

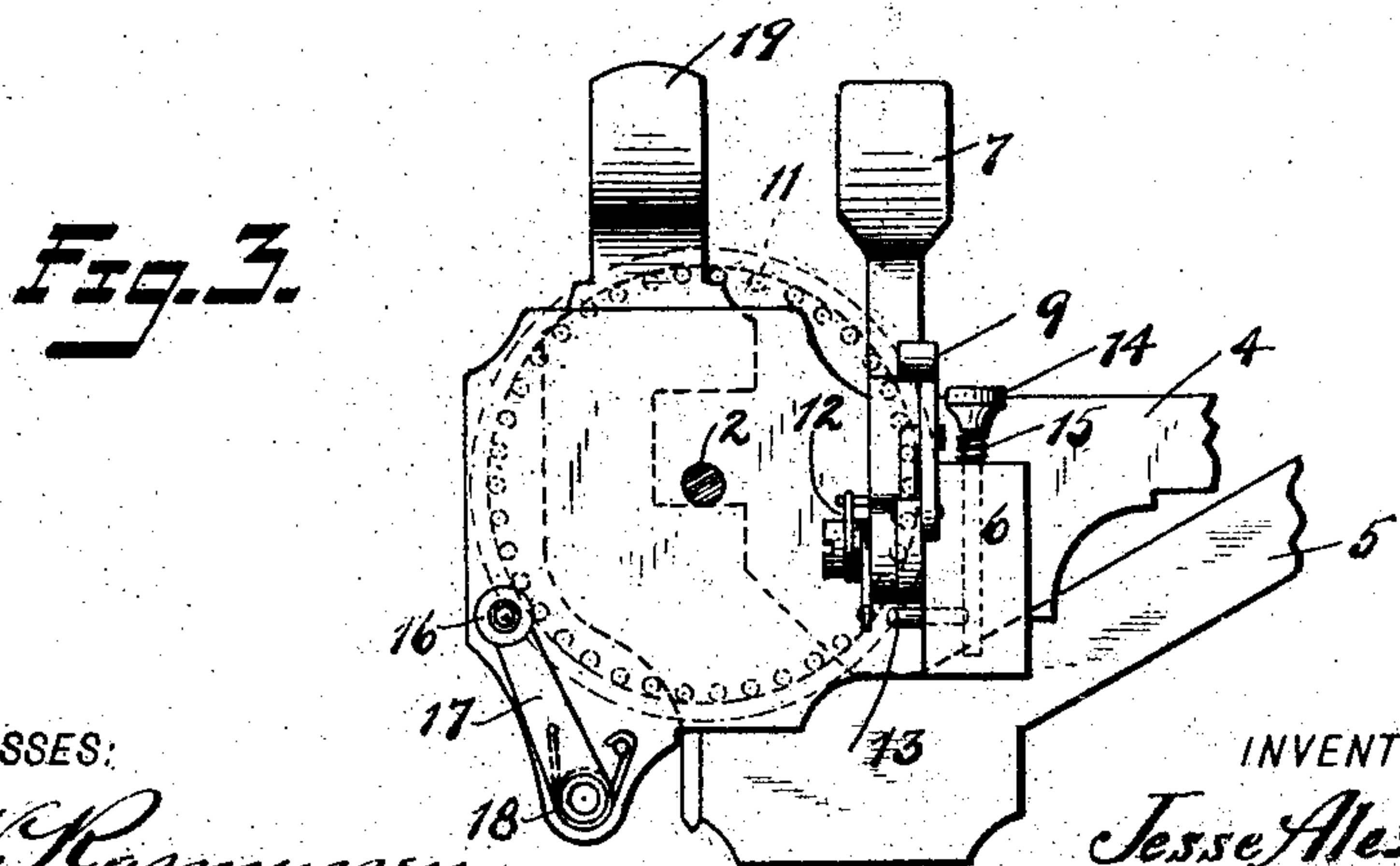
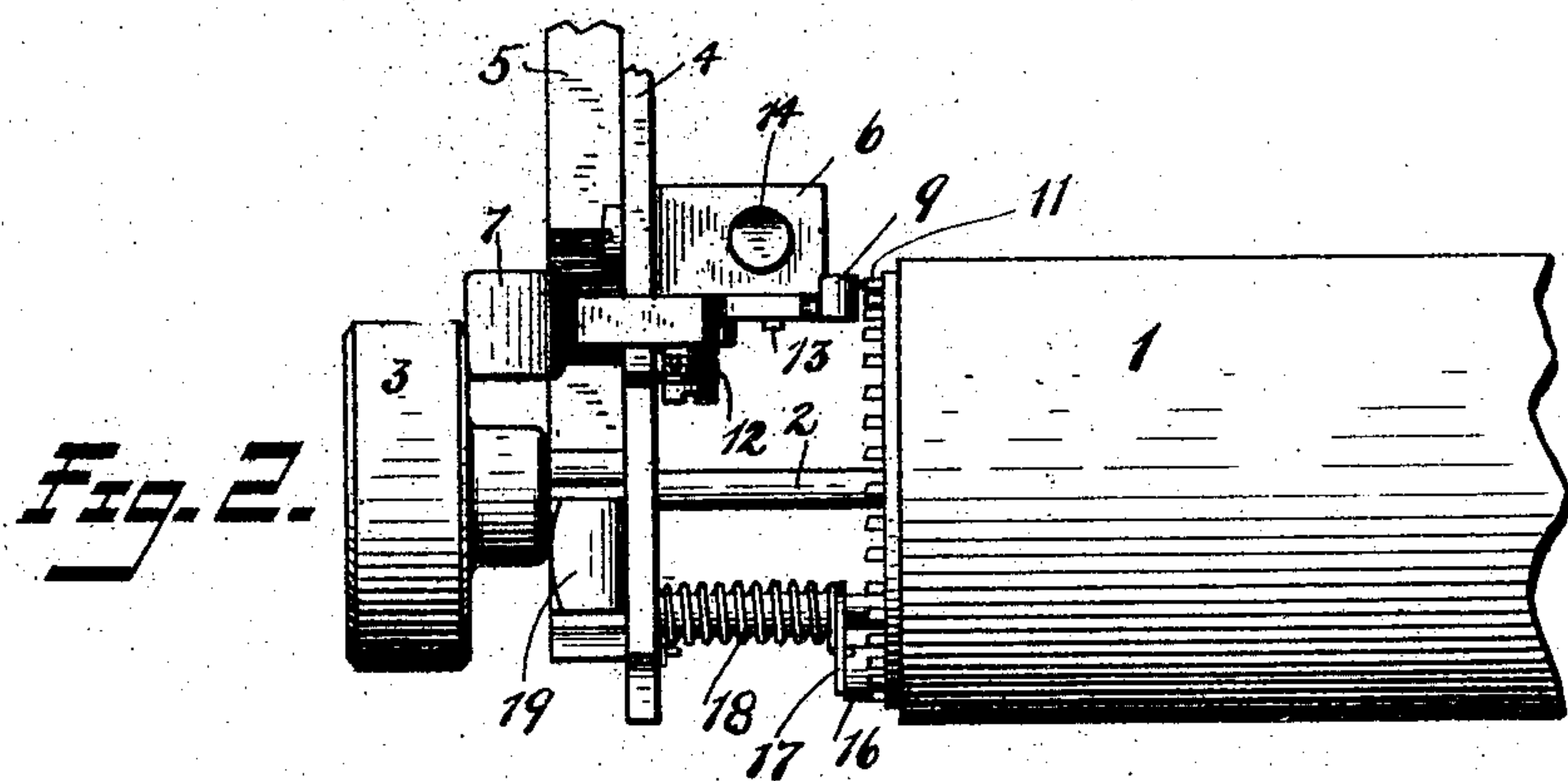
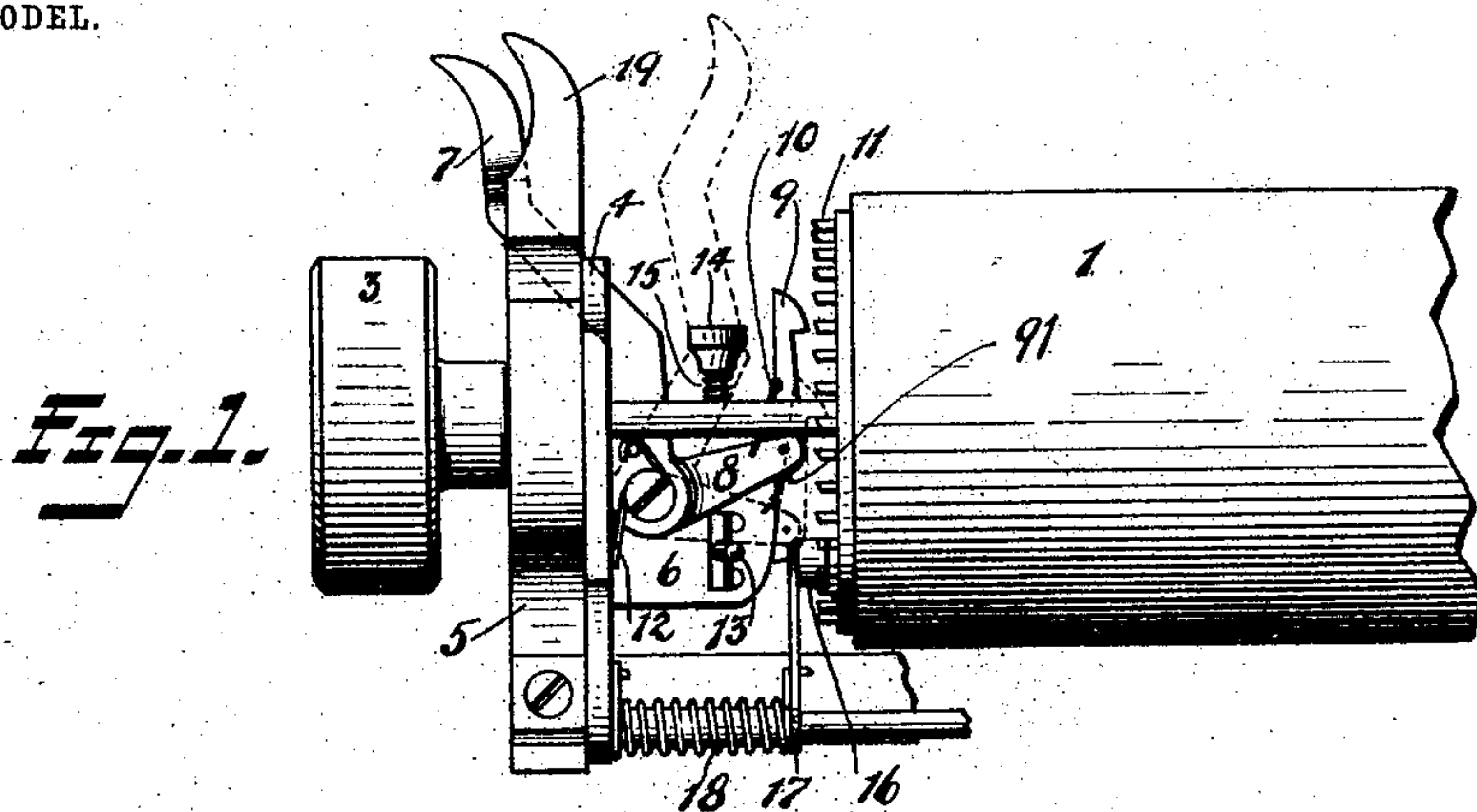
No. 765,647.

PATENTED JULY 19, 1904.

J. ALEXANDER.  
TYPE WRITER LINE SPACING MECHANISM.

APPLICATION FILED SEPT. 9, 1903.

NO MODEL.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## TYPE-WRITER LINE-SPACING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 765,647, dated July 19, 1904.

Application filed September 9, 1903. Serial No. 172,483. (No model.)

*To all whom it may concern:*

Be it known that I, JESSE ALEXANDER, a citizen of the United States, residing at Brooklyn, in the county of Kings, State of New York, have invented certain new and useful Improvements in Type-Writer Line-Spacing Mechanism, of which the following is a full, clear, and exact description.

My invention relates to improvements in type-writers, and particularly to what is known as the "line-spacing mechanism" thereof. It is designed for use with a machine of the "front-strike" class. The line-spacing mechanism is situated at the left-hand end of the platen-roller and is so constructed that the spacing may be effected through any one of a number of spaces by reason of an adjustable stop device. The parts are so situated as to be readily accessible and to cooperate with one another, so that there is but little danger of injury to the parts even under the most severe use of the machine. The operating-handle is mounted adjacent to and at the rear of a post, by means of which the carriage may be drawn from one side to the other without affecting the adjustment. In this manner when the hand is used to throw the carriage from left to right the same movement effects the adjustment; but the main force exerted is taken up by a rigid member of the carriage-frame, while the slight amount of force necessary to space the platen is exerted by means of the end of the finger, so that injury cannot result from rough usage.

The construction will be more clearly seen on an inspection of the accompanying sheet of drawings, in which—

Figure 1 is a front elevation of a fragment of a platen and those parts of the carriage construction embodying my invention. Fig. 2 is a plan view of the same details. Fig. 3 is a view looking from right to left of the same details with the platen-roller removed.

The remaining parts of the carriage construction are shown in greater detail and claimed in an accompanying application filed herewith.

1 is a platen, mounted on the shaft 2, hav-

ing an operating knob or handle 3, as is customary.

4 is a side plate of what is termed the "platen-supporting" frame, and 5 is a fragment of the left-hand carriage-frame.

6 is a block carried by the platen-plate 4, to which is pivoted the operating-handle 7.

8 is an arm projecting to the right from the operating-handle and to which is pivoted a pawl 9. This pawl is pressed toward the platen-roller by means of a spring 10; but in the normal position, as shown in Fig. 1, the lower end 91 of the pawl 9 engages the outer face of the block 6, so as to hold the pawl out of engagement with the teeth 11, constituting the ratchet. These teeth are preferably formed of pins set about the end of the platen 1 and preferably beveled, so that when the pawl 9 is being returned to its normal position the end may slip easily over the end of the pins.

12 is a spring which holds the parts in the normal position, as shown in Fig. 1, the arm 7 resting against the side plate 4 of the platen-frame.

When the arm 7 is moved to the right, the pawl 9 is pulled downward and thrown into engagement with a pin of the ratchet 11 by means of the small spring 10. The width of the operating-face of the pawl 9 should be such that the pins 11 will not escape from engagement therewith at any point in the descent of the pawl. This object will be more readily understood on an inspection of Fig. 3, in which the ratchet-pins 11 are shown dotted. It will also be observed here what particular advantage is to be derived from the use of the pins in the ratchet instead of the ordinary teeth, since by the use of pins the operating-face of the pawl 9 will always be at approximately the same distance from the axis 2 of the platen, so as to result in a uniform pull. When the operating-handle 7 is released, the spring 12 throws the handle about its pivot to the left and raises the pawl 9, which as it approaches its upper position is forced out of engagement with the ratchet 11 by reason of its lower end engaging, as before mentioned,



the face of the block 6. The operating pull on the pawl being downward and direct, the parts can be made very light.

It is desirable that the operator have some means for limiting the range of movement of pawl 9, so as to rotate the platen through one or more spaces, as desired. This is accomplished by means of the adjusting-stop 13, which is carried by a post 14. A spring 15 tends to twist the post 14 anticlockwise, so as to hold the pin 13 in engagement with a notch in the block 6, the pin 13 projecting through an opening which is provided at the right-hand edge with a series of notches to correspond with the required depth of throw of the pawl 9. When the handle 7 is thrown to the right, the arm 8 at the point set will come into engagement with the pin 13, so that the spacing is thus limited.

The roller 16, carried by the arm 17, is pressed forward by a spring 18 for holding the platen in its definite space positions when out of engagement with the pawl 9.

19 is a projecting post carried by the general carriage-frame 5, which extends forward in front of the operating-handle of the line-spacing mechanism 7. It will therefore be seen that when the hand is used to throw the carriage from left to right it will first encounter the post 19, and the end of the finger or a portion of the finger beyond will come into engagement with the handle 7, so that the greater part of the strain is taken up directly by the carriage-frame.

The construction will therefore be seen to be simple and readily operable. It also affords convenient and accessible means of adjustment for the parts and insures that the more delicate parts of the mechanism shall not be subjected to undue wear.

What I claim is—

1. A line-spacer for a type-writer, including a relatively stationary frame member, a platen-shaft mounted therein, a platen carried by said shaft, a series of round pins having beveled ends constituting a ratchet carried by said platen, a pivoted operating-arm, a pawl pivotally carried by said arm having a beveled face for coacting with the beveled ends of the pins when the pawl is moving toward its normal position of rest, and a spring for holding the arm in its normal position.

2. A line-spacer for a type-writer, including a relatively stationary frame member, a platen-shaft mounted therein, a platen carried by said shaft, a block carried by said frame member, an operating-arm pivoted to said block on a horizontal axis at right angles to the shaft, an arm projecting toward the platen from said operating-arm but carried thereby,

a spring for holding the said parts with the operating-arm resting against the stationary frame member, a pawl pivoted to said projecting arm and extending upwardly therefrom at the rear of the platen, a ratchet carried by the platen, a spring for pressing said pawl toward the ratchet the lower end of said pawl engaging with the outer surface of said block on the return movement of the parts so as to free the pawl from the teeth of the ratchet.

3. In a line-spacing mechanism for a type-writer the combination of a relatively stationary frame member, a platen-shaft rotatably mounted therein, a platen carried by said shaft, a ratchet rotatable therewith, a post projecting upwardly from the left-hand side of said frame member having a concaved portion on the outer left-hand face adapted to be engaged by the finger, an operating-arm pivoted to said frame on a horizontal axis at right angles to said platen-shaft at the rear of but adjacent said post and adapted to be engaged by the end of the finger and a pawl pivotally carried by said operating-handle and adapted to coact with said ratchet to rotate the platen when the operating-arm is moved to the right.

4. A line-spacer for a type-writer, including a relatively stationary frame member, a platen-shaft mounted therein, a platen carried by said shaft, an upwardly-extending operating-arm pivotally carried by said frame member, a projecting arm carried by said operating-arm, a pawl carried by the projecting arm for rotating the platen, a post mounted in a part of the stationary frame on a vertical axis, a stop-pin carried by said post in engagement with one of a series of notches in part of the frame member, and a knob for grasping the post for moving it into its adjustable positions.

5. A line-spacer for a type-writer, including a relatively stationary frame member, a platen-shaft mounted therein, a platen carried by said shaft, a ratchet therefor, an operating-handle pivoted to said frame member, a projecting arm carried thereby, a pawl carried by said projecting arm for moving the platen-ratchet, a block carried by the stationary frame member, a post mounted in a recess in said block, a stop-pin carried by said post projecting into an opening in the block, and a spring for holding said pin in engagement with the notches in the opening corresponding to the various line-spacing positions, and a handle projecting upward from said post accessible for adjusting the position of the same.

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Witnesses:

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