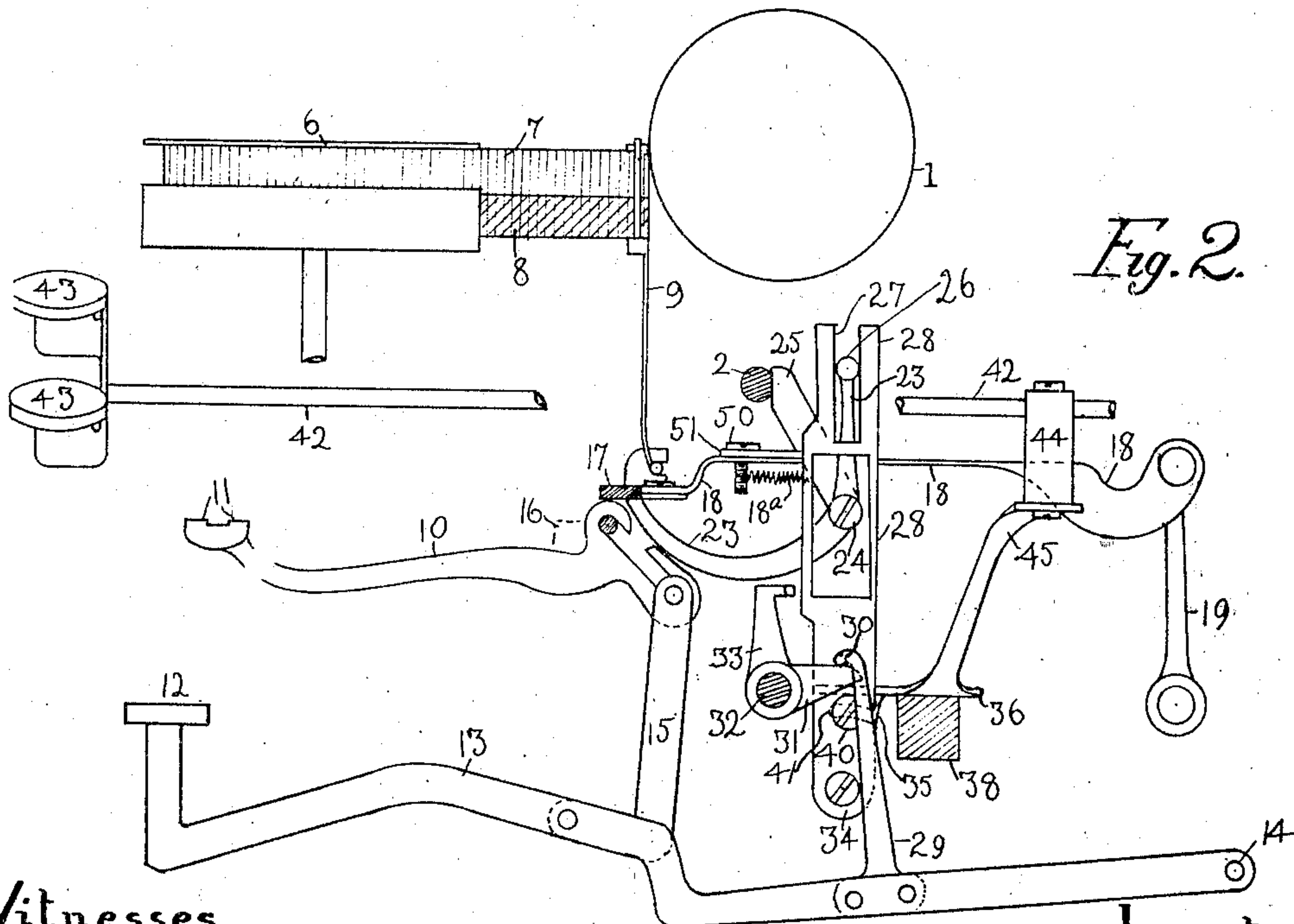
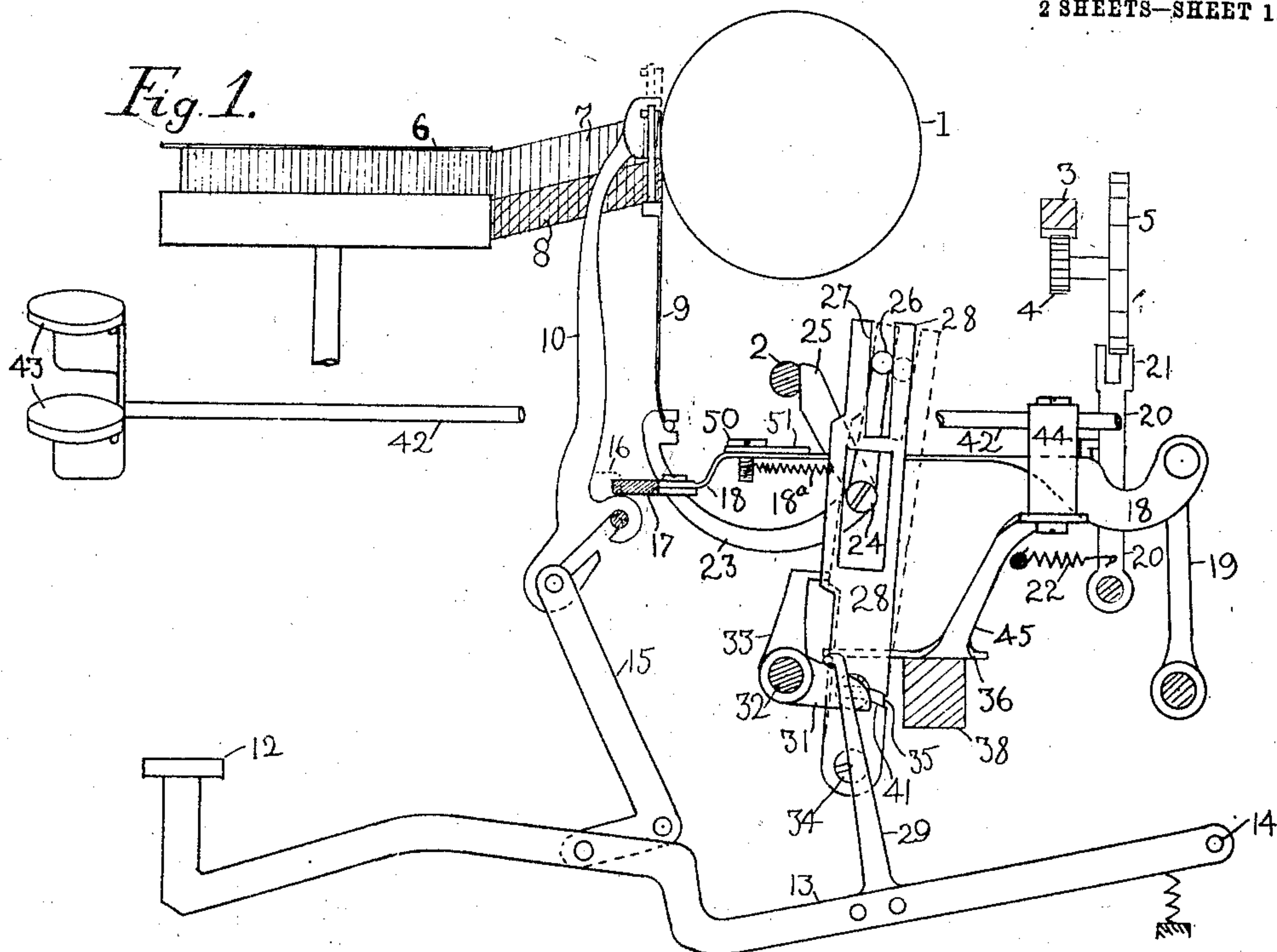


No. 850,846.

PATENTED APR. 16, 1907.

J. C. McLAUGHLIN.  
TYPE WRITING MACHINE.  
APPLICATION FILED JAN. 19, 1906.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 3.

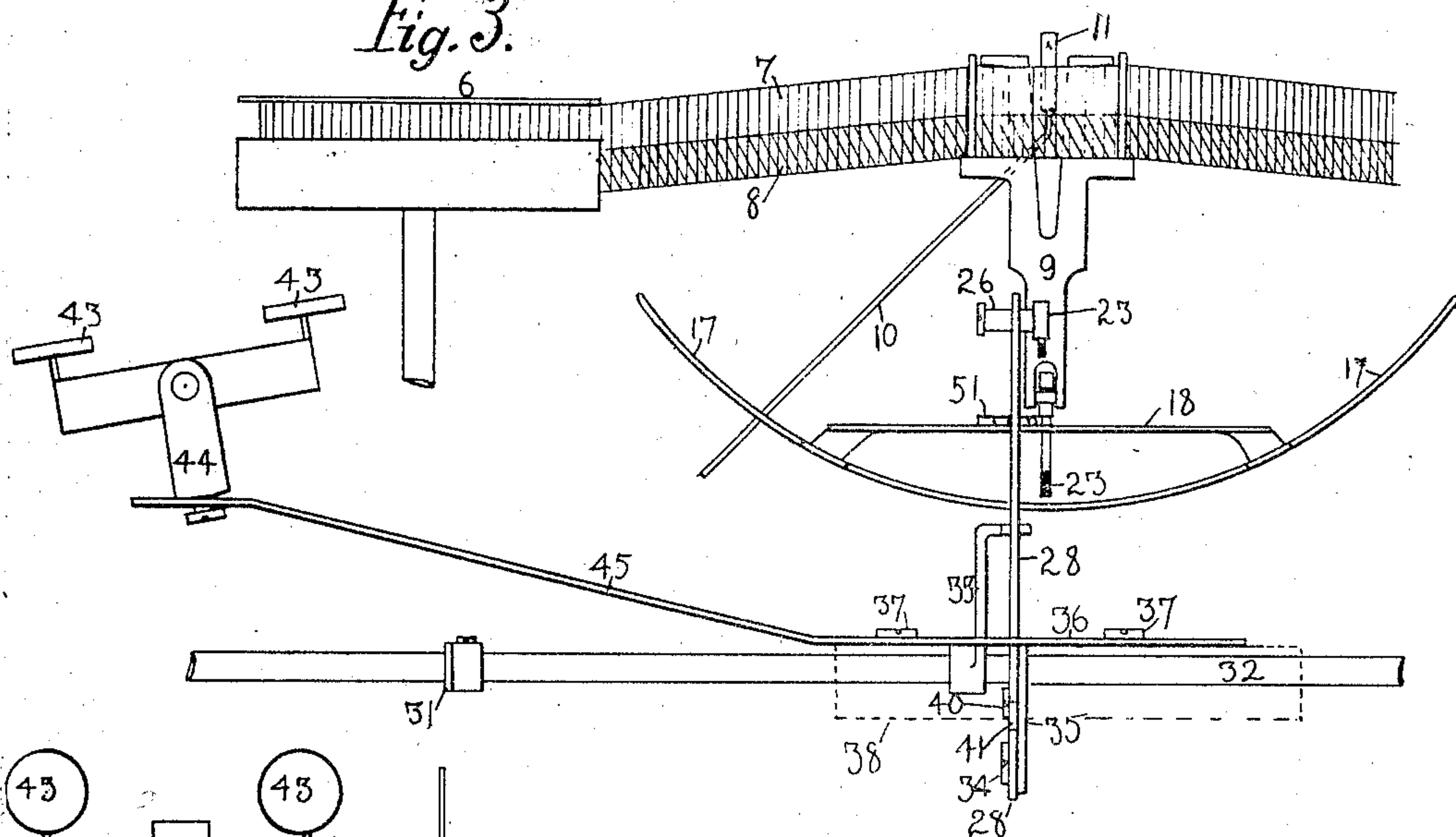


Fig. 4.

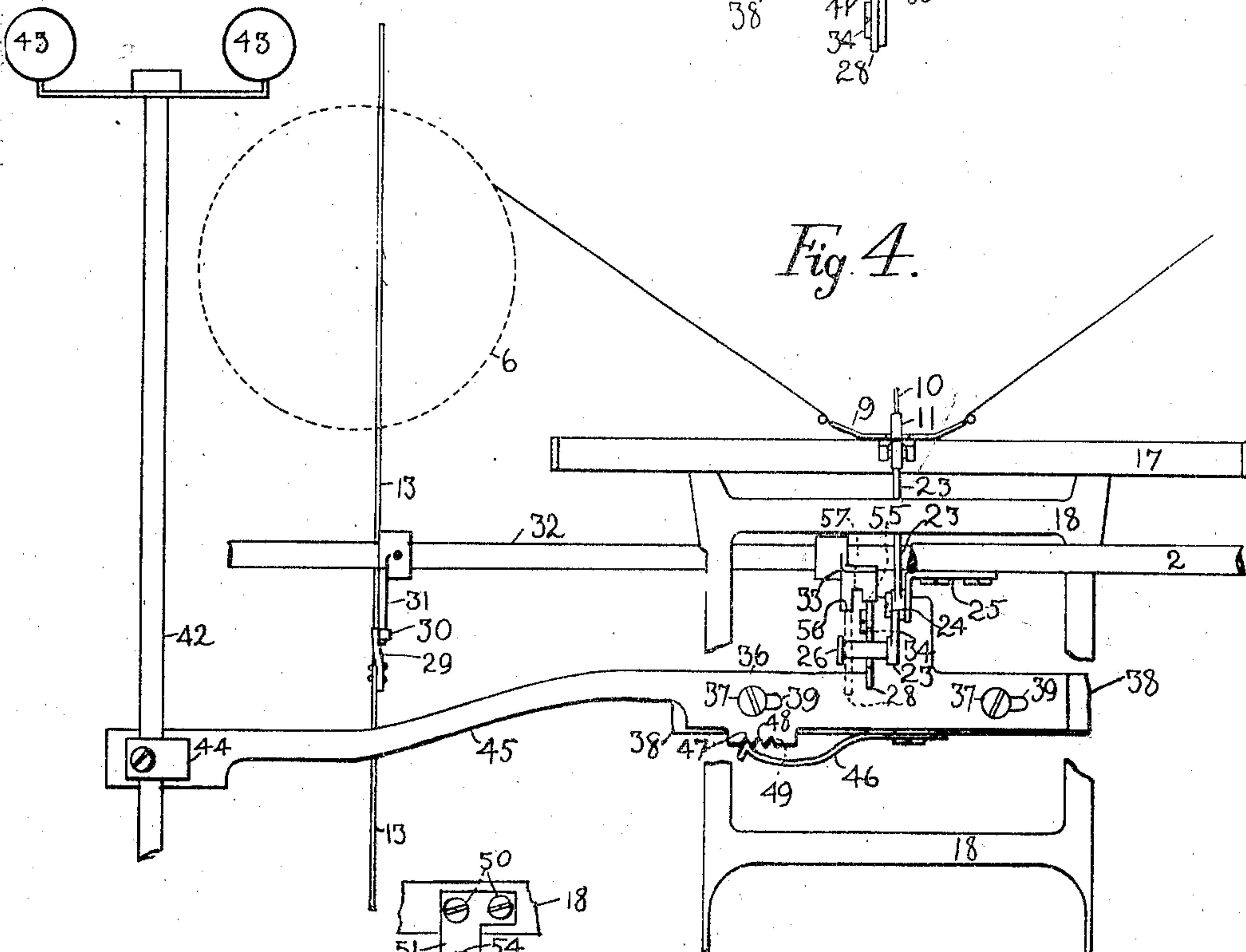
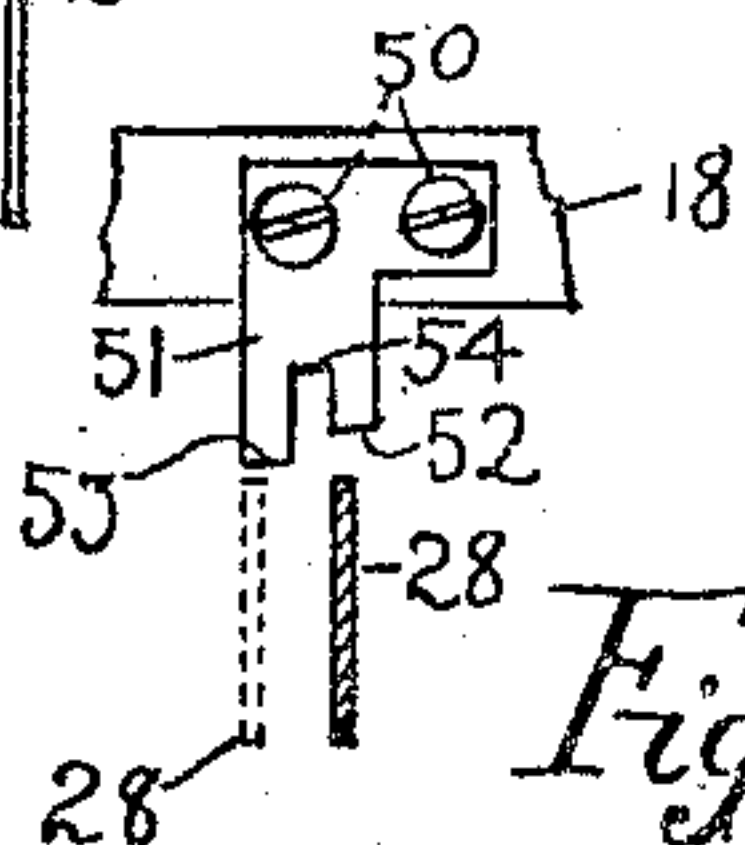


Fig. 5.



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# UNITED STATES PATENT OFFICE.

JOHN C. McLAUGHLIN, OF NEW YORK, N. Y., ASSIGNOR TO UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

## TYPE-WRITING MACHINE.

No. 850,846.

Specification of Letters Patent.

Patented April 16, 1907.

Application filed January 19, 1906. Serial No. 296,817.

*To all whom it may concern:*

Be it known that I, JOHN C. McLAUGHLIN, a citizen of the United States, residing in Manhattan borough, city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to both the ribbon and accent-key mechanisms of type-writing machines in which the ribbon is vibrated to cover and uncover the printing-point at each type-stroke.

The principal objects of my invention are to provide a simple, inexpensive, and easily-operated accent-key mechanism, whereby the accent-key may move its type to the platen and may vibrate the ribbon to cover the printing-point, so as to secure an imprint of the type without feeding the carriage, and to provide also for varying the printing position of the ribbon, so that writing may be done in different colors, provision being also made for enabling the types to strike upon the platen directly or without printing through the ribbon when desired.

In carrying out my invention I provide in connection with the usual universal bar operable by the type-keys a ribbon-vibrating member, which is operated by the universal bar and may also be operated by the accent-type key while the universal bar remains stationary. This ribbon-operating member does not control the carriage-feeding devices and the latter remain stationary with the universal bar, not being affected by the operation of the accent-type key, so that the accent-type may be printed without feeding the carriage. Said ribbon-operating member is illustrated in the form of a lever, and adjustable means are provided for enabling it to vary the throw of the ribbon both when operated by the universal bar and also when operated by the accent-type key independently of the universal bar.

In the accompanying drawings, Figure 1 is a sectional elevation from front to rear, showing a portion of the well-known front-strike "Underwood" type-writing machine with many improvements applied thereto, the parts being shown in full lines when the accent-type key is depressed and when the ribbon-controlling members are adjusted for producing

a short vibration of the ribbon. The movement of the ribbon-vibrating lever for effecting a greater vibration of the ribbon is indicated by dotted lines. Fig. 2 is a view similar to Fig. 1, showing the parts in normal positions. Fig. 3 is a rear elevation, and Fig. 4 a plan, of the devices seen at Fig. 2. In Figs. 3 and 4 the parts are seen in the Fig. 1 position. Fig. 5 is a plan of the ribbon-vibrating stepped member, which is fixed to the universal-bar frame.

The platen is seen at 1 and runs upon a horizontal rail 2, which is shiftable up and down to enable different types to print, the platen being mounted upon a carriage comprising a rack 3, which meshes with a pinion 4, connected to an escapement-wheel 5. The types strike upon the front of the platen through a ribbon, which is carried upon spools 6, said ribbon having upper and lower color-bands 7 8 and being threaded through a carrier 9. A type-bar 10 carries a plurality of accent-types 11 and is operated by a key 12, mounted upon a lever 13, pivoted at 14, movement being transmitted from said lever through a bell-crank 15 to the type-bar. The type-bars forming the usual system are similar to that illustrated and are similarly operated by key-levers and bell-cranks, and each of the usual type-bars is provided with a heel 16 for operating a segmental universal bar 17, the type-bar 10, however, being unprovided with such heel, so that it does not operate the universal bar. The latter is fixed upon a horizontal frame or table 18, which has suitable guides including idle links 19 and moves rearwardly and forwardly. It actuates a rocker 20, having escapement-dogs 21 to cooperate with the escapement-wheel 5, a spring 22 returning the dog rocker, and universal bar to normal positions.

The ribbon-carrier 9 is lifted by an elbow-lever 23, the latter being pivoted at 24 upon a bracket 25, fixed upon the platen-shift rail 2. Said lever 23 has a wrist 26, which may rise and fall in a vertical slot 27, formed in an upright lever 28, which is operable by the universal bar, so that each rearward movement of the latter throws the ribbon up to print.

The accent-key lever 13 has an arm 29 fixed thereon, the latter having a projection 30 to bear down upon an arm 31, which is



carried upon a rock-shaft 32, and also fixed upon said rock-shaft is an upstanding arm 33, which moves rearwardly when the key 12 is depressed and pushes said lever 28, while the universal bar 17 remains stationary, so that the ribbon is thrown up to cover the printing-point, when the accent-type is thrown against the platen, as seen at Fig. 1.

The ribbon-vibrating lever 28 is shiftable bodily in axial direction, or from left to right at Figs. 3, 4, and 5. For this purpose it is pivoted at 34 upon an arm 35, which depends from a slide 36, the latter being loosely retained by screws 37 upon a fixed part 38 of the framework, said screws passing through slots 39 in said slide, which permit movement of the latter from left to right together with said lever 28. The latter may be prevented from tipping facewise by means of a screw 40, which passes through a slot 41 in the lever and is threaded into the arm 35. The movement of the slide 36 is effected by a rock-shaft 42, having keys 43 on its forward end and having at its rear a pendent arm 44, which loosely engages an extension 45 of said slide. A detent 46 may engage any one of three notches 47 48 49 formed in the slide 36 to retain the latter as well as the lever 28 in any one of three positions, dependent upon whether it is to be a short stroke, a long stroke, or no stroke at all during the operation of the ordinary types. Upon the universal bar is secured, by screws 50, Fig. 5, a plate 51, having steps 52 and 53, and an intervening notch 54. The step or projection 52 is shorter than 53, and when the lever stands opposite 52 it is given a short stroke by the rearward movement of the universal bar, as illustrated in full lines at Figs. 1 and 4; but when it stands opposite the step or projection 53 it is given a long stroke, as seen in dotted lines at Figs. 1 and 4. The short stroke brings the upper color-band 7 of the ribbon into use, while the long stroke brings the lower color-band 8 into use, so that either color may be written, according to which of the keys 43 is depressed.

When the slide 36 is shifted to the midway position, so that the detent 46 rests in the notch 48, the lever 28 stands opposite the notch 54, and hence is not operated at all by the rearward stroke of the universal bar, this being a convenience for writing-stencils. The arm 33 of the accent-key mechanism is provided with corresponding steps or projections 55 56 and an intervening notch 57, Fig. 4, so that when the lever is adjusted to the desired position relatively to the stepped member 51 on the universal bar it occupies the same position relatively to the steps and notch on the arm 33 of the accent-key mechanism, and hence the accent-marks are either printed in the same color as the ordinary letters or are impressed directly upon the paper without being inked, as may be desired.

Variations may be resorted to within the scope of my invention, and portions of my improvements may be used without others.

Having thus described my invention, I claim—

1. In a type-writing machine, the combination with a platen shiftable up and down, a carriage, types and keys, of a universal bar operable by the keys, a carriage-feeding mechanism operable by the universal bar, a lever also operable by the universal bar, an accent-type key having means for operating said lever but incapable of operating the universal bar, and a ribbon-vibrating lever shiftable up and down with the platen and having a pin-and-slot connection with the first-mentioned lever.

2. In a type-writing machine, the combination with a platen, a carriage, a carriage-feeding mechanism, types and keys, of a universal bar operable by the keys and controlling said carriage-feeding mechanism, a lever operable by said universal bar, an accent-type carrier, a key-lever connected to the latter, a rock-shaft operable by said key-lever, an arm upon said rock-shaft for operating the first-mentioned lever, said accent-type-key lever being incapable of operating said universal bar, and a ribbon-vibrator controlled by the first-mentioned lever.

3. In a type-writing machine, the combination with a platen, a carriage, a carriage-feeding mechanism, types and keys, of a universal bar operable by the keys, a ribbon-vibrator, adjustable means for enabling the universal bar to move the ribbon-vibrator through variable distances, an accent-type key incapable of operating the universal bar, and means for enabling the accent-type key to vibrate the ribbon through variable distances.

4. In a type-writing machine, the combination with a platen, a carriage, a carriage-feeding mechanism, keys and types, of a universal bar operable by the keys and controlling the carriage-feeding mechanism, an accent-type key incapable of operating the universal bar, ribbon mechanism operable by the universal bar, a shiftable device for causing the universal bar to impart different throws to the ribbon at the type-strokes, and means for enabling the accent-type key to operate said ribbon mechanism; said shiftable means including means to vary the throw of the ribbon effected by said accent-key.

5. In a type-writing machine, the combination with a platen, a carriage, a carriage-feeding mechanism, keys and types, of a universal bar operable by the keys and controlling the carriage-feeding mechanism, an accent-type key incapable of operating the universal bar, a variable-throw ribbon mechanism operable by the universal bar, and means for enabling the accent-type key to operate



said ribbon mechanism; the latter including means for causing the ribbon either to be idle during the type-strokes or to be moved during the type-strokes, so as to bring either its upper or lower edge over the printing-point.

6. In a type-writing machine, the combination with a platen, a carriage, a carriage-feeding mechanism, types and keys, of a universal bar operable by the keys and controlling said carriage-feeding mechanism, an accent-type key, a rock-arm controlled by the latter and having stepped portions, a part connected to said universal bar and having similar stepped portions, a lever, means for adjusting said lever in axial direction, so that it may be engaged by either of said stepped members, and a ribbon-vibrating device controlled by said lever.

7. In a type-writing machine, the combination with a platen, a carriage, a carriage-feeding mechanism, types and keys, of a universal bar operable by the keys and controlling said carriage-feeding mechanism, an accent-type key, a member in the form of a rock-arm controlled by the latter and having steps, a member in the form of a part connected to said universal bar and also having steps corresponding to the first-mentioned stops, a lever, means for adjusting said lever in axial direction, to enable it to engage different steps, and a ribbon vibrating device controlled by said lever; said stepped members having notches; and said lever being adjustable to a position opposite said notches, so as not to be operated by either of said stepped members.

8. In a type-writing machine, the combination with a platen, a carriage, types, keys therefor, and a universal bar operable by the

keys, of a ribbon-throwing mechanism operable by said universal bar, a finger-piece, shiftable means controlled by said finger-piece for causing the universal bar to impart different throws to the ribbon at the type-strokes, an accent type and key, and means for enabling said accent-key to operate said ribbon-throwing mechanism independently of said universal bar, said shiftable means including means to vary the throw of the ribbon effected by said accent-key.

9. In a type-writing machine, the combination with a platen, a carriage, and type-operating keys to feed the carriage, of an adjustable member operable by the keys for throwing the ribbon variable distances, and an accent-type key also provided with means for moving said adjustable member variable distances, but incapable of feeding the carriage.

10. In a type-writing machine, the combination with a universal bar operable by the keys, of a lever shiftable in axial direction, a stepped member fixed to said universal bar for engaging said lever, and a ribbon-vibrating lever operated by said lever.

11. The combination with a lever and means for shifting the same in axial direction, of a ribbon-carrier operated by said lever, and a key-operated device having a stepped member for imparting variable movements to said lever according to the adjustment of the latter; said lever having a slot to accommodate the shifting movements of the platen.

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