

No. 619,365.

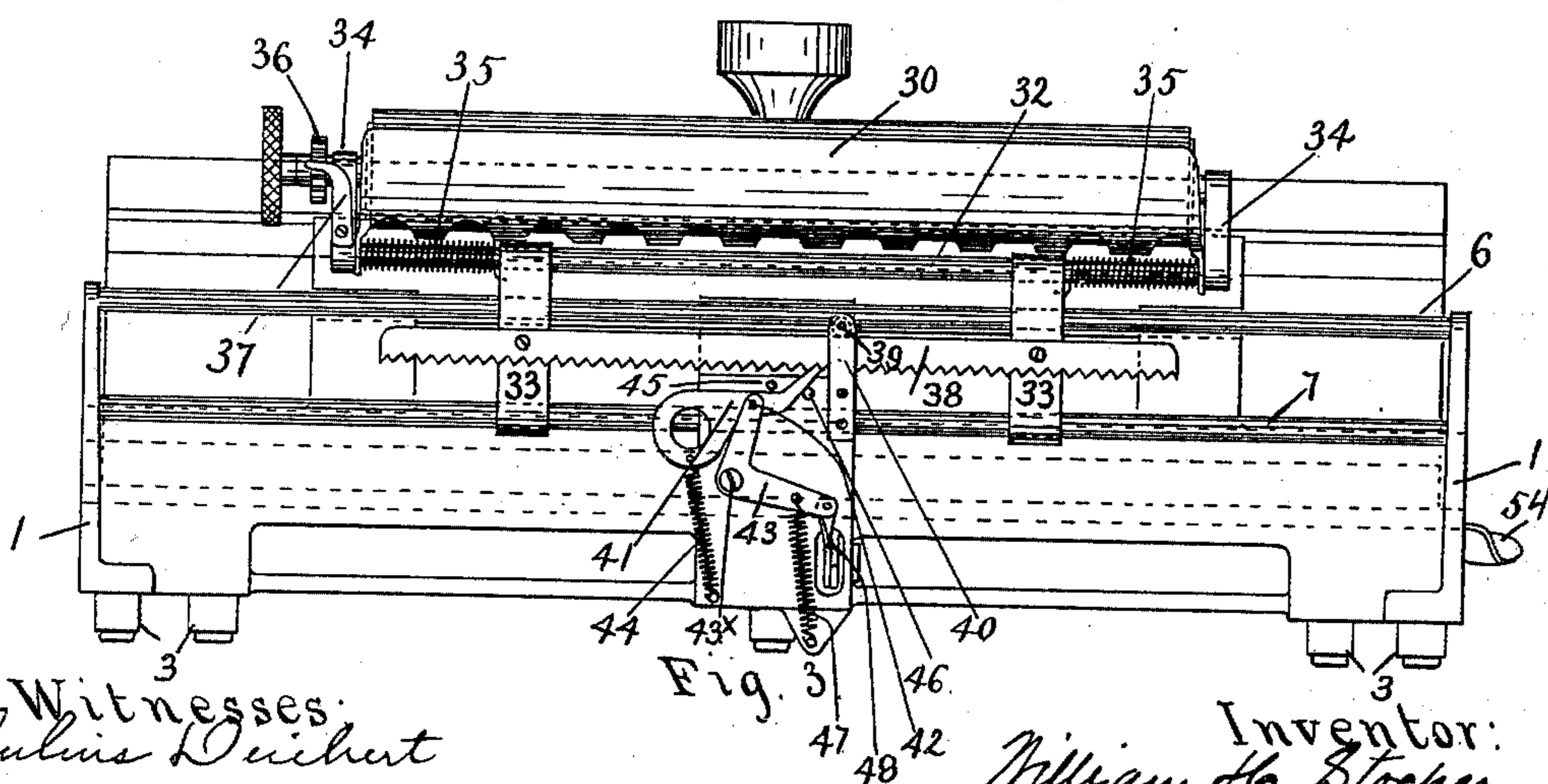
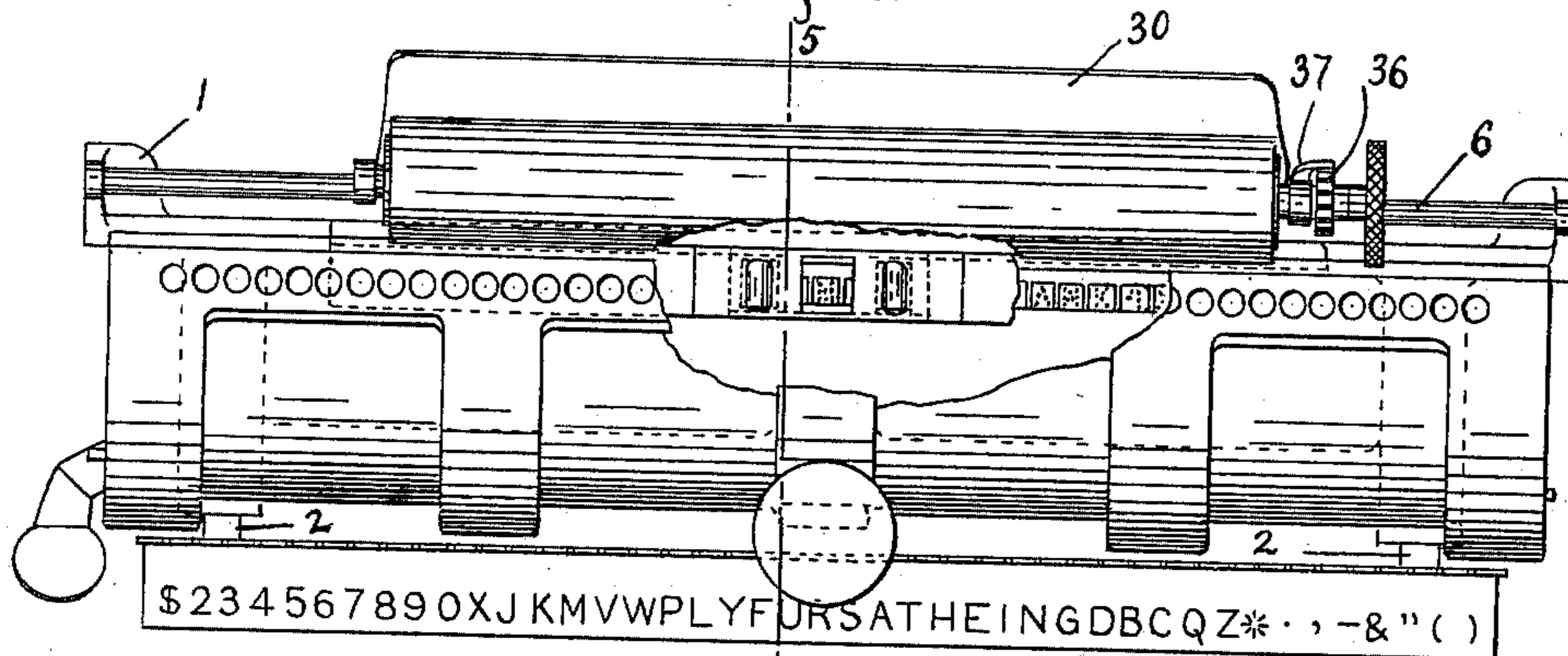
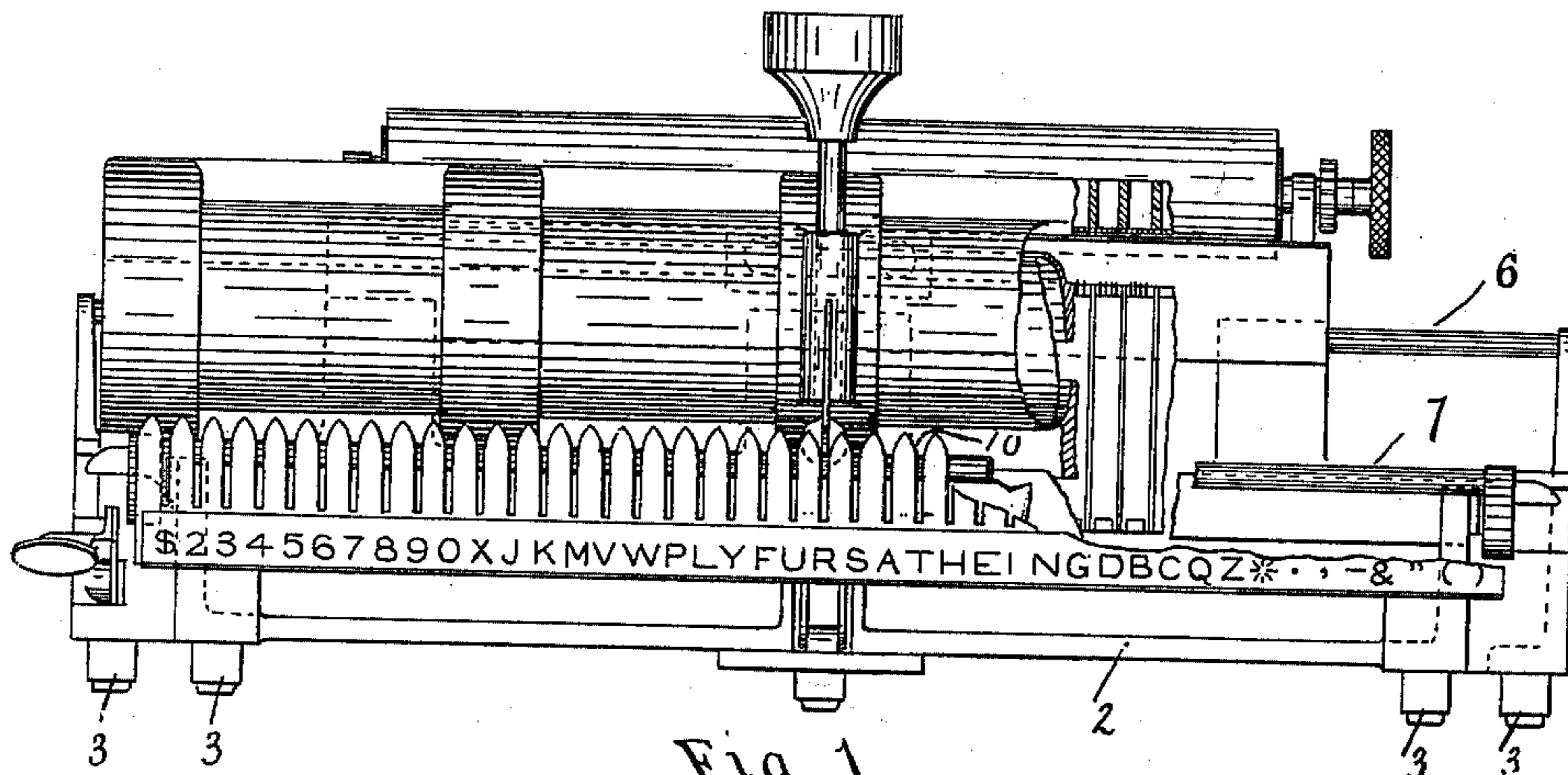
Patented Feb. 14, 1899.

W. H. STOCKER.
TYPE WRITING MACHINE.

(Application filed June 29, 1897.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:
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Inventor:
William H. Stocker
by his attorney
Edward S. Beach

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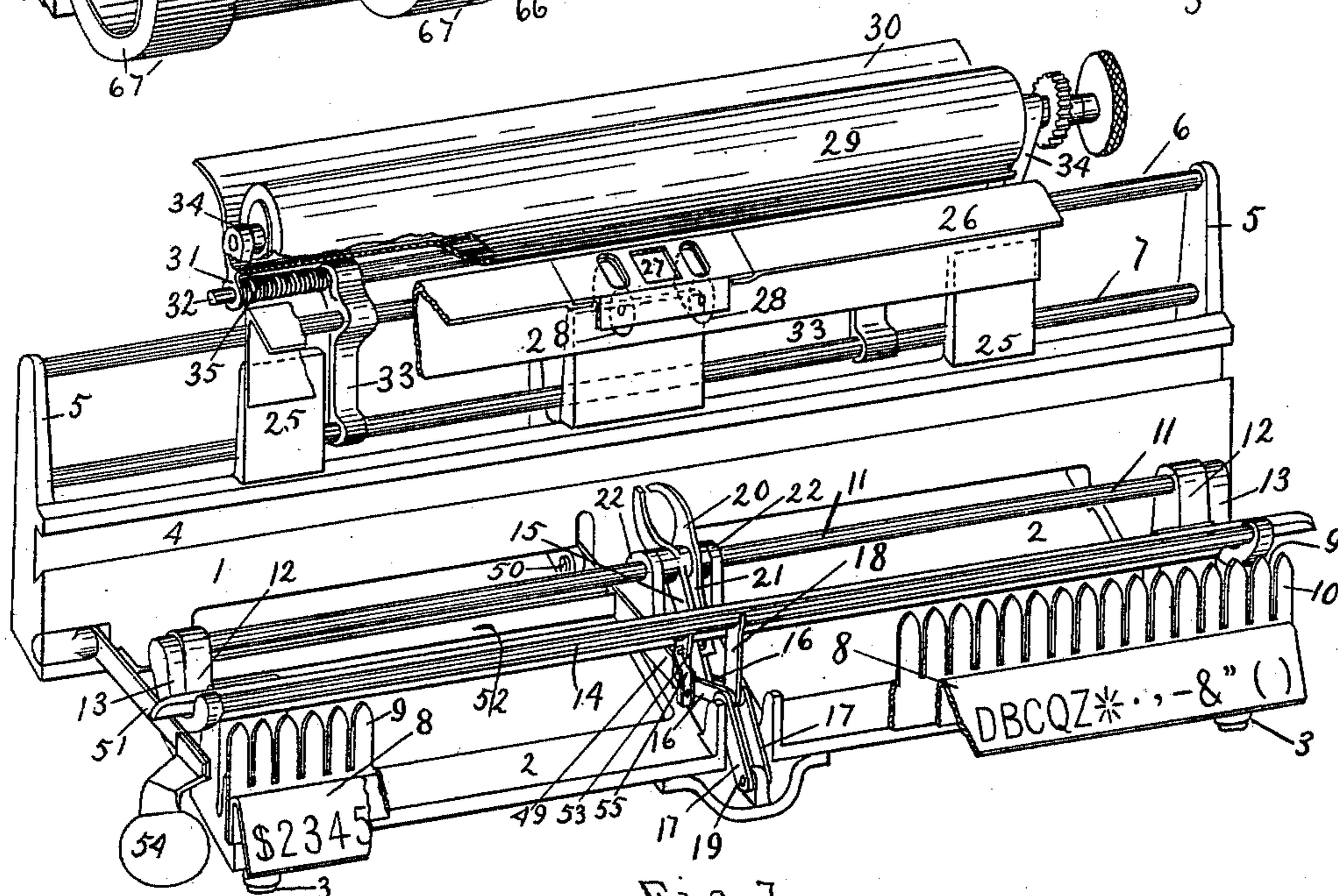
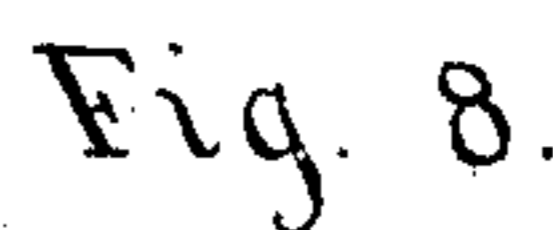
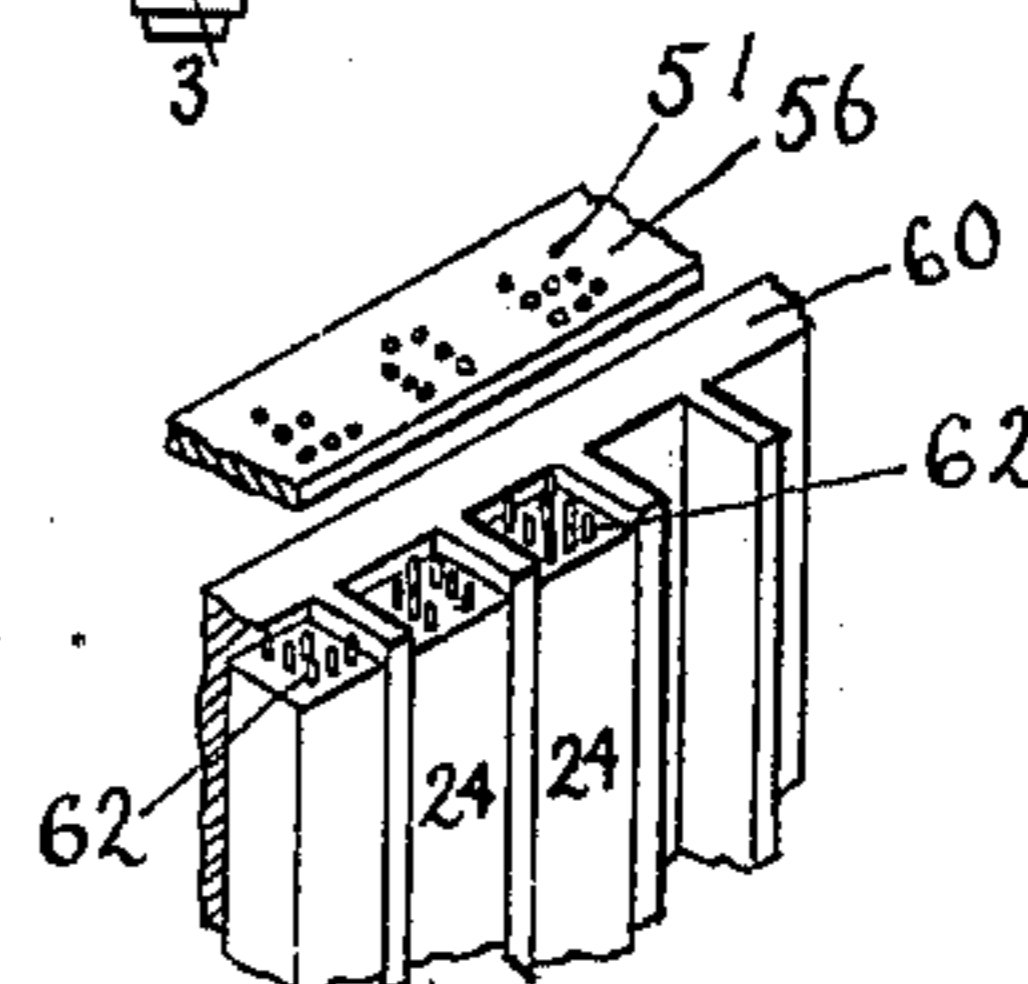
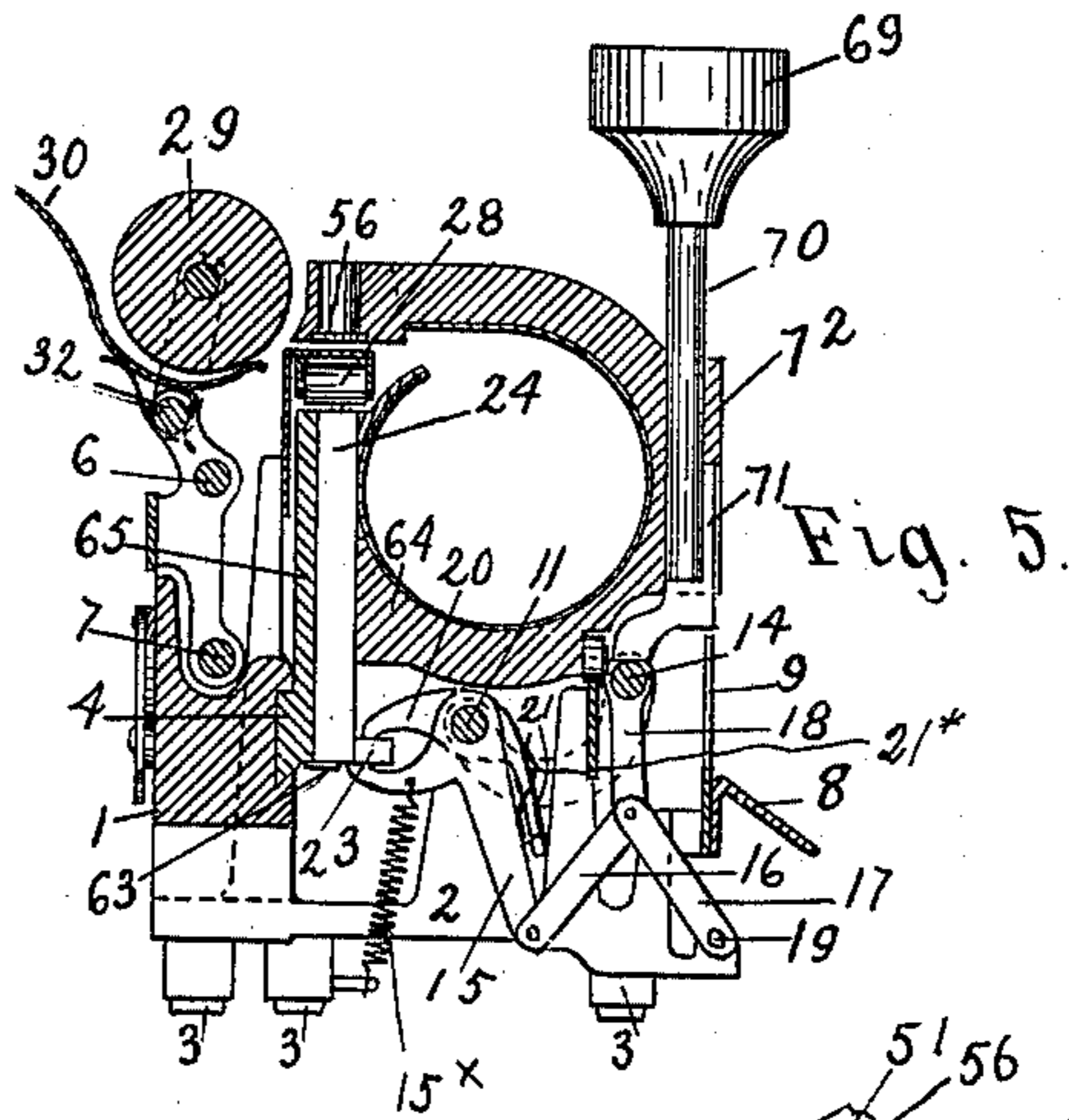
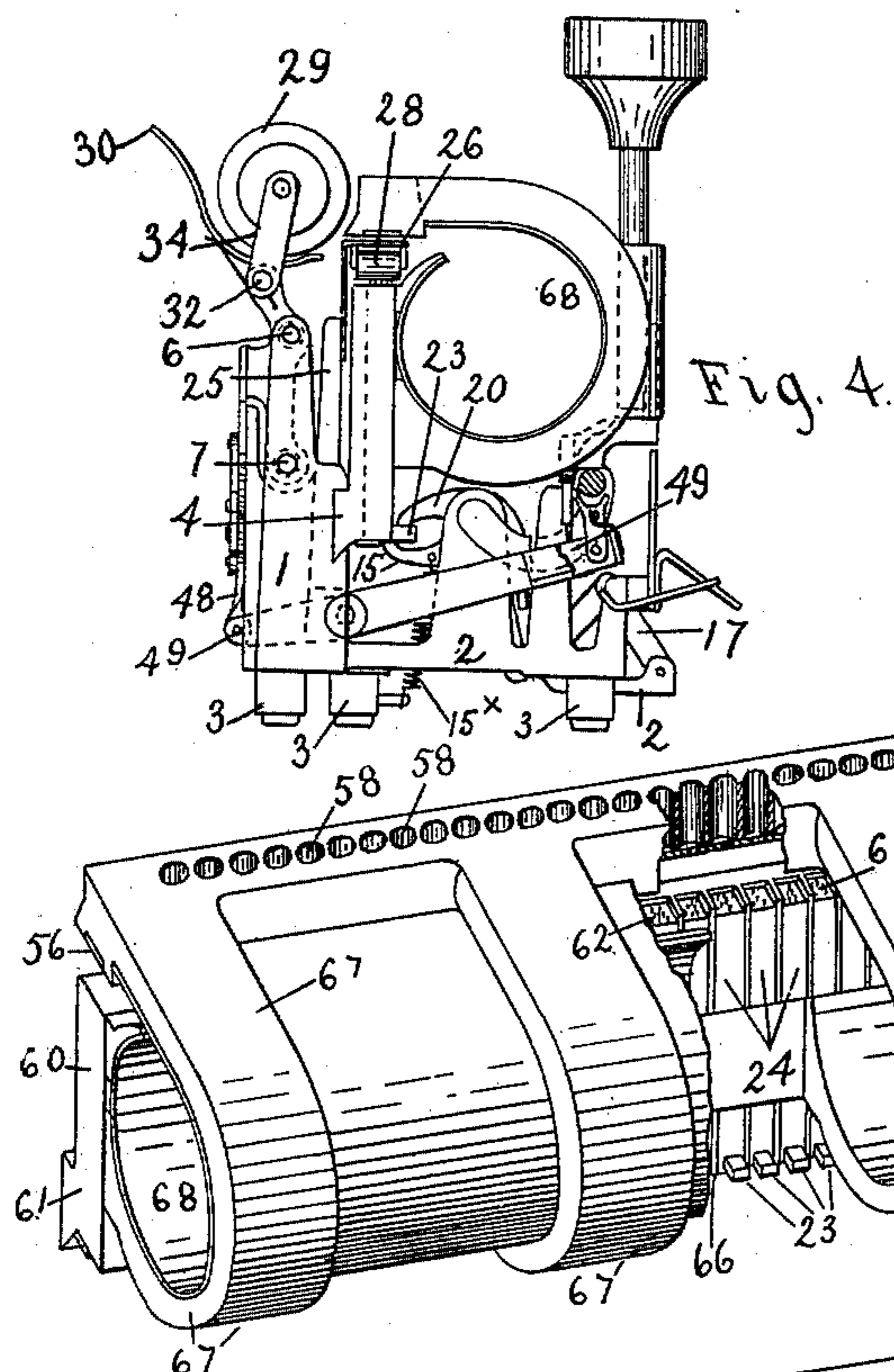


Fig. 7.

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UNITED STATES PATENT OFFICE.

WILLIAM H. STOCKER, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE
VICTOR MANUFACTURING COMPANY, OF MAINE.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 619,365, dated February 14, 1899.

Application filed June 29, 1897. Serial No. 642,793. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. STOCKER, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved Perforating Type-Writer, of which the following is a specification.

Reference being had to the accompanying drawings, Figure 1 is a front elevation, Fig. 2 a top plan view, Fig. 3 a rear elevation, and Fig 4 an end elevation, of one form of machine embodying my invention. Fig. 5 is a transverse sectional elevation of the machine on line 5 5 of Fig. 2. Fig. 6 is a perspective view of a portion of the combined die-plate, type-carrier, and paper-receiver detached, a part being broken away for greater clearness. Fig. 7 is a perspective view of my machine, the combined die-plate, type-carrier, and paper-receiver being removed for greater clearness and a part being broken away to show more clearly the attachment for the paper-carriage. Fig. 8 is a perspective view of the die-plate and the type-bars in their settings.

The object of my invention is to produce a type-writing machine which perforates the paper in forming the characters, the perforations which form the characters being formed with or without inked or otherwise colored edge or marginal portions, accordingly as the machine is provided with a color-applying mechanism.

My invention consists in the combinations hereinafter described and claimed.

In the drawings illustrating the principle of my invention and the best mode now contemplated by me of applying that principle, 1 is the back piece, and 2 the base extension, of the stationary frame of the machine, the back piece being upright and the base extension horizontal, so that the stationary frame rests either on the bottom of the back piece and of the base extension or on the legs or supports 3, with which the stationary frame is preferably provided. Back piece 1 is provided on its front side with a lengthwise-extending dovetailed groove 4 and at or near its ends with uprights 5 5, in which the parallel rods 6 7 are mounted, these rods extending, like the groove 4, lengthwise of the stationary frame. The front extension 2 supports a lengthwise-extending index-guide 8, having a

series of alternating vertical slots 9, open at the upper end, between the teeth 10. It also supports a lengthwise-extending rocker-shaft 11, mounted in its uprights 12. The rocker-shaft 11 carries the fixed forwardly-extending rocker-arms 13 13, the outer portions of which are connected by the lengthwise-extending rod 14. Shaft 11 forms the fulcrum of a lever 15, the forward end of which is loosely jointed to the parallel bars 16 16, which, with the parallel bars 17 17, form a toggle, the opposed ends of the bars 16 16 and 17 17 being loosely pinned to the upright bar 18, the upper portion of which engages with rod 14. The outer or forward ends of bars 17 17 are loosely pinned at 19 to the base extension 2. Rocker-shaft 11 is also provided with a lever 20, the tail-piece 21 of which is free and kept in a downward position by a spring 21*, one end of which is fixed to lever 15, and the other end presses on the tailpiece 21 of lever 20, so that when spring 15* pulls lever 15 down after pressure is removed from rod 14 by the removal of the hand of the operator from the key 69 lever 20, bearing on lug 23 of a type, presses the type downwardly with a slightly-yielding action at the completion of its downward movement. The free inner ends of the levers 15 and 20 move upwardly together when the rod 4 is moved downwardly by pressure on said key, and these inner ends of the levers 15 and 20 move downwardly together under stress of spring 15* when the rod 4 is free to move upwardly by removal of downward pressure on the key. Spring 21* keeps the tailpiece 21 down, and consequently keeps the free inner end of the lever 20 up and just above the upper surfaces of the lugs 23, so that the type-carrier and attached parts may be slid endwise without contact between the upper surfaces of said lugs and the opposed surface of the free end of the lever 20.

Levers 15 and 20 are retained in position about midway between the extremities of the machine by the uprights 22 from extension 2, between which uprights these levers are loosely mounted on the shaft 11. The front ends of the levers 15 and 20 are opposed so as to receive between them the forwardly-extending lugs 23 on each of the series of types 24. Attached to the lever 15 and to a leg 3

is a spring 15^x, which acts to keep the front end of lever 15, which presses on the base of the type-bars 24, in the lowest position. By the action of the toggle-joint lever 15 presses the type-bar up through the die-plate and is then pulled back by the spring 15^x, and lever 20 presses downward on the lug 23 of the type-bar, so as to pull the type-bar down to its lowest position, resting on a metal strip 63.

Referring again to the stationary frame of the machine, the frame is provided with uprights 25 25, which support a longitudinal web 26, perforated at 27 between its ends directly at the point of impression, with which levers 20 15 approximately correspond. At each side of the perforation 27 there are mounted beneath web 26 ink-rolls 28 28. The paper-carriage comprises a paper-roll 29 and a cooperating plate 30, which is attached by its perforated lugs 31 to the rod 32, which extends lengthwise the machine and is mounted in the carriage-supporting arms 33 33, through which the rods 6 and 7 pass. Arms 33 slide on rods 6 and 7. The paper-roll 29 is journaled in arms 34 34, which are fixed on and project upwardly from the extremities of the rod 32. A spring 35 is interposed on rod 32 between each arm 34 and its nearer carriage-supporting arm 33 on rods 6 and 7. The purpose of springs 35 is to keep plate 30 in place against the feed-roll.

The journal of the paper-roll is provided with a ratchet-wheel 36, with which a pawl 37, mounted on the bar 34, cooperates to hold the paper-roll in any desired relative position. The paper-carriage-supporting arms 33 33 carry a lengthwise-extending rack-bar 38, toothed on its under edge, and on its upper edge forming a track for the carriage-retaining roll 39, which lies above the rack-bar 38 in the path thereof and helps to steady the carriage in its reciprocation from end to end of the machine. This roll 39 is journaled on an upright 40 from the stationary frame. The back piece 1, about midway between its ends, carries a suitable escapement-tooth 41, loosely pinned at 42 to the angular rocker-arm 43, which is journaled to the back piece 1. To the tail of the escapement-tooth 41 a spring 44 is attached, and the free end of the escapement-tooth 41 is confined in its upward and downward vibration between the upper and under projecting pins 45 and 46. The lower arm of the rocker-lever 43 is connected with a spring 47, which tends to keep it in its lowest position and to thereby keep the free end of the escapement lever or tooth 41 in engagement with the rack 38 to feed the paper-carriage step by step or to keep it from back motion. When the escapement is out of engagement with rack 38 and released, spring 47 pulls the escapement into contact with a tooth on the rack and the carriage is fed to the left. The end of the lower arm of the rocker-lever 43 is connected by link 48 with the forwardly-extending lever 49, journaled at 50. Lever 49 is also

connected with a rocker-arm 51 by the brace 52. The forward end of the rocker-lever 49 is provided with an upright 53, which engages with the rod 14, so that when the rod 14 swings downwardly the lower or outer end of angular lever 43 is raised through the described connections to release the escapement-tooth 42 from rack 38 and permit the automatic endwise movement of the paper-carriage under the stress of spring 47. The rocker-arm 51 is provided with the space-key 54, and when this is depressed the carriage is fed just as when the rocker-arm 49 is depressed. Upright 53 is kept in place preferably by a spring 55.

The die-plate, type-carrier, and paper-receiver are connected with the hereinbefore-described mechanism and are adapted to be moved by hand in either direction. The die-plate 56 extends lengthwise of the machine and is provided with perforations 57, corresponding in arrangement with the perforating-pins 62 on the type-bars 24. Above the die-plate is a row of circular perforations 58, which allow the paper cut out by the pins 62 to escape and prevent the clogging of the type-bars 24. This die-plate 56 is rigidly connected in any suitable manner with the parallel and opposed type-carrier 60. From the rear of the type-carrier a dovetail rib 61 projects to slide in the groove 4. The types now shown are of the perforating kind, being formed of small pins 62, which project above the upper faces of the type-bars. A rib 63 extends lengthwise of the type-carrier 60 beneath the type-bars to keep them in place, the forward lugs or projections 23 extending forwardly beyond the front edge of that rib, so as to pass over the type-lifting lever 15, which lifts the type by pressing on its base. The several type-bars are endwise movable in vertical spaces formed in the type-carrier by the front and rear portions 64 and 65 and by vertical webs 66, which are between the type-bars. The die-plate and parallel type-carrier are connected, preferably, by the bent connections 67, the die-plate and carrier being left open at each end and kept straight and parallel, so that paper fed from the roll is passed between the die-plate and type-carrier and while between is perforated with the desired characters in the type-bars corresponding to the characters on the index-scale. The characterized paper is conveniently received in this form of my machine in the hollow space 68 formed within the connections 67. A sheet of mica or thin celluloid or the like may be mounted within the connections 67 and form a desired receptacle for the perforated paper. If ink or suitable coloring-matter be supplied to the perforating characters on the type-bars, these characters will produce perforations which show color at the edges or margins and are consequently incapable of effacement; but, if desired, the inking or coloring device may be omitted.

The key consists of a round flat head 69,

mounted on round stem 70, which works up and down through a circular aperture in a projection 72 on the center band 67. Set in the lower part of the stem 70 is a thin projecting
 5 piece of metal 71, the lower end of which curves inward and rests on bar 14. This metal projects from the stem 70 in the front, so that when the key is pressed downward the metal 71 fits into a space 9 between two
 10 prongs 10, and thus insures the accurate placing of the type-carrier and die-plate to secure the perforation on the paper of the desired character. The metal projects through a narrow slit in the projection 72, the slit being
 15 carried half the height of the projection 72, so that it is impossible to pull the key out of the hole.

Machines embodying my invention may be used as check-punches or for writing legal
 20 and other documents in such wise as to insure them against fraudulent alterations.

The machine above described may be varied in many respects without departure from my invention.

25 What I claim is—

1. In a type-writing machine the combination of a straight die-plate with a straight and parallel type-carrier, the die-plate and type-carrier being connected by outwardly-extending
 30 ing parts which leave an open space, between the opposed extremities of the die-plate and type-carrier, for the proper movement of the paper thereinbetween and beyond said extremities, and form a chamber for the reception of the paper being printed.

2. In a type-writer, the combination with a type-carrier having a series of type-bar-receiving slots and a contained series of type-bars each provided with a projection; of a
 40 spring-controlled rocker-lever; a toggle connected therewith and with the frame of the machine; a rocker-frame comprising a bar running lengthwise the machine; a type-bar-

actuating key engaging said bar; and mechanism substantially such as described to connect said bar and toggle. 45

3. In a type-writer, the combination with a stationary frame having endwise-extending paper-carriage-supporting rods; an endwise-movable paper-carriage; of a combined die-
 50 plate and type-carrier rigidly connected and endwise movable; a type-bar-actuating key mounted in the frame of the combined platen and carrier, the latter being provided with a plurality of type-bars each having a projection; mechanism substantially such as described for intermittently connecting the key
 55 and a type-bar to actuate the same; a spacing mechanism, substantially such as described, for the paper-carriage; and a toothed guide-rack with which said type-bar-actuating key engages when depressed. 60

4. The combination of a stationary supporting-frame; a toothed index-bar mounted on the frame; a combined straight die-plate,
 65 and parallel, straight, endwise-movable type-carrier containing a series of independently-movable type-bars; a type-bar-operating key or plunger; mechanism intermittently connecting the key with any desired type-bar
 70 in the carrier; an endwise-movable paper-carrier mounted on said supporting-frame; a suitable step-by-step feeding mechanism therefor, mechanism for intermittently connecting the key with said step-by-step feeding mechanism; and means for inking the
 75 characters of the type-bars.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 26th day of
 80 June, A. D. 1897.

WILLIAM H. STOCKER.

Witnesses:

EDWARD S. BEACH,
 E. A. ALLEN.