No. 767,342. PATENTED AUG. 9, 1904.

H. P. HUSE.

REPEATING MECHANISM FOR PHONOGRAPHS.

APPLICATION FILED JUNE 1, 1903.

NO MODEL.

Fig. 1.

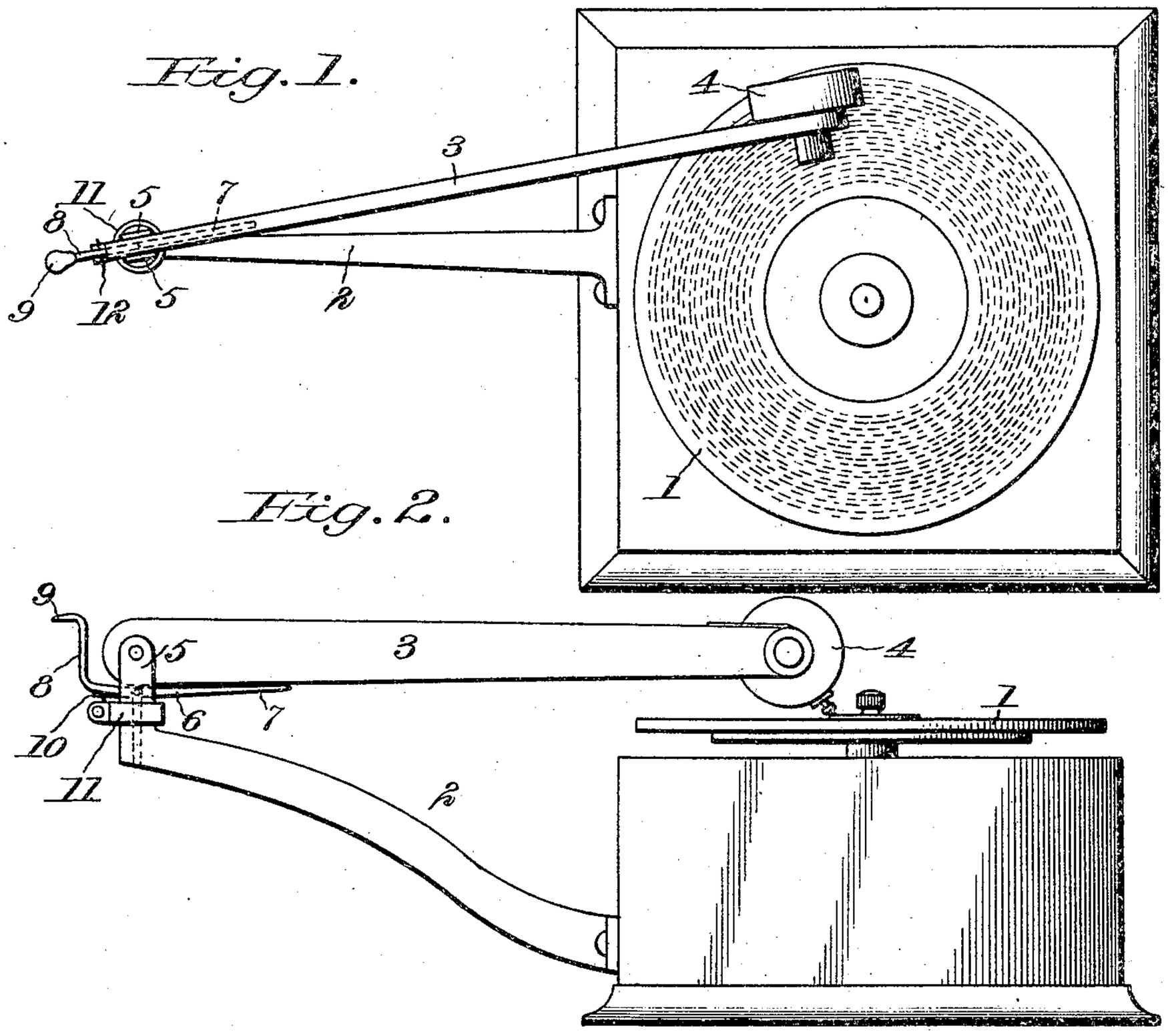
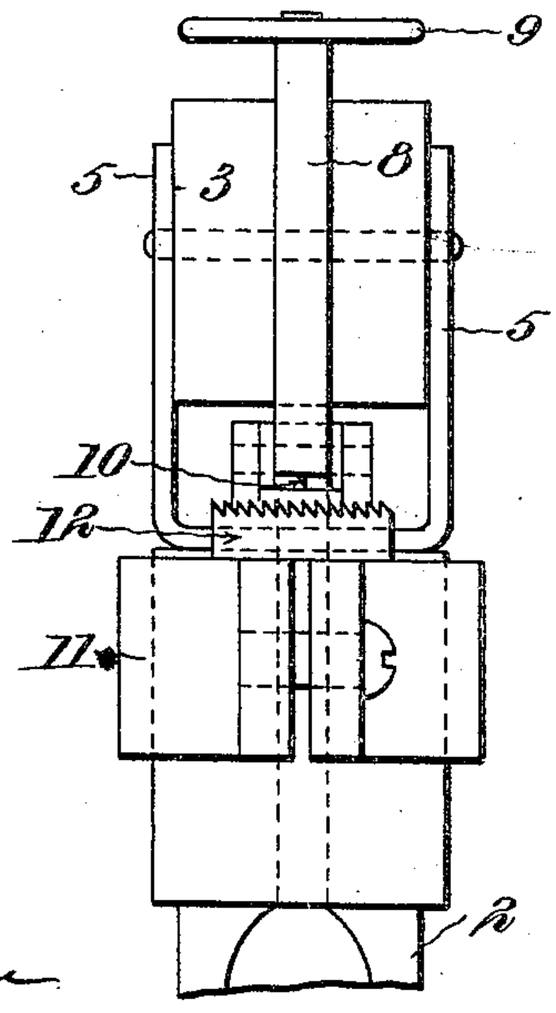


Fig. 2.

Fig. 3.



Witnesses

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No. 767,342. Patented August 9, 1904.

UNITED STATES PATENT OFFICE.

HARRY P. HUSE, OF THE UNITED STATES NAVY, ASSIGNOR TO UNITED STATES SCHOOL OF LANGUAGES, OF WILMINGTON, DELAWARE, A CORPORATION OF DELAWARE.

REPEATING MECHANISM FOR PHONOGRAPHS.

SPECIFICATION forming part of Letters Patent No. 767,342, dated August 9, 1904.

Application filed June 1, 1903. Serial No. 159,624. (No model.)

To all whom it may concern:

Be it known that I, HARRY P. HUSE, of the United States Navy, have invented a certain new and useful Improvement in Repeating Mechanisms for Phonographs, of which the following is a full, clear, and exact description.

In utilizing sound-reproducing machines—such as those commonly known as "phonographs," "graphophones," and "gramophones"—especially for educational purposes, it is desirable to provide for the repetition of a part or the whole of a record. Means for accomplishing this object have been applied to the Edison phonograph, and means have been devised for automatically returning the reproducer to the initial starting-point at the completion of the travel of the reproducer in disk machines.

In the present invention means are provided for arresting the reproducer of a disk machine and resetting it at any desired point in the sound-groove of the disk, so as to repeat any portion of the record any number of times.

The means last above referred to include a device coöperating with another member to raise the stylus out of the sound-record groove as the record rotates, move it laterally and arrest it at a selected point between the ends of such groove, and then return it to the groove at such selected point again to traverse the previously-traveled portion of the groove, so that any desired portion of the record less than the whole may be repeated as often as required.

In the accompanying drawings, illustrating the invention, in the several figures of which like parts are similarly designated, Figure 1 is a top plan view, and Fig. 2 is a side elevation, showing a disk machine somewhat conventionally and having the improvement applied. Fig. 3 is an end view, on a larger scale, of the improvement.

The disk record 1 is as usual, and so are the bracket 2, reproducer-arm 3, and reproducer 4 and its stylus.

The yoke 5, in which the reproducer-arm is pivoted and which turns with the arm as it sweeps horizontally over the disk, has pivoted in it a lever 6, one leg, 7, of which extends beneath the arm 3 forwardly, and the other leg, 8, of which extends rearwardly and is formed with a finger-piece 9, elevated to about the level of the top of arm 3. The leg 8 is also provided with a knife-edge 10 on its lower side. On the head or socket end of the bracket 2 is a clamp 11, supporting a ratchet-tooth rack 12 in line with the knife-edge and equal to its sweep.

The lever 6 constituted as above forms a trigger and is herein so designated.

If it be desired to repeat any portion of the record during its transmission, the finger-piece 9 is depressed, thus elevating the leg 7 and the arm 3, and consequently raising the stylus out of the sound-groove in the disk. The knife-edge 10 then comes into contact with the slanting side of the selected adjacent tooth in the rack 12, and as it descends toward the root of such tooth a reverse movement is imparted to the reproducer-arm, setting it back, and then the trigger, being released, the stylus enters the sound-groove at a definite point distant from which it was removed and is caused to travel again along the groove, and so repeat any desired portion of the record less than the whole. As is obvious, this repetition may be effected any number of times and at any point in the travel of the reproducer.

The invention is not limited to the details of arrangement of the trigger.

The value of the attachment will readily occur to any one engaged in teaching languages, music, and other subjects where inflection, pronunciation, enunciation, and the like are of importance.

What I claim is—

1. The combination with a reproducer, its support, its stylus, and a record-disk, of a repeating mechanism for shifting the reproducer as often as desired at any point within the length of the groove in the disk as it travels therein, comprising essentially means to raise the stylus out of the groove as the record-disk rotates, said means coöperating with means to

move said stylus laterally a limited distance and arrest its lateral motion and return it to the groove in the rotating disk at any desired point between the ends of the groove to repeat any desired portion of the record less than the whole.

2. In a repeating mechanism for phonographs, a horizontally-swinging reproducer-arm, a hand-actuated trigger applied to it and capable of raising its stylus out of the sound-groove, a knife-edge on said trigger, and a ratchet-tooth rack with any selected tooth of which said knife-edge coöperates to shift the reproducer-arm backwardly at any point in its travel less than the whole.

3. The combination with a disk sound-reproducer, of a horizontally-swinging reproducer-arm having a stylus, of a trigger pivotally connected with said arm and carried by it, a knife-edge on said trigger, and a ratchet-tooth rack stationarily mounted beneath the knife-edge and coöperating with it to reverse the reproducer-arm to effect repetition of any portion of the record.

In testimony whereof I have hereunto set my hand this 26th day of May, A. D. 1903.

HARRY P. HUSE.

Witnesses:

FRANK K. STOCKETT,

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