

J. B. SECOR.
CONTROLLING MECHANISM FOR THE CARRIAGES OF TYPE WRITING MACHINES.
APPLICATION FILED JAN. 9, 1907.

982,885.

Patented Jan. 31, 1911.

2 SHEETS—SHEET 1.

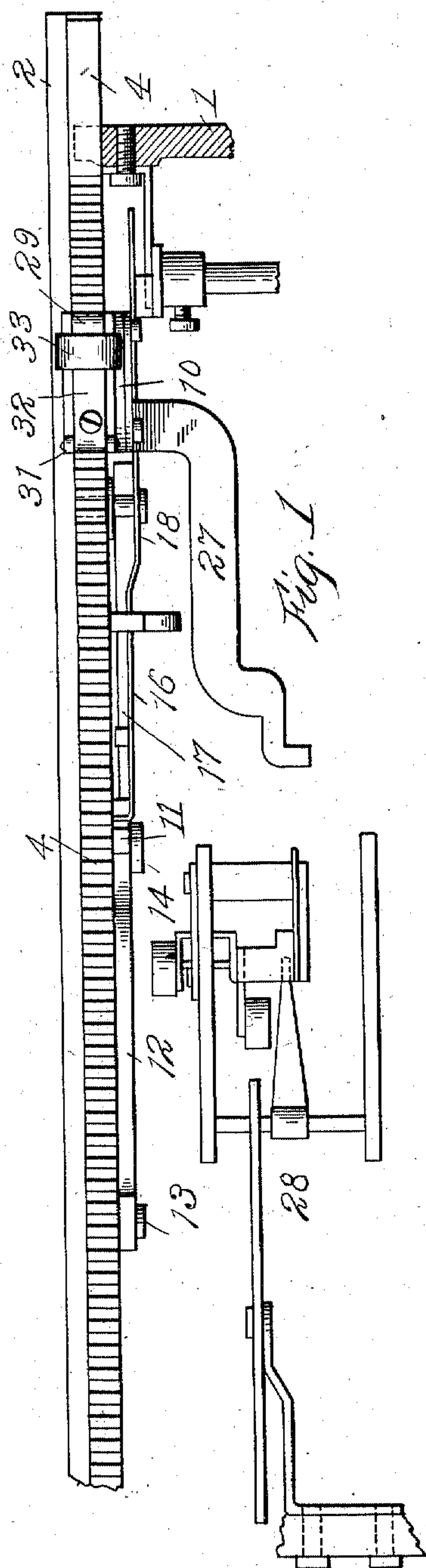


Fig. 1

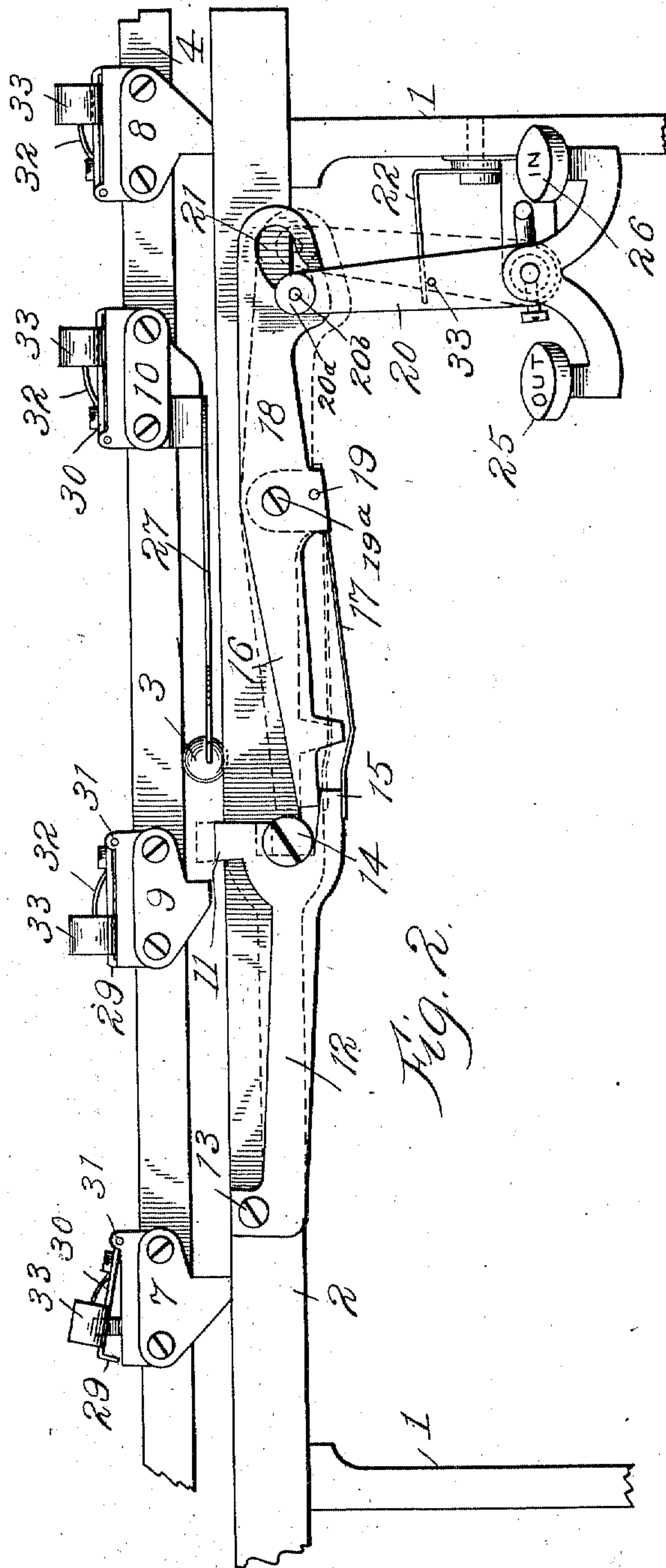


Fig. 2

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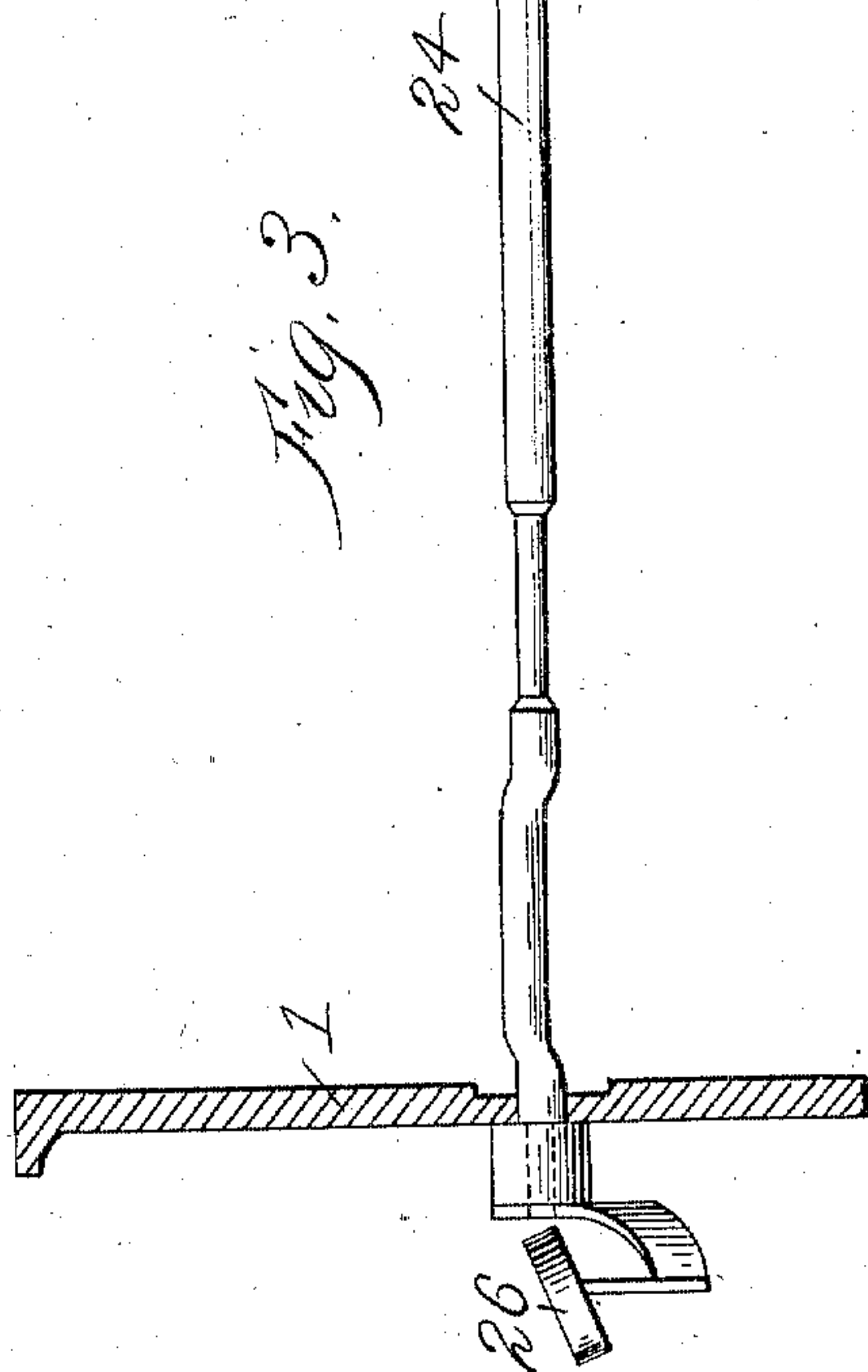
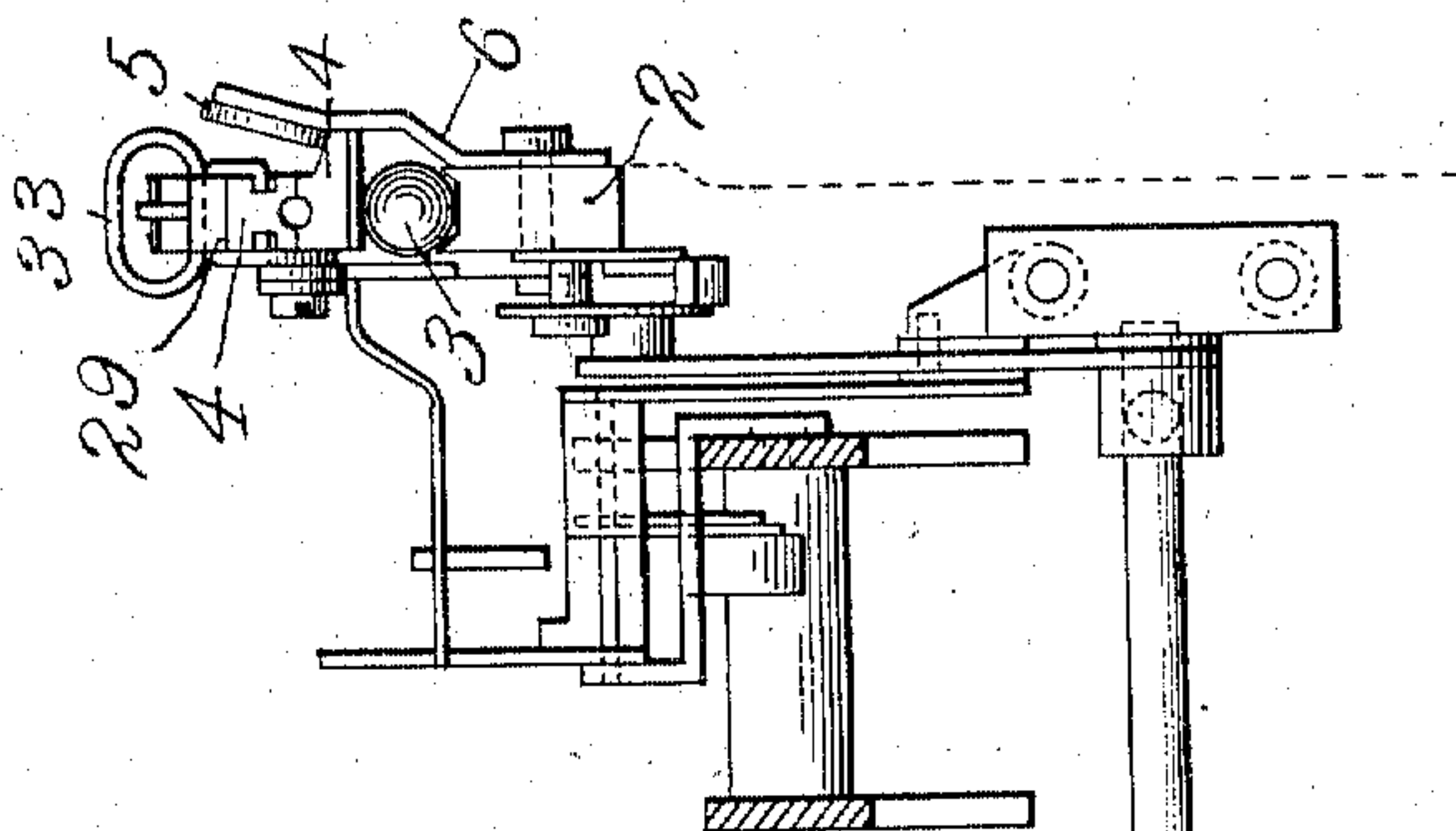
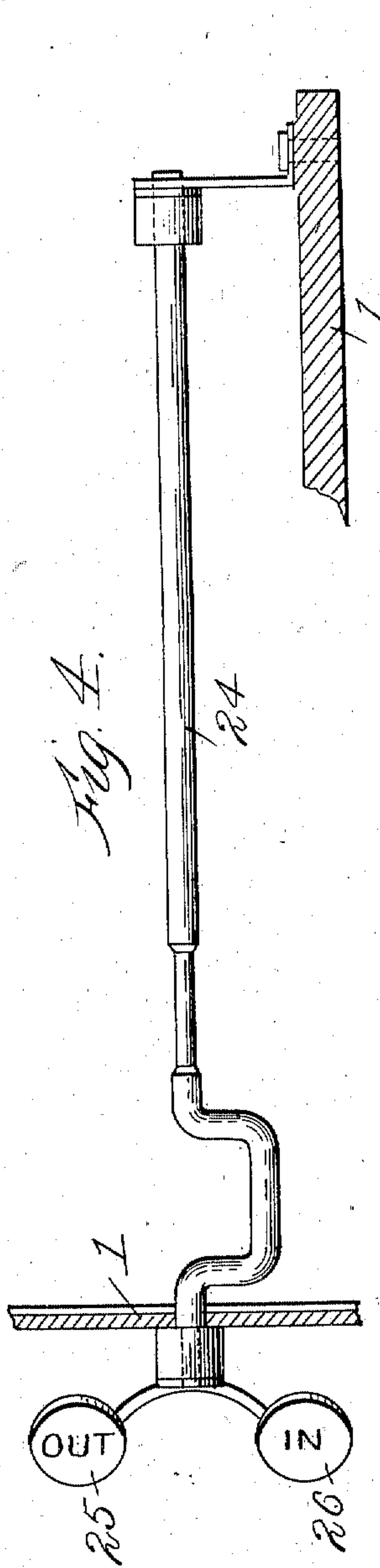
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UNITED STATES PATENT OFFICE.

JEROME B. SECOR, OF DERBY, CONNECTICUT, ASSIGNOR, BY MESNE ASSIGNMENTS, TO
SECOR TYPEWRITER COMPANY, OF DERBY, CONNECTICUT, A CORPORATION OF
CONNECTICUT.

CONTROLLING MECHANISM FOR THE CARRIAGES OF TYPE-WRITING MACHINES.

982,885.

Specification of Letters Patent.

Patented Jan. 31, 1911.

Application filed January 9, 1907. Serial No. 351,461.

To all whom it may concern:

Be it known that I, JEROME B. SECOR, a citizen of the United States, residing at Derby, New Haven county, Connecticut, have invented certain new and useful Improvements in Controlling Mechanism for the Carriages of Type-Writing Machines, of which the following is a specification.

My invention relates to means for enabling the ready control of the carriages of typewriting machines, preferably by mechanism adjacent to the key-board, for stopping them in either or both directions of their movement—whether to limit their point of starting or their point of stopping—so that for example, the operator may readily change the length or the position of beginning or ending of the line of writing.

To this end, my invention comprises marginal stops on the carriage, adjustable in the direction of the carriage movement and preferably plural in number at both ends of the carriage, and a stop or stops carried by the machine frame and controlled by a key or keys adjacent to the key-board of the machine to be brought readily into or out of engagement with said stops or certain of them.

Preferably, as shown in the drawings accompanying and forming part of this specification, a single stop on the machine frame, controlled by a rocking, two-keyed shaft, may be placed in either of two positions—in one of which it engages, in each direction of movement of the carriage, a marginal stop for limiting the length of the printing line to less than normal and in the other of which it engages in each direction of movement of the carriage a marginal stop for the normal line length. In said drawings I have illustrated only so much of a typewriting machine as is necessary for an understanding of the invention, and it will be understood that the invention may be applied to various forms of typewriting machines and that the application to the form here shown is merely illustrative.

Figure 1 is a plan view of parts of the carriage-controlling mechanism of a typewrit-

ing machine. Fig. 2 is a front elevation of parts of said mechanism. Fig. 3 is a sectional elevation, looking from the right-hand side of the machine, of the parts shown in Figs. 1 and 2. Fig. 4 is a plan view of the controlling rock-shaft and its keys.

Parts of the stationary frame of the machine are indicated at 1.

At 2 is shown one of the guide rails fixed to the machine frame and grooved longitudinally on its upper surface to receive the balls 3 whereon the carriage travels.

4 is the marginal-stop rack-bar, having for the greater part of its length the notched or toothed upper surface for locating and holding the marginal stops at desired positions. In the instance here shown, it also constitutes one of the carriage supporting and guiding rails, being fastened at its ends to the end frame of the carriage (not shown) and traveling on the balls 3, whereon it is held and guided by one or more rolls or wheels 5, journaled to bracket or brackets 6, fixed to and projecting up from the rail 2 (see Fig. 3). Adjustable upon the toothed bar 4 are two or more sets of margin stops, one set 7, 8, serving to regulate the extreme transverse carriage movement for maximum predetermined length of line, and the other set 9, 10, serving to arrest the carriage in either or both directions of movement, optionally at points short of the extreme predetermined line length. Arranged upon the stationary frame of the machine, as for example, upon the rail 2, is a stop 11, which in its normal position will make contact with the terminal margin stops 7, 8, whose bills for that purpose extend down from the carriage rail 4, substantially to the level of the rail 2 on the main frame, but are adjustable to an elevated position to engage the shorter bills of the intermediate paragraphing or inseting stops 9, 10, as shown in dotted lines in Fig. 2. For the purpose adjusting the stop 11, it may, as here shown, be carried upon the inner end of an arm 12, pivoted at 13 to the rail 2, the stop 11 being so arranged as to occupy the center of mo-

tion of the carriage so as to allow the limiting of the line length on each side to any desired extent.

The inner end of the arm 12 has a jaw engaging a stop screw 14, the jaw being high enough to permit and limit the motion of the stop from the position shown in the full lines to that shown in the dotted lines in Fig. 2. For actuating the stop the arm 12 may have a projection 15 engaged on its upper and lower sides respectively by a jaw formed of the lever arm 16 and spring arm 17 fastened by pin 19 to lever 18, which is pivoted at 19^a to the rail 2 and actuated by a rocking arm 20 engaging by an anti-friction roller 20^a on a pin 20^b at its upper end in a cam slot 21 in the right hand end of lever 18. The purpose of having arm 17 as a spring arm is to press the jaw of arm 12 by means of projection 15 yieldingly against stop screw 14, which aids the softness of the touch when key 26 is operated, and causes stop 11 to yield when stop 9 passes it from the right to the left, and stop 10 from the left to the right. A spring 22 fixed to the machine frame and engaging a pin 23 on the arm 20, holds the latter in either extreme position. The arm 20 is fixed to the rear end of the rock shaft 24 (see Figs. 3 and 4) which is mounted upon the machine frame and projects forward, as shown, through the front plate of the machine where it is provided preferably with two keys 25, 26 on opposite sides of its axis and serving to rock it in either direction. It will be seen that when the key 25, marked "Out" is pressed down, the vertical arm 20 is thrown to the left, oscillating the lever 18 and placing the stop 11 in the position shown in full lines, where it will engage only the terminal stop 7, 8. But when the key 26, marked "In" is pressed down, the arm 20 moving in the opposite direction, will throw the stop 11 up to the position shown in dotted lines, where at it will engage the intermediate stops 9, 10. By adjusting the terminal and intermediate stops to the extreme line length and to the intermediate paragraphing or inseting lengths of line, and then operating the keys 25, 26, it will be seen that the line length can be changed during the operation of the machine directly from the key-board and to any desired extent and with any required frequency. The intermediate, or one of the terminal stops, may, as shown, also carry the bell tripping and line lock arm 27. The relation of this to the carriage operating and controlling mechanism is indicated in Fig. 1, where I have shown at 28 certain of the mechanism for operating the bell and propelling the carriage, which however are not here described as they form no part of this invention.

It will be noticed that the rear side of the

bills of all of the margin stops are inclined to move over the stop 11 on return of the carriage to position beyond them from either direction. To hold the stops 7, 8, 9, 10, to position upon the bar 4, it has, as shown, teeth in its upper surface, and with these teeth engage the down-turned lips 29 on pivoted plates 30 hinged to each stop at 31 and forced down by spring 32, or lifted manually by handle 33.

Having thus described my invention, the following is what I claim as new therein and wish to secure by Letters Patent:

1. In a typewriting machine, the combination of a terminal and an intermediate adjustable stop mounted upon a carriage and spaced apart longitudinally thereof, an adjustable stop mounted upon the machine frame having two engaging positions with said stops, and means operated adjacent to the keyboard for transferring said adjustable stop to engage either the terminal or intermediate stop at will.

2. In a typewriting machine, the combination of a terminal and an intermediate adjustable stop for each side mounted upon a carriage and spaced apart longitudinally thereof, an adjustable stop mounted upon the machine frame having two engaging positions with said stops for either side, and means operated adjacent to the keyboard for transferring said adjustable stop to engage either the terminal or the intermediate stop for either side at will.

3. In a typewriting machine the combination of terminal and intermediate stops mounted upon the carriage, an adjustable stop mounted upon the machine frame and normally engaging the terminal stops, and means operated from adjacent to the keyboard for adjusting said stop to engage the intermediate stops.

4. In a typewriting machine, the combination of a paper carriage having terminal stops and intermediate stops, an adjustable stop mounted upon the machine frame, a rock-shaft and a plurality of keys operating said rock shaft, said rock shaft being operatively connected to said adjustable stop.

5. In a typewriting machine, the combination of adjustable terminal and intermediate margin stops carried by the carriage, a stop pivotally supported upon the machine frame, a pivoted lever engaging said stop, a rocking arm engaging and operating said pivoted lever and a rock shaft having a plurality of keys adjacent to the keyboard for operating said arm, substantially as set forth.

6. In a typewriting machine, the combination of an adjustable arm mounted on the machine frame having a stop, hand-controlled means for adjusting said stop in operative and inoperative position, and a mar-

gin stop on the carriage suitably coöperat-
ing with said adjustable stop, said hand-
controlled means having a rigid and a yield-
ing jaw member adapted to receive the free
5 end of said arm between; said jaws dis-
posed to cause the yielding member to op-
erate when said adjustable stop is thrown

into operative position and the rigid mem-
ber to operate when said adjustable stop is
thrown into inoperative position.

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