

No. 713,685.

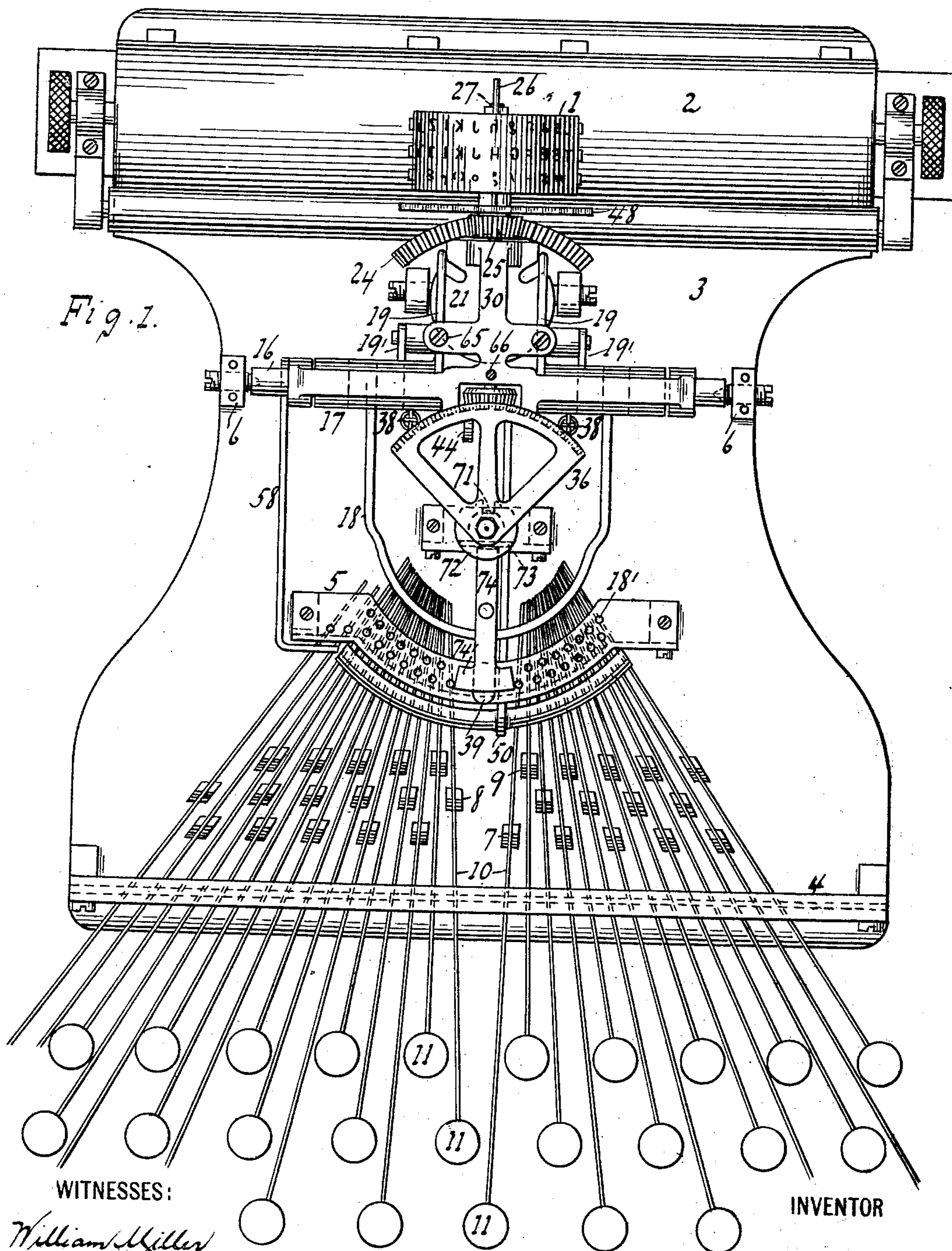
Patented Nov. 18, 1902.

W. P. QUENTELL.
TYPE WRITING MACHINE.

(Application filed Apr. 12, 1902.)

(No Model.)

3 Sheets—Sheet 1.



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Fig. 6.

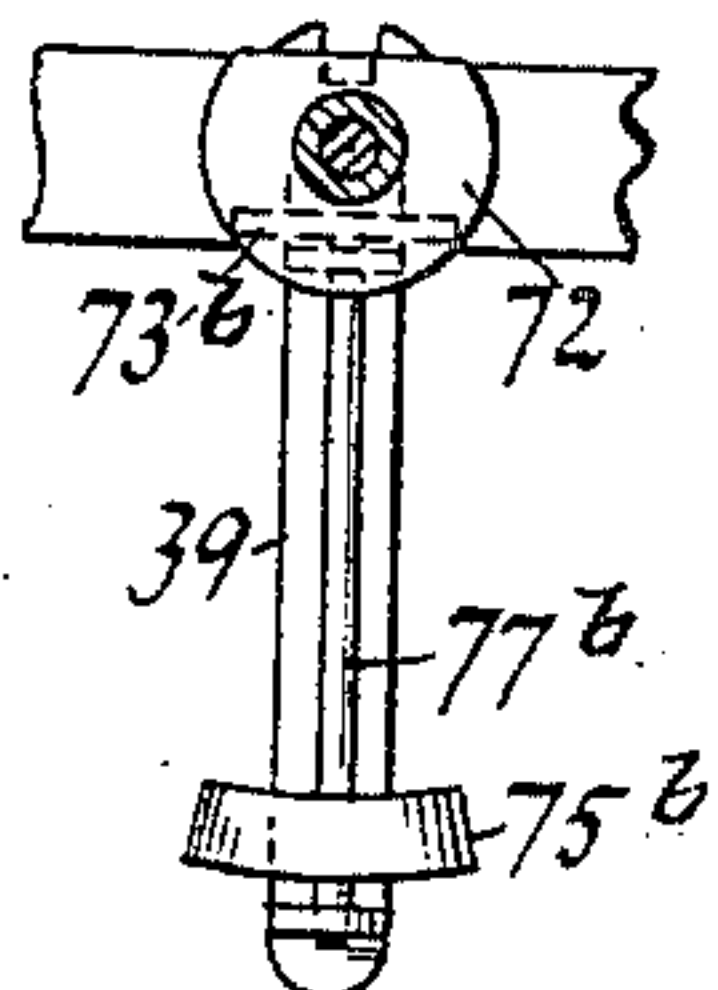


Fig. 2.

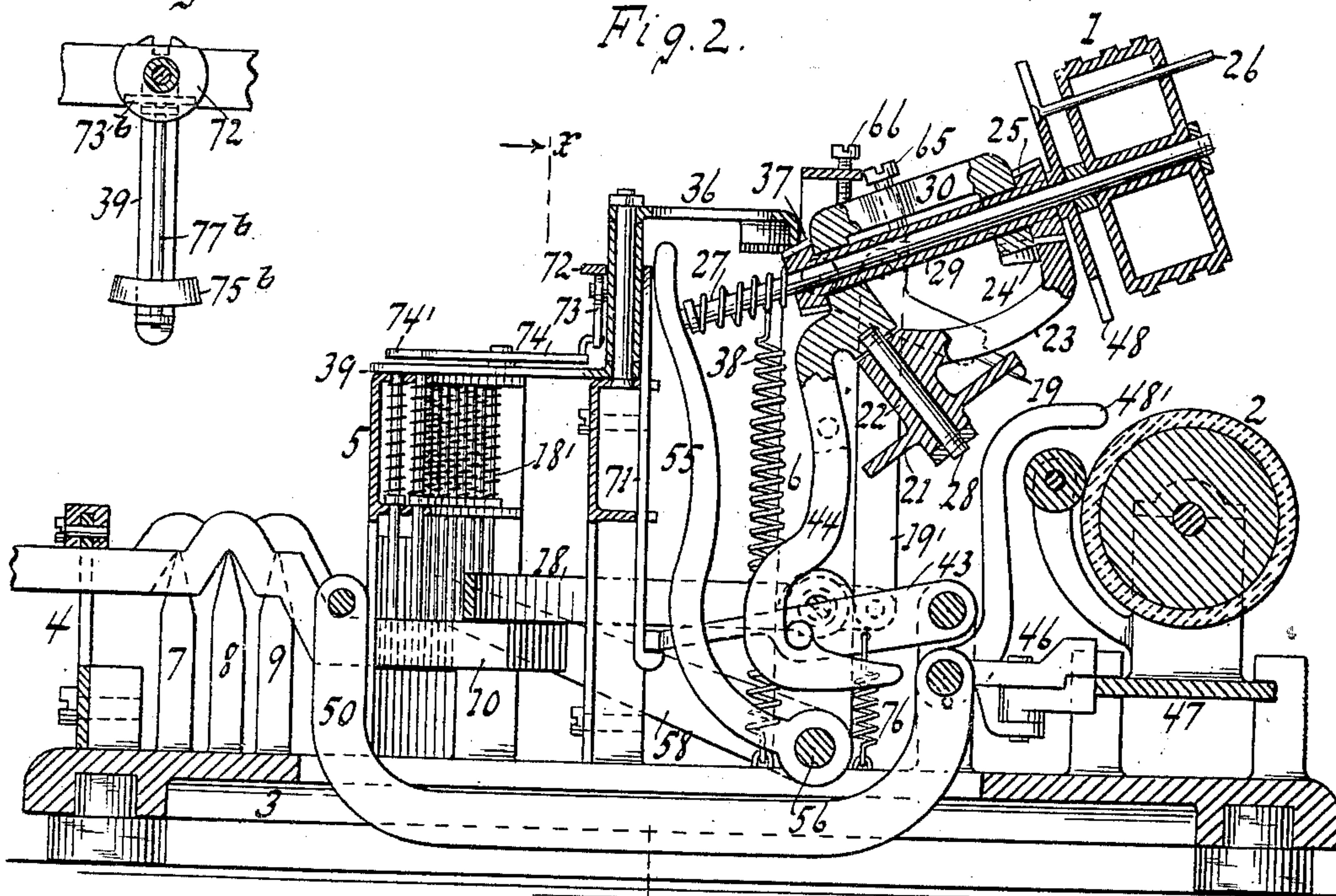


Fig. 3.

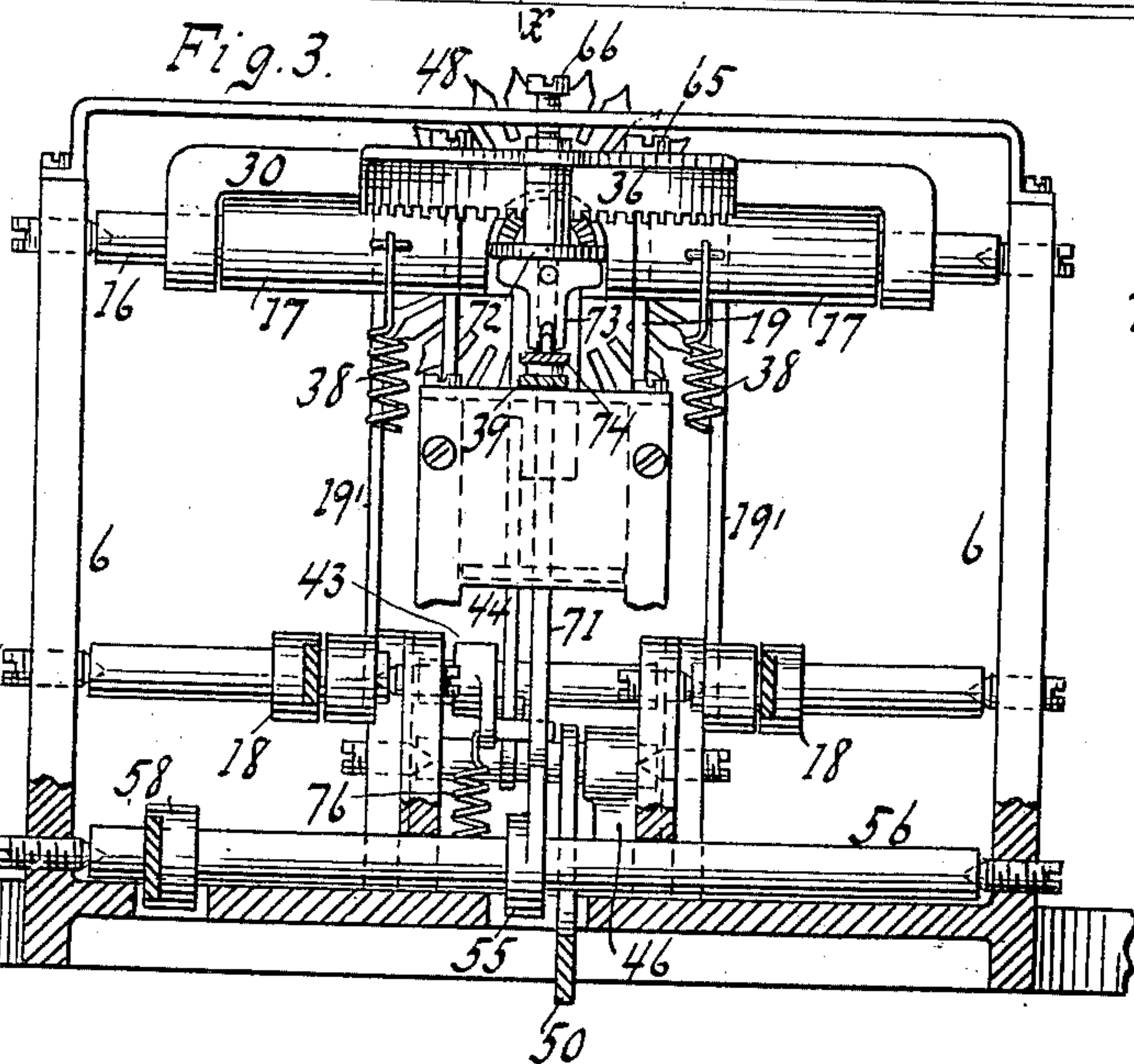


Fig. 4.

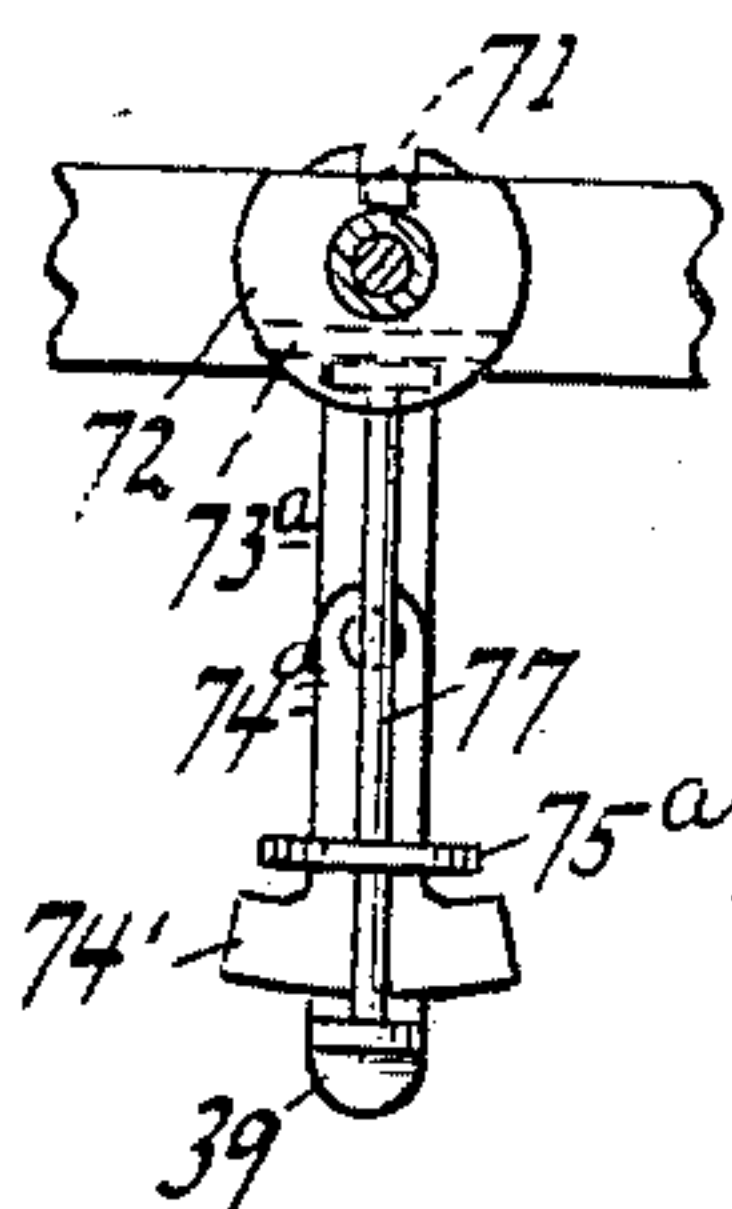
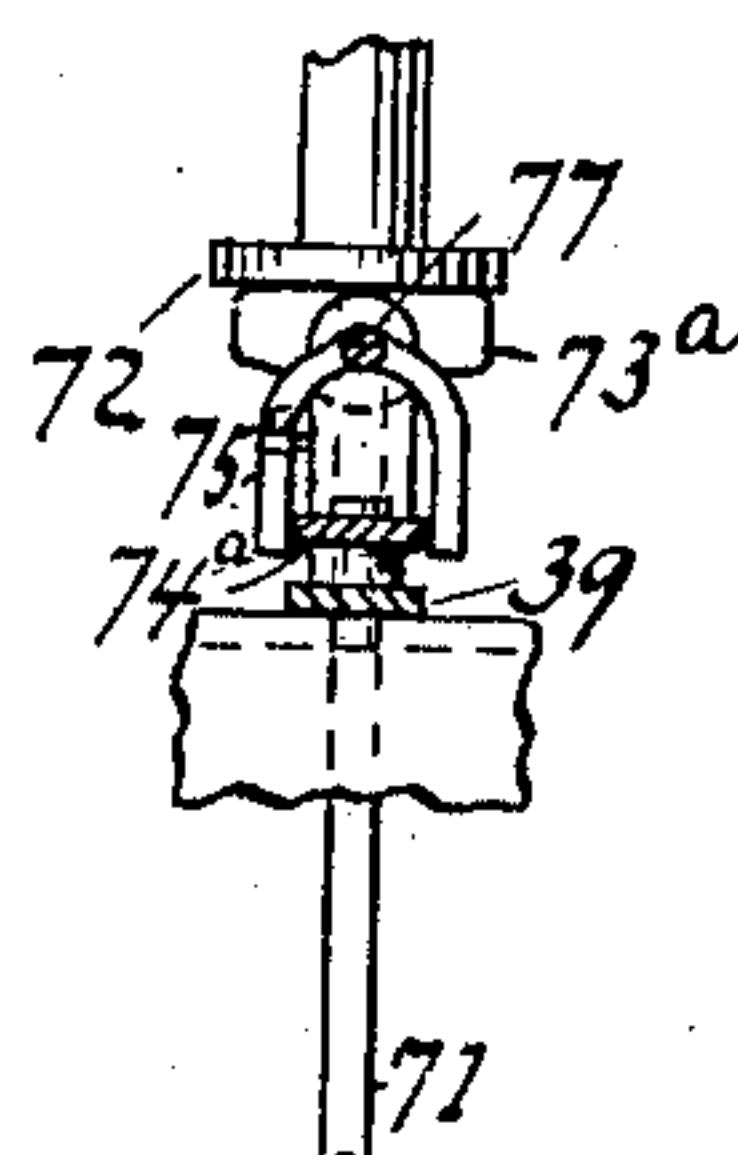


Fig. 5.



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Fig. 7.

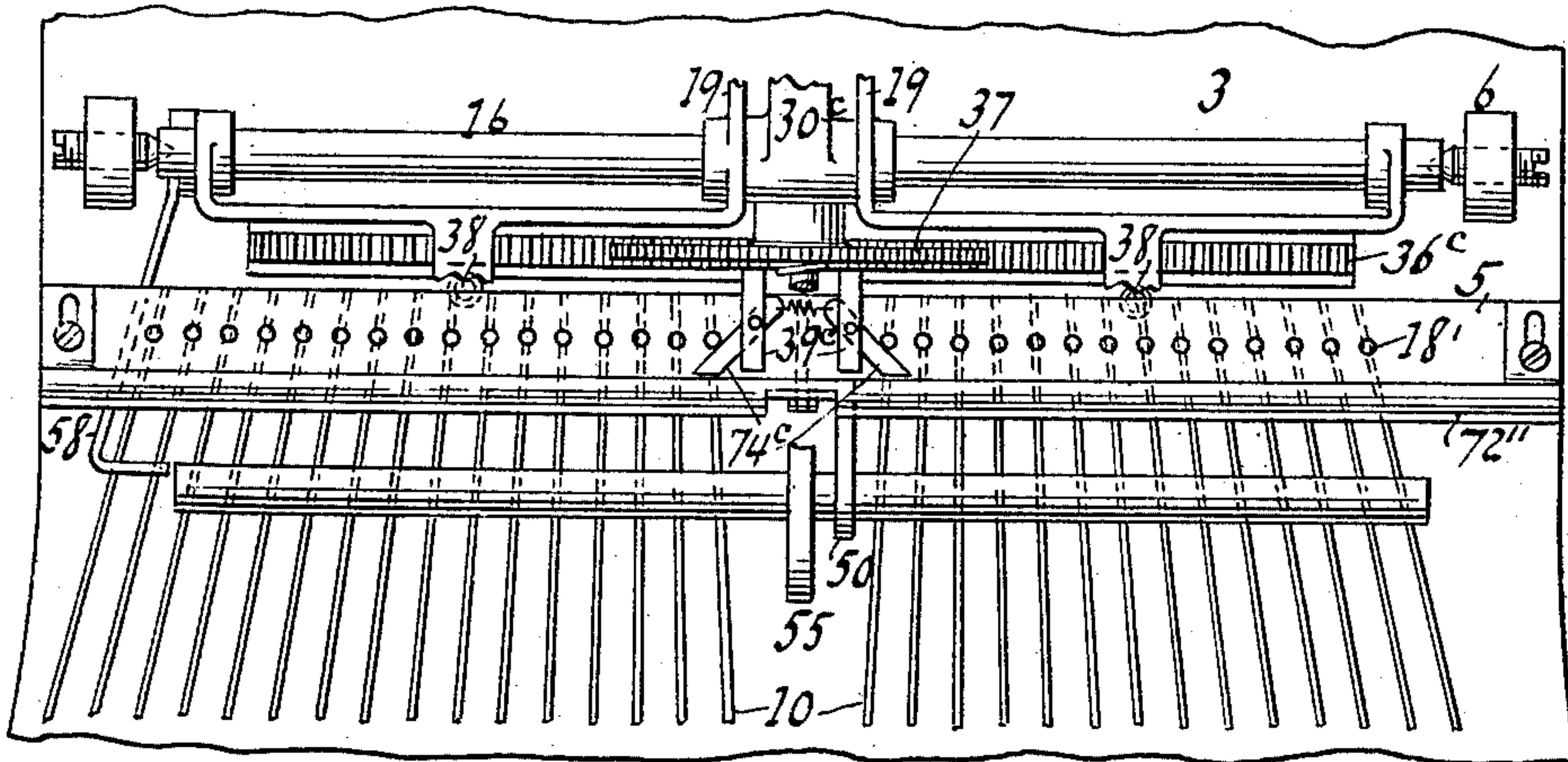
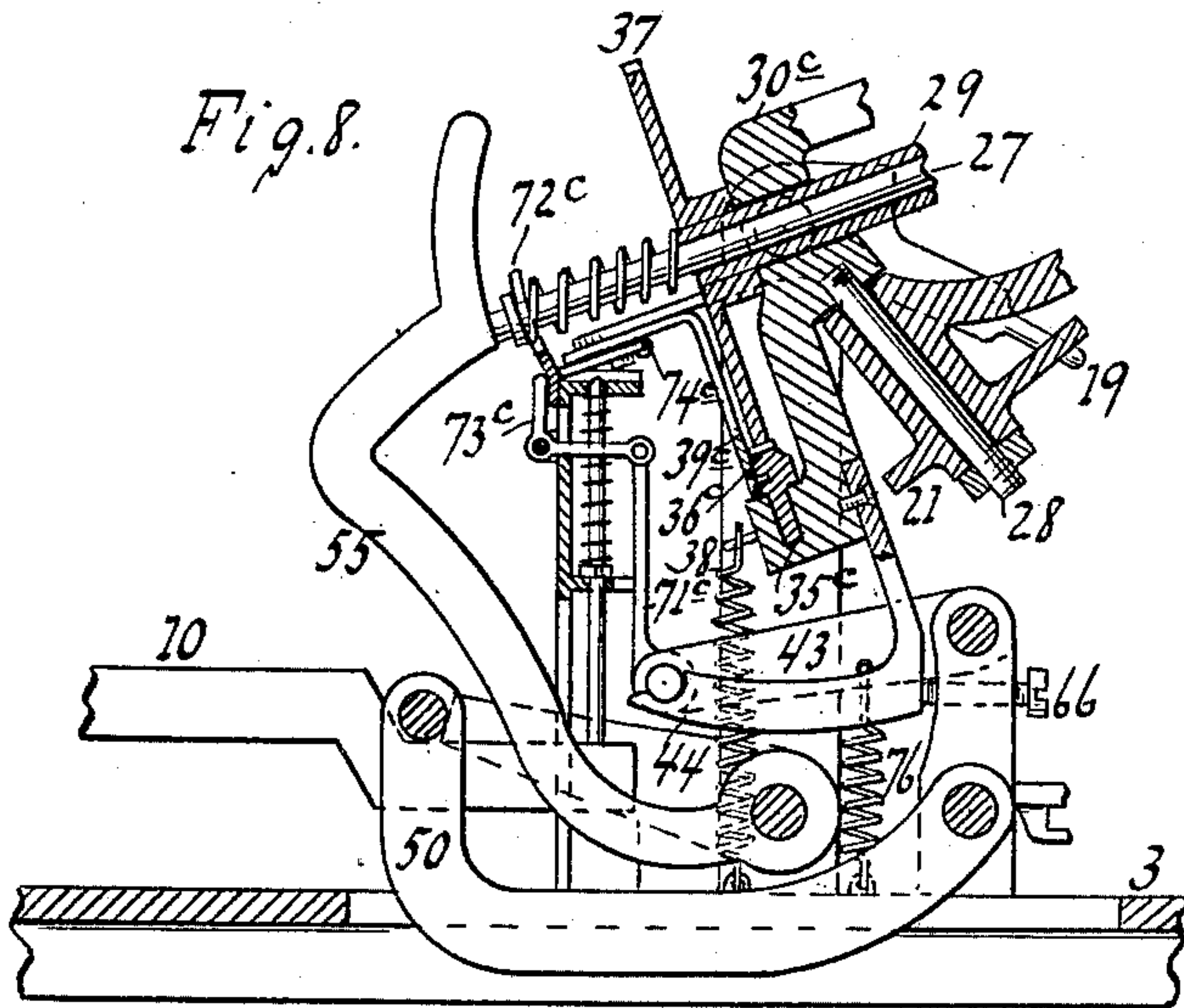


Fig. 8.



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UNITED STATES PATENT OFFICE.

WILLIAM P. QUENTELL, OF NEW YORK, N. Y., ASSIGNOR TO THE POSTAL TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 713,685, dated November 18, 1902.

Application filed April 12, 1902. Serial No. 102,649. (No model.)

To all whom it may concern:

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

This invention resides in certain novel features of construction set forth in the following specification and claims and illustrated in the annexed drawings, in which—

Figure 1 is a plan view of the machine. Fig. 2 is a sectional elevation of Fig. 1. Fig. 3 is a section along xx , Fig. 2. Fig. 4 shows a modification in plan view. Fig. 5 is a front elevation of Fig. 4. Fig. 6 is a plan view of a further modification. Fig. 7 is a plan view of another modification. Fig. 8 is a sectional elevation of Fig. 7.

The machine is shown with a type segment or wheel 1, made to vibrate or give a printing motion or stroke on platen 2, which latter or its carriage travels on or across the base 3. The combs or guides 4 and 5, with fulcrums 7, 8, and 9, serve for the proper mounting and movement of key-levers 10, which can have finger-buttons 11, as usual. On a shaft 16 are sleeves or bearings 17, Fig. 1, of levers or arms 19, Fig. 2, connected by link 19' with lever or bail 18, actuated by the key-levers. Two levers 19, with their respective parts, are shown; but the description of one explains the other. As one lever 19 or the other is actuated it strikes shoulder or disk 21, Figs. 1 and 2, so as to oscillate this piece, with rock-shaft or sleeve 22, carrying arm 23, with segment 24, engaging gear 25 of the type-wheel or its shaft. As the gear 25 is oscillated one way or another with disk 48, having connection by means of pin 26 with the type-wheel, the latter is turned or set to bring a required type to the printing position. The type-wheel shaft 27 is shown with a sleeve 29, rotating with gear 25 and carried by frame 30, vibrated, as presently explained, for the printing stroke. With this sleeve rotates a pinion 37, engaging a segment 36, having an arm 39, adapted to be stopped or arrested by the pins 18', each of which is lifted

or moved to stopping position by its respective key-lever when depressed. When a key-lever is depressed, it lifts a pin and actuates levers 18 and 19, which latter rotate the type-wheel and pinion 37, so as to swing stop-arm 39 until stopped by the pin which has been raised or brought by its respective key to arresting position. After the rotation of the type-wheel is stopped the continued pull of levers 10 and 18 causes frame 30 to swing, so as to dip or strike the type-wheel against the platen. The operation of this part of the device with lock or pawl 43 and hook 44 being set forth in United States Patent No. 698,318, granted April 22, 1902, for type-writing machine no detail description thereof is thought necessary here. The arm 39 and row of pins 18', extending each side of the center line of the machine, are shown not parallel with one another, but in curved relation to one another. It is evident that the arm and pins must be so arranged that the wheel can turn more or less to bring the required type to printing position before the arm or the rotation is stopped. The arrangement shown has been found compact; but of course the invention is not confined to this configuration, as any suitable arrangement can be applied. A returning spring or springs 38, connected to a forwardly-projecting arm of levers 19 or their sleeves, can reset the parts after the key is released.

In some of the so-called "wheel-machines" an escapement is provided for allowing the wheel and paper to come to printing-contact at the proper moment. In this construction here shown the wheel moves to the paper and the escapement is provided for holding the wheel against dipping or tilting prematurely or while rotating and allowing the wheel to print or strike to the platen at the proper moment. The escapement is shown comprising a hook 44, which when engaged by bail or lock 43 holds the wheel against tilting. This printing-escapement is connected with the stop arm or bar 39, so as to be released when the stop arm or bar is arrested by a stop 18'. The escapement is connected with the stop-arm, or rather a lever on said arm, by a link 71, having a ring-flange or disk 72, sitting loosely about the sleeve or shaft of stop-

arm 39 and over the horizontal arms of a three-armed or bell-crank lever 73, pivoted or fulcrumed to said shaft. This lever 73 is jointed to or actuated by lever 74, fulcrumed on stop-arm 39 and having projections or T-tail at 74', projecting beyond each side of arm 39 when the lever 74 lies parallel along said arm. As the arm 39 comes against an elevated stop the lever-tail also being pressed against such stop will oscillate or press lever 74 to an angle with arm 39, and the consequent swing of lever 73 will raise the link 71 and lift or move lock or pawl 43 out of or clear from hook 44. Said parts 43 and 44 can be conveniently called a "printing-escapement" for short. As the key-lever continues to move bail 18 and pull link 19' the frame 30 with wheel 1 is drawn or pressed to the platen. When the stop or bail 43 engages the arm or depending part 44 of frame 30, the latter is locked against vibration, so that the type-wheel cannot dip. A spring 76 can be applied to return the lock or escapement 43 or hold the latter normally in engaging position. The ribbon or inking device is not shown, as any suitable ink-roller will do. The case-shifting movement of the type-wheel or its shaft 27 can be effected by lever-arm 55, fulcrumed at 56 and having an arm 58, suitably lifted or actuated by one or more properly-arranged shift-keys. The levers 19 when at rest or in normal position lie against suitably-adjusted stops or screws 65 on frame 30. A stop 66 limits the upward swinging of the type-wheel—that is, the backward swing of arm 44.

In the modification shown in Figs. 4 and 5 the lever 73^a is not engaged directly by lever 74^a, but the latter engages the fork or arms 75^a, depending from the rock-shaft or fulcrum of said lever 73^a.

A method which may be preferred or is simpler, as shown in Fig. 6, is to omit lever 74 and leave the fork or yoke 75^b in such position as to be carried against stop 18' to be swung or oscillated for actuating rock-shaft or fulcrum 77^b of bell-crank 73^b.

In the modification shown in Figs. 7 and 8 the stop-arm 39^c instead of swinging about a center forms part of a rack 36^c, reciprocating along the race 35^c, forming part of or depending from frame 30^c. The arms 39^c have pivoted thereto levers or arms 74^c, which when struck or brought against a stop-pin are moved or swung to press forward the slide or bar 72^c, actuating lever 73^c to move link 71^c and free the escapement.

I do not herein claim to be the inventor of the combination, with a type mechanism, of a bank of keys, operating mechanism between the keys and the type mechanism, means for holding the type mechanism from movement in one direction, a single locking mechanism for holding the type mechanism against movement in the opposite direction, releasing means for said locking mechanism, and con-

nections whereby said releasing means is operated when a key is operated.

What I claim as new, and desire to secure by Letters Patent, is—

1. A wheel type-writing machine provided with a stop-arm and a printing-escapement, and means for connecting the escapement with the stop-arm so that the escapement will be operated when the stop-arm is arrested.

2. A type-writing machine having a wheel printing mechanism, a stop-arm and a printing-escapement for the printing mechanism, means for connecting the printing-escapement with the stop-arm said escapement being made to release the printing mechanism when the stop-arm is arrested, and stops for the stop-arm.

3. A wheel type-writing machine provided with a stop-arm for the wheel, a stop for the stop-arm, and a printing-escapement and means for connecting the escapement with the stop-arm.

4. A wheel type-writing machine provided with a stop-arm, a lever carried by the stop-arm, and a printing-escapement actuated by the lever.

5. A wheel type-writing machine provided with a stop-arm, a printing-escapement-actuating lever carried by the arm, and a stop for arresting the arm and actuating the lever.

6. A wheel type-writing machine provided with a stop-arm, a lever carried by the arm, a printing-escapement, means for connecting the escapement with the lever, and a stop for arresting the arm and actuating the lever to free the escapement and allow printing.

7. A wheel type-writing machine provided with a stop-arm, a lever carried by the arm, a shaft or sleeve on which the stop-arm is mounted, a bell-crank engaged by the lever, and a printing-escapement and means for connecting the escapement with the bell-crank.

8. A wheel type-writing machine provided with a shaft or sleeve, a stop-arm and bell-crank on the shaft, a lever on the stop-arm made to engage the bell-crank, and a printing-escapement actuated by the bell-crank.

9. A wheel type-writing machine provided with a rotary shaft or sleeve, a stop-arm and bell-crank both connected to and made to rotate with the shaft, a lever fulcrumed on the stop-arm and made to engage the bell-crank, stops made to arrest the stop-arm and actuate the lever and bell-crank, and a printing-escapement actuated by said bell-crank.

10. A wheel type-writing machine provided with a printing-escapement comprising a pawl and hook, a lifting or releasing link for the pawl, a bell-crank for actuating the link, a lever for actuating the bell-crank, a stop-arm on which the lever is mounted, stops for engaging the arm and lever, and a rotary shaft for carrying the bell-crank and lever.

11. A wheel type-writing machine provided with a rotary shaft or sleeve, a link extended

alongside the sleeve, a printing-escapement engaged by the link, a link-actuating bell-crank and a stop-arm on the shaft, a lever made to engage the bell-crank and fulcrumed 5 on the stop-arm to swing across the same, and stops for arresting the arm and actuating the lever.

12. A wheel type-writing machine provided with a printing-escapement comprising a 10 pawl and hook, a releasing-lever for said escapement, connections between said lever and said escapement, a stop-arm carrying said releasing-lever, and stops for arresting the arm or bar and actuating the releasing-lever.

15 13. A type-writing machine having a wheel

printing mechanism, a stop-arm and printing-escapement for the printing mechanism, means for connecting the escapement with the stop-arm, said printing-escapement being made to release the printing mechanism when 20 the stop-arm is arrested, and keys for actuating the printing mechanism and arresting the stop-arm.

In testimony whereof I have hereunto set my hand in the presence of two subscribing 25 witnesses.

WILLIAM P. QUENTELL.

Witnesses:

CHAS. E. POENSGEN,
E. F. KASTENHUBER.