

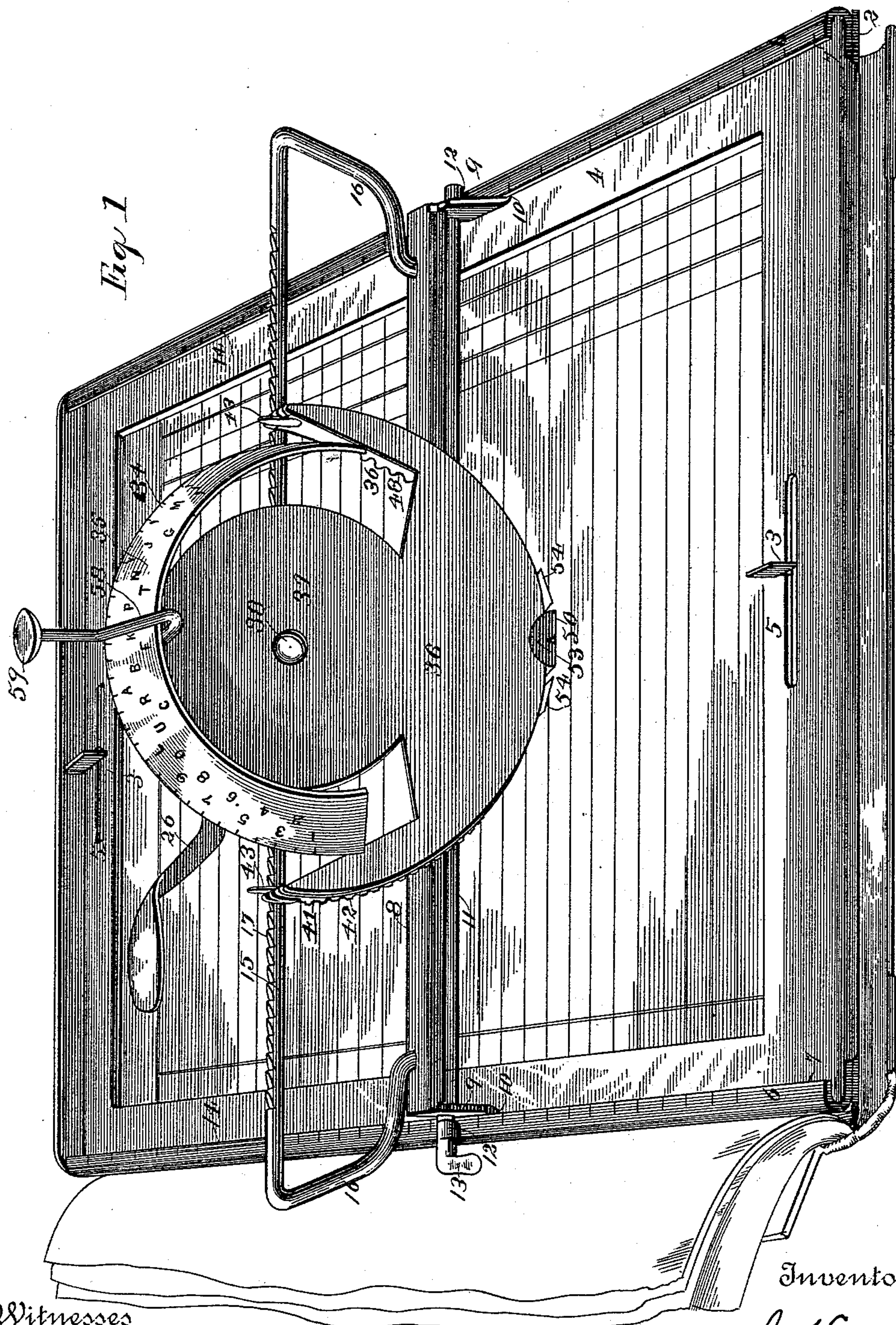
(No Model.)

3 Sheets—Sheet 1.

M. J. HEWLETT.
TYPE WRITING MACHINE.

No. 439,068.

Patented Oct. 21, 1890.



Witnesses
C. C. Burdine.
J. P. Davis.

Inventor
Maddra J. Hewlett
per R. P. Davis.
his Attorney.

(No Model.)

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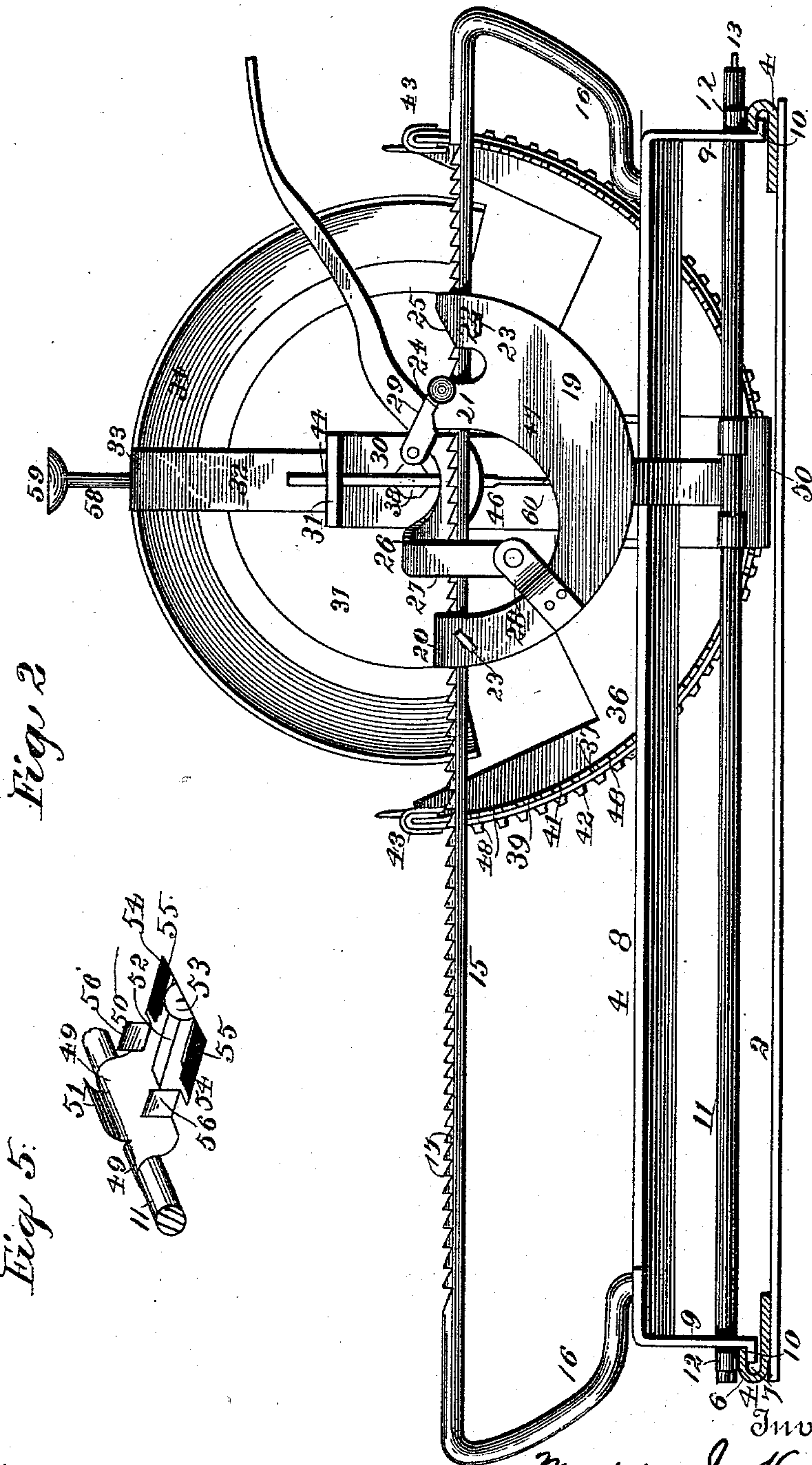
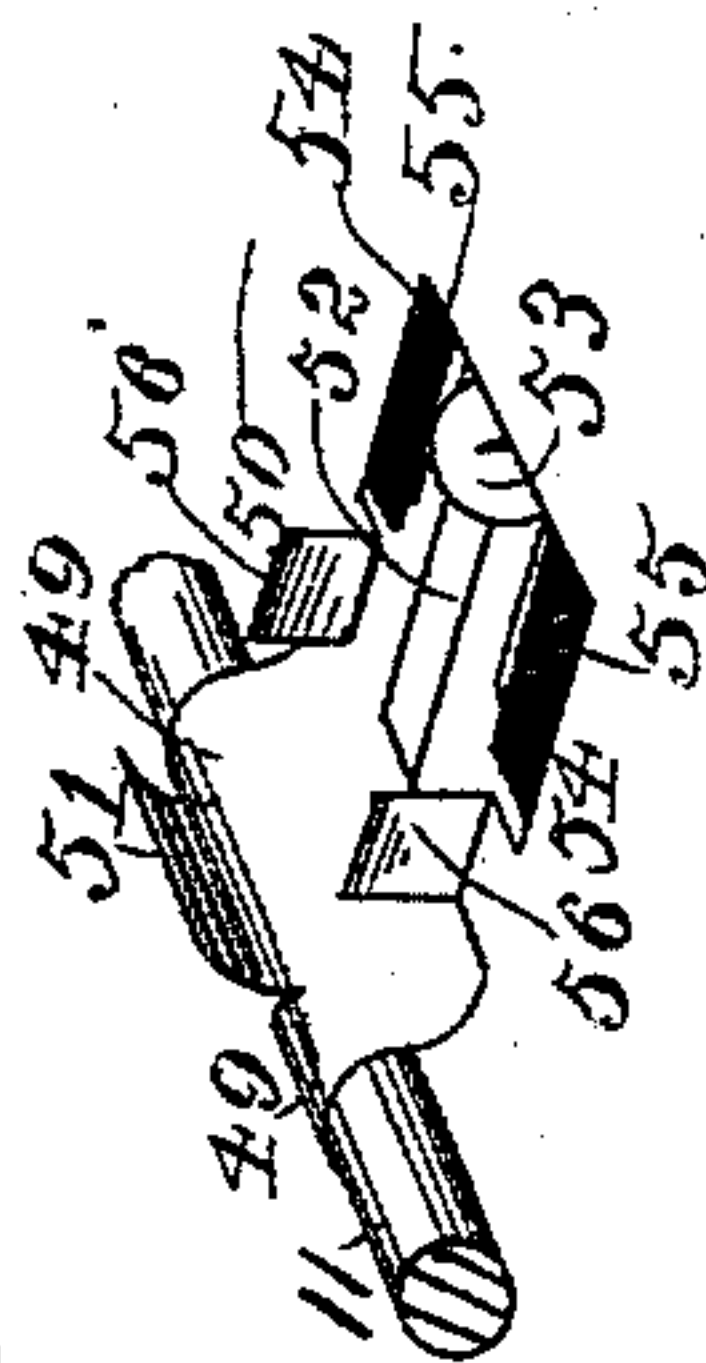


Fig. 2

Fig. 5



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Fig 4

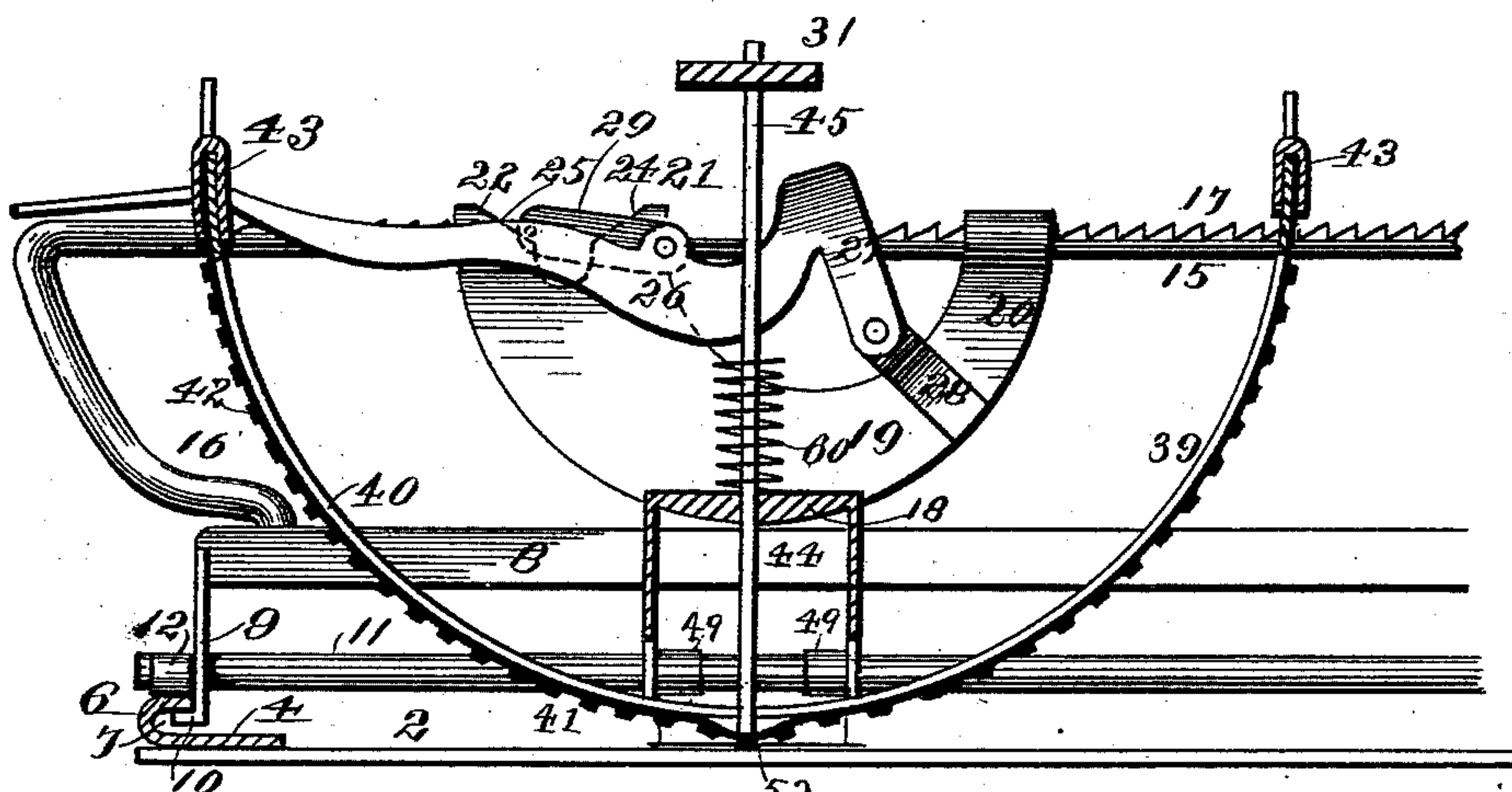
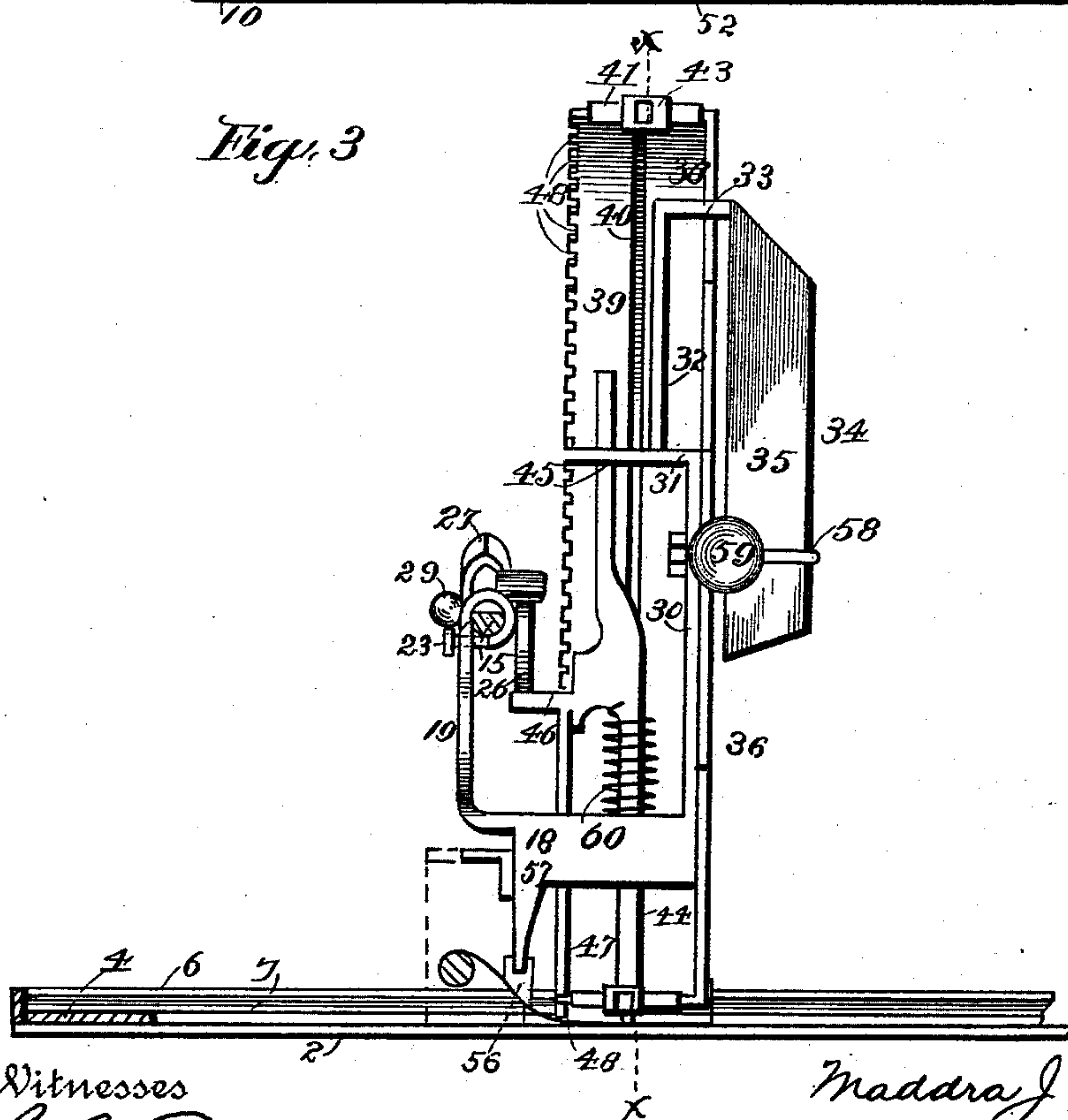


Fig. 3



Witnesses

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His Attorney

UNITED STATES PATENT OFFICE.

MADDRA J. HEWLETT, OF PADUCAH, KENTUCKY, ASSIGNOR OF ONE-THIRD
TO JAMES OWEN, OF SAME PLACE.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 439,068, dated October 21, 1890.

Application filed May 17, 1890. Serial No. 352,155. (No model.)

To all whom it may concern:

Be it known that I, MADDRA J. HEWLETT, a citizen of the United States, residing at Paducah, in the county of McCracken and State of Kentucky, have invented certain new and useful Improvements in the Type-Writing 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 has relation to type-writers, and the object sought to be accomplished is to produce a machine more readily adapted for use in writing upon books, pamphlets, postal-cards, envelopes, &c., and upon any width paper than the devices heretofore in use.

With these ends in view my invention consists in certain peculiarities of construction and combinations of parts more fully described hereinafter, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 is a front perspective of my complete arrangement; Fig. 2, a rear elevation; Fig. 3, a side view of the operating portion of the machine, showing the printing-lever depressed and the type-segment thrown up to its farthest extent; Fig. 4, a front view through line $x x$ of Fig. 3, and Fig. 5 a detail of the inking-pad.

I provide a plate 2 of suitable metal, on which the book-leaf or other matter to be printed upon is placed, and this plate is provided at its opposite ends with buttons 3. A rectangular metallic frame 4 fits down upon the plate 2 and has elongated slots 5 in its opposite end bars, through which the buttons 3 project and are then turned to clamp the plate and frame together, and hence the leaf between them. The side bars of the frame 4 are turned up and doubled over to form flanges 6, extending its entire length and leaving between them and the side bars grooves or ways 7. A transverse frame 8 extends across between the flanges 6, being provided at each end with an upright standard 9, the bases of which are turned at right angles to form projections or feet 10, fitting and traveling in the grooves or ways 7, and a rock-shaft 11 runs through

said frame and has bearings in the standards 9. This shaft projects through said standards and out over the flanges 6, and is provided with cams 12 on each end, arranged to bear upon said flanges, a suitable handle or crank-arm 13 also being formed at one end of the shaft, by means of which it is turned. It will be seen that by turning the arm 13, and hence the shaft, the cams 12 will bind upon the flanges 6 and tightly clamp the latter between them and the projections 10 of the standards 9, thus holding the frame 8 stationary at any point desired. The flanges will have division-marks 14, so that the frame can be accurately adjusted. The feed-bar 15 projects from the opposite ends of the frame 8 and is bent out from the same at each end, as at 16, to allow printing the full width of the plate 2, and the upper straight portion of the bar is provided with the usual teeth 17.

The main standard of the traveling portion of the machine has a base 18, from which extends a substantially semicircular upright 19, having three separate arms 20, 21, and 22 extending up behind the feed-bar and each arranged to straddle the same at their upper ends and held thereto by transverse pins 23, thus forming sliding guides or bearings traveling freely on the feed-bar, extending through the arms 20 and 22 and beneath said feed-bar. The arms 21 and 22 inclose one tooth of the feed-bar between them and are provided with beveled adjacent faces 24 25, for a purpose hereinafter explained.

The printing-lever 26 is arranged at its inner end 27 to straddle the feed-bar, and it is pivoted on ears 28, projecting from the standard 19 on either side of said feed-bar. A gravity feed-dog 29 is pivotally connected to the lever 26, and is adapted to engage the tooth of the feed-bar between the arms 21 and 22.

The opposite vertical portion 30 of the main standard has formed at its upper end a horizontal platform 31, from which is erected the post 32, having an outwardly-extending upper end 33, connected to the center of the index-plate 34, which is semicircular and has a flaring annular surface 35, on which are placed the usual letters and figures. Beneath this index-plate is situated the type-carrying

segment 36, consisting of the circular portion or bearing-plate 37, pivotally secured to the standard 30 by a stud 38, and a semicircular flange 39. A slot 40 is made in the center of this flange and extends almost its entire length, and the type-band 41 is stretched over the lower face of the flange with the raised line of type 42 directly over the slot 40. Clasps 43 are provided at each end, which are arranged to removably clamp the type-band to the flange by straddling the latter and inclosing the ends of the band, thus making the substitution of new type an easy matter.

An indicator or arm 58 is secured to the upper portion of the plate 37 and is bent out and thence back over the face of the index-plate and provided with a finger-piece 59, so that by means of this arm the type-segment can be shifted to any point desired.

The punching-bar 44 is arranged behind the post 32 and has a square upper end 45, operating in a corresponding opening in the platform 31, to prevent it from turning, and its lower end extends through the base 18, directly over the slot 40. This punching-bar has a rearward projection or offset 46, projecting beneath the printing-lever 26, from the center of which extends downwardly a rod 47, passing through the base 18 and projecting slightly beyond the lower end of the bar 44. A coil-spring 60 surrounds the punching-bar between the projection 46 and the base 18 and acts to keep the bar in elevated position. The inner edge or rim of the flange 39 has a series of notches 48, one for each type, and the rod 47 is adapted to engage said notches, as will hereinafter appear.

Beneath the flange 39 and the type an inking device is situated, which consists of a frame 50, having rearwardly-extending arms 49, surrounding the shaft 11 and sliding on it, and an upwardly-turned lip 51, engaging frame 8 to hold the inking device in proper position. The central portion of the frame 50 is provided with a longitudinal slot 52, arranged to come beneath the lower end of the punching-bar, and a lip 53 is turned up from said central portion to bear against the front face of the type-segment to further steady the inking-frame. On either side of the inking portion arms 54 project, and on them are placed the inking-pads 55. The inking-frame is moved along with the type-segment and connections by means of lugs 56, projecting upwardly from it and engaged by corresponding lugs 57, depending from the base 18 of the main standard. Thus it will be seen that whichever way the carriage is moved the inking-pad is carried with it, and at the same time access can be readily had for purposes of reinking or renewing the pads by simply throwing back the type-segment and connections.

The preferred construction of my device having been set forth, I will now proceed to describe its operation. The book-leaf or other

matter to be printed upon having been clamped between the plate 2 and frame 4, as previously set forth, and the feed-bar having been set at the desired line, by turning the rock-shaft 11, and thus binding the cams 12 upon the flanges 6, the operator will slide the carriage to the point at which it is desired to commence. The letters and figures on the index-plate accord with those upon the type-band, and consequently when the indicating arm 58 is brought over the letter desired the same letter on the type-band will be directly beneath the punching-bar. Now upon depressing the lever 26 it will be seen that the feed-dog 29 will act to shove along the carriage one notch, and at the same time it will bear upon the projection 46 and push down upon the punching-bar and rod 47. Said punching-bar being, as previously stated, directly over the slot in the type-flange will be pushed through the latter and upon the type, which has been brought directly beneath it. At the same time the rod 47 engages the notch opposite the letter being printed, and thus holds the type-segment stationary and a clear imprint is obtained. The rod 47, extending slightly below the punching-bar, limits the movement of the latter by coming in contact with the plate 2. When the printing-lever is released, the reaction of the spring 60 will return the punching-bar, rod, and lever to their normal positions ready to be again operated to print the next letter desired. In the normal position of these parts the feed-dog will be resting against the beveled edge of the arm 21, and when the lever is depressed will be guided down said inclined surface into the tooth, and when the carriage has been carried the length of this tooth this dog will strike the beveled edge of the beveled arm 22 and be lifted free of the rack while the punching-bar is operating to print the letter. While one letter is being printed those on either side of it will be pressing upon the inking-pads 55, and thus the type will be kept constantly inked. The spacing is accomplished either by a half-stroke of the printing-lever or by bringing the indicator-arm to a vertical position when a blank is left in the type-band.

It is evident that my arrangement could be varied in many slight ways which might suggest themselves to a skilled mechanic. Hence I do not wish to limit myself to the precise construction herein shown, but consider myself entitled to all such slight variations as come within the spirit and scope of my invention.

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

1. In a type-writing machine, the combination of a plate on which the matter to be printed upon is placed, a frame arranged to be clamped to it, a printing device traveling in ways in said frame, and a rock-shaft journaled in the frame of the printing device and

provided with cams for binding said printing device in said ways, substantially as described.

2. In a type-writing machine, the combination of a plate, a frame arranged to be clamped to the same, flanges turned up from said frame, a printing device, feet projecting from the frame of the latter and traveling beneath said flanges, and a rock-shaft provided with cams arranged to bind said flanges to hold the printing device, substantially as described.

3. In a type-writing machine, the combination of a frame arranged to be fixed at the desired line, a feed-bar fastened to said frame, a main standard traveling on said feed-bar, a printing-lever pivoted on said frame, a gravity feed-dog depending from said lever and engaging the teeth of the feed-bar, a punching-bar mounted in said standard to have sliding vertical movement, a projection from said bar engaged by said printing-lever, a type-carrying segment hinged to the standard and provided with a slot beneath said punch-bar, a line of type fastened to said segment and coming directly beneath said slot, an index-plate carrying letters, &c., to correspond with said type, and an indicator-arm connected to said type-segment and extending over said index-plate, substantially as described.

4. In a type-writing machine, the combination of a plate on which the matter to be written upon is placed, a frame clamped thereto, and a printing device traveling in ways in said frame and consisting of a transverse frame, a feed-bar connected to it, a main standard traveling on said feed-bar, a printing-lever pivoted to said standard, a gravity feed-dog depending from said lever and engaging the teeth of the feed-bar, a punching-bar mounted to have vertical movement in said standard, a projection from said punching-bar engaged by said printing-lever, a guide-rod depending from said projection and arranged to come in contact with the plate beneath to limit the movement of the

punching-bar, a type-carrying segment hinged to said standard and provided with a flange coming beneath the punching-bar and guide-rod and having depressions engaged by the latter and also provided with a slot, a line of type on said flange directly beneath said slot, an index-plate bearing letters, &c., corresponding to said type, and an indicator-arm connected to said type-carrying segment and extending over said index-plate, substantially as and for the purpose described.

5. In a type-writing machine, the combination of a frame arranged to be fixed at the desired line, a feed-bar projecting therefrom, a main standard provided with arms traveling on said feed-bar, two of said arms inclosing between them one tooth of the feed-bar and being provided with beveled adjacent edges, a printing-lever hinged to the standard, a gravity feed-dog pivoted to the printing-lever and arranged to engage the tooth of the bar between the two arms of the standard, a punching-bar operated by said printing-lever, a type-segment pivoted to the main standard, a corresponding index-plate, and an indicator-arm for shifting the type-segment, substantially as described.

6. In a type-writing machine, the combination, with a feed-bar, a standard traveling in the same, a printing-lever pivoted on said standard, a gravity feed-dog, a punching-bar, type-segment, and an index-plate, of an inking device consisting of a frame having arms sliding on a shaft mounted in the frame of the machine, and inking-pads on each side of a central slot beneath the punching-bar and also provided with projections engaged by corresponding ones depending from the main standard, whereby it is carried along with said standard, substantially as described.

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

MADDRA J. HEWLETT.

Witnesses:

RICH'D. RUDY,
W. F. PAXTON.