

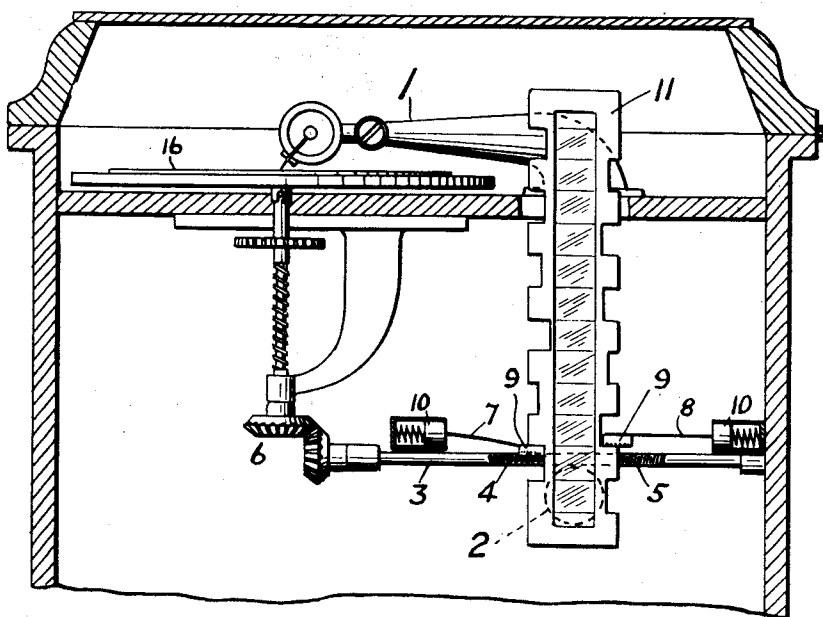
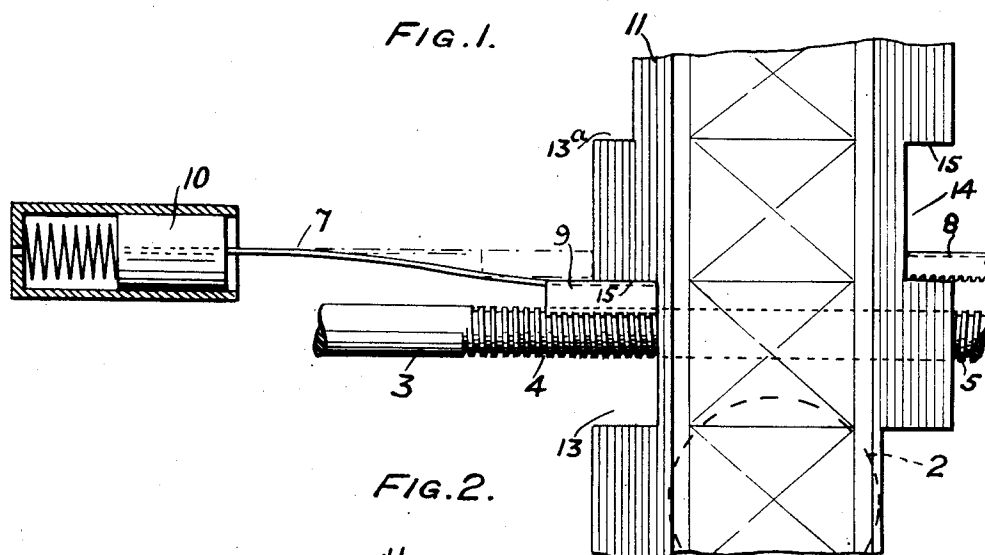
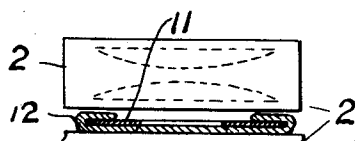
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1,482,387

W. J. DONALDSON

TALKING MACHINE PICTURE EXHIBITOR

Filed April 5, 1921



WITNESS:

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Patented Feb. 5, 1924.

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UNITED STATES PATENT OFFICE.

WILLIAM J. DONALDSON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE VISUALATONE CORPORATION, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF DELAWARE.

TALKING-MACHINE PICTURE EXHIBITOR.

Application filed April 5, 1921. Serial No. 458,825.

To all whom it may concern:

Be it known that I, WILLIAM J. DONALDSON, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Talking-Machine Picture Exhibitors, of which the following is a specification.

The principal object of the present invention is to provide simple, efficient and reliable means or mechanism for controlling the exhibition of pictures in connection with sound reproduction in such a way that the times at which and the intervals of time through which the different pictures are shown can be easily and accurately made appropriate or desirable for the reproduction of different compositions.

To this and other ends hereinafter set forth the invention, generally stated, comprises the combination in a talking machine picture exhibitor of a right and lefthand screw driven synchronously with the talking machine, a pair of opposed detents solicited towards each other and movable away from each other and provided with half nuts normally out of engagement with the screw and capable of engagement therewith, and a picture frame movable between the detents to bring pictures in succession into operative position with respect to the exhibitor and provided on opposite sides with staggered marginal notches with the top walls of which the detents automatically contact to arrest the frame and bring the half nuts alternately into engagement with the screw by which the detents are moved clear of the frame in intervals of time fixed by the depth of the notches.

The invention further comprises the improvements to be presently described and finally claimed.

The invention will be claimed at the end hereof but will be first described in connection with the embodiment of it diagrammatically illustrated in the accompanying drawings forming part hereof and in which—

Figure 1 is an elevational view.

Fig. 2 is a similar view drawn to an enlarged scale showing parts of the mechanism illustrated in Figure 1, and

Fig. 3 is a top or plan view, partly in section, illustrating features omitted from the other figures.

In the drawings 1 generally illustrates a talking machine and 2 a picture exhibitor shown as consisting of a projector. 3 is a screw having right and lefthand threads 4 and 5, and it is driven in synchronism with the talking machine through the intervention of gearing illustrated generally at 6. 7 and 8 are opposed detents and they are each provided with a half nut 9. The half nuts are normally held clear of the threads 4 and 5, for example by giving the detents a slight pivotal motion which, as shown, is accomplished by making them somewhat springy so that they can be sprung downward in the drawing into engagement with the threads and will normally disengage the threads. 10 are spring pressed plungers which tend to move the detents toward each other. The picture frame 11 carries a series of pictures and is moved for example by its own weight as in guides 12 between the detents and in line with the picture exhibitor 2. The edges of the frame are provided with marginal notches 13 and 14 arranged in staggered relation and of different depths for a purpose that will be presently described.

In use the frame is arrested with one of its pictures in line with the exhibitor 2 by one of the detents, for example, the detent 7 in Fig. 2, and the top wall 15 of the notch 13 by reason of the tendency of the frame to move downward brings the half nut 9 of the detent 7 into engagement with the thread 4, thus the detent, or more accurately, its half nut, resting on the thread 4 and engaging the top wall 15 holds the picture frame. However, the thread 4 engaging the half nut pushes the detent 7 away from the frame until finally the detent 7 clears the wall 15 and the frame drops displaying another picture until the detent 8 operates on the top wall 15 of the notch 14 in the manner just described. Meanwhile the detent 7 has entered the next succeeding notch 13^a. By the alternate operation of the detents the picture frame is permitted to advance with an intermittent motion. The pauses in its motion during which pictures are displayed can be made longer or shorter by simply making the notches 13 and 14 more or less deep. The deeper the notches the longer it will take for the screw to disengage the detent from the top wall of the notch. A given number of revolutions of the record 16 will

occupy a certain length of time and produce a certain number of revolutions of the screw and the edges of the frame may be ruled as shown in Fig. 2, so that each ruling corresponds with the time that it takes the half screw to travel between the rulings, and this time may correspond with the time selected in connection with the revolutions of the record, thus if the record makes a certain number of revolutions in a second and the screw travels the distance between the rulings in a second, it is very easy to make the depth of the notch appropriate for changing the picture at the end of any desired number of revolutions of the record or after the lapse of any desired number of seconds.

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 without departing from the spirit of the invention which is not limited as to those matters or otherwise than the prior art and the appended claims may require.

I claim:

1. In a talking machine picture exhibitor the combination of a screw having right and lefthand threads, means for driving the screw in synchronism with the talking machine, opposed movable detents, means for normally projecting the detents and for per-

mitting of their retraction, half nuts carried by the detents, devices for normally holding the half nuts clear of the screw to free the detents for projection and for permitting the nuts to engage the screw to retract the detents, and a picture frame carrying pictures and movable to bring the pictures successively into co-operation with the exhibitor and marginally provided with staggered notches of different depths into which the detents are projected to permit notch top walls to cause the nuts to alternately engage with the screw and from which the nuts are withdrawn by the screw at intervals depending upon the depth of the notches.

2. In a talking machine picture exhibitor the combination of a picture frame provided at its edges with notches arranged in staggered relation and of different depths appropriate for the required dwells in the movement of the frame, a screw having right and lefthand threads disposed at the edges of the frame, and detents having means for normally projecting them into the notches to permit the top walls of alternate notches to bring a detent into engagement with one of said threads whereby it arrests the frame until it is withdrawn from a notch by the thread.

WILLIAM J. DONALDSON.