

No. 640,367.

Patented Jan. 2, 1900.

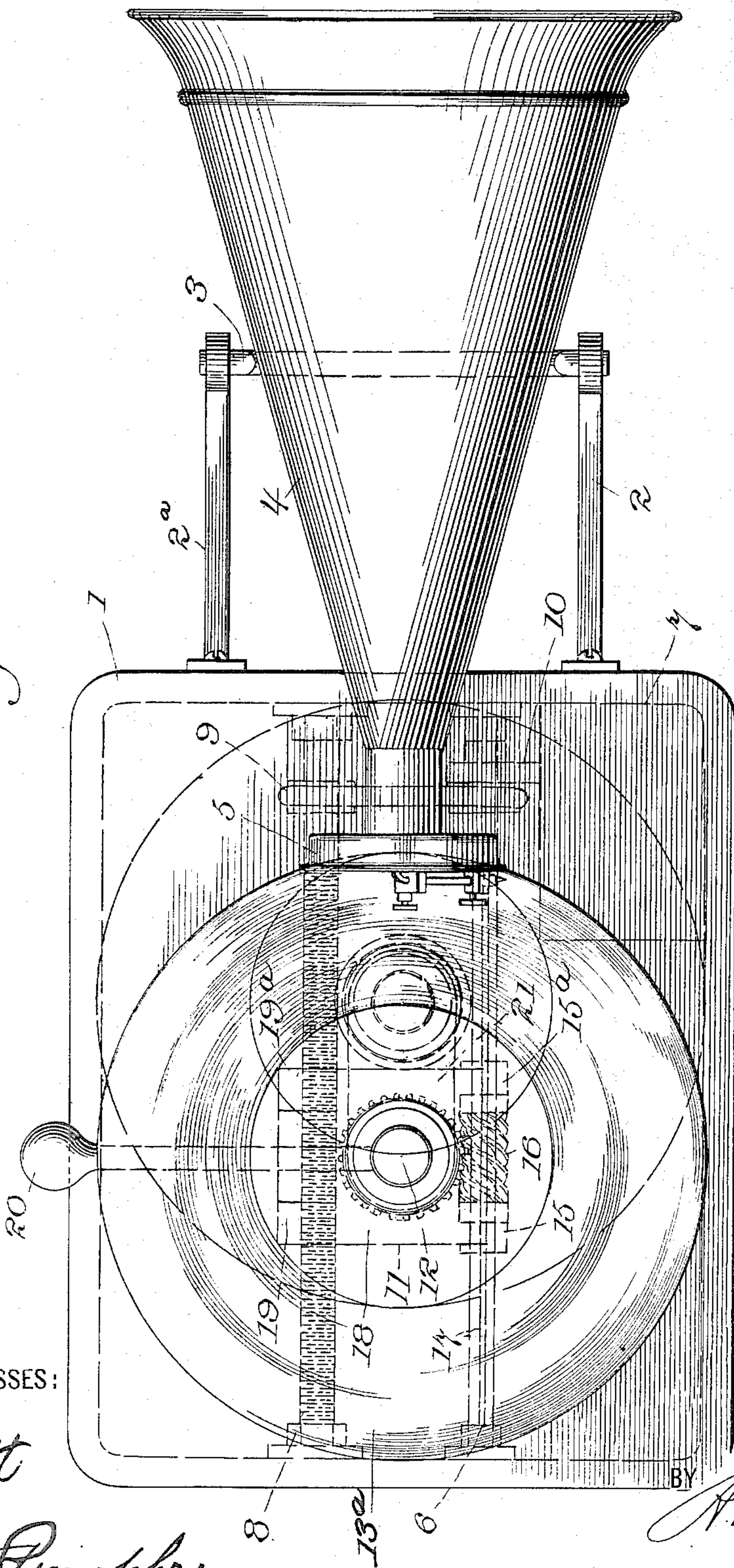
G. K. CHENEY.  
TALKING MACHINE.

(Application filed Mar. 3, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



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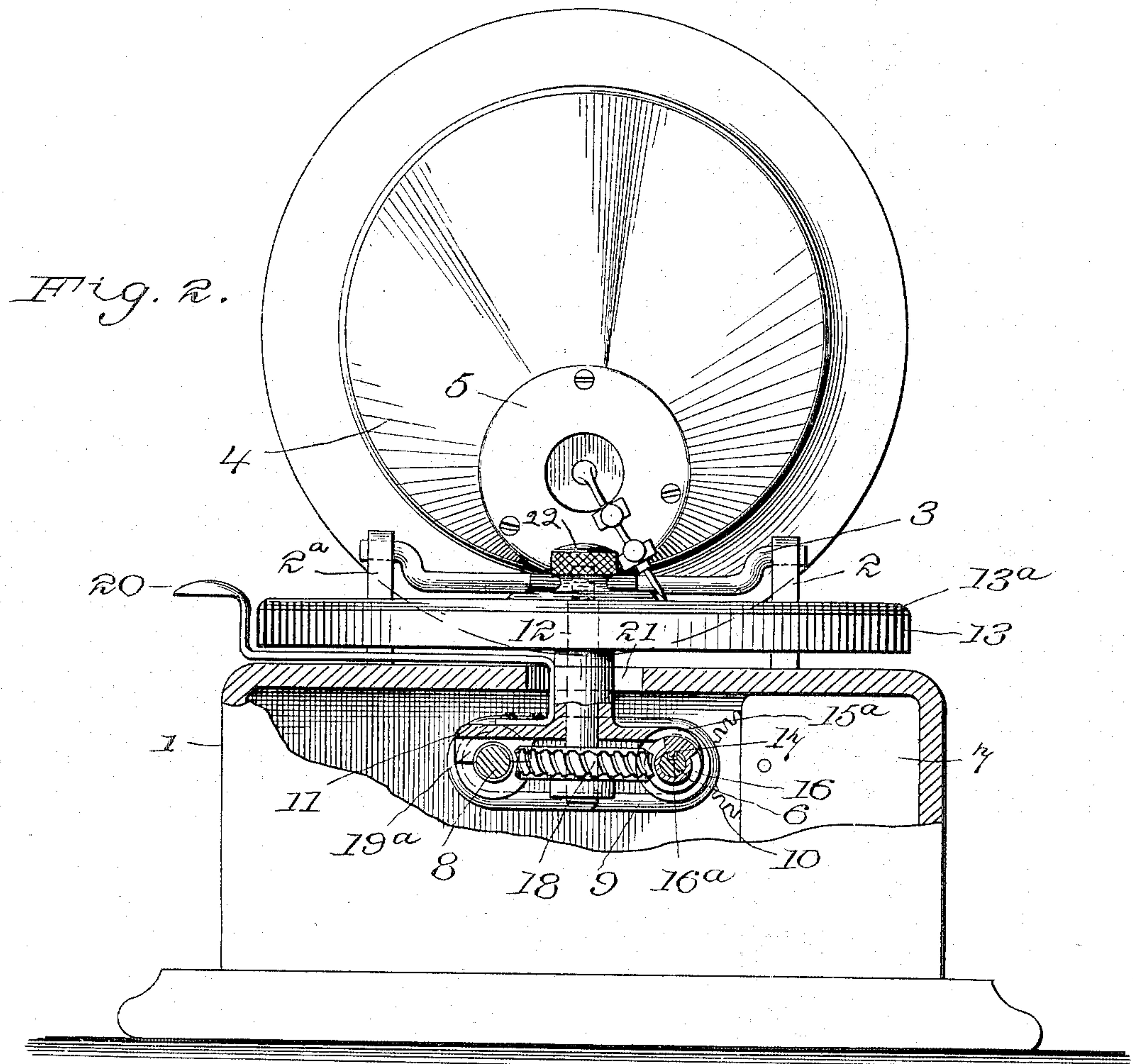
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# UNITED STATES PATENT OFFICE.

GEORGE K. CHENEY, OF NEW YORK, N. Y.

## TALKING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 640,367, dated January 2, 1900.

Application filed March 3, 1899. Serial No. 707,572. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE K. CHENEY, a citizen of the United States of America, and a resident of New York city, county and State of New York, have invented certain new and useful Improvements in Talking-Machines, of which the following is a specification.

My invention relates to talking-machines in general, and is more specifically designed to produce an improved form of sound-reproducing apparatus.

The preferred construction embodying my invention is disclosed in the two accompanying sheets of drawings, in which—

Figure 1 is a plan view of the type of talking-machines known as the "gramophone" embodying my invention, and Fig. 2 is an end elevation with a part of the casing broken away.

Throughout the drawings like reference-figures refer to like parts.

Any convenient form of casing 1 incloses the driving apparatus for rotating the disk-shaped sound-record shown. To the casing are attached any convenient form of brackets 2 2<sup>a</sup>, on which is journaled a cross-piece 3, which carries the horn 4, on the smaller end of which is the ordinary sound-box 5, the reproducer being thereby hinged to the casing 1. Journaled in the casing 1 is the driving-shaft 6, which is driven by any suitable gearing (indicated at 10) from any convenient form of motor, whose position is indicated at 7. Parallel to the driving-shaft 6 is a feed-screw 8, and the belt 9 or other convenient form of gearing transmits motion from the driving-shaft to the feed-screw.

Hinged upon the driving-shaft and sliding endwise thereon is the record-supporting carriage 11. Journaled in this carriage is the upright shaft 12, which carries the rotating record-table 13. On this table is supported the ordinary disk-shaped record 13<sup>a</sup>, which is held in place by the thumb-screw 22 or other convenient means. The carriage 11 is mounted on the driving-shaft 6 by means of the perforated lugs 15 15<sup>a</sup>, through which said driving-shaft passes. Between said lugs is the worm-screw 16, also mounted on the driving-shaft and sliding endwise thereon, but compelled to rotate with said driving-shaft by

reason of the keyway 17 and the key or feather 16<sup>a</sup> engaging therewith. This worm-screw meshes with the worm-gear 18, which is rigid on the shaft 12. The carriage 11 being hinged on the driving-shaft 6, as described, is supported on the other side by the feed-screw 8 and engages with said feed-screw by means of the half-nuts 19 19<sup>a</sup>, which bear upon the feed-screw. The upper portion of the carriage 11 and the shaft 12 project upwardly through the top of the casing through a slot-shaped opening 21, which allows a certain freedom of movement lengthwise of the driving-shaft and feed-screw. The projection 20 is rigidly attached to the carriage 11 and extends out under and beyond the table 13, so that it can be grasped by the operator.

The mode of operation of my invention is as follows: The sound-record being fastened to the table 13, the carriage 11 is lifted up so as to free the nuts 19 19<sup>a</sup> from engagement with the feed-screw by grasping the projection 20, and the whole apparatus is slid to the right, Fig. 1, until it reaches the position shown in dotted lines. The carriage is then allowed to fall back upon the feed-screw and the mechanism set in motion by the motor 7. The rotation of the driving-shaft 6 is transmitted through the worm-gearing to the shaft 12, and the record is thereby rotated under the sound-box 5, so that the recorded sounds are audibly reproduced. The motion of the driving-shaft is also transmitted through the belt 9 to the feed-screw 8, and the carriage 11 is thereby fed to the left, Fig. 1, at the proper rate to keep the reproducer-needle engaged with the record. When the entire record has been reproduced, the sound-box may be swung up from the record and the mechanism moved back, as before, to the position for starting over again.

It is evident that various changes could be made in the details of construction described without departing from the spirit and scope of my invention. The feed motion might be in either direction. Other forms of gearing could be employed, and the horn and sound-box might be differently mounted; but these I consider changes in form and not in principle and still within the scope of my invention.



Having therefore described my invention, what I claim as new, and desire to protect by Letters Patent, is—

1. The combination of the driving-shaft, 5 the record-carriage hinged upon the driving-shaft, the feed-screw, and means whereby the feed-screw may engage said carriage.

2. The combination of the driving-shaft, 10 the record-carriage hinged upon the driving-shaft, the feed-screw, and means whereby the feed-screw may engage said carriage, together with connecting-gearing between said driving-shaft and feed-screw.

3. The combination of the driving-shaft, 15 the record-carriage hinged to and sliding on the driving-shaft, the record-table mounted on the carriage and rotating on an axis at right angles to the driving-shaft, connecting-gearing from driving-shaft to rotating table, 20 the feed-screw parallel to the driving-shaft, and the half-nut carried by said record-carriage and adapted to engage said feed-screw.

4. The combination of the driving-shaft, 25 the record-carriage hinged to and sliding on the driving-shaft, the record-table mounted on the carriage and rotating on an axis at right angles to the driving-shaft, connecting-gearing from driving-shaft to rotating table, the feed-screw parallel to the driving-shaft, 30 and the half-nut carried by said record-carriage and adapted to engage said feed-screw,

together with the casing for the carriage and driving-gear, having a slotted opening through which the table-carrying shaft projects. 35

5. The combination of the driving-shaft, the record-carriage hinged to and sliding on the driving-shaft, the record-table mounted on the carriage and rotating on an axis at 40 right angles to the driving-shaft, connecting-gearing from driving-shaft to rotating table, the feed-screw parallel to the driving-shaft, and the half-nut carried by said record-carriage and adapted to engage said feed-screw, 45 together with the casing for the carriage and driving-gear, having a slotted opening through which the table-carrying shaft projects, and the projection from said carriage extending through said slot and under and beyond the table. 50

6. The combination of the driving-shaft, the record-carriage hinged upon the driving-shaft, the feed-screw, and means whereby the feed-screw may engage said carriage, together with the inclosing casing and the 55 sound-box hinged to said casing.

Signed by me at New York city, New York, this 25th day of February, 1899.

GEORGE K. CHENEY.

Witnesses:

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A. PARKER SMITH.