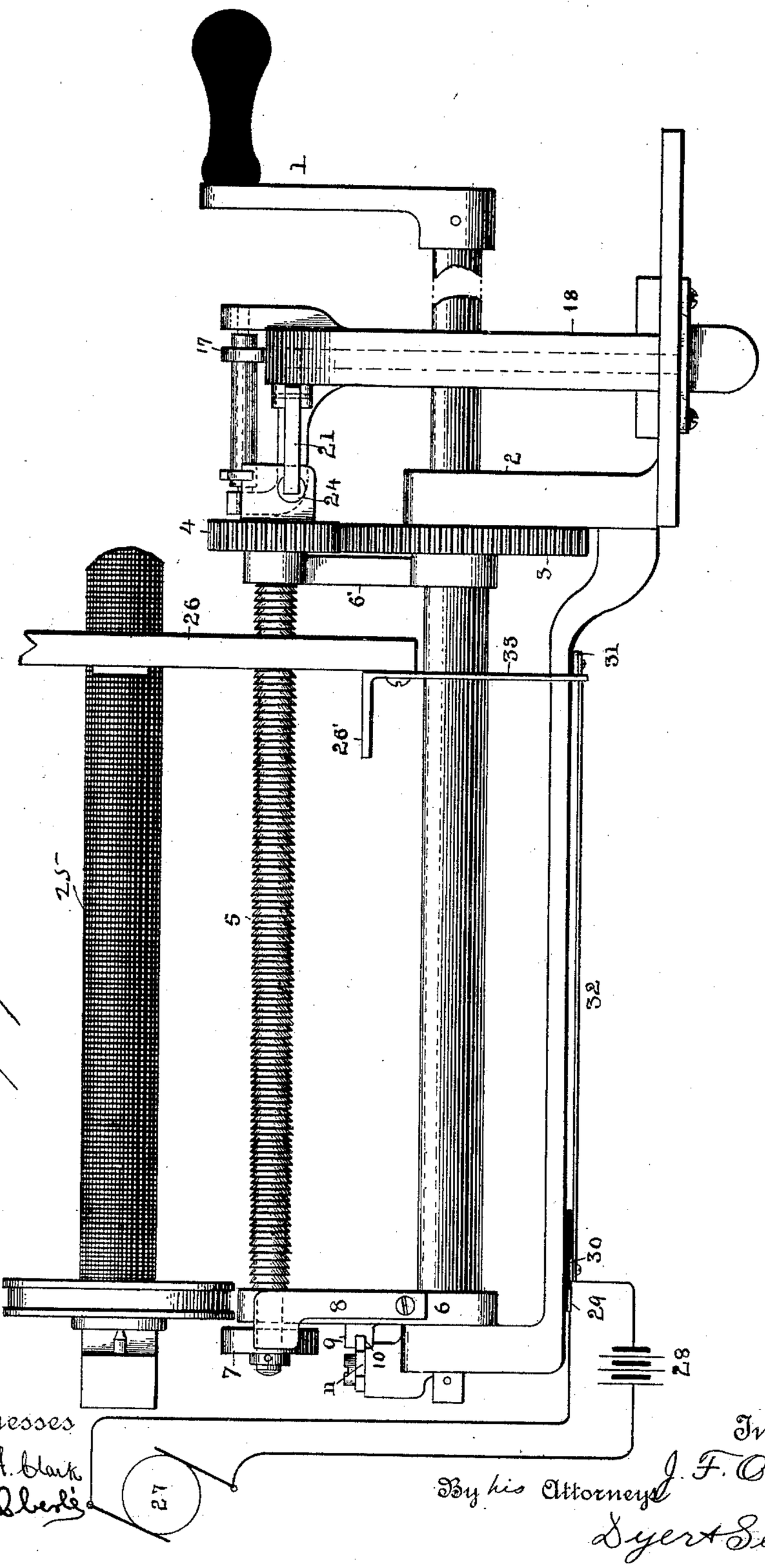
(No Model.)

3 Sheets—Sheet 1.

J. F. OTT.

ATTACHMENT FOR PHONOGRAPHS.

No. 466,922. Patented Jan. 12, 1892.



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(No Model.) 3 Sheets—Sheet 2.

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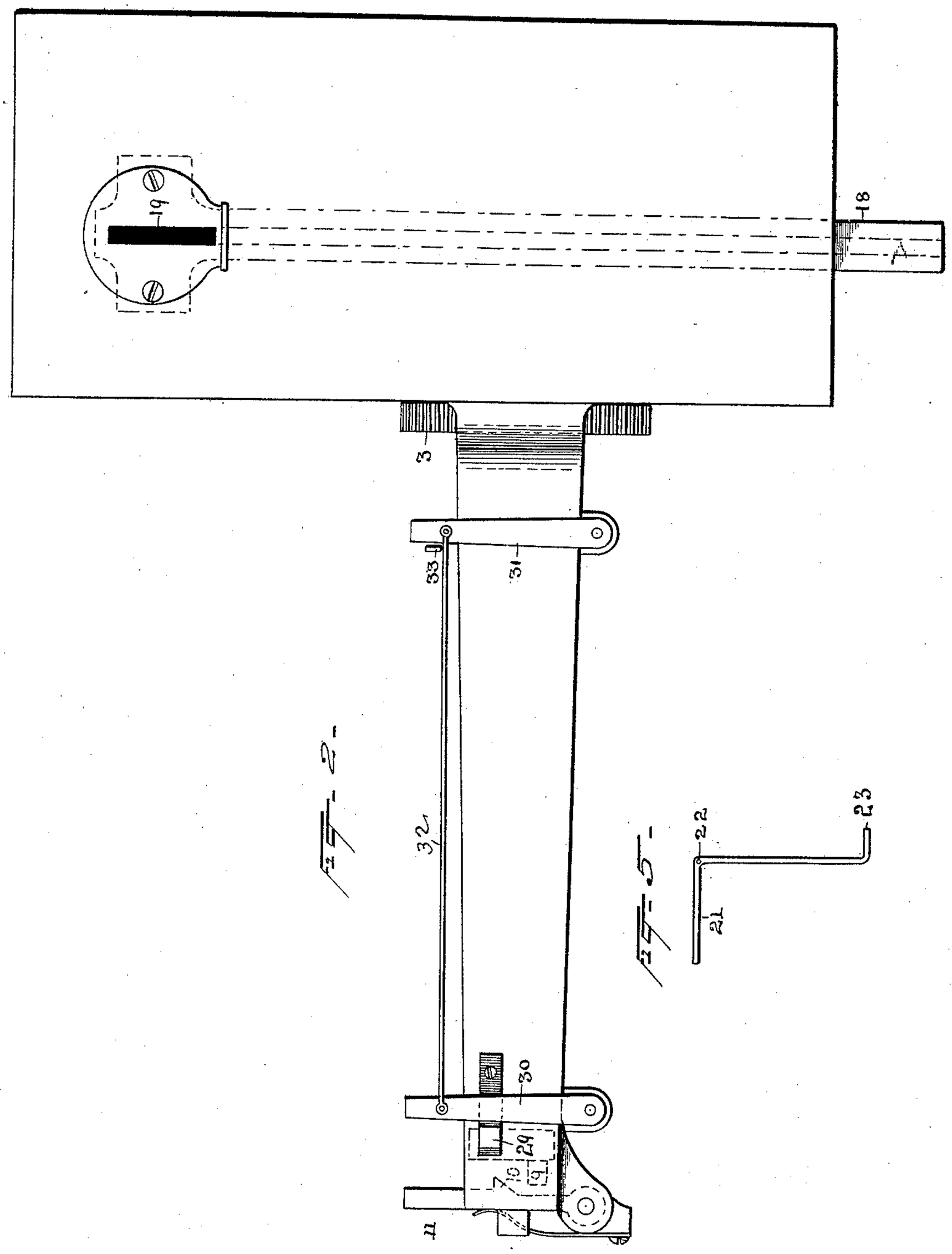

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(No Model.)

3 Sheets—Sheet 3.

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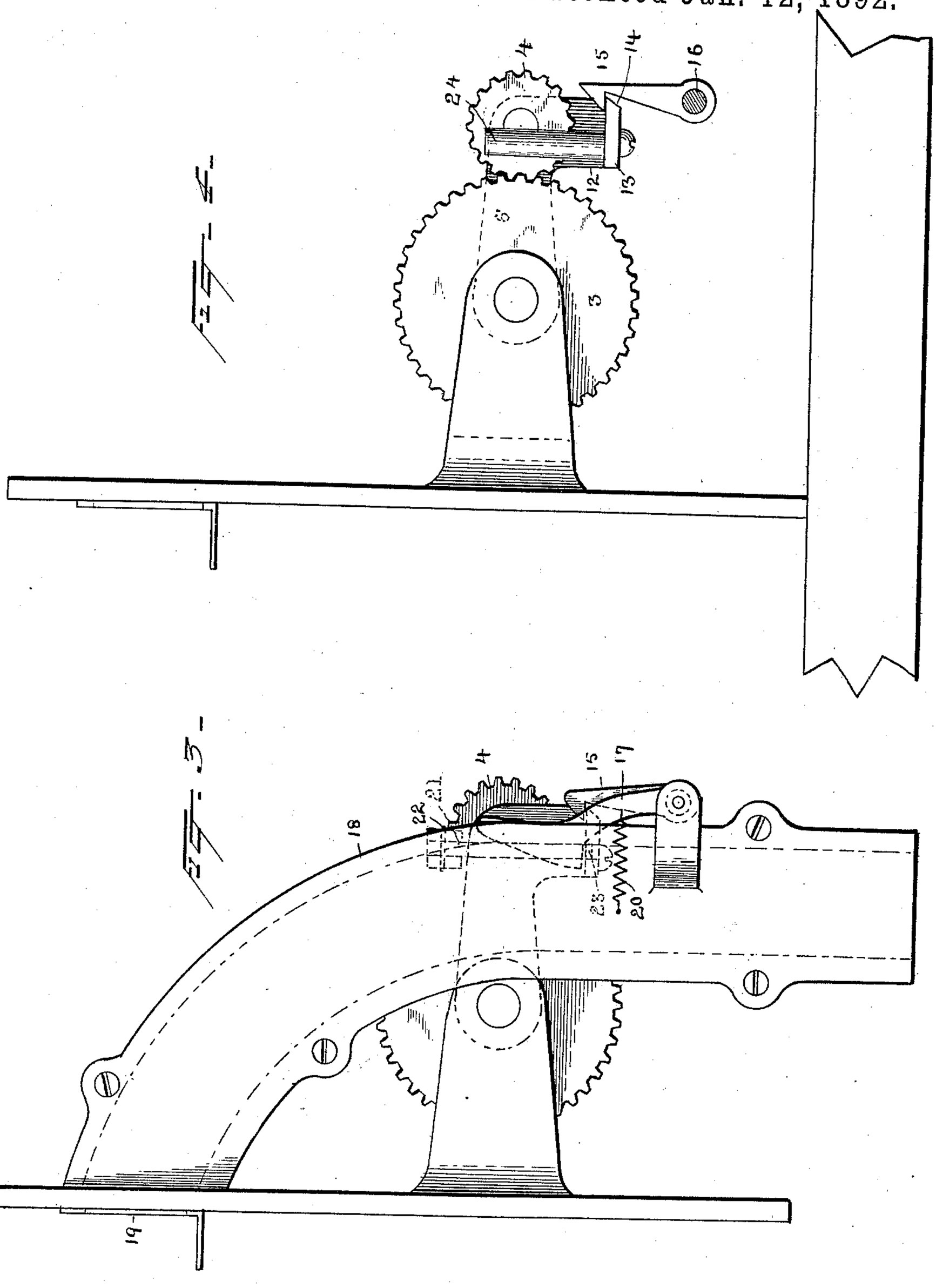

Witnesses
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Inventor
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By his Attorneys
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UNITED STATES PATENT OFFICE.

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ATTACHMENT FOR PHONOGRAPHS.

SPECIFICATION forming part of Letters Patent No. 466,922, dated January 12, 1892.

Application filed December 29, 1890. Serial No. 376,057. (No model.)

To all whom it may concern:

Be it known that I, JOHN F. OTT, a citizen of the United States, residing in Orange, county of Essex, and State of New Jersey, have invented a certain new and useful Improvement in Attachments for Phonographs, of which the following is a specification.

My invention relates to means for returning the reproducer of a phonograph to the end of the phonogram-blank at which the record commences, and is especially adapted to that class of phonographs the use of which is controlled by a nickel or other coin or token.

The invention consists in the apparatus hereinafter described for accomplishing the object above mentioned.

In the accompanying drawings, which illustrate the apparatus, Figure 1 is a plan view of the attachment. Fig. 2 is a view at right angles thereto. Fig. 3 is a side view of the coin-passage and the coin-controlled devices, a part of the coin-passage being broken away. Fig. 4 is a view looking in the same direction, the coin-passage and several other parts being omitted; and Fig. 5 is a detail view of the coin-releasing lever or trip.

It is common in phonographs to have a fine screw driven by an electrical or other motor to move the reproducer slowly along the phonogram-blank at the same time that the blank rotates and to have a second screw of greater pitch and rotating in an opposite direction or having an oppositely-inclined screw-thread for rapidly returning the reproducer to the beginning of the phonogram. In the present device the returning-screw is preferably not rotated by the phonograph-motor, as is usual, but by a hand-crank 1, the shaft of which is journaled in suitable bearings in the frame 2. This shaft is provided with a gear-wheel 3, engaging with wheel 4 on the return-screw 5, which preferably has a left-hand screw-thread. On the shaft, also, and having a frictional connection therewith are two arms or links 6 6′, in which the screw 5 is supported. At the left end of screw 5 is a smooth wheel 7, on which spring 8 bears for the purpose of producing resistance to the rotation of said screw. On the link which carries this spring is mounted a projecting lug 9, which when the apparatus is at rest is below the extension 10 on the spring-pressed pivoted lever 11, but when the apparatus is being used is raised above said extension and is held up thereby.

The arm or link 6′ is provided with an extension 12, which in turn has an angle-extension 13, one end of which is beveled, as indicated at 14. A catch 15 normally engages with 13 and holds it and link 6′ from movement. Said catch is rigidly mounted on an axle 16, at the opposite end of which is an arm 17, having a cam-shaped end extending into the coin-passage of the tube 18, which tube communicates with the coin-receiving slit 19. This is clearly shown in Fig. 3.

20 is a spring which normally holds 15 and 17 in their forward position.

21 is an angle-lever pivoted at 22 and having a bent end 23, extending into the coin-passage just below the cam-shaped end of 17. (See Fig. 3.) A plan of this lever is shown in Fig. 1. Under the outer end of said lever is a post 24, carried by the extension of the movable link 6′.

In Fig. 1, 25 indicates the ordinary feed-screw of a phonograph, driven, preferably, by an electric motor, and 26 is the feed-arm or other feeding device, connected with the reproducer in the ordinary manner. 27 is the phonograph-motor. (Shown diagrammatically.) 28 is the motor-battery. One terminal of the circuit is connected to a platinum or other conducting plate 29, which is mounted on but insulated from the frame, and the other terminal is connected to the pivoted lever 30. At the opposite end of the frame is a second pivoted lever 31. 32 is a rod connecting levers 30 and 31. 33 is an arm carried by the feed-arm and adapted to strike lever 31 as it moves toward the right and to strike lever 30 as it moves toward the left.

The apparatus above described is operated in the following manner: The feed-arm being at the extreme right of the screw, as indicated in Fig. 1, when it is desired to move said arm and the reproducer toward the left, a coin—for example, a nickel—is dropped into the coin-passage, and as it falls it strikes the cam-face of the pivoted arm 17, and the weight and size of the coin are such that it presses arm 17 and at the same time arm 15 toward the right. The coin comes to rest in position to hold the arm 17 in its retracted position, the coin resting on the end 23 of the arm 21. As the crank is turned by the hand the screw

is rotated, and since the catch 15 has been retracted the frictional connection between the shaft and the screw 5 is sufficient to bodily raise said screw against the force of gravity, bringing it into working contact with the feed-arm of the phonograph, whereby the reproducer will be moved toward the left by continued movement of the screw. As the screw is raised the lug 9 snaps over the detent or holding device 10 and holds the screw in its elevated position. When the feed-arm reaches the limit of its motion toward the left, the extension 26′ strikes the pivoted lever 11, moving it back against the force of its spring, thereby moving the projection 10 from under lug 9 and allowing the screw to resume its normal position. The upward movement of the screw above described raised post 24 against the outer end of the pivoted lever 21, thereby withdrawing the end 23 from the coin-passage, allowing the coin to fall into a suitable receptacle. When the screw is released and returns to its normal position, as above described, the beveled face 14 of the extension 13 rides over the inclined end of the catch 15 and the parts resume the position shown in Fig. 4. When the apparatus is in the position shown in Fig. 1, the motor-circuit is open. When the arm 33 reaches its extreme position toward the left, it carries lever 30 of the circuit-controller onto plate 29, closing the circuit. The circuit remains closed until the arm 33 moves back to its first position, when the circuit is again opened.

It will be evident that the parts may be varied in form to a considerable extent, and I do not confine myself to the exact construction described and shown.

Having thus set forth the invention, what I claim is—

1. The combination, with the feed-screw for advancing the reproducer of a phonograph, of a return-screw for the reproducer, normally out of engagement with the feed-arm, and a coin-operating device controlling the movement of said return-screw toward said feed-arm, substantially as described.

2. The combination of a return-screw for the reproducer of a phonograph, normally out of engagement with the feed-arm of the phonograph, a catch holding the return-screw, an arm controlling the catch and extending into the coin-passage, whereby the catch may be released by the insertion of a coin, substantially as described.

3. The combination, in an attachment for phonographs, of a return-screw for the phonograph-reproducer, and means for moving it toward the feed-arm of the reproducer, and means for turning the screw, a catch to hold said screw from movement toward the feed-arm, a coin-operated device for releasing the catch, and a trip for the coin, substantially as described.

4. In an attachment for phonographs, the combination of a shaft and means for turning it, a gear on the shaft, arms or links on the shaft, a return-screw for the reproducer at the opposite end of the links, and a gear on said screw engaging the first-mentioned gear, substantially as described.

5. In an attachment for phonographs, the combination of a shaft and means for turning it, a gear on the shaft, arms or links on the shaft and having a yielding frictional connection therewith, a return-screw for the reproducer at the opposite end of the links, and a gear on said screw engaging with the first-mentioned gear, substantially as described.

6. In an attachment for phonographs, the combination of a shaft and means for turning it, a gear on the shaft, arms or links on the shaft and having a yielding frictional connection therewith, a return-screw for the reproducer at the opposite end of the links, a gear on said screw engaging with the first-mentioned gear, and a catch or detent to hold the screw from movement, substantially as described.

7. The combination, in an attachment for phonographs, with a shaft and means for turning it, of a return-screw for the phonograph-reproducer, means for transmitting motion from the shaft to the screw, and a frictional connection between said shaft and screw, substantially as described.

8. The combination, with the feed-screw of a phonograph and a feed-arm for the reproducer, of a return-screw normally out of range of the feed-arm, and means for moving the screw against the feed-arm and for turning the screw, substantially as described.

9. The combination of a return-screw for a phonograph-reproducer, normally out of range of the feed-arm of said reproducer, means for moving the screw against the feed-arm, means for turning the screw, and a detent for holding the screw in such elevated position, substantially as described.

10. The combination, with the feed-screw of a phonograph and a feed-arm for the reproducer, of a return-screw normally out of range of the feed-arm, means for moving the screw against the feed-arm, means for turning the screw, a detent for holding the screw in such elevated position, and a releasing device for the screw, operated at the close of the return movement of the reproducer, substantially as described.

11. The combination, with a feed-screw of a phonograph and a feed-arm for the reproducer, of a return-screw normally out of range of the feed-arm, means for moving the screw against the feed-arm and for turning the screw, and a circuit-controller moved to open and close the phonograph-motor circuit, substantially as described.

This specification signed and witnessed this 20th day of December, 1890.

JOHN F. OTT.

Witnesses:
CHARLES M. CATLIN,
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