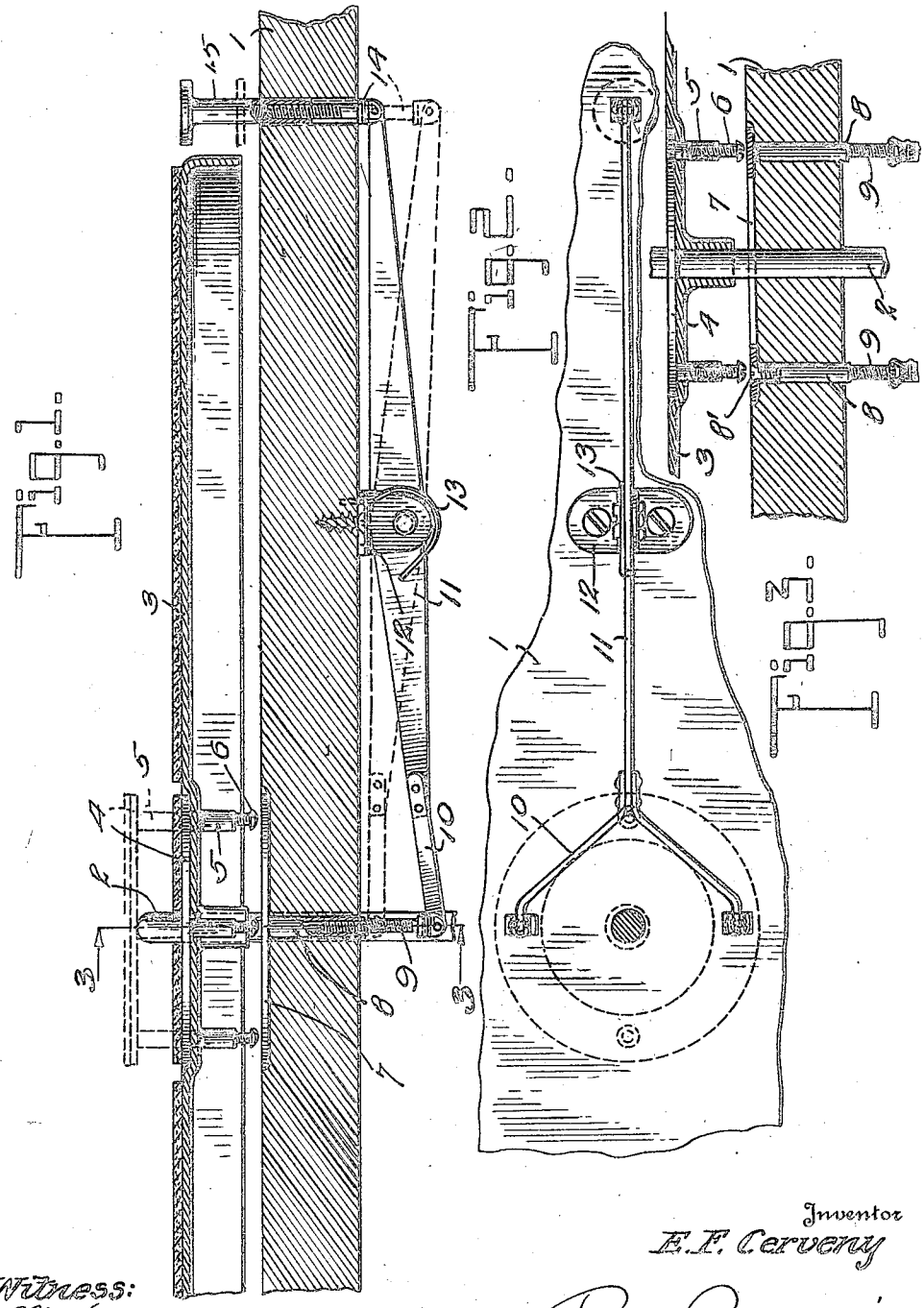
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E. F. CERVENY.

RECORD LIFTING DEVICE FOR SOUND REPRODUCING MACHINES.

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UNITED STATES PATENT OFFICE.

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RECORD-LIFTING DEVICE FOR SOUND-REPRODUCING MACHINES.

Application filed August 27, 1921. Serial No. 495,988.

To all whom it may concern:

Be it known that I, EMIL F. CERVENY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Record-Lifting Devices for Sound-Reproducing Machines, of which the following is a specification.

The present invention appertains to attachments for or devices used in conjunction with sound reproducing machines of the disk-record type, by means of which the record may be lifted from the surface of the turntable to the more easily enable it to be grasped for removal.

The invention has for its primary object the provision of simple mechanism for this purpose so constructed as to possess a wide range of adjustment whereby the degree of elevation of the disk may be determined to suit the convenience.

It is further the object of this device to provide an arrangement in which the lifting operation may be accomplished even while the turntable is still in motion, or prior to the complete cessation of rotation retarded by the application of the usual brake mechanism in stopping.

These and such other objects as may hereinafter appear are attained by the novel construction, combination and arrangement of parts to be hereinafter specifically described and claimed.

Reference will now be had to the accompanying drawings forming a part of this specification, wherein:

Figure 1 is a vertical sectional view showing the application of my invention to a conventional form of sound reproducing machine.

Figure 2 is a bottom plan view showing more clearly certain details of construction of my device.

Figure 3 is an enlarged sectional view taken on the line 3—3 of Figure 1.

Throughout the following detailed description and on the several figures of the drawing, similar parts are referred to by like reference characters.

Referring to the drawing, 1 designates the top of a conventional form of sound reproducing machine which constitutes the support for the motor, and this part will hereinafter be referred to as the motor board. Through this the usual spindle 2 projects a suitable distance above the surface and upon said spindle the turntable 3 is removably mounted in the customary manner. I prefer that the turntable at a point surrounding its axis should be depressed so as to receive a record lifting member or disk 4 loosely seated about the turntable spindle and having tubular posts 5 projecting from its under surface and extending through suitable openings in the said turntable. These posts are internally threaded so as to receive adjustment screws 6 and these project downwardly from the posts into close proximity to the motor board disk or ring 7 which similarly to the corresponding part 4 above referred to is preferably seated within the depression in the motor board, so as to lie flush with the surface of the latter. The ring 7 has also extending downwardly therefrom a pair of tubular projections 8, best seen in Figure 3 of the drawings, so as to receive the threaded connections 9 pivoted to a yoke member 10 which latter is in turn fixed to the end of a rocker arm or lever 11. The arm 11 is pivotally secured to the under surface of the motor board 1 upon a depending bracket 12 and associated with the pivot portion of the lever is a spring 13 which coacts to hold the inner end of the lever in its lowermost position as shown in Figure 1 in full lines. The outer extremity of the arm 11 carries a threaded stem 14 pivotally connected thereto and this part is in turn attached to the manipulating button 15 arranged adjacent to the periphery of the turntable.

This simple mechanism constitutes the attachment which I have devised for carrying out in a simple manner the raising of a disk record from the surface of the turntable to enable the fingers to easily grasp the record for its displacement. In devising this arrangement I have had in mind the desirability especially of providing for adjustment of the device such that the record may be raised a predetermined extent according to the desires of the operator. This adjustment may be carried out in a threefold manner:

First: The button 15 may be screwed farther upon the stem 14 or in the reverse manner according to whether a greater or less lifting action is desired;

Second: The threaded connections 9 permit of a similar or corresponding adjustment to be made with respect to the lower lifting disk 7, this adjustment being obtained by loosening the connecting screw 8' and rotating the sleeve 8 in the desired direction; and

Lastly, the adjustment may be produced by raising or lowering the screws 6 which are mounted in the posts 5 of the turntable disk 4. Any one or more of these adjustments may be utilized for the purpose specified so that the record may be elevated by this arrangement partially upon the extremity of the spindle, or it may be elevated until it entirely clears the spindle, as may be desired.

One of the advantages of this arrangement is that it is unnecessary to completely stop the turntable to effect the elevation of the record disk since the button 15 may be depressed at any time and if the turntable is in motion the heads of the screw 6 will ride upon the surface of the annular ring or disk member 7. This arrangement, therefore, affords a very desirable facility of removal of the record and replacement of another without necessitating the application of the brake to stop the turntable rotation.

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

1. The combination with a sound reproducing machine including a turntable having openings therethrough, of record lifting means comprising a lever pivoted intermediate its length beneath the motor board of said machine, record engaging means operable by said lever, mounted upon said turntable and having elevating means projecting through the openings therein, depressing means for actuating said lever comprising a stem pivotally connected with the lever and passing through the motor board, and a button member adjustably mounted thereon whereby to adjust the extent of elevating operation of the record engaging means aforesaid and permit of accommodation of motor boards of varying thicknesses.

2. The combination with a sound reproducing machine including a turntable having openings therethrough, of record lifting means comprising a record engaging member mounted upon the turntable and means beneath the motor board of the machine and extending therethrough and operable on said adjustable means to disengage the record therefrom, said means beneath the motor board including means for adjusting its position with respect to the lifting means.

3. The combination with a sound reproducing machine including a turntable having openings therethrough, of record lifting means mounted thereupon provided with adjustable posts projecting through said openings, and actuating means beneath the motor board of the machine operable to engage with the posts whereby to raise the record from the turntable, said means including means for adjusting its relation to the posts and its throw according to the relative distance between the turntable and the motor board and the thickness of the latter.

4. The combination with a sound reproducing machine including a turntable having openings therethrough, of record lifting means mounted thereupon provided with adjustable posts projecting through said openings, a separate annular member mounted below the turntable operable to engage the posts during the movement of the turntable or when the latter is stationary whereby to raise the record from the same, and actuating means mounted beneath the motor board of the machine and adjustable with relation to the annular member.

5. The combination with a sound reproducing machine including a turntable having openings therethrough, of record lifting means mounted thereupon provided with means projecting through the openings, a lever disposed below the motor board, and adjustable means connected to the end of the lever and engageable with the projecting means aforesaid by which to adjust the extent of lifting action.

6. The combination with a sound reproducing machine including a turntable having openings therethrough, of record lifting means mounted upon said turntable having projections extending through the openings, a ring or disk member supported on the machine below the projections and engageable therewith, a lever for actuating said ring member, mounted below the motor board and adjustable connecting means between the ring and lever.

7. The combination with a sound reproducing machine including a turntable having openings therethrough, of record lifting means comprising a disk member mounted upon the turntable and provided with depending posts extending through the openings thereof and adjustable screws carried by said posts, and adjustable means mounted upon the machine operable to engage the screw members to raise the record from the turntable, said means including a depressible lever disposed below the motor board and means for adjusting the throw of the lever for contact with the screw members to vary the degree of lifting action of the lever.

8. The combination with a sound reproducing machine including a turntable hav-

ing openings therethrough, of record lifting mechanism comprising a disk member having depending adjustable posts projecting through the openings of said turntable, and actuating mechanism therefor including a disk adapted to engage the said posts and a lever disposed below the motor board and having adjustable connection with the last named disk, and a button adjustably connected to said lever through said motor board for depressing the end of the lever.

In testimony whereof I affix my signature.

EMIL F. CERVENY.