposed edge of which the radial parts co-operate with a tone arm needle to check the disk, and of which the circumferential parts co-operate with the needle to permit the disk to travel with the sound record, and in another of its aspects the invention comprises a balopticon carried by the tone arm and adapted to co-operate with the pictures on the slip-disk to project them upon a screen arranged at the outlet of the horn. The invention further comprises the improvements to be presently described and finally claimed.

In the following description reference will be made to the accompanying drawing forming part hereof and in which is illustrated one embodiment of the invention chosen from among other embodiments of the invention for the sake of illustration and in these drawings

Figure 1 is an elevational view, partly in section, of apparatus embodying features of the invention and of parts of a talking machine of the disk record type,

Fig. 2 is a view drawn to an enlarged scale illustrating in plan a slip-disk embodying features of the invention and showing sound grooves of the record through a slot or opening in the slip-disk, and

Fig. 3 is a view similar to Fig. 2 showing a modification.

The slip-disk 1 is slotted as at 2 and is provided with a wall or edge of which parts 3 are disposed generally radially and of which parts 4 are disposed generally circumferentially. At the marginal surface of the disk are arranged pictures 5, and the center of the disk is shown as provided with a perforation 6. The disk may be made of appropriate material of which paper or card-board is an illustration, and the walls

or edges 3 and 4 may be reinforced, if desired. There is a picture projector indicated at 7 in Fig. 2, and it is arranged in position for co-operation with the pictures 5. As illustrated in Fig. 1 the projector is of the form of a balopticon 8 carried by the tone arm 9 and adapted to project the pictures upon a screen 10 at the outlet of the horn. In this particular construction the tone arm and horn provided with a balopticon constitute an accessory that can be applied to the pivotal tone arm support 11 of existing talking machines. In Fig. 1, 14 are condensing lenses. 15 is a projecting lens. 16 is a light disposed on the far side of the mirror 17 and intended to be so shown. 18 is a lamp house. 19 are supporting legs or arms. Obviously the slip-disk 1 is an accessory that may be placed in contact with the face of the disk record *a*.

The mode of operation of the invention will be described in connection with the embodiment of it chosen for illustration in the accompanying drawings, that is, in connection with a slip-disk having one slot 2 which is intended for use with a single face record, but in the case of a double face record another similar slot 2', Fig. 3, is provided and reference will be made to a balopticon because that happens to be the type of picture projector shown but it is within the scope of the invention to project the pictures by illumination from beneath the slip-disk. A needle attached to the tone arm which may well be a stylus 12 travels in the needle grooves from the rim toward the center as the record rotates and the slot in the slip-disk permits of that operation. The needle as it travels along the radial portions 3 of the wall or edge prevents rotation of the slip-disk during the interval of time consumed in such travel so that the picture corresponding to the particular portion 3 is permitted to remain at rest beneath the picture projector 7, thus the exhibition of the picture and the reproduction appropriate to it are synchronized. The slip-disk may be ruled as at 13 in correspondence with the needle grooves and the scale 13 thus provided is available in manufacture for ascertaining the proper length of the radial portion 3 of the wall in order that its corresponding picture may be exhibited during the reproduction. In the construction described the pictures are projected onto the screen 10 at the end of the horn, which

is a convenient location in which to view them, but the screen is not in all cases necessarily located at the end of the horn.

It will be obvious to those skilled in the art to which the invention relates that modifications may be made in details of construction and arrangement and in matters of mere form without departing from the spirit of the invention which is not limited as to such matters or otherwise than as the prior art and the appended claims may require. I claim:

1. A picture exhibitor for disk record talking machines comprising a picture projector, a pivotal tone arm, a radially moving needle, a slip-disk having a circumferential row of pictures arranged for presentation to the projector and having radially and circumferentially arranged edge portions of which the former in co-operation with the radial movement of the needle provided on the tone arm position the slip-disk pictures in respect to the projector.

2. A picture exhibitor for disk record talking machines comprising a slip-disk adapted to be frictionally driven in contact with a disk record and having a slot through which sound grooves are exposed and providing an edge of which portions range crosswise and of which portions range in line with the sound grooves, a tone arm provided with a needle which operates on

said edge to stop the slip-disk for intervals of time corresponding to the lengths of crosswise portions of the edge and to permit the disk to move with the record as the tone arm sweeps towards the center of the record, and a row of pictures at the marginal portion of said disk.

3. A picture exhibitor for disk record talking machines comprising a slip-disk slotted to expose sound grooves and provided with a marginal row of pictures and with a radially and circumferentially disposed edge of which the radial parts co-operate with a tone arm needle to check the slip-disk and of which the circumferential parts co-operate with the needle to permit the disk to travel with a sound record, a bal-opticon picture projector carried by the tone arm and into co-operation position with which the pictures are brought, a disk sound record, and a tone arm provided with a needle.

4. A picture exhibitor comprising a disk provided with a row of pictures at its circumference and with a perforation at its center and including between its center and the circle of the row of pictures an opening having edges of which one extends both generally radially and generally circumferentially in alternation.

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