

No. 659,737.

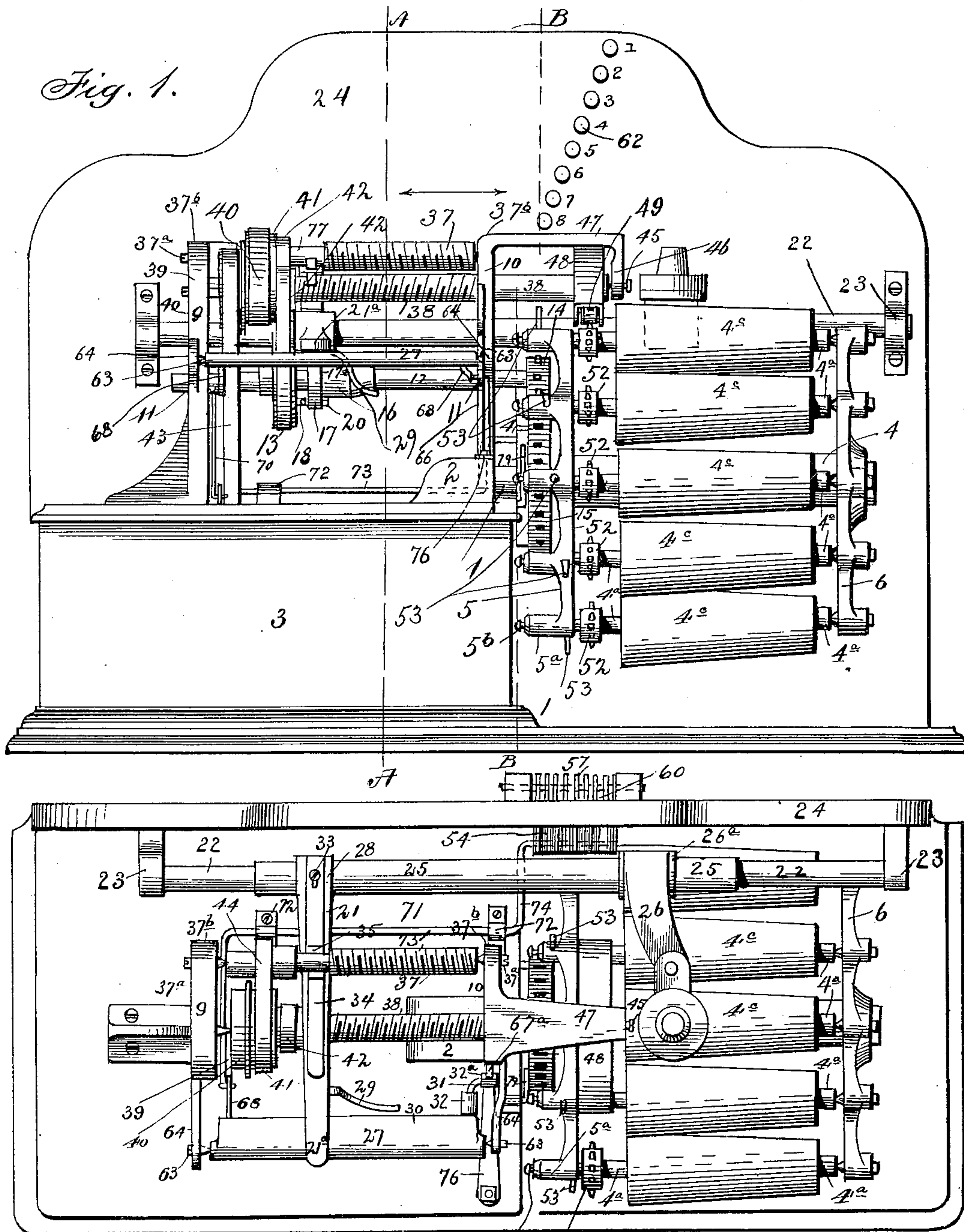
Patented Oct. 16, 1900.

G. W. GOMBER.
TALKING MACHINE.

(Application filed Nov. 9, 1896.)

(No Model.)

4 Sheets—Sheet 1.



Witnesses
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Fig. 2
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4 Sheets—Sheet 2.

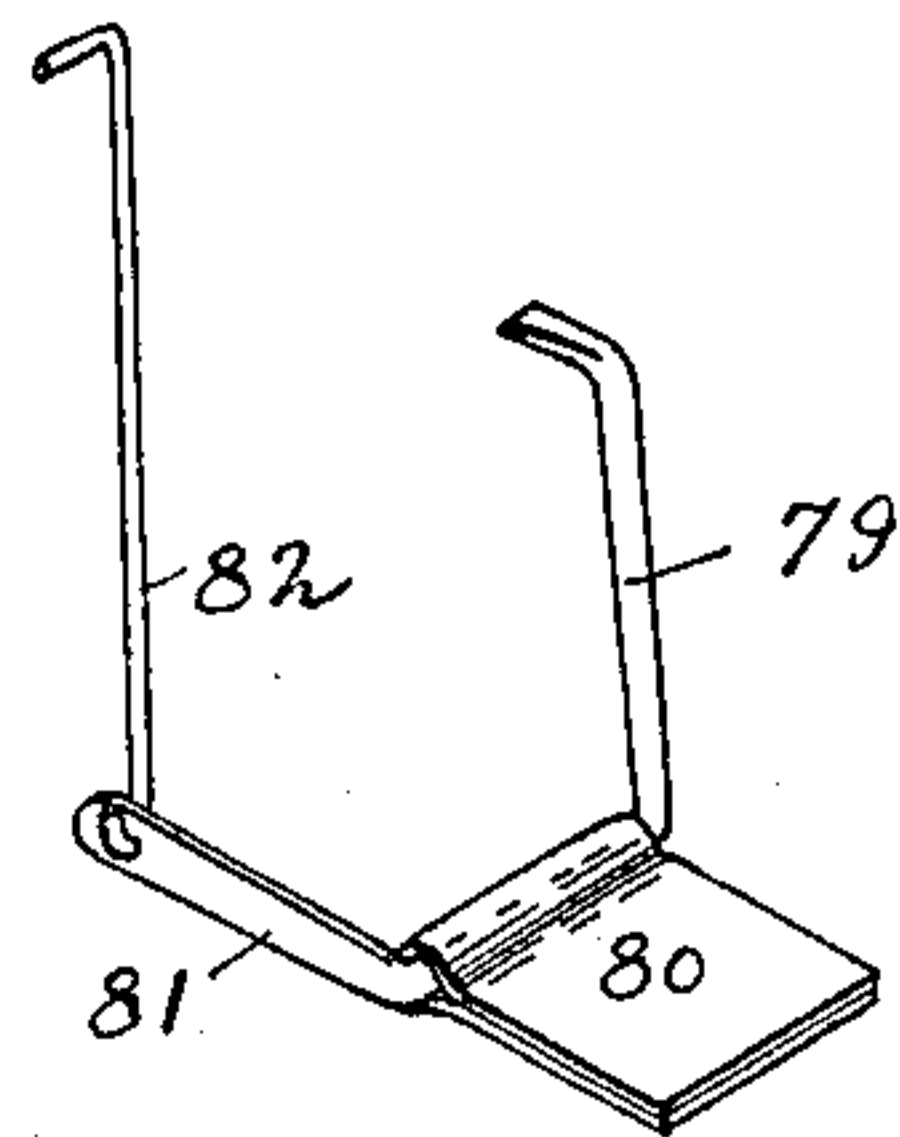
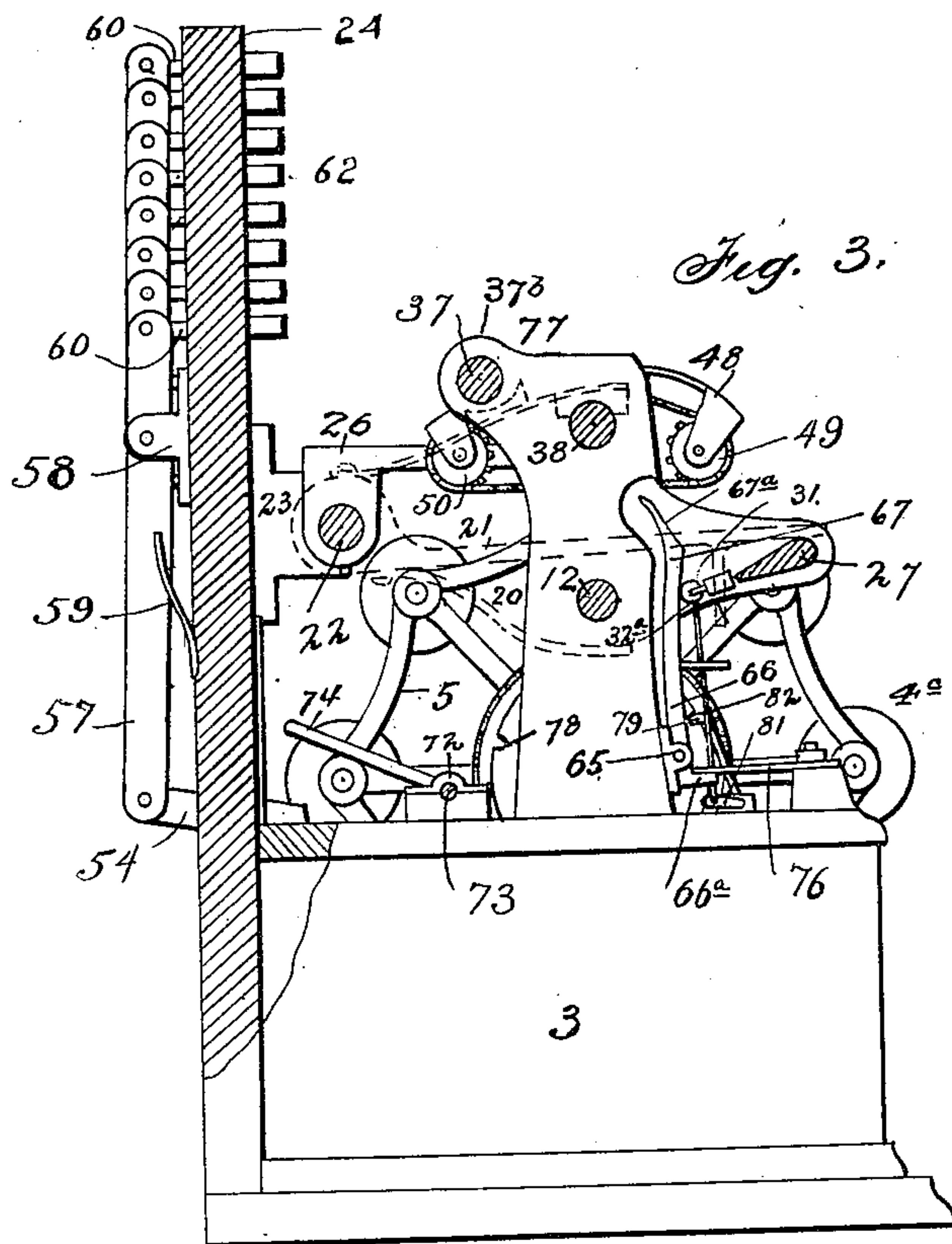
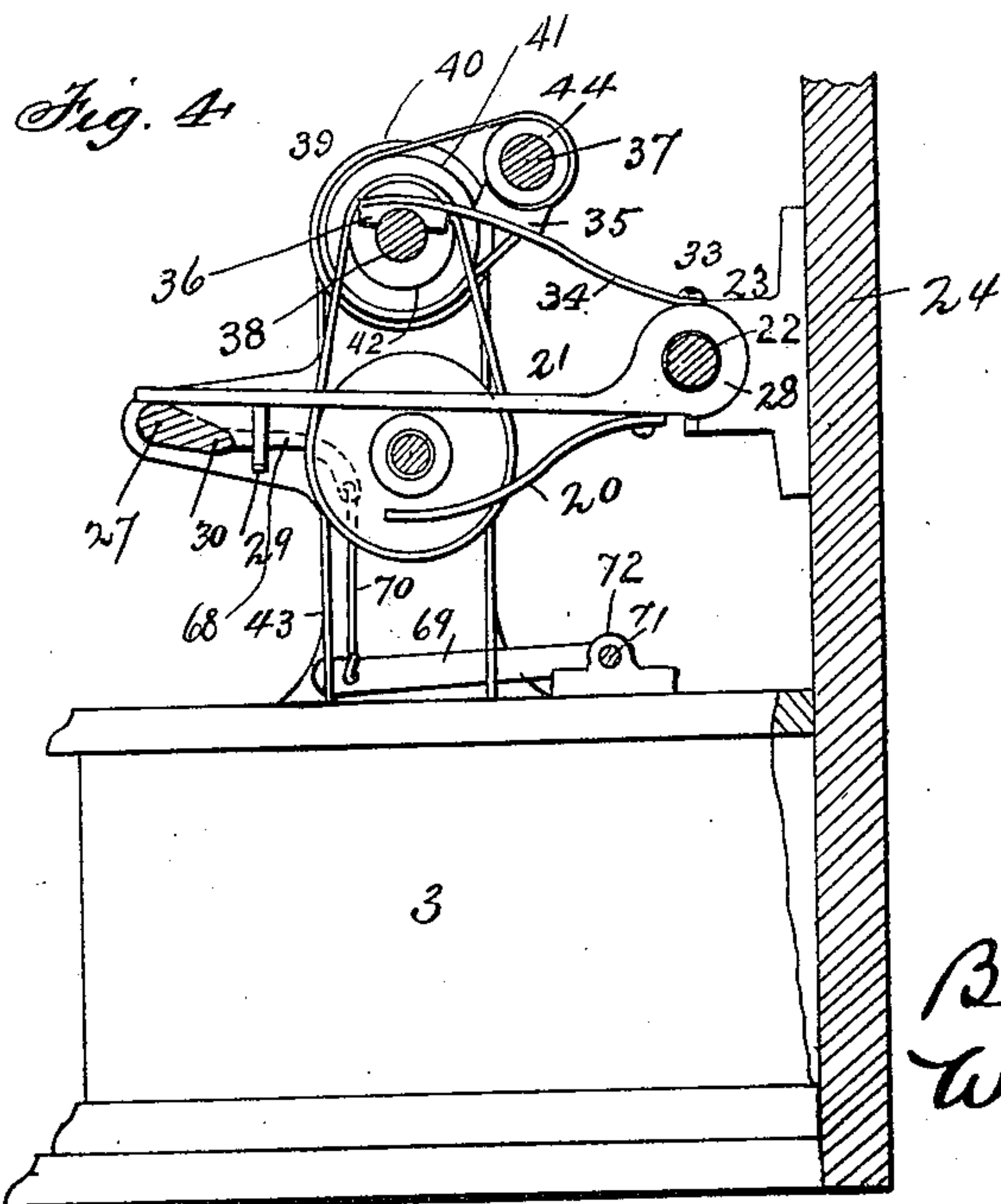


Fig. 10.



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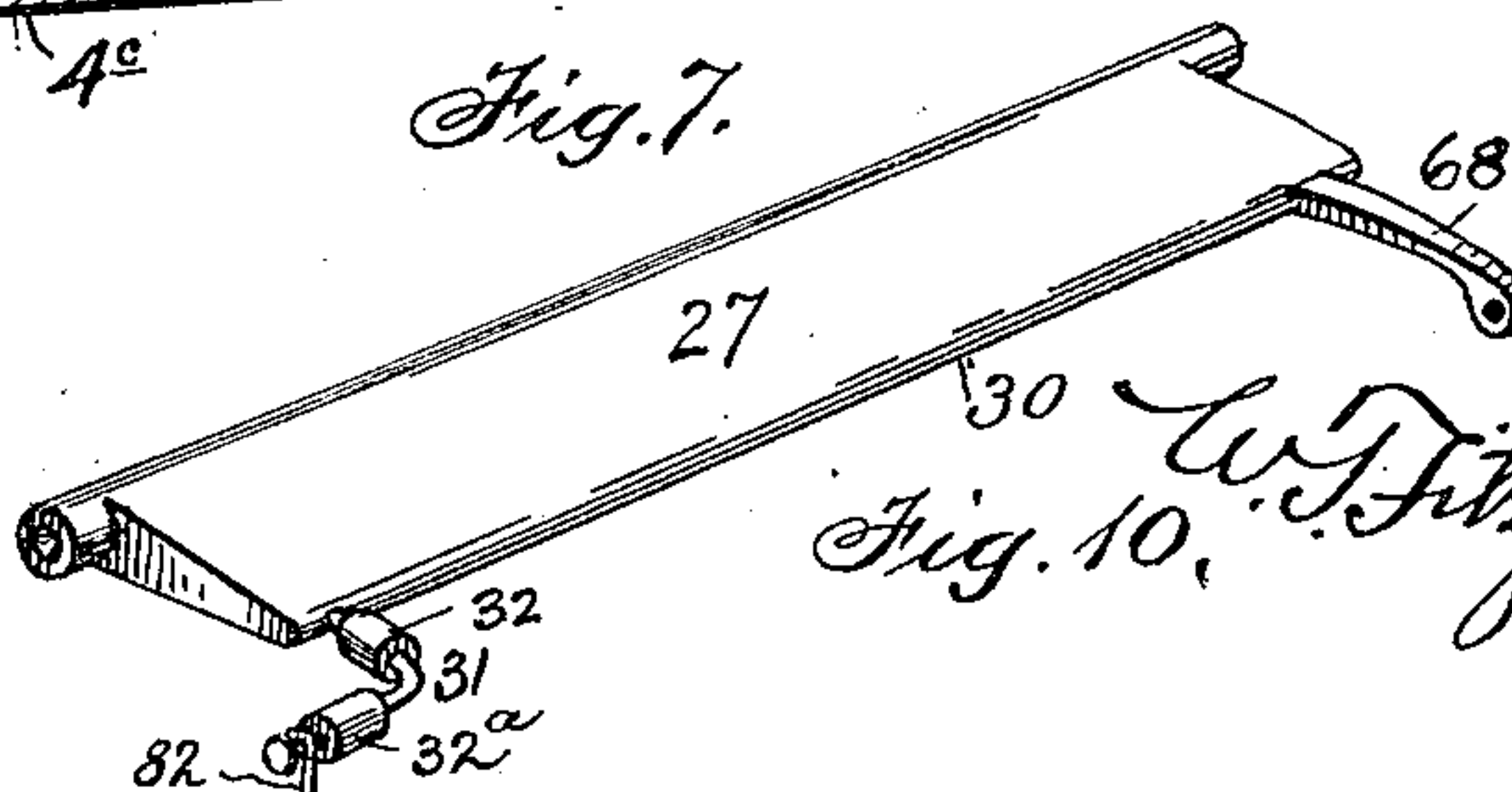
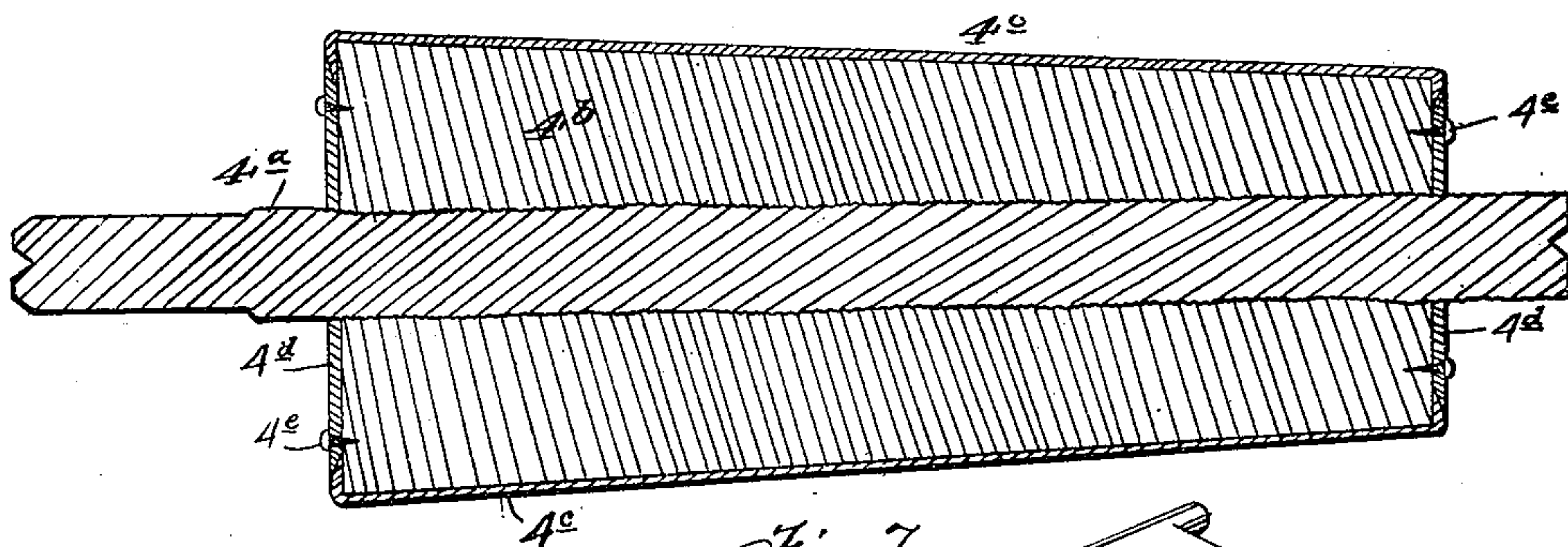
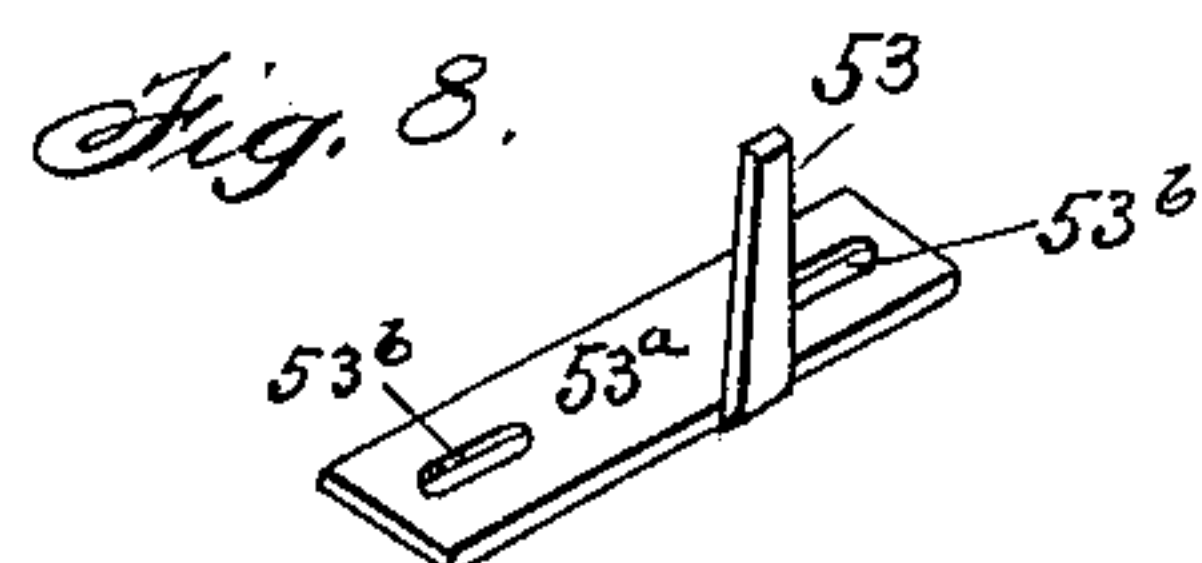
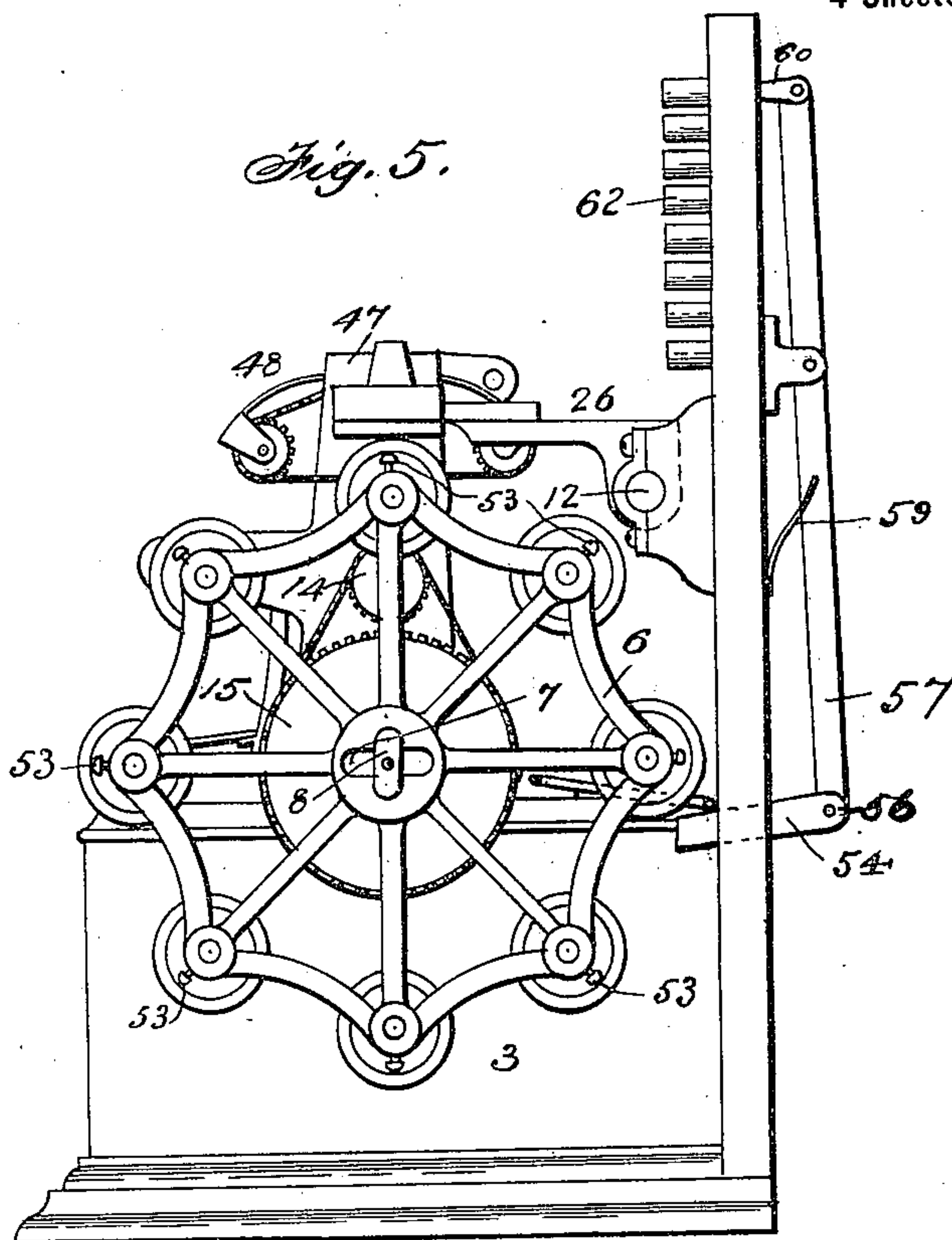
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TALKING MACHINE.

(Application filed Nov. 9, 1898.)

(No Model.)

4 Sheets—Sheet 3.



Witnesses
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(Application filed Nov. 9, 1898.)

(No. Model.)

4 Sheets—Sheet 4.

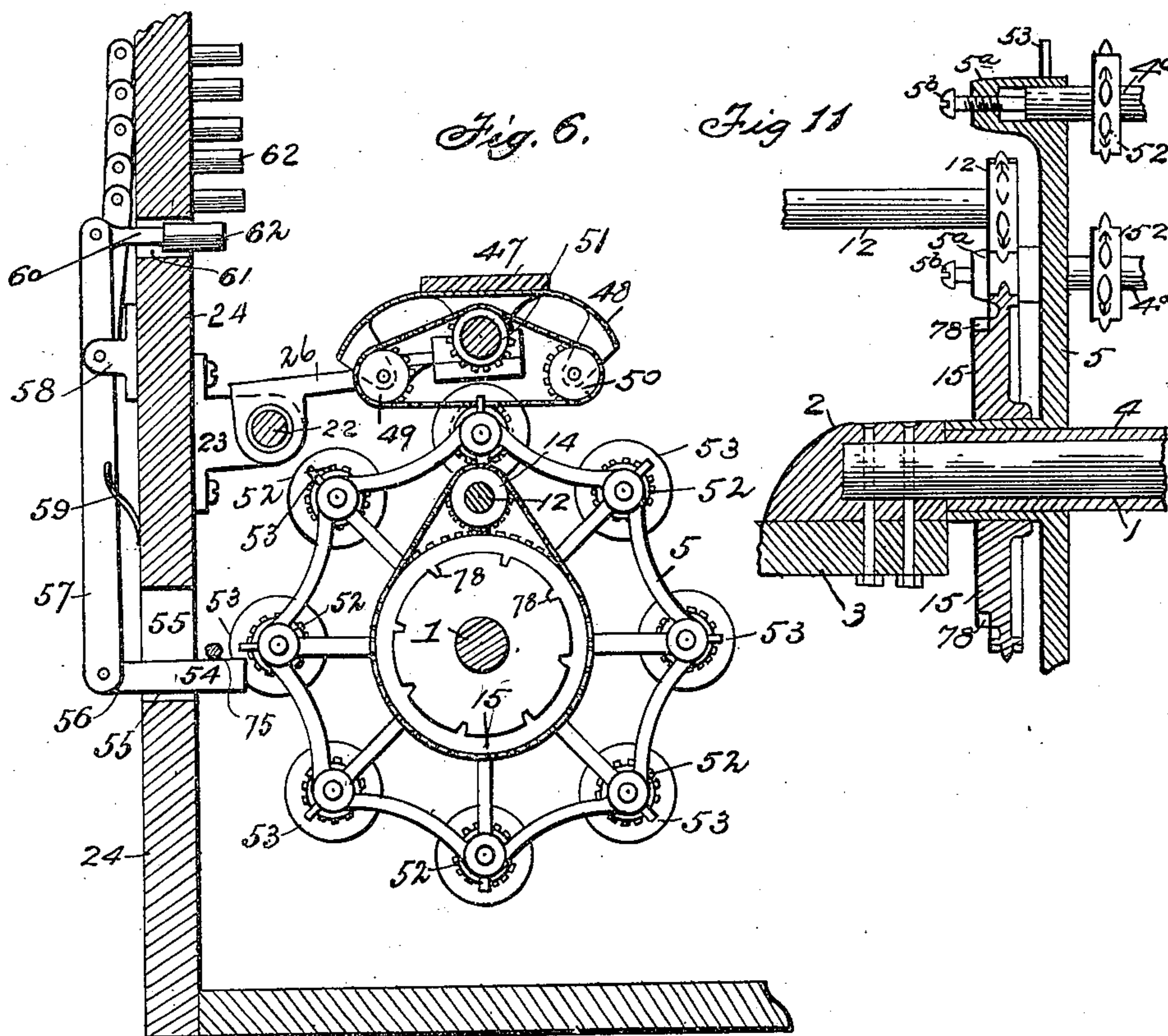
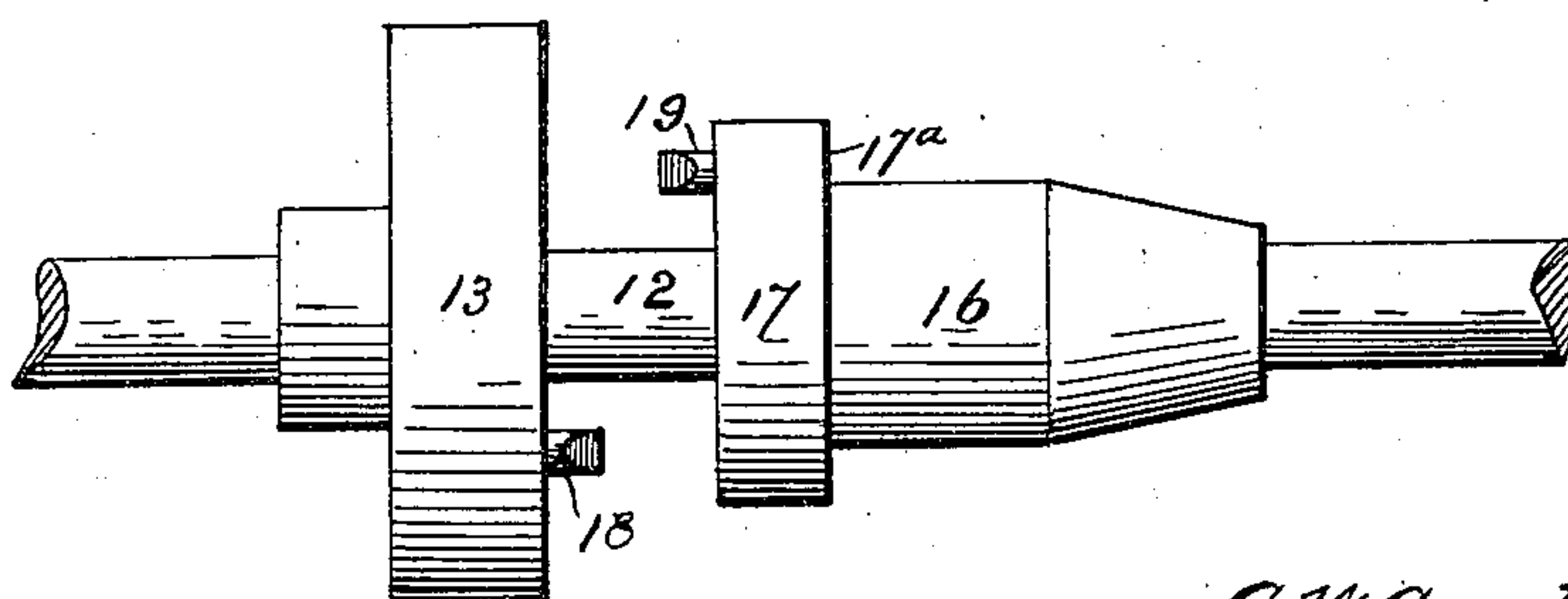


Fig. 9.



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UNITED STATES PATENT OFFICE.

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TALKING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 659,737, dated October 16, 1900.

Application filed November 9, 1896. Serial No. 611,562. (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 improvements in talking-machines of that class in which any preferred individual tablet in a plurality or magazine of tablets may be brought into operative relation with the recorder and reproducer.

The object, therefore, of my invention is to provide a talking-machine which shall have a plurality of tablets and shall combine in close coöperative relationship automatic means for bringing any selected individual of the series of tablets into operative relation with the "vibratory diaphragm" (by which term I desire to comprehend a recorder or reproducer) by simply dropping a coin in the slot prepared for its reception and pushing one of the series of buttons corresponding to the selected tablet.

Referring to the drawings, Figure 1 is a front elevation of my improved talking-machine in its complete operative position, showing the diaphragm in its initial position. Fig. 2 is a top plan view of Fig. 1. Fig. 3 is a sectional view of Fig. 1 on line A A looking toward the magazine and showing the position of the carriage and parts carried thereby by dotted lines. Fig. 4 is a sectional view on line A A looking to the left. Fig. 5 is an end elevation from the right side. Fig. 6 is a sectional view on line B B of Fig. 1 looking to the right. Fig. 7 is a longitudinal section of the tablet-cylinder and the shaft therefor. Fig. 8 is a detail perspective view of my preferred form of adjustable stop. Fig. 9 is a detail side elevation of the idler and reciprocating sleeve. Fig. 10 is a detail perspective view of part of the controlling mechanism for the outer end of the carriage. Fig. 11 is a detail view showing the supporting-axle and

the sleeve and the head 5 carried by said sleeve.

While, as previously stated, the essential features of my invention reside in the provision of a plurality of tablets and means for selectively bringing them into coöperation with the transcribing-stylus, yet there are certain accessories which bear an important relation to these elements and which will be hereinafter referred to as a part of my complete operative talking-machine.

In the employment of a magazine of tablets for the purpose stated I prefer to adopt that particular form of rotatable tablet-holder illustrated, consisting of a fixed shaft 1, secured at one end by a retaining-clamp 2, affixed to part of the frame 3, which part may also provide or form a housing for the motor. The inner end of the shaft 1 being thus secured in position the outer end is free and suspended, permitting the reception thereon of the snugly-fitting sleeve 4, to the inner end of which is rigidly secured the fixed head 5, while to the outer end thereof is detachably secured the removable head 6. The head 6 I prefer to detachably secure to the hub or sleeve 4 by providing in the end of said hub an elliptical bore 7, adapted to accommodate a clamp 8, formed to register with the elliptical opening when it is desired to remove the head and to rest transversely across said aperture and against the outer face of the head when in its securing operative position.

If preferred, an individual releasing device for each of the tablet-cylinders may be provided, though it is thought that by making provision for the simultaneous removal of all the tablets such means will be found amply sufficient to meet the requirements, as it will be seen that each of the shafts provided for the tablet-cylinders is well anchored in its bearings provided in the fixed head, thus enabling the removable head to be taken away, allowing the tablet-cylinders to remain in their respective positions until the ends of their shafts are removed from their bearing-seats.

Upon the housing 3 for the motor I erect the standards 9 10, which are adapted to af-

ford seats for various elements hereinafter referred to. In substantially the central section of the standards 9 10 I provide suitable bearings 11 for receiving the rotatable shaft 12, and upon said shaft, intermediate said standards, though nearer the former, I mount the idler 13. The inner end of the shaft 12 extends through its bearings 11 in the standard 10 and is provided with the pulley or sprocket 14, adapted to cooperate with the pulley or sprocket 15, secured to the axle-sleeve 4 on the inner end of the tablet-magazine. By means of said sprockets or pulleys, as the case may be, said magazine is rotated. Located upon the inner side of the idler 13 I provide the reciprocating sleeve 16, which terminates in the head 17 and is so keyed or feathered to the shaft 12 that it will rotate therewith, but will also have a reciprocatory movement thereon. The contacting faces of the idler 13 and the head 17 are provided with frictional points or pins 18 19, adapted for engagement with each other when the sleeve is moved toward the idler by the downwardly-extending arm 20, secured to the carriage-frame 21 and arranged to bear against the face 17^a of the head.

The carriage 21 is held in its operative position by the shaft 22, mounted in suitable brackets or supports 23, attached to a part of the frame 24, and is adapted to reciprocate on said shaft through the medium of the barrel or sleeve 25, loosely mounted on the shaft 22 and extending to the right sufficiently to provide a point of attachment and support for the diaphragm-carrying arm 26. By this arrangement the barrel or sleeve 25 may be freely moved in either direction upon the shaft 22, enabling the diaphragm to be moved into contact with the tablet. I prefer to so mount the arm 26 upon the barrel 25 that it will tightly grasp the same and have frictional contact therewith, permitting the diaphragm to be raised or lowered by simply overcoming the frictional grasp, when the diaphragm will be held in an adjusted position—that is to say, the arm 26 is provided with the collar 26^a, which tightly fits around the barrel 25, and while the frictional grasp of said collar may be overcome it will be understood that it will cling sufficiently to the barrel to hold the arm 26 in an adjusted position.

The carriage-frame 21 extends to the front part of the machine and rests by its extreme outer end 21^a upon the cam-faced shaft 27, while its inner end is rigidly secured to the barrel 25 by means of the body 28.

The outer end of the carriage-frame 21 has depending therefrom the obliquely-disposed finger 29, adapted to raise the inner edge or blade 30 of the shaft 27 when it comes in contact with the elbow 31, provided with the frictional rollers or sleeves 32 and 32^a.

Preferably upon the upper surface of the body 28 I secure the slotted end 33 of the spring 34, provided upon its upper surface,

near the intermediate part thereof, with the threaded block 35, and upon the under side of its outer end with a similar block 36, adapted, respectively, for contact with the threaded shafts 37 38, by means of which the carriage is moved in opposite directions. The shaft 37 is provided with threads running to the left, while the shaft 38 has threads running to the right, and as there is sufficient play permitted to the spring-arm 34 between the shafts 37 38 only one of the threaded blocks is in contact with its shaft at the same time, providing that the carriage will be moved to the right or the left, as the case may be. The shaft 38 is provided with a suitable bearing in the upper end of the standard 9 and with a graduated pulley 39, having the faces 40, 41, and 42, the first being designed to connect directly with the motor in the housing 3 by the belting 43. The face 42 is designed to connect by belting with the idler 13, while the face 41 cooperates with the pulley 44, provided at an opposite point thereto upon the shaft 37. The shaft 37 is also properly seated in bearings 37^a, provided in the extreme inner and upper-extensions 37^b of the standards 9 10. The inner end of the shaft 38 passes loosely through an aperture provided in the upper end of the standard 10 and extends into engagement with the bearing-point 45, held in an adjusted position by the downwardly-extending section 46 of the lateral continuation 47 of the standard 10. It will be understood that all of said shafts may be provided with bearings of this character in order that a minimum amount of friction may result, though any desired form may be employed.

The lateral extension 47 is designed, in addition to providing a bearing for the extreme end of the shaft 38, to carry or suspend the sprocket-frame 48, in the outer ends of which are mounted the sprockets 49 50, intended to be actuated by the sprocket 51, mounted on the extreme end of the shaft 38. These sprockets when properly connected by a suitable belting are intended to act upon one of the sprockets 52, secured to the inner end of the shaft of the tablet-cylinder, and as the sprocket 51 is disposed slightly above the sprockets 49 50 the belting will reach across from the under side of said sprockets and freely contact with any preferred one of the sprockets 52 as its accompanying tablet is brought into cooperation with the diaphragm. For this purpose it is thought that a belting constructed of suitable pliable material provided with eyelets for engaging with the teeth of the sprockets will be found most suitable, though ordinary leather belting provided with suitable apertures to receive the sprocket-teeth will, it is thought, be found to be sufficient to meet the requirements, yet by protecting the edges of said apertures with metal eyelets a much longer life is imparted to the belting, rendering it more desirable for the purpose.

In order to hold each of the shafts 4^a of the

tablet-cylinders in its operative position and to accommodate a suitable form of bearing therefor, I provide upon the fixed head the inwardly-extending sockets 5^a, having a sufficient bore to loosely receive the inner ends of the cylinder-shafts 4^a, which are received and held in position by the adjustable bearing-points 5^b, axially seated in the ends of said sockets. The extensions or sockets 5^a also provide a seat upon their upper surface for the reception of a series of disalined stops 53, so located that none will move in the plane or path of the others and designed to contact with their respective tumblers when the desired tablet is in apposition with the diaphragm.

Mounted in the rear part 24 of the frame of the machine, at a point on a line with the disalined stops 53 and designed to contact by proper manipulation with their respective stops, I provide a series of tumblers 54, arranged to reach through suitable bearing seats or apertures 55 in the frame, while pivotally connected to the inner ends 56 of said tumblers is the operating-bar 57 for each of the tumblers 54, preferably extending upward from the point of their pivotal connection with the tumblers on the rear side of the frame and parallel therewith. Said apertures 55 are of sufficient extent to admit of a free upward movement of the tumblers 54. By this arrangement of the apertures the tumblers 54 will rest upon the lower end thereof and check the downward movement of their respective stops; but when the magazine is reversely rotated each will move out of the path of its stop when contacting therewith from the lower side. Each of the bars 57 is provided, preferably near its upper end, with a pivotal connection or bearing 58, secured to the rear side of the frame. Designed to normally withdraw the tumblers 54 is the spring 59, one end of which is anchored in the inner edge of the bar 57, while the free end thereof is arranged to bear against the frame, thus withdrawing the tumblers. To the upper ends of the bars 57 I pivotally connect the operating-lever 60, arranged to extend through suitable apertures 61, provided in the frame, to the front side thereof, where they terminate in or connect with suitable manipulating-buttons 62 for manual control. In order to dispose the series of operating-buttons thus provided within a convenient area and position, I prefer to graduate the length of the series of bars 57, arranging that the bar upon the right or left shall be shortest or longest, as may be preferred, and gradually increasing or diminishing the length of the other bar, as the case may be, resulting in the arrangement of the buttons in a line with each other, substantially as shown in Fig. 1. This is a preferred form of arrangement for the operating-buttons, though it will be understood that any convenient and preferred plan may be adopted for this purpose.

For cheap, and consequently expeditious, construction I prefer to form the bars and

tumblers 57 and 54, respectively, of wood, arranging that a simple saw-mark in the inner edges of said bar will provide a seat for the spring 59, though for more permanent construction it will be understood that these parts may be formed of any preferred material. By the disposition made of the spring 59 it will be observed that the respective button of each bar will be held normally outward, when a pressure upon said button will enable the tension of the spring 59 to be overcome, thus forcing the tumbler 54 into the path of its respective stop, all of which for convenience are designated by the numeral 53.

From the drawings and specification in this case it will appear that it is the function of the stops 53, respectively, to engage each its appropriate tumbler 54, and thereby to determine automatically which one of the tablets of the magazine shall assume operative relations with the vibratory diaphragm. The actuation of one tumbler causes the mechanism automatically to select a particular stop and no other. In like manner the actuation of another tumbler causes the selection of another stop, and so on throughout the complete series of stops. Now the employment of coöperative stops and tumblers is intended only to illustrate one mode of accomplishing an object that may be accomplished in a variety of ways and is representative in the broad sense of any mechanism that is adapted to select any one of a series of tablets in preference to any other. Therefore for brevity and convenience I denominate such mechanism "tablet-selective" mechanism, intending thereby to include any mechanism that is adapted, through the manipulation of a member—in the present example one of the tumblers 54—to select for operative relations with the vibratory diaphragm any individual of a series of tablets that may be determined upon irrespective of the relation in which the tablet selected may stand toward the other tablets of the series.

The cam-faced shaft 27 is mounted in suitable bearings 63, located in the outer ends of the brackets 64, the latter being so connected to the standards 9 10 that said shaft will be held slightly above though parallel with the shaft 12. At the foot of the standard 10 and at the forward edge thereof I provide the pivotal seat 65, arranged to receive the lower end of the standard 66, which extends upward parallel with said standard and is provided upon its upper end with the obtuse angle 67, presenting a cam-face 67^a for contact with the friction roller or sleeve 32^a, mounted upon the elbow 31, secured to the shaft 27. To the opposite end of the shaft 27 and extending inwardly therefrom parallel with the blade 30 I provide the controlling-lever 68, which has pivotal connection with the crank-arm 69 by means of the link 70. Said crank-arm is rigidly connected to or integrally formed with the rocking shaft 71, which is disposed parallel with the longitudinal line of the ma-

chine and is mounted in suitable bearings 72 and consists of the body-section 73, the transverse arm 74, and the terminal branch 75, adapted to bear upon the upper edge of the tumblers and prevent the upward extension or movement thereof. The connection between the shaft 27 and the rocking shaft is so made that the elevation of the edge or blade 30 will result in the depression of the terminal branch 75 into contact with the upper edge of the tumblers, preventing, as previously stated, an upward movement thereof until said branch has been elevated by the corresponding depression of the blade 30.

In order to automatically provide for the actuation of the terminal branch 75, I provide near the outer end of the carriage-frame 21 the inclined guide or radially-disposed finger 29, which will, as the carriage moves to the right, contact with the friction roller or sleeve 32 and cause the same to ride upon its inclined face, resulting in the elevation of the inner edge or blade 30 and the partial rotation of the cam-faced shaft. The elevation resulting from this contact of the friction-roller with the inclined face of the depending finger 29 causes the friction roller or sleeve 32^a to ride upward against the outer face of the lever 66 until the obtuse angle 67 has been reached, when the upper end 67^a of said lever will be forced outward against said sleeve, causing the same to ride upon the inclined face 67^a, through the action of the spring 76, so disposed that its free end will bear downward upon the outward extension 66^a of the lever. The opposite end of the spring 76 is suitably anchored at any preferred point where its office may be most effectively performed.

The operation of my improved automatic talking-machine may be described as follows: That is to say, the carriage is placed in its initial position at the extreme left end of the threaded shafts, when the diaphragm-arm is depressed, overcoming its frictional grasp upon the barrel 25, bringing the diaphragm into the plane of the surface of the tablet, which has first been placed in position by a pressure upon its corresponding button, duly labeled to indicate said tablet. The motor is then started, either manually or automatically, by aid of a suitable prime mover, when the threaded block 36 will engage with the shaft 38, resulting in the lateral movement of the carriage in unison with the threads provided on said shaft, causing the stylus, with its accompanying diaphragm, to follow the line of record provided on the tablet until the extreme outer end thereof is reached, when the depending radially-disposed finger 29 will engage with the friction-roller 32, elevating the elbow 31, and thereby causing the friction-roller 32^a to travel upward upon the face of the lever 66 until the obtuse angle 67 thereof is reached, when the action of the spring will force said lever outward, contacting the face 67^a of said lever with said roller, and complete the elevation of

the blade 30, incidentally causing said blade to act upon the outer end 21^a of the carriage and forcing the threaded block 36 out of engagement with the shaft 38 and bringing the threaded block 35 into coöperation with the shaft 37, effecting the reverse movement of the carriage. The elevation of the blade 30 also results in the upward movement of the controlling-lever 68, acting upon the rocking shaft 71 in such manner as to cause the terminal section 75 thereof to move downward into contact with the upper edge of the tumbler, holding the same in a horizontal position, preventing a continued reverse movement of the tablet-magazine.

It will be understood that each of the buttons controlling its respective tumbler will be labeled or designated in any preferred manner to correspond with the subject or selection inscribed upon the tablet located at its respective stop, enabling the operator to make a selection of a subject and bring the same under the reproducing-stylus by a simple pressure on the button.

The adjustment of the several parts is so made that the contact of the tumbler with its stop will place the desired selection under the stylus, bringing the sprocket 52 into engagement with the belting upon the sprockets 49 50, which latter, as previously set forth, are actuated through the medium of the sprocket 51, located upon the shaft 38. The movement, therefore, of the shaft 38, in addition to a positive actuation of the carriage, also rotates the tablet-cylinder, enabling the diaphragm to travel in harmony with the line of record.

In order to provide a construction for the tablet-cylinder which will compensate for the expansion and contraction incident to changes in the temperature, I prefer to provide that the surface of the shaft 4^a for the cylinder-body 4^b shall be suitably roughened or finely corrugated, upon which is shrunk or forced the body proper, 4^b, preferably made of light porous wood, cork, or the like, while upon the outer surface thereof I secure a covering 4^c, of a flexible and loosely-formed fibrous material—such, for instance, as canvas, cotton-flannel, or the like—the object being to provide for the free expansion and contraction of the material forming the tablet.

The stops 53 may consist for cheap and efficient construction of a series of screw-threaded lugs or points properly seated in the outer face of the sockets in such manner that each will engage with its respective tumbler and be disposed in an entirely-different path from the other, or said stops may consist of the adjustable device shown in Fig. 8 and consisting of the plate 53^a and the integrally-formed point 53. In either end of the plate I provide the slotted apertures 53^b, designed to permit longitudinal movement of the plate 53^a, that the stop may be properly adjusted. If the form of stop consisting of the threaded lug or point be employed and it should be

necessary to readjust it after it is seated in the outer face of the socket, such readjustment can easily be effected by simply bending the point in the direction desired, which of course will be readily appreciated.

Upon the shaft 12 is mounted the idler 13 and the sleeve 16, as previously stated, and said sleeve is designed to coact with the depending arm 20, provided upon the carriage-frame 21, as follows: When the carriage has moved back into its initial position, the bearing-block 35 will drop into the groove 77, (said groove being a reduced portion of the shaft 37,) when the blade 30 will tend further to elevate the carriage-frame 21 and its accompanying depending arm 20, bringing it to bear against the face 17^a of the sleeve, forcing said sleeve and the friction-point 19 thereon into engagement with the idler and the friction-point 18, secured thereto, thus connecting said idler to the shaft and resulting in its rotation and incidentally rotating the sprockets 14 15, causing a reverse movement to be imparted to the tablet-magazine until the stop bearing upon the upper side of its tumbler is moved entirely around to contact with the lower side thereof, thus bringing the magazine to a full stop, owing to the interposition of the terminal section 75.

It will of course be understood that I do not wish to be confined to the use of belting as a means for communicating power from one pulley to another, as toothed gearing or other equivalent may be used, if preferred. For instance, the sprockets 14 15 may be toothed gearing arranged to mesh with each other in the usual manner, thus dispensing with the necessity of other means for forming connection. The same may be said with reference to the sprockets 51 52 and other parts now shown as connected by belting.

In order to make it clear how I retain a flexible covering of felt, canvas, or other preferred material upon the porous body of the tablet-cylinder, I will state that said covering may be so placed that the projecting edges thereof will extend past the ends of the body of the cylinder, where they may be drawn inward toward the shaft and there secured against the ends of the body by a suitable retaining-plate 4^d and retaining-screws 4^e or other preferred means, taking through said plates into the body.

In order to provide that the tablet-magazine will be reliably held in an adjusted position, to the end that the subject-matter upon any preferred tablet may be transcribed, I arrange the locking mechanism for the magazine, (more clearly shown in Figs. 3, 5, 6, and other views,) and which I will describe by stating that the sprocket or gearing wheel 15 is provided upon the face thereof or other preferred point with a series of notches or teeth 78, adapted for engagement with the detent or pawl 79. The lower end of the detent 79 is pivoted in a suitable seat 80, mounted at any convenient point to enable it to per-

form its office. The said detent after passing through the seat provided therefor terminates in the crank-arm 81, which is pivotally connected to the free end of the elbow 31 or any convenient point of the blade 30 by means of the link-arm 82. By this arrangement of the several parts just described it will be apparent that I have provided an efficient locking device for the tablet-magazine when any preferred one of the tablets is being transcribed.

The operation of the locking device may be stated as follows: When the elbow or inner edge of the blade, to one of which the link-section 82 is attached, is depressed, the crank-arm 81 will be moved downward, forcing the free end of the detent into engagement with one of the notches or ratchets 78, thus locking the sprocket or gearing 15 against movement until the detent is withdrawn. The downward movement of the elbow or blade just referred to occurs only when the diaphragm is brought into coöperation with the tablet, consequently resulting in holding the magazine in a fixed position until the diaphragm has traveled the entire length of its tablet. When the stylus has transcribed the entire line of record, the diaphragm is automatically returned to the starting-point, as already described, through the elevation of the blade 30, which act results in the withdrawal of the detent 79 from engagement with the sprocket 15, permitting another selection from the magazine-tablets to be made.

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

1. In a talking-machine, a sound reproducer or recorder, a series of sound-records, a carrier therefor, means for bringing any sound-record into coöperative relation with said sound reproducer or recorder, and stop mechanism for stopping any desired record when it is brought into coöperative relation with the sound reproducer or recorder, as set forth.

2. In a talking-machine, the combination with a frame, a recorder or reproducer, a series of tablets and a tablet-carrier, of automatic means for bringing any selected individual of the tablets into operative relation with the sound reproducer or recorder, and a push-button for releasing and mechanism for stopping said means, as set forth.

3. In a talking-machine, the combination with a frame, a recorder or reproducer, tablets and a tablet-carrier, of automatic means for bringing any selected individual tablet into operative relation with the sound reproducer or recorder, and a device for releasing and mechanism for stopping said automatic means, as set forth.

4. In talking-machines having a plurality of tablets, and provided with a recorder and reproducer and a series of buttons, automatic means for bringing any selected tablet into operative relation with the recorder or repro-

ducer which are released by pushing one of said buttons corresponding to the selected tablet, as set forth.

5. In talking-machines, a series of tablets, a recorder and reproducer, a rotatable tablet-carrier, and automatic means for bringing any selected one of said series into operation and means for holding it until operated upon by the recorder or reproducer, as set forth.

6. In a talking-machine the combination with a frame, sound-receiver, tablet-magazine and magazine-driving mechanism, of a plurality of tablets carried in the magazine, and a corresponding plurality of magazine-stop mechanisms, adapted through manipulation thereof respectively to release the driving mechanism and stop any one of the tablets when in operative relation with the sound-receiver, substantially as set forth.

7. In talking-machines, the combination of a magazine of tablets, means to actuate the same, a diaphragm, a series of graduated stops carried by said magazine, and means cooperating with the stops for checking and holding the desired tablet when in cooperative relation with the diaphragm, as set forth.

8. In a talking-machine, the combination with a tablet-magazine having a fixed and a removable head, of a series of graduated stops so arranged in the periphery of the fixed head that they will cooperate with the stop mechanism, designed to hold any preferred tablet into cooperation with the recording-stylus, and means for automatically reversing the movement of the carriage and for sending it back to the initial point, substantially as described and for the purpose set forth.

9. As an improvement in talking-machines, the combination with the tablet-magazine and diaphragm-carriage; graduated stops on said magazine; a series of tumblers; a rocking shaft; a series of buttons; suitable connection between said tumblers and buttons and means mounted on said carriage for actuating said rocking shaft and thereby locking the tumblers, substantially as specified and for the purpose set forth.

10. As an improvement in talking-machines, the combination of a magazine of tablets; a diaphragm, means for bringing the tablets into cooperative relation with the diaphragm, a series of graduated stops carried by said magazine and means intermediate the carriage and stops for cooperating with said stops for checking the rotation of the magazine and holding the desired tablet thereon in cooperation with the diaphragm, substantially as specified and for the purpose set forth.

11. As an improvement in talking-machines, the combination with the tablet-magazine and diaphragm-carriage and a series of tumblers, of means, substantially as described, for automatically reversing and continuing the movement of the carriage and for locking the tumblers against upward move-

ment, substantially as described and for the purpose set forth.

12. As an improvement in talking-machines, the herein-described diaphragm-carriage-reversing mechanism consisting of the cam-face rock-shaft, a spring-controlled lever for holding the inner edge of said shaft normally depressed, and means mounted upon the carriage for overcoming the tension of the spring in said spring-controlled lever, thereby elevating the inner edge of said shaft when the line of record has been transcribed, substantially as described and for the purpose set forth.

13. As an improvement in talking-machines, the combination with a plurality of tablets and a diaphragm-carriage, of a depending arm mounted on said carriage, a sleeve so disposed upon its shaft that it will rotate therewith and slide thereon when actuated by said arm, and an idler-pulley arranged to contact with said sleeve, and rotate therewith when they are forced together, and thereby reverse the movement of the magazine, as and for the purpose set forth.

14. In a reversing mechanism for tablet-magazines, the combination with the diaphragm-carriage, of a driving-shaft for said magazine having a sprocket fixedly secured to the inner end thereof designed to coact with the sprocket on the magazine-axle; an idler mounted on said shaft; a sleeve loosely keyed thereon and a depending arm connected to the carriage adapted to slide said sleeve into engagement with the idler when the carriage has moved back to its initial position, thereby causing said idler to rotate on its shaft, as and for the purpose set forth.

15. As an improvement in talking-machines, a tablet-magazine and means for checking the rotation of the same, consisting of a series of graduated stops secured to the outer side of the spindle-sockets, a series of tumblers for engagement therewith, a series of bars, each designed to act upon its respective tumbler, a series of buttons for actuating said bars, and individual springs for said bars disposed to normally withdraw each tumbler from the path of its stop as and for the purpose set forth.

16. The combination with a rotatable tablet-magazine of a series of stops carried thereby; a series of tumblers for engaging therewith; a series of bars, each designed to act upon its individual tumbler; a series of buttons for manipulating said bars and suitable means for disposing said buttons normally inward and thereby holding each tumbler out of the path of its individual stop, as and for the purpose set forth.

17. As an improvement in talking-machines, the combination with a recorder or reproducer and a tablet-magazine, of stop mechanism for said magazine, consisting of a series of graduated stops and tumblers therefor; a series of buttons corresponding to each

individual tablet, and means intermediate said buttons and stops, whereby a pressure upon one of the buttons will hold one of the tumblers in such position that it will contact
 5 with the stop of the desired tablet and thereby hold said tablet into coöperation with the recorder or reproducer, substantially as specified and for the purpose set forth.

18. As an improvement in talking-machines, the combination with a transcribing-stylus a tablet-magazine, stop-mechanism therefor, consisting of a series of graduated stops; a series of buttons referring respectively to an individual tablet, and means for
 15 so connecting said buttons and stops that a pressure upon one of the former will hold one of the latter in such position that the desired tablet will be locked in coöperation with the transcribing-stylus, substantially as described
 20 and for the purpose set forth.

19. In talking-machines, the combination with a tablet-magazine, means to actuate the same, a diaphragm-carriage and a series of tumblers, of means coöperating with said

tumblers for checking the magazine and operating the diaphragm-carriage, as set forth. 25

20. In a talking-machine, a diaphragm-carriage a tablet-carrier, and means for operating the same, a series of tumblers, and means coöperating therewith for checking the tablet-carrier and means for operating the diaphragm-carriage, as set forth. 30

21. In a talking-machine, a sound reproducer or recorder; a magazine adapted to carry a plurality of tablets; automatic means for bringing, at will, any selected individual of the tablets into coöperation with the recorder or reproducer, and additional means for stopping and holding it until operated upon by said recorder or reproducer, as set forth. 35 40

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

GEORGE W. GOMBER.

Witnesses:

W. H. KNELLY,
 H. F. GOMBER.