

Clocks, Trains,  
Sinking,  
Graphophone.

No. 877,949.

P. M. RAVENSKILDE.

PATENTED FEB. 4, 1908.

STARTING MEANS FOR SOUND REPRODUCING MECHANISM.

APPLICATION FILED JUNE 22, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

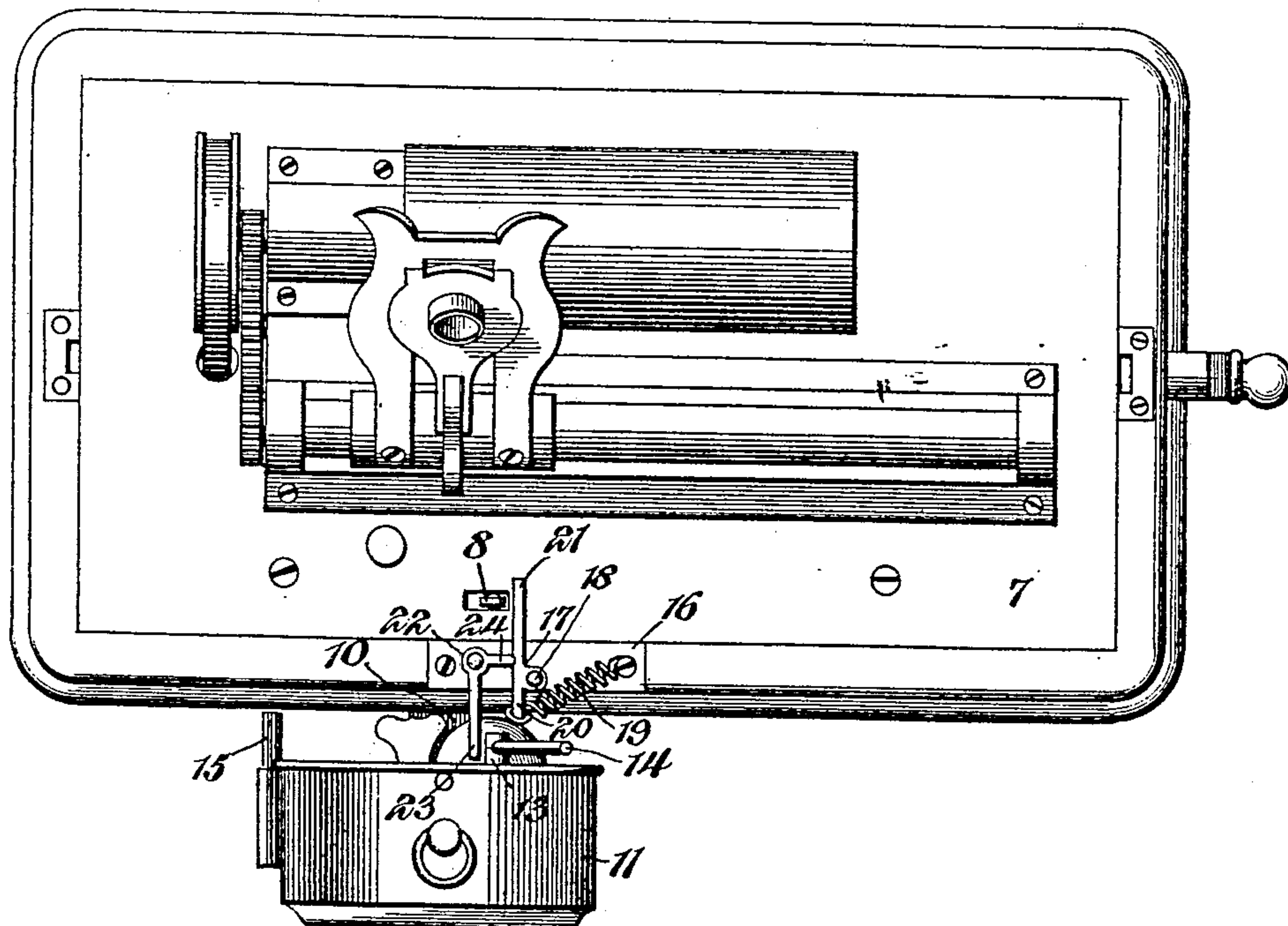
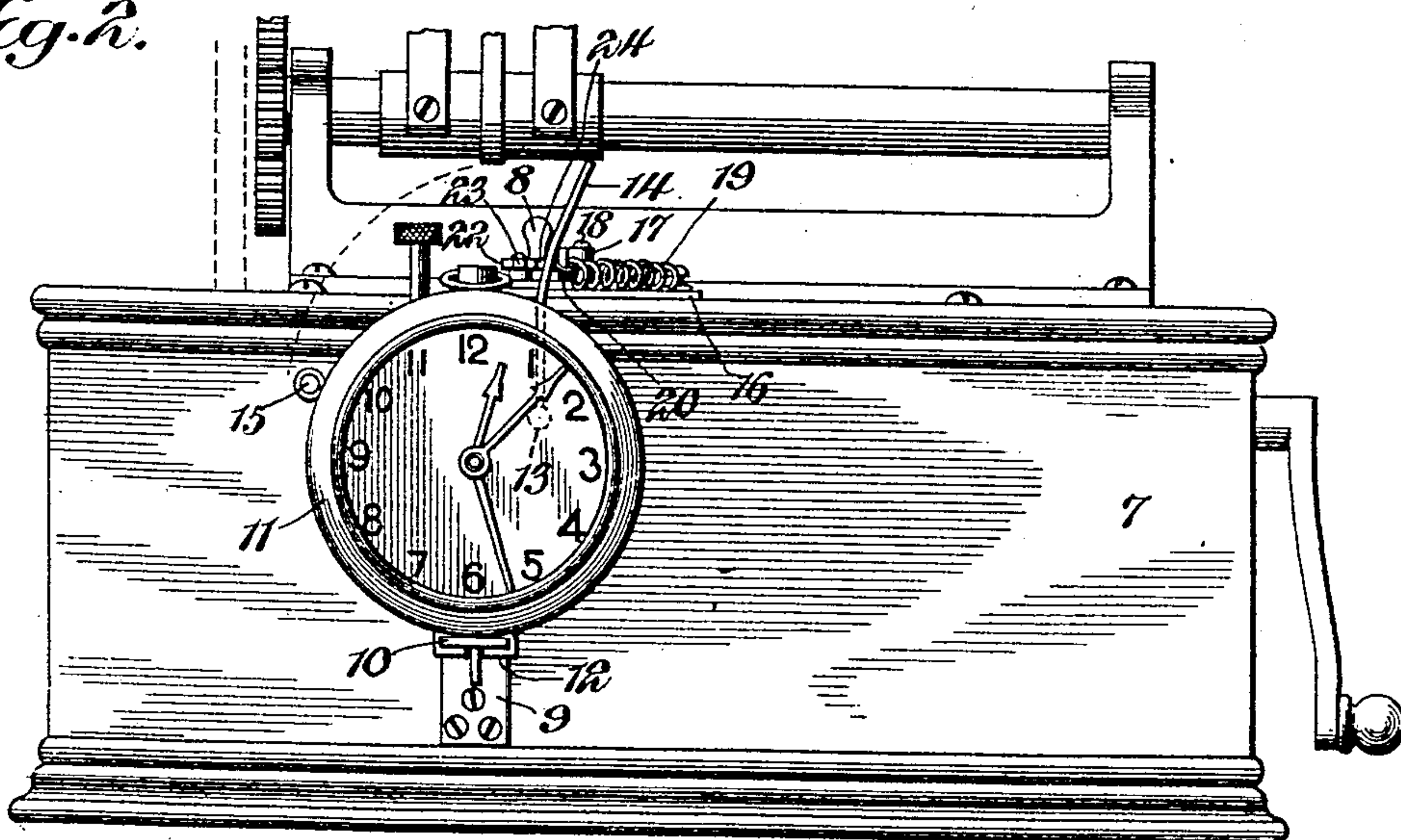


Fig. 2.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

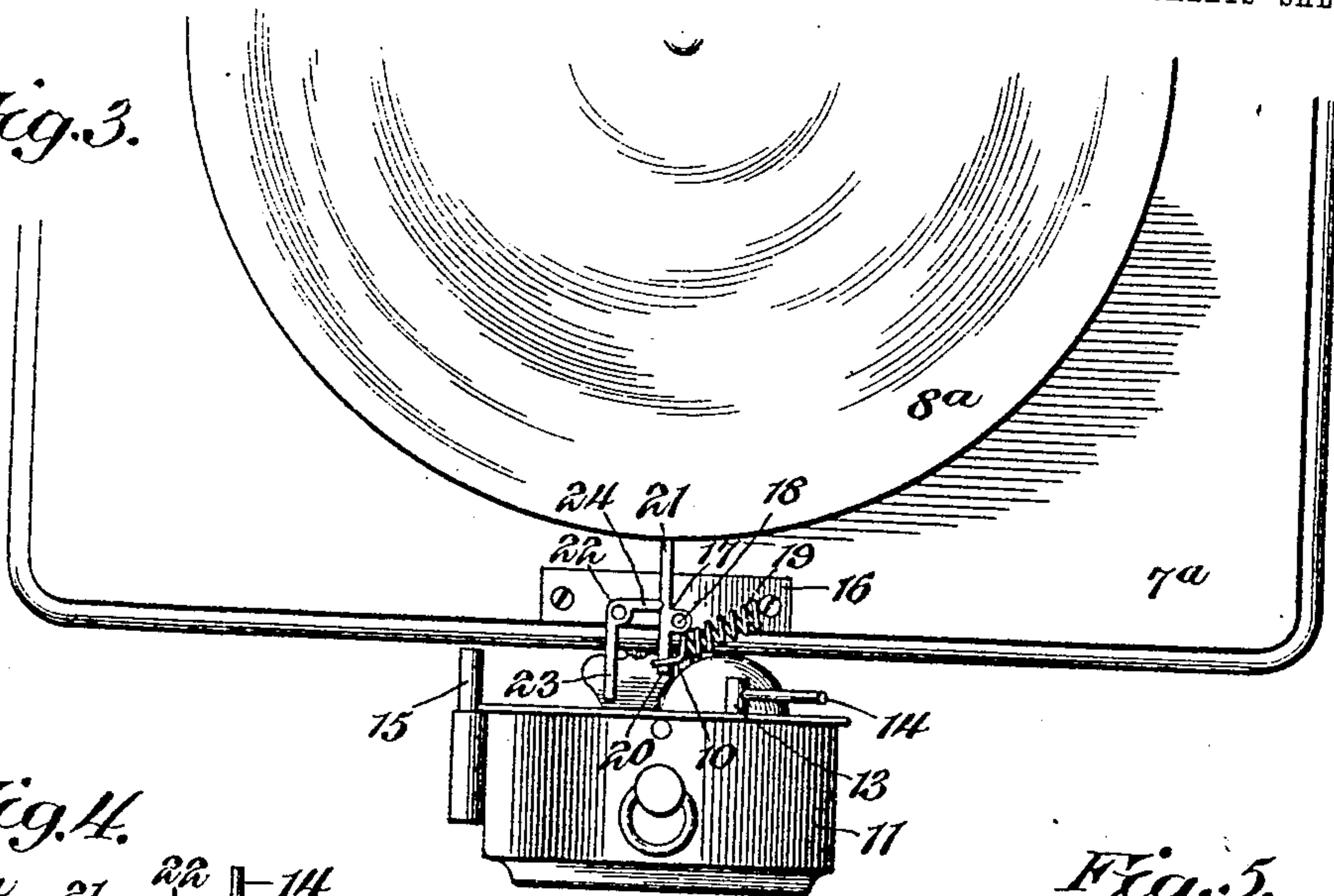


Fig. 4.

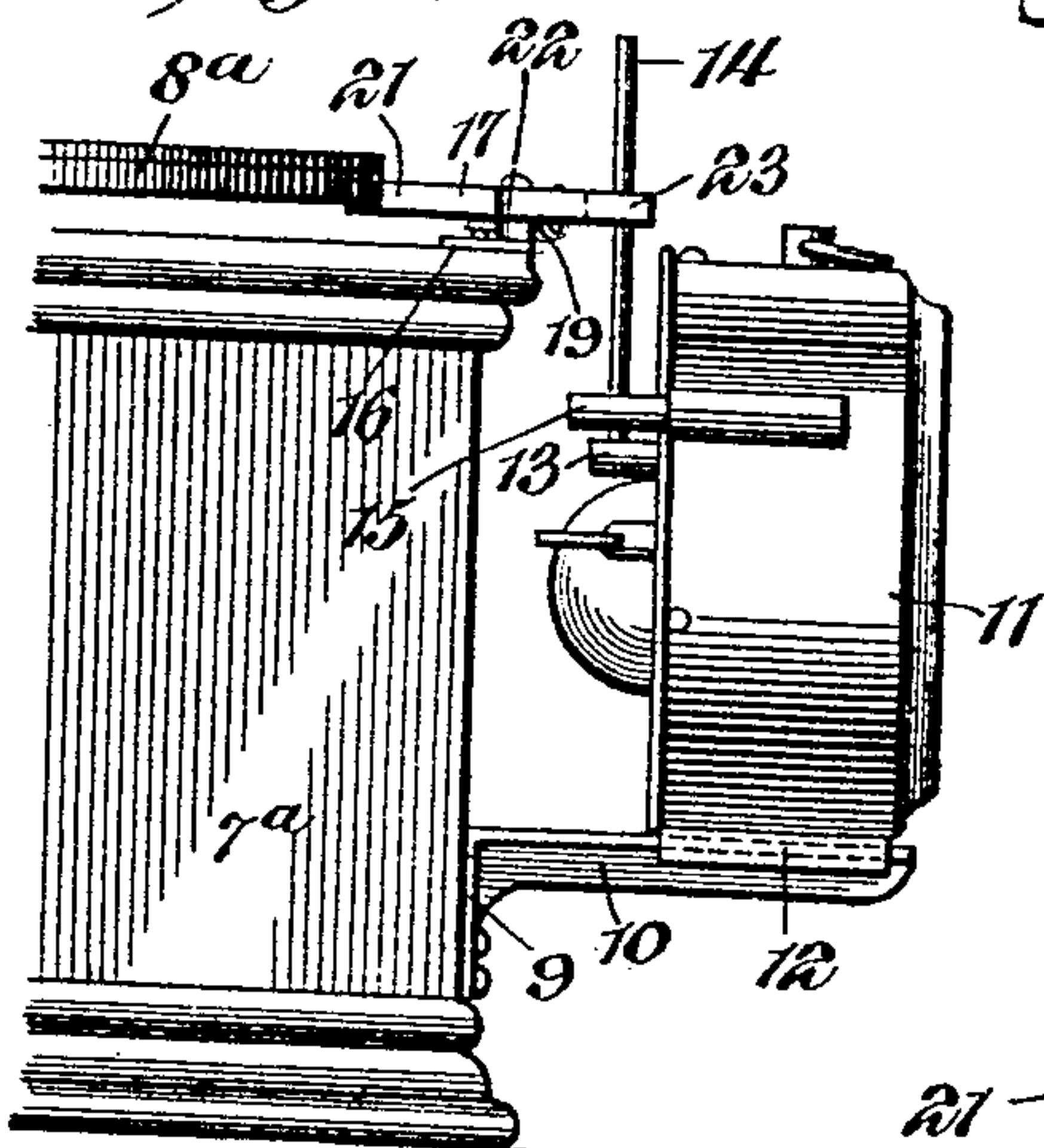


Fig. 5.

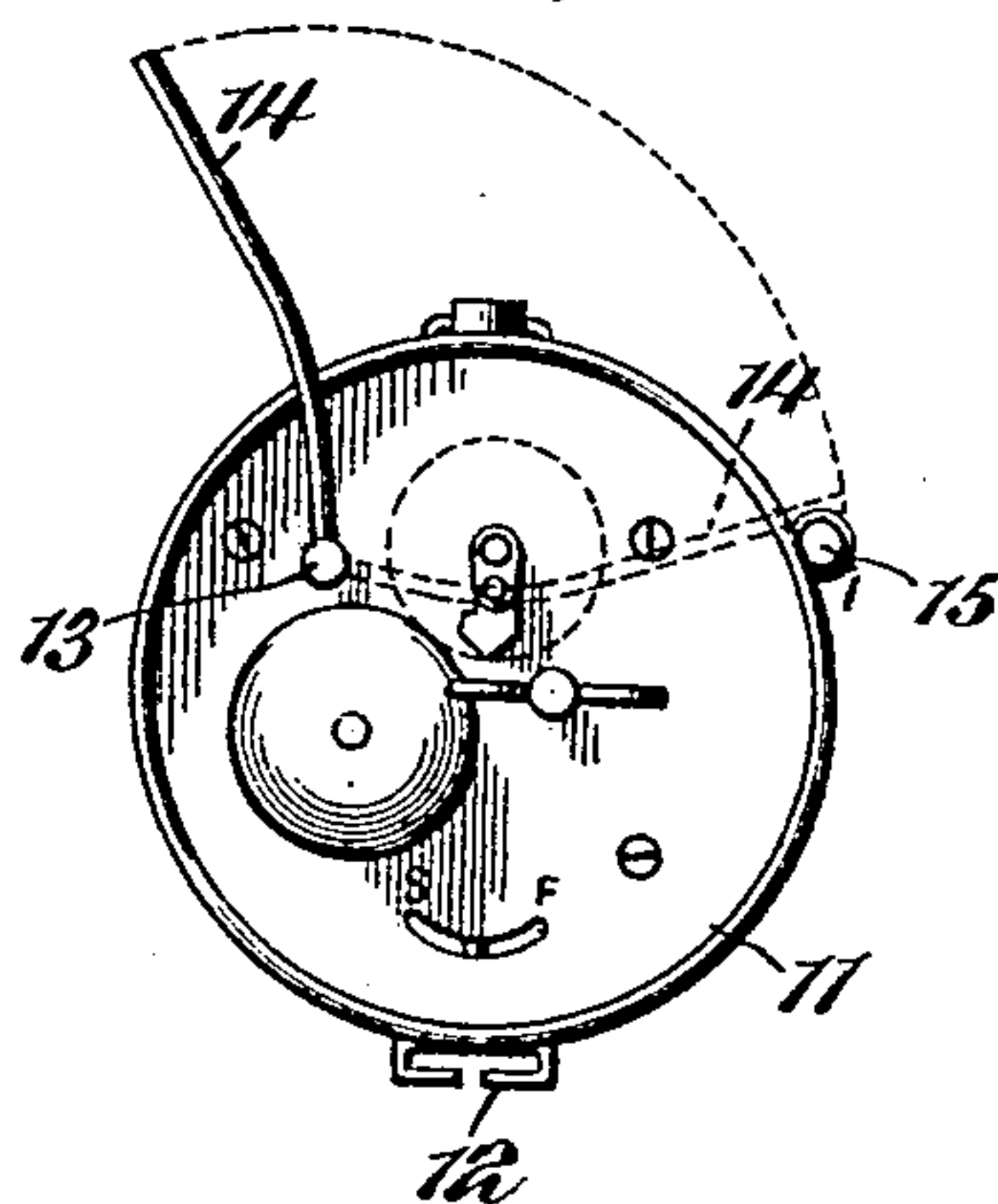
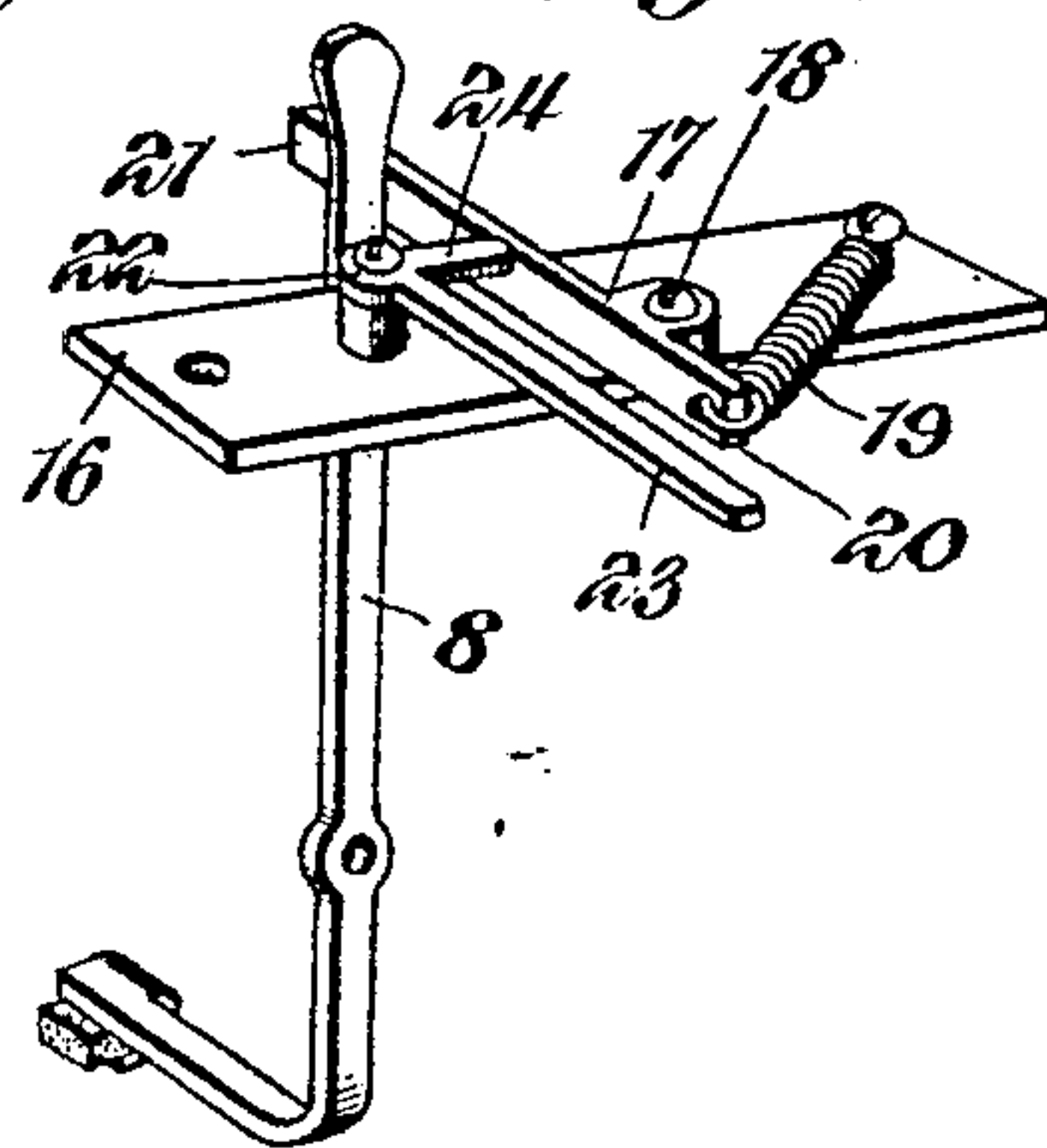


Fig. 6.



Witnesses

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# UNITED STATES PATENT OFFICE.

PETER M. RAVENSKILDE, OF CABERY, ILLINOIS.

## STARTING MEANS FOR SOUND-REPRODUCING-MECHANISM.

No. 877,949.

Specification of Letters Patent.

Patented, Feb. 4, 1908.

Application filed June 22, 1907. Serial No. 380,274.

*To all whom it may concern:*

Be it known that I, PETER M. RAVENSKILDE, a citizen of the United States, residing at Cabery, in the county of Ford and State of Illinois, have invented a new and useful Starting Means for Sound-Reproducing Mechanism, of which the following is a specification.

This invention relates to means for starting sound reproducing mechanism at predetermined times, and the principal object is to provide novel and effective mechanism of a simple nature that can be employed in connection with the usual sound reproducing mechanism and includes as its controlling means an ordinary alarm clock, this mechanism furthermore being so constructed that neither the sound reproducing mechanism nor the alarm clock has to be materially altered and either can be used in the ordinary manner whenever desired.

In the drawings:—Figure 1 is a plan view of a graphophone of the type employing cylindrical records, showing the controlling mechanism thereon. Fig. 2 is a front elevation of the same. Fig. 3 is a plan view of a portion of a sound reproducing machine employing disk records, and showing the controlling means associated therewith. Fig. 4 is a side elevation of the same. Fig. 5 is a rear elevation of the clock illustrating the slight modifications necessary thereto. Fig. 6 is a detail perspective view of the starting means and detent therefor.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

The two types of sound reproducing mechanisms are designated respectively 7 and 7<sup>a</sup>, and are of the usual construction. The machine which employs cylindrical records, has the usual starting or brake lever 8. The mechanism 7<sup>a</sup>, which employs a disk record, has a rotatable support in the form of a disk 8<sup>a</sup>. Secured to the cases of these sound reproducing mechanisms are brackets 9 having outstanding supporting arms 10. A clock 11 of any well known type, has secured to the under side of its casing, a guideway 12 which slips upon the outstanding arm 10 of the bracket 9, and thus the clock is mounted on the sound reproducing mechanism. This clock is provided with the usual time movement, and a motor for operating the alarm. The winding shaft of the alarm motor is designated 13, and has secured

thereto, an upstanding swinging arm 14, the movement of which is limited by a stop 15 secured to the clock casing.

In actual practice, the alarm motor is preferably wound up, and thus the arm in its limited movement will be operated by comparatively great power. A plate 16 is fastened upon the top of the casing, and an actuating lever 17 is fulcrumed between its ends, as shown at 18 to the plate. A coiled spring 19, secured at one end to the plate, has its other end connected to the outer arm 20 of said lever. The inner arm 21 of the lever when applied to the type of machine shown in Figs. 1, 2 and 6 is in a position to operate against the upper end of the starting lever 8 of the machine. When applied to the form of sound reproducing mechanism illustrated in Figs. 3 and 4, the inner end of said lever constitutes a brake that is arranged to engage the periphery of the rotatable support 8<sup>a</sup> to prevent its rotating. A detent in the form of a bell crank 22 has an out- standing arm 23 which is arranged to be placed in the path of movement of the swinging arm 14 of the clock, while its other arm 24 is then arranged in engagement with the arm 21 of the lever 17 to prevent the movement of said lever by the spring 19.

The operation of the mechanism is substantially as follows: The clock having been wound and the alarm mechanism having been set to be released at a predetermined time, said clock is supported on the bracket 9. The lever 21 is moved against the tension of the spring 19, and is held by the bell crank 22. If the graphophone shown in Figs. 1 and 2 is employed, the brake lever 8 is placed in position to hold the mechanism against operation while in the mechanism illustrated in Figs. 3 and 4, the inner arm of the lever 21 will prevent the rotation of the disk. The parts are thus so held until the alarm is released, whereupon the arm 14 will be operated until it strikes the stop 15. During this movement, it will engage and swing the outstanding arm 23 of the bell crank, thus moving the arm 24 of said bell crank out of engagement with the lever 21 and releasing said lever. The spring will thereupon act to swing the lever and release the sound reproducing mechanism.

From the foregoing, it is thought that the construction, operation, and many advantages of the herein described invention will be apparent to those skilled in the art with-



out further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

10 1. In mechanism of the class set forth, the combination with a plate and means for fastening the same to a sound reproducing instrument, of a lever fulcrumed between its ends on the plate, a spring connected to one 15 arm of the lever and to the plate, a detent pivotally mounted on the plate and having one end movable to and from a position in the path of movement of one arm of the lever to hold it against movement by the spring, 20 a bracket having an outstanding arm, means for mounting the bracket on the sound reproducing instrument, a clock, a guideway secured to the under side of the clock and slidably engaging the arm of the bracket, 25 and a swinging arm mounted on and actuated by the clock, said arm engaging the detent to move the same to a position to permit the actuation of the lever by the spring.

2. In mechanism of the class set forth, the 30 combination with sound reproducing mechanism, of controlling means therefor including a lever, means for actuating the lever, a detent comprising a bell crank, one arm of which engages the lever to hold it against 35 movement by the actuating means, a motor, and a device operated by the motor and engaging the other arm of the bell crank for moving it and releasing the lever.

3. In mechanism of the class set forth, the 40 combination with sound reproducing mechanism, of controlling means therefor, a tripping member for the controlling means, a

spring connected to the member for operating it, a detent comprising a bell crank, one arm of which engages the member to hold 45 it against movement by the actuating means, a motor, and a device operated by the motor and engaging the other arm of the bell crank for moving it to release the member.

4. In mechanism of the character set forth, 50 the combination with sound reproducing mechanism, of controlling means therefor including a lever fulcrumed between its ends, a spring connected to one arm of the lever, a detent comprising a bell crank, one arm of 55 which engages with the opposite arm of the lever to that connected to the spring, a motor, and a swinging arm operated by the motor and engaging the other arm of the bell crank to move the same and release the lever. 60

5. In mechanism of the character set forth, the combination with a casing and sound reproducing mechanism carried thereby, of a supporting bracket secured to one side of the casing, a clock detachably 65 mounted on the supporting bracket and including a motor, a swinging arm operated by the motor, a stop for limiting the swinging movement of the arm, controlling means for the sound reproducing mechanism in- 70 cluding a lever fulcrumed between its ends, a spring connected to the outer arm of the lever, and a detent comprising a bell crank, one arm of which detachably engages the inner end of the lever, the other arm being 75 disposed in the path of movement of the swinging arm of the clock.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

PETER M. RAVENSKILDE.

Witnesses:

WILLIAM R. WATTS,  
G. B. ALDRICH.