

(No Model.)

2 Sheets—Sheet 1.

G. B. WEBB.
TYPE WRITING MACHINE.

No. 492,599.

Patented Feb. 28, 1893.

Fig. 3,

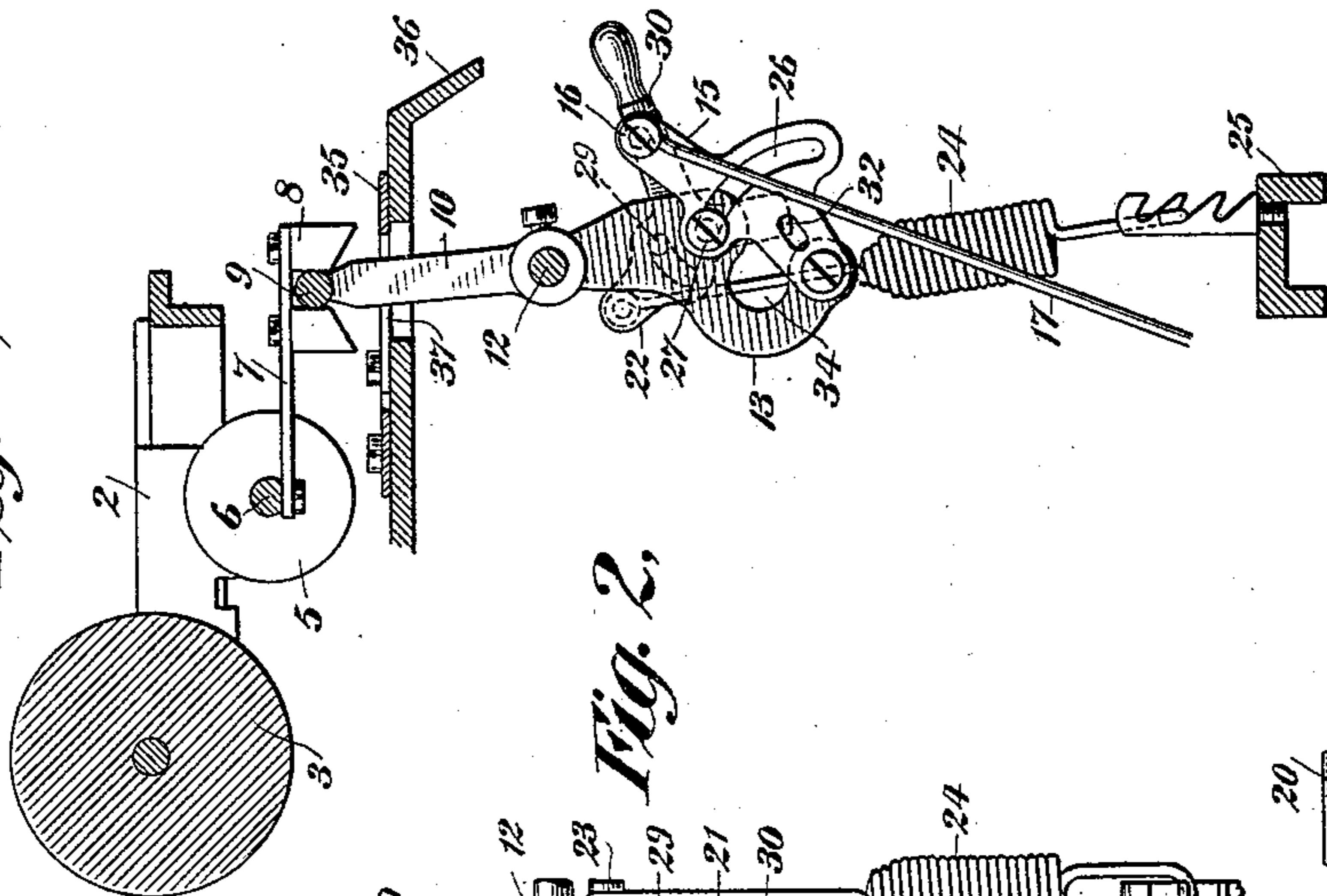
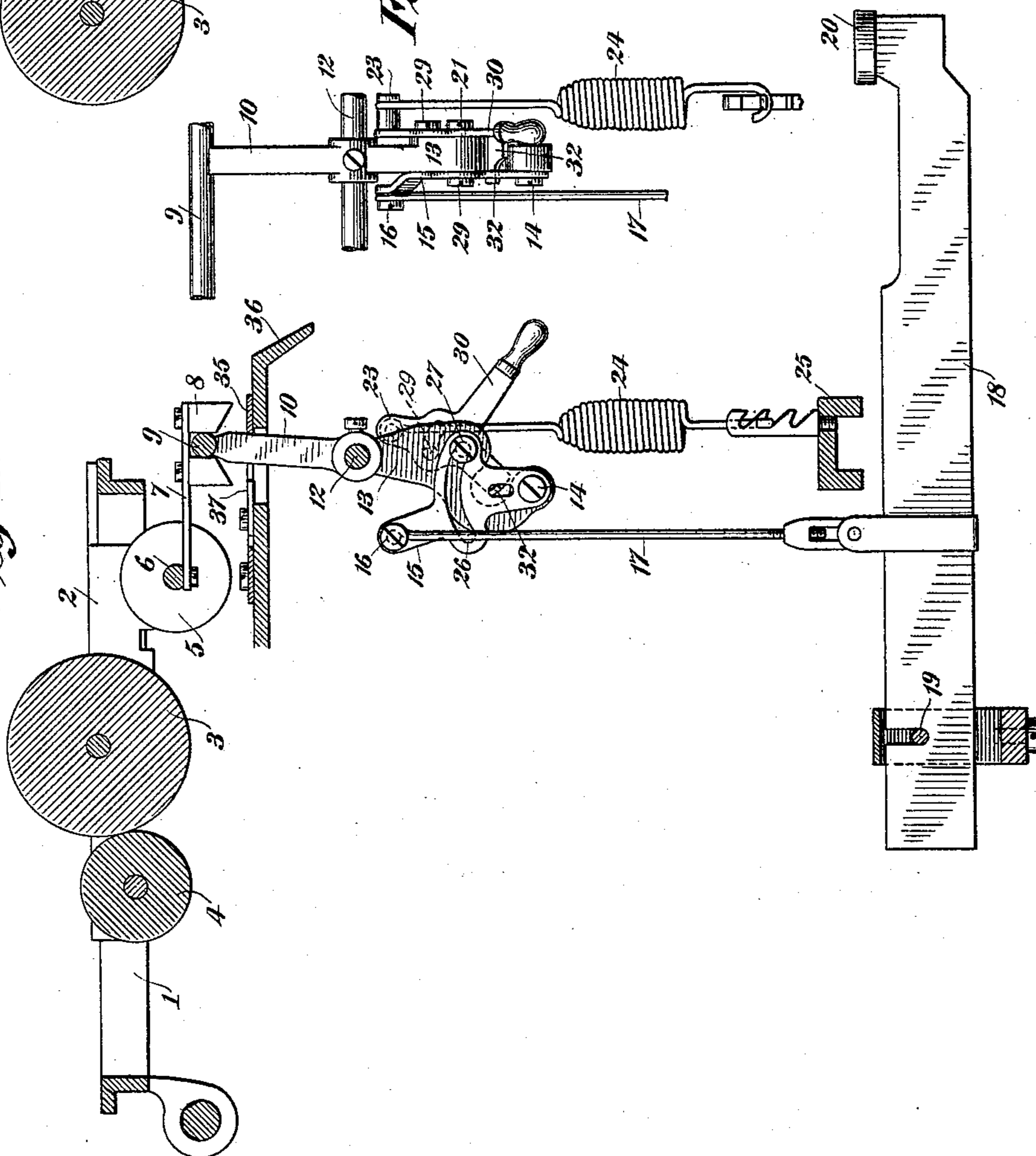


Fig. 2,

Fig. 1,



Witnesses

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Inventor

George B. Webb

By his Attorneys

Donnelly & Felbel.

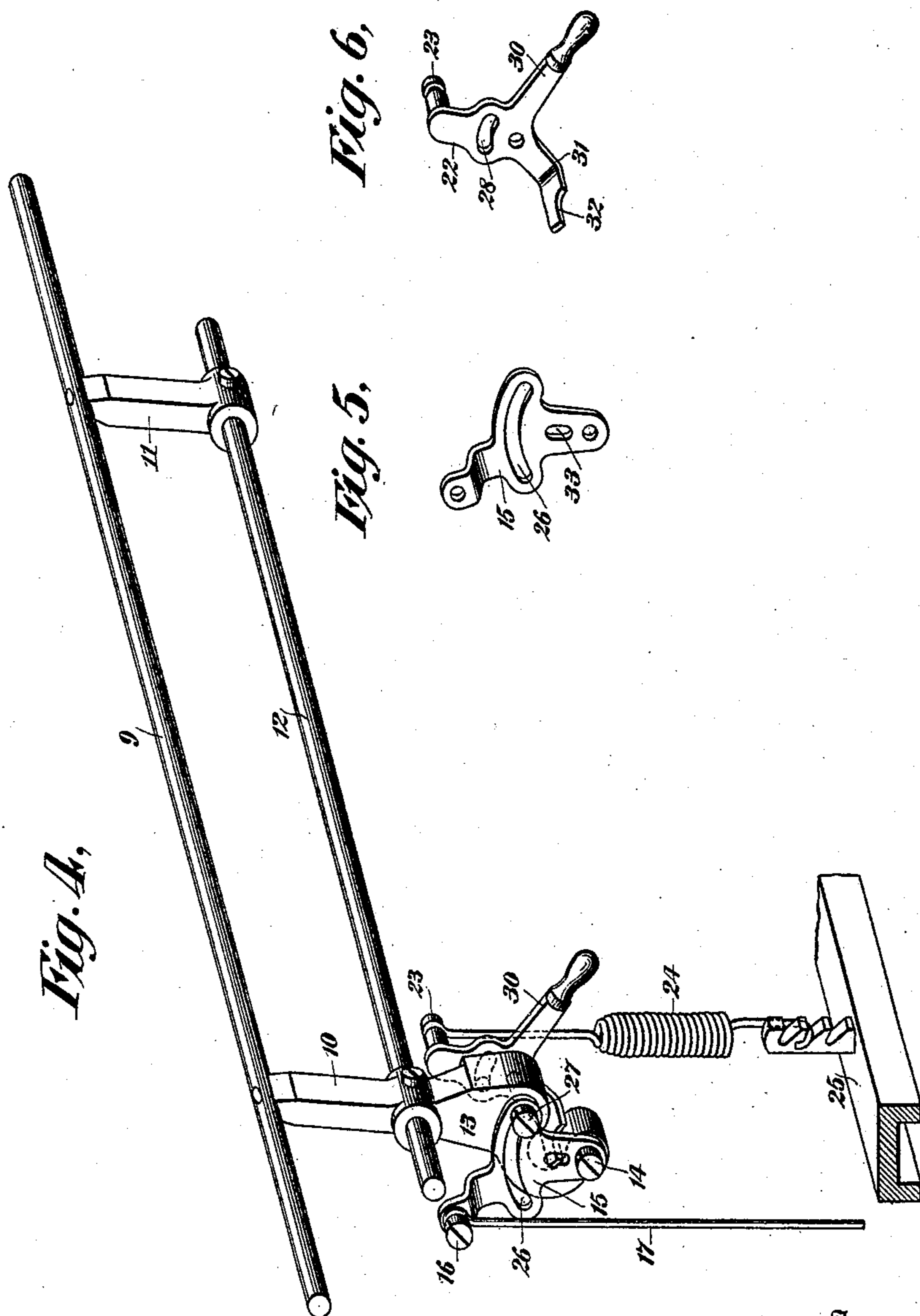
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UNITED STATES PATENT OFFICE.

GEORGE B. WEBB, OF NEW YORK, N. Y., ASSIGNOR TO THE WYCKOFF,
SEAMANS & BENEDICT, OF SAME PLACE.

TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 492,599, dated February 28, 1893.

Application filed September 26, 1892. Serial No. 446,876. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. WEBB, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates to means for locking and shifting the platen-carrier of that type of machines known as the "Remington, No. 2," in which there is a vibratory-platen, and a series of type-bars provided each with a plurality of types. In said machine, in the normal forward position of the platen one type of each set of two is adapted to print, and in the abnormal or backward position of the platen the other type of the set is adapted to print. The first mentioned types are known as "lower case" and the second mentioned types as "upper case."

Heretofore, the platen has been shifted rearwardly by means of a key-lever, on the left hand side, a connecting rod, a hand-lever to which said rod is connected at its upper end, and a spring also connected at its upper end to said lever, the said hand-lever being pivoted upon one of a pair of horizontally-pivoted levers supporting at their upper ends the shift-rod, which is connected to the platen carrier by one or more yokes on the letter. To the other one of said shift-rod levers is attached the upper end of another connecting-rod, whose lower end is connected to another key-lever at the right hand side of the machine, the two connecting rods of the two key-levers being arranged on opposite sides of the pivot or pivots of the shift rod lever, so that when the left hand key-lever is depressed the right hand key-lever is elevated, and vice versa. In the normal condition a depression of the left hand key-lever will effect a rearward movement of the shift rod and platen-carrier against the tension of the spring, which is located on the opposite side of the pivot or pivots of the shift rod from that of the connecting rod, and upon releasement of said key-lever said spring will operate to return all of the parts to their first positions. If it be desired to lock the platen back for upper case work, the hand lever may be vibrated rear-

wardly, and the spring caused to pull on the rear side of the pivot or pivots of the shift rod, and hence force the same and the platen carrier rearwardly and maintain them in this position. While the platen is thus locked for upper case work it is often very desirable and necessary to shift the same forwardly for the impression of some lower case character, and heretofore this shift has been effected in either of two ways; first, by moving the hand lever back to its normal position, thus throwing the spring forward of the shift rod pivot or pivots and after the impression of the desired character returning said hand lever and spring to their shifted positions; or, secondly, by depressing the lever at the right hand side of the machine. This plan of construction has been found in practice to be unsatisfactory in that it is rather slow and confusing in operation.

My invention has for its main object to provide means whereby the platen may be held or locked in either its normal or abnormal position, and while thus held or locked, by a single key, be shifted either backward or forward, according to the locked position of the platen. In other words, if the platen is locked forward for lower case work, a depression of the finger-key will effect a rearward shift or vibration of the platen, and if the platen is locked back for upper case work by a depression of the same key-lever the platen may be vibrated or shifted forwardly for the impression of lower case characters, and in either case automatically returned to its locked or first position after releasement of the lever by one or the same spring.

My invention consists in the features of construction and combinations of devices hereinafter more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a side sectional view of so much of a Remington type writing machine as is necessary to illustrate my improvements, the platen being shown in its normal position. Fig. 2 is a partial front elevation of the same, the carriage portion and the key-lever being removed. Fig. 3 is a view similar to Fig. 1 showing the platen and the parts for moving the same in the shifted or upper case position. Fig. 4 is a perspective view of the shift-

ing mechanism. Fig. 5 is a detail perspective of the lever to which the upper end of the connecting rod is attached, and Fig. 6 is a detail perspective view of the lever to which the upper end of the spring is connected.

In the several views the same parts will be found designated by the same numerals of reference.

10 1 designates the main paper-carriage, 2 the platen carrier adapted to slide thereon in the usual way, 3 the platen, 4 the feed roll, and 5 one of the usual band pulleys mounted on a shaft 6, which is connected to the platen carrier. To said shaft is attached, by an arm 7, a yoke 8, which embraces a shift rod 9 mounted at the upper ends of a pair of levers 10 and 11, which are secured to an elongated pivot or rock-shaft 12 having bearings as usual in the main frame. The lever 10 is provided with an extension 13 below said rock-shaft to which is pivoted, at 14, a lever 15, having a stud 16, over which is hooked the upper end of a connecting rod 17, connected 25 preferably by a turn-buckle and strap to the key-lever 18 pivoted at 19 in the frame work and provided at its forward end with a finger key or head 20.

On the opposite side of the extension 13 is 30 pivoted at 21 another lever 22, which is provided at its upper end with a lateral stud 23, to which is connected either directly or indirectly the upper end of a coiled spring 24, whose lower end is attached either directly or 35 indirectly to some stationary part of the machine or frame-work as 25.

The lever 15 is provided with an arc-shaped slot 26, which embraces a screw-stop 27 secured to the extension 13, and the lever 22 is 40 also provided with an arc-shaped slot 28, which embraces a screw stop 29 also secured to said extension. The lever 22 is provided with a handle portion 30 and with a depending arm 31 having an integral lateral projection 32, which engages with a slot or opening 45 33 in lever 15 above its pivot, the lower portion of the extension 13 being cut-away or recessed at 34 to permit said projection to engage with the slot 33 of the lever 15.

50 By referring to Fig. 1, it will be observed that the stud 16 or point of application of the finger-power is on one side of the pivot 12 of the shift rod 9, and that the stud 23, or the point of application of the power of the spring 55 24 is arranged on the opposite side of the pivot 12. The said spring, having a downward pull always and being of the requisite strength, operates to lock or hold the shift rod and the platen in their forward or normal positions, 60 the levers 10 and 11 pressing against front stops 35 on the top plate or frame work 36. The said spring also operates at this time to maintain the rear end of the slot 28 of the lever 22 against its stop 29 and the front end 65 of the slot 26 of the lever 15 against its stop 27 by reason of the connection between said

two levers. Still referring to Fig. 1, it will be observed that if the key-lever be depressed the shift rod levers 10 and 11 will be vibrated rearwardly, due to the downward pull of the 70 connecting rod on the rear side of the pivot 12, until said levers strike against the rear stops 37, on the top plate or frame work, and during this vibration of said levers the shift rod and the platen carrier are moved rear- 75 wardly to bring the impression point of the platen to the center at which the upper case characters strike. Upon releasing said key-lever the spring will operate to return all the parts to their normal positions, as shown at 80 Fig. 1.

If now it be desired to lock the platen in position for upper case work the handle end of the switch lever 22 may be swung up to move the stud 23 to the opposite or rear side 85 of the pivot 21 in order that the spring may exert its force in a direction to throw and hold the shift rod and platen carrier rearwardly. In thus throwing up the handle end of the lever 22 to shift the stud 23, the said 90 lever, by means of its connection with the switch lever 15, through the arm 31, projection 32, and slot 33, operates to simultaneously vibrate the lever 15, in an opposite direction or forwardly to carry the stud 16 95 to the opposite side of the pivot 12 of the shift rod, as shown at Fig. 3, in which position the levers 15 and 22 are held against undue vibration or movement under the influence of the spring 24 by the pressure of the front end 100 of the slot 28 against its stop 29, and the rear end of the slot 26, against its stop 27. It will be observed from Fig. 3, that while the shift rod and platen carrier are thus locked or held rearwardly for upper case work, the stud 16 105 is arranged in front of the line of the pivot 12, while the stud 23 is arranged on the opposite side of the line. By reason of this arrangement, I am enabled to shift the platen forwardly for lower case characters without 110 manipulating the hand lever 22, and by merely depressing the key-lever 18 as before. Upon the depression of said key-lever, while the parts are in the positions shown at Fig. 3, the power is applied through the connecting rod 115 on the front side of the shift rod in a downward direction, and hence said shift rod and the platen carrier are forced to move forwardly against the tension of the spring 24. Upon releasing the key-lever 18 the spring 24 120 will operate to return all of the parts to the positions shown at Fig. 3. Thus by the means shown and described, if the platen carrier is locked for lower case work it may be shifted rearwardly for the insertion of upper 125 case characters by a depression of a key-lever and automatically returned upon release of said key-lever, and if the platen carrier is locked rearwardly for the performance of upper case work, it may be moved forwardly 130 for the insertion of lower case characters upon a depression of the same key-lever and

may be automatically returned to its first position, for the continuance of said upper case work upon releasement of said key-lever.

For the proper working of this mechanism it is necessary that the two studs 16 and 23, or the points at which the power of the key-lever and the spring are applied be always on opposite sides of the shift rod pivot or axis of vibration, and to accomplish this it is essential to make such a connection between said studs that when one stud is moved in one direction the other stud is moved in the opposite direction; or in other words, when the spring stud is shifted for upper case work, the connecting rod stud should always be shifted in the opposite direction so that the connecting rod and key-lever may still oppose the spring. The pull of the spring is always downward and to make the one spring keep the shift rod either in the front or back position it is necessary to shift its stud either to the front or back of the line of the pivot 12, and as the connecting rod must always oppose the action of said spring, it is necessary to move its stud simultaneously with the spring stud in an opposite direction; so that when the spring stud goes backward the connecting rod stud comes forward, and vice versa. By reason of the connection between the two levers 15 and 22 by means of the arm 31, projection 32, and slot 33, the arc of vibration of the lever 15 is somewhat greater than that of the lever 22, which is desirable in order that the stud 16 may stand at substantially the same distance from the line of the pivot 12, whether the parts are held for lower or for upper case work.

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

1. In a type-writing machine, the combination of a shifting platen-carrier, a vibratory shift rod, a spring-actuated lever, and a lever connected thereto to be moved thereby and also connected to the finger-key in substantially the manner and for the purposes set forth.

2. In a type-writing machine, the combination of a shifting platen carrier, a vibratory shift-rod, a lever, a spring applied thereto at one side of the axis of vibration of the shift rod, a second lever connected to the first mentioned lever so as to be moved thereby, a connecting rod applied to the second mentioned lever on the opposite side of the axis of vibration of the shift rod, and means for moving upon said connecting-rod.

3. In a type-writing machine, the combination of a shifting platen-carrier, a vibratory

shift rod, a lever, a spring applied thereto on one side of the axis of vibration of the shift rod, a second lever, a finger-key connected to said second lever on the opposite side of the axis of vibration of said shift rod, and connecting devices between said levers, whereby, when the first mentioned lever is moved to the opposite side of the axis of vibration of the shift rod, the second mentioned lever is simultaneously moved in the reverse direction.

4. In a type-writing machine, the combination of a shifting platen carrier, a vibratory shift rod, a lever provided with a handle, an arm, and a projection, a spring connected to said lever on one side of the axis of vibration of the shift-rod, a second lever provided with a slot for engagement of the projection of said first mentioned lever and connected to a key-lever on the opposite side of the axis of vibration of said shift rod, whereby when said handle portion is vibrated the said levers are caused to cross each other, substantially as and for the purposes set forth.

5. In a type-writing machine, the combination of a platen-carrier, a vibratory shift rod mounted on a pair of levers, one of which is provided with a downward extension, a lever pivoted to said extension and provided with a slot, a handle portion, an arm, and a projection, and having a slot to embrace a stop on said extension, a spring connected at one end to the stud, and at its other end to a fixed portion of the machine, a second lever pivoted to said extension and provided with a stud and an opening for the reception of said projection, and having a slot embracing a stop on said extension, a rod attached to the stud of said second lever at its upper end and connected at its lower end to a key-lever.

6. In a platen shifting mechanism, having a spring and a finger mechanism, a pair of connected switch-levers, one lever being connected to the spring, and the other to the finger mechanism, the arrangement being such that the switch-lever connected to the spring may, when shifted, operate in turn to shift the switch-lever connected to the finger-mechanism in substantially the manner and for the purposes set forth.

Signed at New York city, in the county of New York and State of New York, this 21st day of September, A. D. 1892.

GEORGE B. WEBB.

Witnesses:

JACOB FELBEL,
IDA MACDONALD.