

No. 686,321.

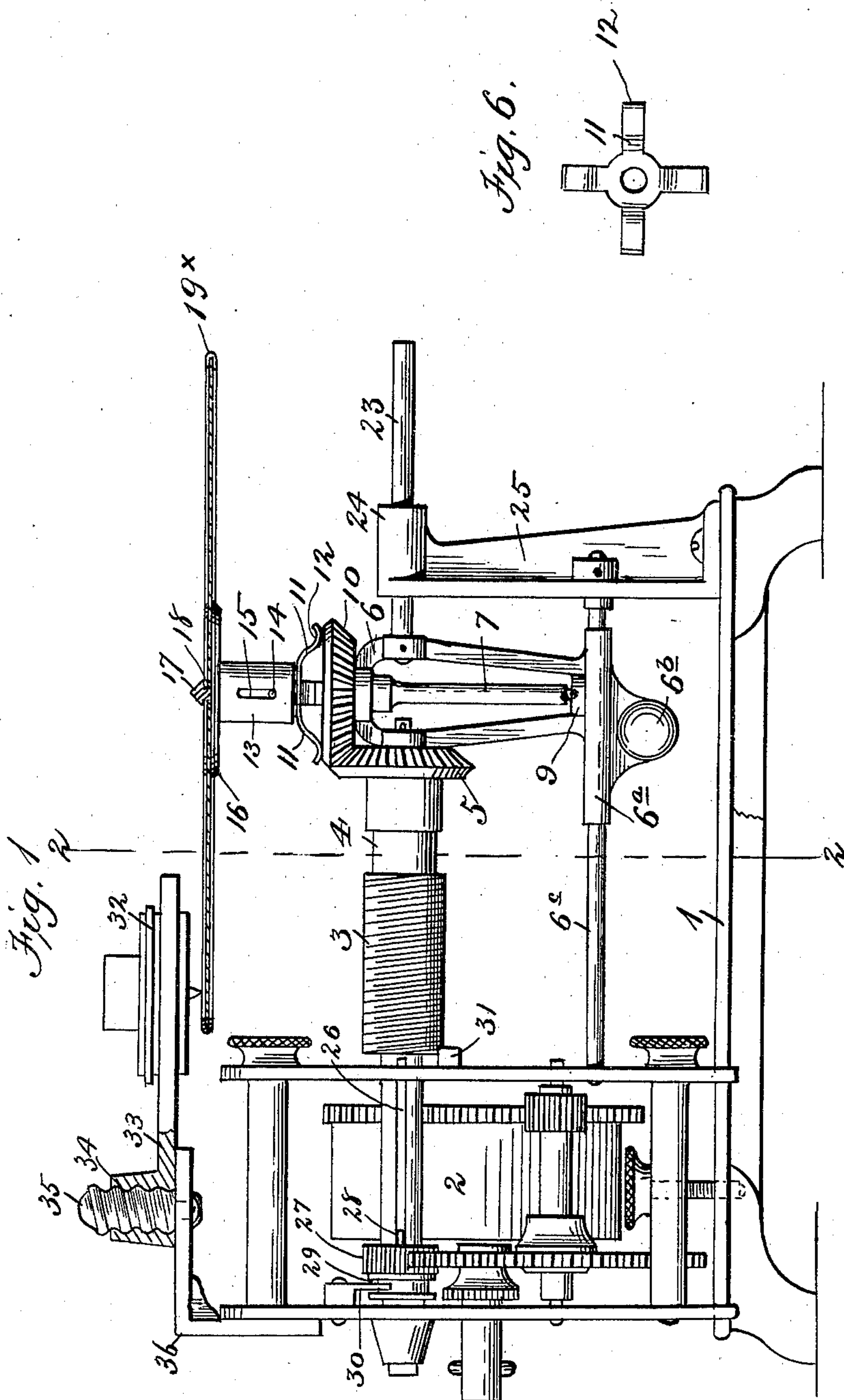
Patented Nov. 12, 1901.

F. MYERS.
PHONOGRAPH.

(Application filed Dec. 28, 1900.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
H. L. Curand
Henry H. H. The

Inventor
Frederick Myers
by E. P. Myers, his Attorney

No. 686,321.

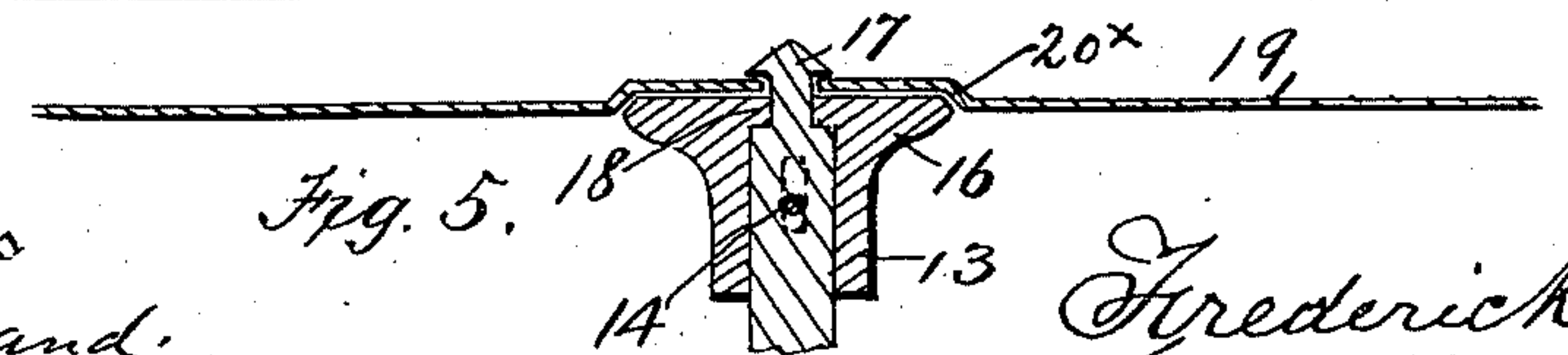
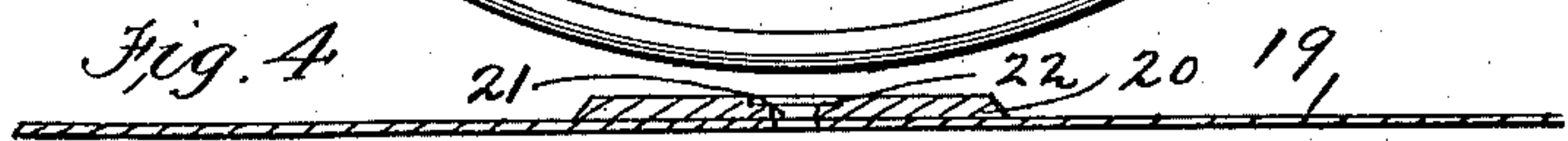
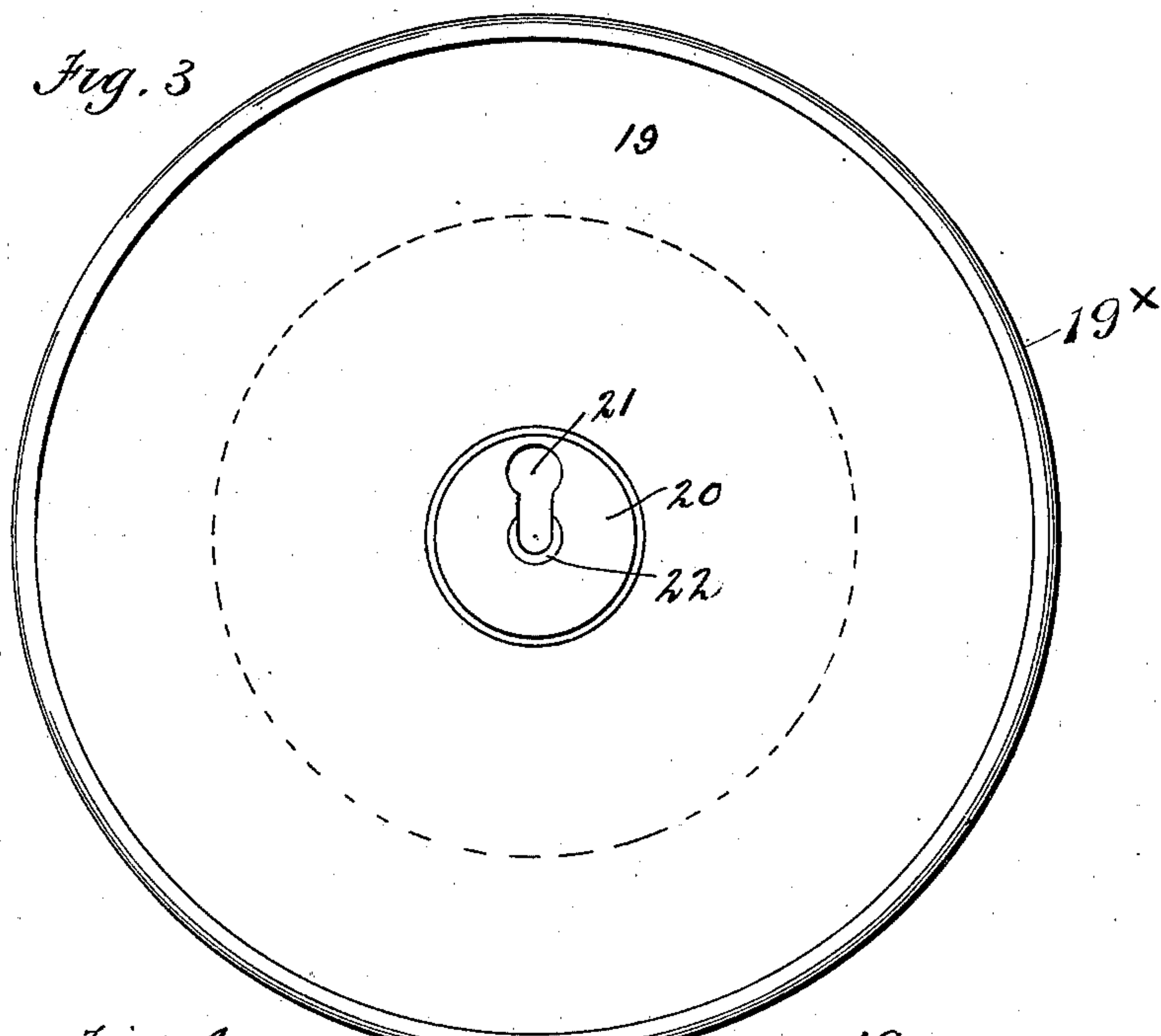
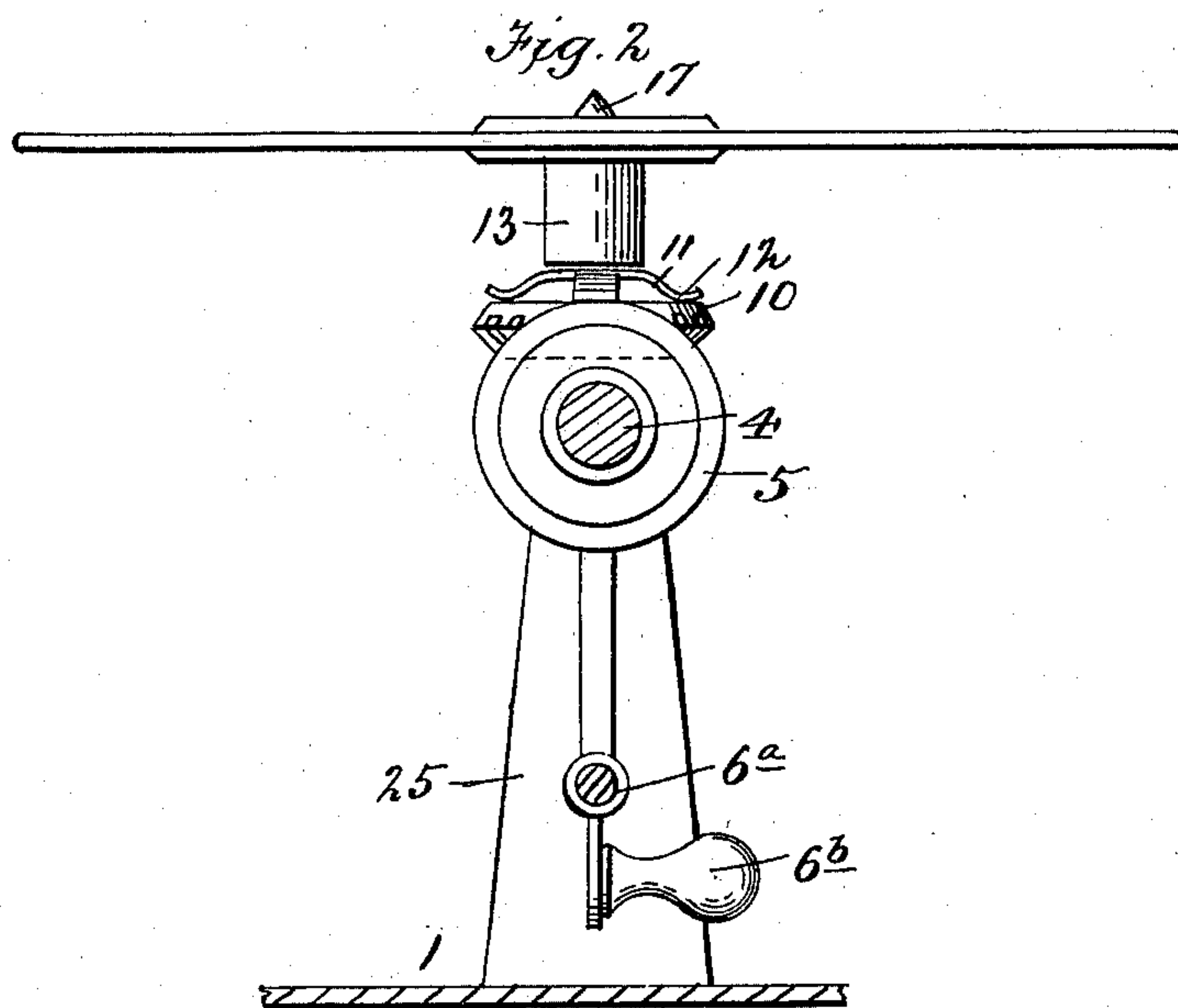
Patented Nov. 12, 1901.

**F. MYERS.
PHONOGRAPH.**

(Application filed Dec. 26, 1900.)

(No Model.)

2 Sheets—Sheet 2.



Inventor

Witnesses

J. L. Curran.

Henry Henry Jre

Fig. 5.

Frederick Myers

E. P. Brumley, his Attorneys

UNITED STATES PATENT OFFICE.

FREDERICK MYERS, OF NEW YORK, N. Y., ASSIGNOR TO THE STYLOPHONE COMPANY, OF NEW YORK, N. Y., A CORPORATION OF WEST VIRGINIA.

PHONOGRAPH.

SPECIFICATION forming part of Letters Patent No. 686,321, dated November 12, 1901.

Application filed December 26, 1900. Serial No. 41,045. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK MYERS, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Phonographs, of which the following is a specification.

My present invention relates to sound-reproducing instruments; and the object of the same is to provide a record disk or tablet of thin resilient material which will possess the required elasticity to insure a constant contact with a superposed stylus mounted in a rigidly-supported sound-box. In a patent granted me December 4, 1900, No. 663,194, a record-disk having a thin elastic portion is described and claimed, and in that case the record is produced upon a thickened outer portion of the disk or tablet. I have ascertained by a series of experiments that a record-disk cut from sheet material like celluloid serves my purpose equally as well as a molded disk having a thickened portion to support the record, and there are many advantages arising from the use of the sheet-celluloid or similar material—viz., a material reduction in cost of production and the provision of an indestructible record, which occupies but a small space, as a number of such records may be arranged one upon another to occupy little space for packing and shipping. To give the required resiliency to such records, I may, however, apply a metal binding to their outer peripheries. I attain these objects by means of the construction illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of an instrument made in accordance with my invention, a part of instrument being shown in section. Fig. 2 is a vertical section on the line 2 2, Fig. 1. Fig. 3 is a plan view of a record-disk made in accordance with my present invention. Fig. 4 is a central vertical section of the same. Fig. 5 is a similar view of a modified form of record-disk mounted upon the central spindle. Fig. 6 is a plan view of the spring which holds the record in connection with the spindle.

Like numerals designate like parts wherever they occur in the different views of the drawings.

Referring to the drawings, the numeral 1

designates a table or stand upon which the instrument is mounted. A spring-motor 2 is suitably secured to the table, and this motor consists of a train of gearing designed to properly revolve the feed-screw 3. This feed-screw 3 may be formed upon a shaft 4, having a miter-gear 5 secured near one of its ends. The end of the shaft is reduced in size and journaled in a sliding carriage 6. A vertical spindle 7 is journaled in the carriage 6 and the lower end of the spindle 7 is reduced to a point and rests in a conical bearing 9, formed as a part of the sliding carriage. Secured to the spindle 7 is a miter-gear 10, which is always in mesh with the miter-gear 5 on the shaft 4. A spring 11, having any suitable number of arms 12, rests upon the gear 10, and seated upon this spring is a collar 13, mounted to slide upon the spindle 7. A stud 14 projects from the spindle into a slot 15, formed in the collar 13, and thus serves as a stop to limit the sliding movement of said collar. A support or face-plate 16 is formed upon the upper end of the collar 13, and the upper end of the spindle is provided with a head 17, having a reduced neck 18. The record-disk 19 consists of a thin piece of celluloid or similar material having a keyhole-slot formed centrally therein. As shown in Fig. 4, a central button or hub 20 is secured to the disk, and a keyhole-slot 21 is formed in the hub and in the disk. A recess 22 is formed in the hub or button at a point surrounding the smaller portion of the slot. When the record-disk is placed upon the spindle, the larger portion of the slot 21 passes over the head 17, and when the disk is moved until the head occupies the smaller portion of the slot 21 the head rests in the recess 22 and is held firmly therein by the stress of the spring 11. As shown in Fig. 5, the central hub or button 20 is dispensed with and the thin sheet material of which the disk is formed is pressed upward to form a recess 20^x, which fits the upper face and periphery of the support or face-plate 16 and holds the disk firmly in connection with the spindle 7. A metal binding or edging 19^x is applied to the periphery of the disk 19 to give strength and stability to said disk. By using this binding or edging I am enabled

to utilize a much thinner record, because the metal binding adds some stiffness to the disk.

Secured to the sliding carriage 6 in line with the feed-screw is a shaft 23, which slides in a sleeve 24, formed in a bracket 25, rising from the table or stand. The feed-screw shaft 4 passes through the motor-frame and is reduced in size and has a longitudinal groove 26, the end of said shaft being fitted to slide in the motor-frame. Loosely surrounding the shaft 4 is a pinion 27, having a key or spline 28, which fits to slide in the groove 26 in the shaft 4. Secured to the pinion 27 is a grooved hub 29, and a fork or yoke 30 spans the groove in the hub 29. The feed-nut 31 may be located under the feed-screw 3, and when in contact with the feed-screw the record-disk is revolved by the motor and fed laterally, the pinion 27 permitting the shaft 4 to slide through it and revolving therewith. Upon the lower portion of the carriage 6 a sleeve 6^a is formed, and a knob or handle 6^b extends outward from a depending portion of said sleeve 6^a. A shaft 6^c extends through the sleeve 6^a, said shaft being supported at one end in the motor-frame and at its other end in the bracket 25. When it is desired to move the record laterally by hand, the knob or handle 6^b is grasped and moved to the desired position when the nut has been thrown out of contact with the feed-screw.

The operation of the instrument will be understood from the foregoing. As the feed-shaft is revolved by the motor the shaft slides through the pinion 27 and the record is fed in a smooth and steady manner, owing to the sleeve 6^a and the shaft 6^c, which form a long and firm bearing for the sliding carriage. The sound-box 32 is held in place in a swinging arm 33 in any suitable manner, and the

arm 33 is provided with an interiorly-screw-threaded sleeve 34. A threaded stud 35 is secured in a vertical position to a bracket 36, attached to the motor-frame. The threads of the stud 35 and the sleeve 34 are of quick pitch, and when the arm 33 is moved to one side the sound-box is quickly raised until the stylus is out of the way of the record, and only one movement being necessary to move the sound-box and stylus away from the record. When the arm 33 is swung back into operative position, the sleeve 34 is firmly seated in place, as the threads of the stud will not permit further movement of the arm 33.

The thin record-disks occupy but little space, are indestructible, and by their resiliency are always in contact with the stylus during the operation of the instrument.

Without desiring to be limited to the exact construction shown and described, what I claim is—

1. A record for phonographs, consisting of a thin elastic disk of equal thickness throughout, said record adapted to be held in engagement with a stationary stylus by its inherent resiliency.

2. A record-tablet consisting of a thin sheet-celluloid disk of equal thickness throughout, and provided with a depressed central hub.

3. A record-disk of resilient material having an edging or binding applied to its periphery, said edging or binding being more rigid than the disk.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERICK MYERS.

Witnesses:

HENRY H. SMYTHE,
GUY E. PADGETT.