

No. 659,738.

Patented Oct. 16, 1900.

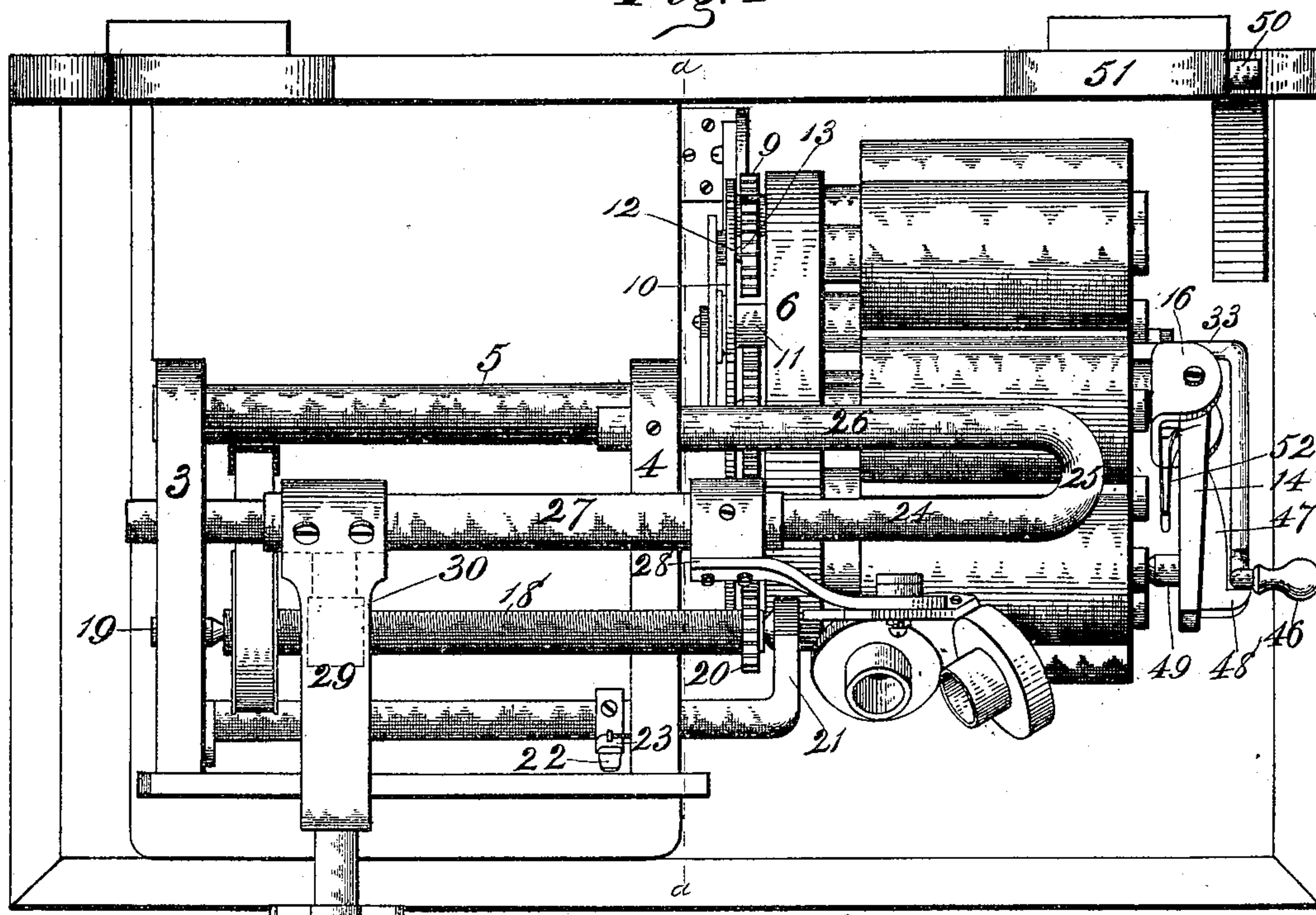
G. W. GOMBER.  
TALKING MACHINE.

(Application filed Feb. 24, 1897.)

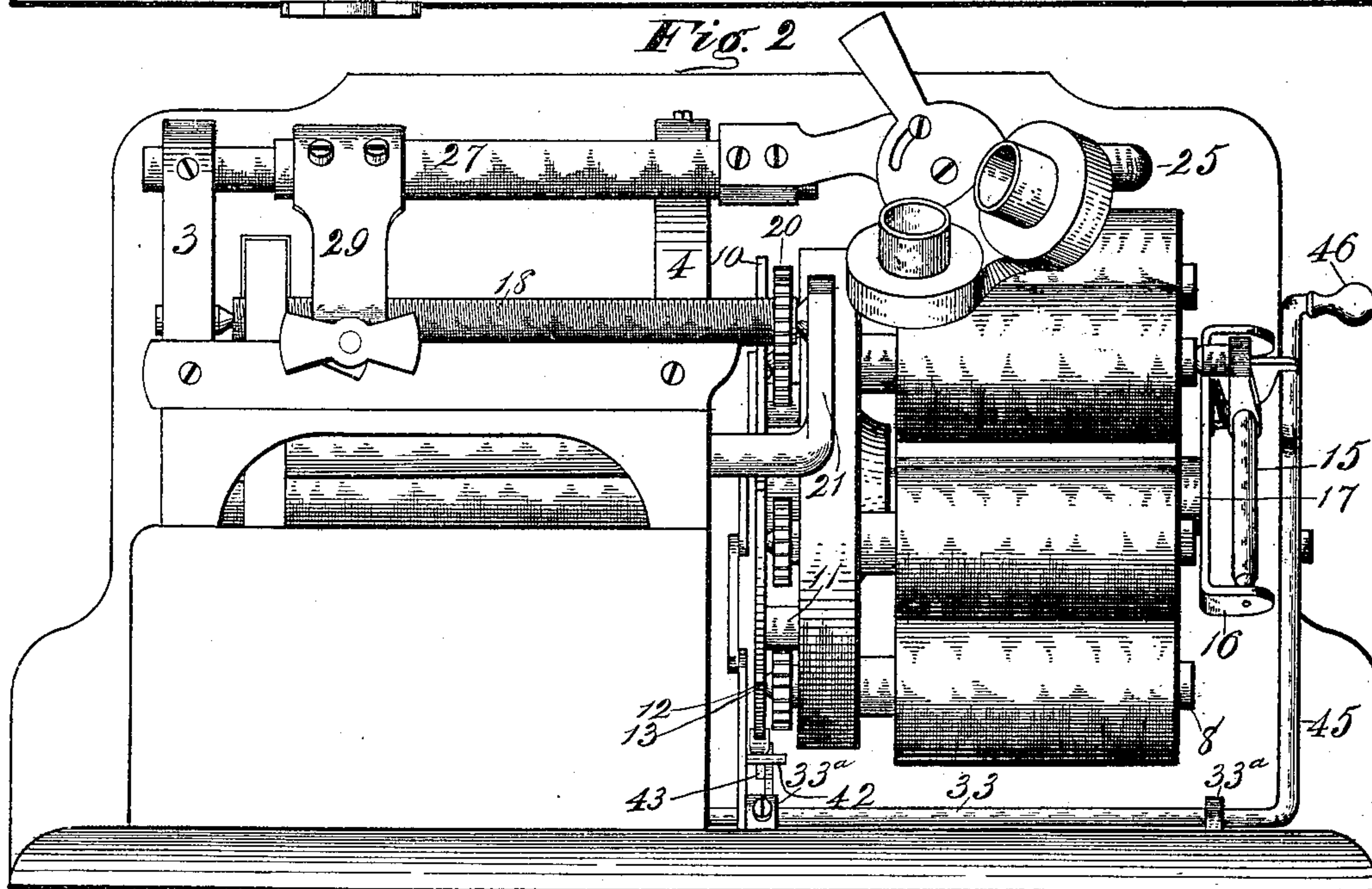
(No Model.)

2 Sheets—Sheet 1.

*Fig. 1*



*Fig. 2*



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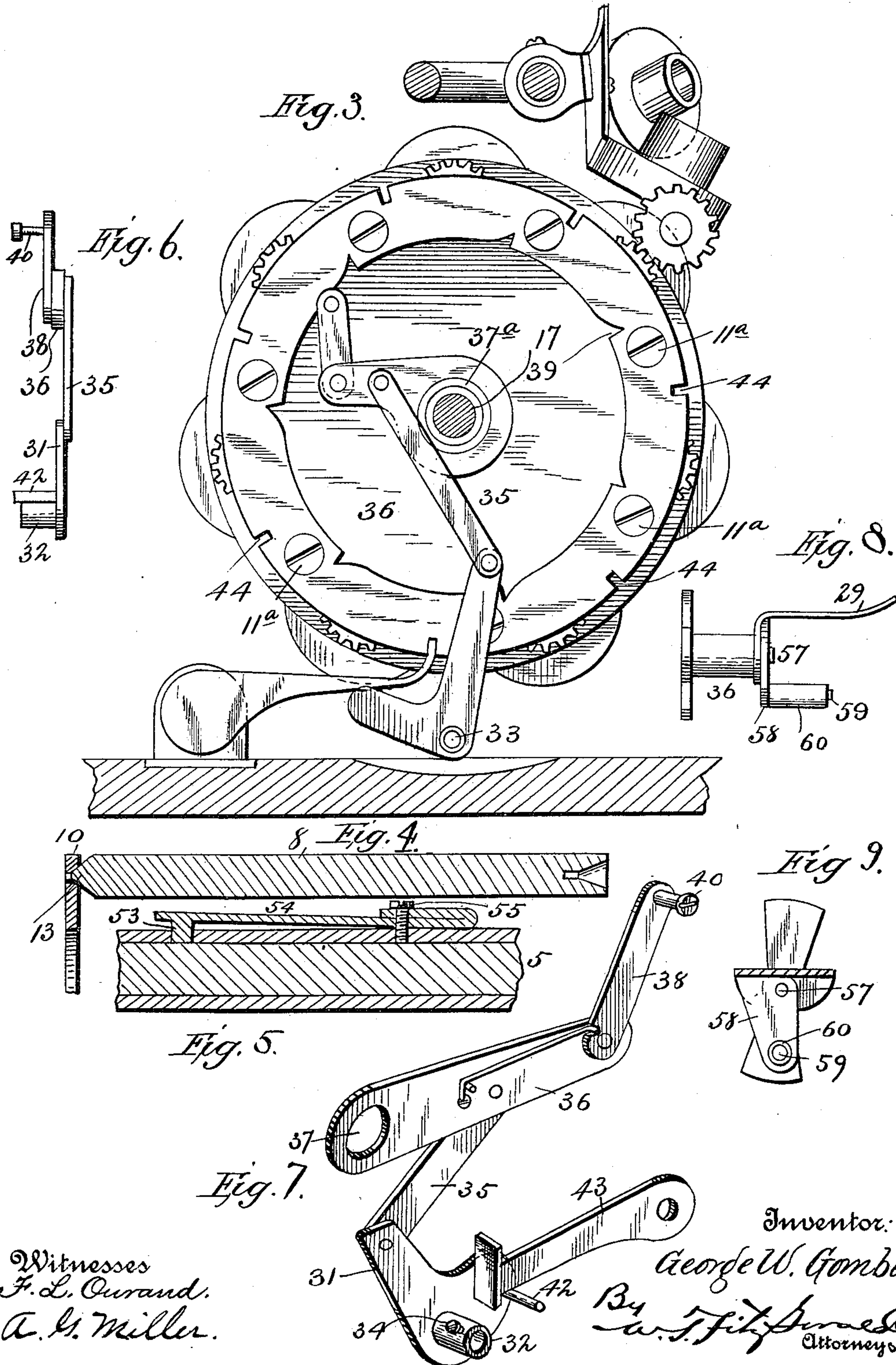
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2 Sheets—Sheet 2.



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# UNITED STATES PATENT OFFICE.

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MACHINE COMPANY, OF WEST VIRGINIA.

## TALKING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 659,738, dated October 16, 1900.

Application filed February 24, 1897. Serial No. 624,823. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. GOMBER, a citizen of the United States, residing at Conyngham, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Talking-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to talking-machines, and more particularly to that class thereof wherein a plurality of tablets are so grouped that any one of said tablets may be readily placed into coöperative relationship with the recorder or reproducer.

The object of my invention is to provide a talking-machine having a magazine designed to carry any desired number of tablets and render it possible to bring any preferred tablet in position ready for being acted upon by the recorder or reproducer, it being understood that the said magazine is manually controlled through certain mechanism, the details whereof will be fully set forth in the following specification and illustrated in the accompanying drawings, in which—

Figure 1 represents a top plan view of my complete talking-machine. Fig. 2 is a front elevation thereof. Fig. 3 is a section of Fig. 1 on line *a a*. Fig. 4 is a longitudinal section of the tablet spindle-shaft, showing part of the cylinder-head. Fig. 5 is a sectional view of the magazine-axle, showing the friction clutch or brake therefor. Fig. 6 is a side view of the controlling mechanism for the magazine. Fig. 7 is a perspective detail of the parts shown in Fig. 6. Fig. 8 is a side view of the carriage-elevating device, and Fig. 9 is an inner end view thereof.

In materializing my invention I provide the base 1, upon which is mounted a motor-receptacle 2, and upon said receptacle I erect the brackets 3 and 4, designed to hold the several parts of my invention in their respective operative positions. Upon the top of said receptacle I mount in said brackets the supporting axle or shaft 5, the free end of

which extends over the base 1 and is designed to hold the magazine rotatively in position. The magazine consists of the head 6, which is provided with a series of bearing seats or sleeves 7, of any preferred number, each bearing-seat being arranged to extend outward sufficiently to provide a reliable support for holding the spindle-shafts 8 to their work. Said shafts, it will be observed, extend entirely through the bearings and the head 6 and have attached to their protruding ends the gears 9.

In order to reinforce the bearing-seats 7 in their work of holding the spindle-shafts in position, I attach to the inner face of the head 6 the ratchet-plate 10 in any suitable way, as by bolts or screws extending through the tubular sections 11 into engagement with said head, the object of the tubular sections being to hold the plate 10 a proper distance from the head.

I provide on the inner side of the plate 10, at points opposite the inner ends of the shafts, suitable bearing-seats 12, adapted to receive a bearing-point 13, formed upon the shaft. The free ends of said shafts are provided with the tablet-carrying body-section, and in order to secure the free ends of the shafts and properly support the same while the tablet carried thereby is being recorded or transcribed I provide the arm 14, rigidly secured to the rocking shaft 15, held by center points in the bracket 16, which is rigidly secured to the outer end of the axle 5. The head 6 is secured to the sleeve 17. Said sleeve may consist of a tubular shaft of sufficient bore to snugly receive the axle upon which it is desired to freely rotate in either direction.

I adjustably mount in the brackets 3 4 the threaded shaft 18, the outer end of which is secured by the center point 19, mounted in the bracket 3, while the inner end is provided with a suitable gear 20, designed to mesh with one of the gears 9 and adjustably held in position by the spring-controlled rocking finger 23. By this arrangement of the rocking arm 21 it will be observed that the gear 20 has the capacity of moving out of the path of the gears 9 when the magazine is rotated to bring



the desired tablet into coöperation with the diaphragm. I also secure with the standards 3 4 the carriage shaft or track, which consists of a main section 24, the curved end 25, and the anchored terminal 26. The track is rigidly held by the standards, and designed to reciprocate upon the section 24 is the barrel 27, adapted to carry the diaphragm-arm 28 and the guiding-arm 29, having a suitably mounted threaded block 30 for coöperation with the threaded shaft 18.

In order to rotate the magazine and automatically lock the same when the desired tablet has been brought into alinement with the diaphragm, I provide the compound pawl illustrated in Fig. 7, consisting of the base member 31, having the sleeve 32 arranged to receive the rocking shaft 33 and become fixedly attached thereto by means of the set-screw 34. Pivotally attached to the base member 31 is the link 35, the upper end of which is pivotally attached to the arm 36, provided with the aperture 37, designed to loosely receive the axle 5 or sleeve 17, mounted thereon.

Pivotally connected to the arm 36 is the detent or pawl proper, 38, arranged to engage with one of the ratchets 39 upon the edge of the plate 10 or coöperate with said ratchets by means of the stud 40. In order to hold the pawl 38 in an extended position, I provide the spring 41, secured to the arm 36 at one end, while the free end is so disposed that it will engage a notch upon said pawl. The base member 31 is also provided with the finger 42, adapted to elevate the free end of the detent 43 when the magazine has been brought into an adjusted position by the operation of the rock-shaft 33. Said detent 43 is pivoted in a suitable seat 43<sup>a</sup>. The free end of the detent 43 engages one of the recesses or notches 44, arranged upon the periphery of the plate 10, as more clearly shown in Fig. 3. The rocking shaft 33 extends outward to the end of the base 1 and is mounted thereon in suitable bearings 33<sup>a</sup>. The outer end of the shaft 33 has the upwardly-extending lever-section 45, which terminates in a suitable handle 46. The arm 14 is provided with the laterally-curved lip 47 and the stop 48, as fully set forth in Fig. 1. The office of the rocking shaft 33 is twofold, its first work being to operate the compound pawl, and, secondly, to cause the arm 14 to move inward, and thus force the bearing-point 49 into engagement with the bearing-seat provided in the ends of the shafts 8 when the desired tablet is in alinement with the recorder or reproducer. As the lever 45 is moved rearwardly against the stop 50, attached at a convenient point to the casing 51, the shaft 33 is partly turned, causing the compound pawl fixedly connected thereto and pivotally attached to the axle to so move that the pawl 38 will withdraw from engagement with the succeeding ratchet, when by reversing the movement of the lever 45 until the upper end thereof engages the

stop 48 upon the arm 14 the pawl will extend into engagement with the contiguous ratchet and rotate the magazine, and it will be observed that at the instant said pawl is fully extended the arm 14 will be moved inward by the action of said lever, thereby causing the bearing-point 49 to take into the seat in the end of the tablet-spindle. The act of operating the compound pawl will lock the arm 14 into engagement with the tablet-spindle. The simple act, therefore, of operating the lever 45 actuates the magazine and locks it in an adjusted position. The arm 14 is held normally outward by the spring 52 to insure that the bearing-point 49, carried by said arm, will be withdrawn from the path of the tablet-spindles while the magazine is being rotated. As a result of bringing the lever 45 forward, more or less impetus is imparted to the magazine, and in order to overcome this movement I provide the friction contact-point 53, attached to the spring-plate 54, which in turn is secured to the sleeve 17 by the set-screw 55. The point 53 reaches loosely through an aperture provided in said sleeve into direct contact with the axle 5, and by regulating the tension of the spring 54 by means of said set-screw 55 the degree of friction set up between said point and axle is easily regulated, thus making it possible to freely rotate the magazine in either direction without permitting the impetus of the movement to carry a preferred tablet-spindle past its point of coöperation with the bearing-point 49.

In order to readily elevate the arm 29 out of engagement with the threaded shaft 18, I mount upon the outer arm, as shown in Fig. 8, the cam-lever, consisting of the sleeve 56, attached to said arm, the shaft 57 in said sleeve, the crank-arm 58, attached to said shaft, and also the finger 59, attached to said crank, and antifriction-roller 60 upon said finger.

By reference to Fig. 8 it will be seen that the outer end of the arm 29 is bent downward at right angles to the body portion, and said downwardly-extending section is provided with a suitable aperture designed to receive the inner end of the sleeve 56; it being understood that said inner end may be slightly reduced, if desired, in order to prevent the sleeve from having a longitudinal movement in said aperture, though permitting the same to be easily rotated in order to operate the finger 59 and cause said finger to bear upon a contiguous portion of the frame, and thereby elevate the arm 29, so that the block carried thereby will be raised out of coöperation with the threaded shaft 18.

In Fig. 13 it will be observed that the crank 58 is substantially triangular in outline, the shaft 57 being connected to one angle, while the opposite angle 61 is sufficiently shortened to form the lower end of the crank-arm and its accompanying finger to pass the center of the shaft 57 when the operating-handle 62 is properly manipulated. When the finger 59



is moved toward the left, the arm 29 is dropped sufficiently to cause the threaded block to cooperate with its shaft, when the reverse movement of said handle will move said finger to the right until it is past the dead-center, as indicated by the center of the shaft 57, when the point 61 will bear against the arm 29, and thus hold said arm in an elevated position, which will permit the carriage to be freely moved to an initial point.

By means of the construction of my compound pawl for actuating the magazine the result is a differentiated movement of said magazine—that is to say, the first movement of the shaft 33 causes the rapid extension of the pivoted parts forming said pawl; but as the operating-lever 45 is brought near the arm 14 such movement of the magazine, owing to the peculiar construction of said pawl, is checked until a very slow movement results at the time the desired tablet is in position for cooperating with the bearing-point upon the arm 14. The act of rotating the shaft 33, it will be observed, causes the upper end of the base member 31 to move outward, promptly acting upon the link 35; but after the pivoted point of said member and link passes the center or the extreme point of extension a withdrawing movement will be imparted to said link, thus preventing further pressure of the pawl 38 upon one of the ratchets 39. The time of the passage of the pivoted parts past the center or extreme point of extension marks the withdrawal of the stop 38, preventing further movement of the magazine, and at this instant the point upon the arm 14 takes into the bearing-seat provided for it in the end of one of the tablet-spindles. The outward movement of the upper end of the base 31 also elevates the finger 42, resulting in forcing the detent 43 into registration with one of the notches 44 at the instant said bearing-point engages the spindle, thus insuring harmonious cooperation of the several parts.

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

1. In talking-machines, the combination of a rotatable magazine having a supporting-axle and means for operating the same con-

sisting of a rock-shaft, a compound pawl attached to said shaft and to the axle of the magazine, an operating-lever connected to said shaft, and a pivoted arm secured to said axle and normally held in the path of the lever, all arranged as set forth.

2. In talking-machines, a rotatable magazine adapted to carry a plurality of tablets, each tablet-spindle on said magazine having a driving-gear, in combination with a driving-shaft having a transmitting-gear upon its free end adapted to cooperate with the spindle-gears, the outer end of said shaft being movably mounted upon a rocking arm 21 and suitable means to hold said arm normally downward whereby the transmitting-gear will be permitted to move out of the path of the spindle-gears, all substantially as specified and for the purpose set forth.

3. In talking-machines, a magazine having a plurality of tablet-spindles, each spindle having an actuating-gear, in combination with a driving-shaft having a transmitting-gear designed to cooperate with said spindle-gears, the end of said shaft carrying said transmitting-gear being mounted upon a movable arm, a spring adapted to so hold said arm that the transmitting-gear will be disposed in the path of the spindle-gears, though permitting it to have the power to move out of said path when it is desired to pass any one of the spindles without operating it, all substantially as specified and for the purpose set forth.

4. In talking-machines, a rotatable magazine having a plurality of tablets, a transmitting-gear secured to the shaft of each tablet; a driving-gear adapted to cooperate successively with said transmitting-gears and means substantially as described whereby said actuating-gear is automatically moved out of the path of the transmitting-gear though normally disposed in said path all arranged as set forth.

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

GEORGE W. GOMBER.

Witnesses:

D. W. FAUST,  
CHAS. BAUK.