

(No Model.)

2 Sheets—Sheet 1.

W. P. KIDDER,
PLATEN SHIFT FOR TYPE WRITING MACHINES.

No. 564,699.

Patented July 28, 1896.

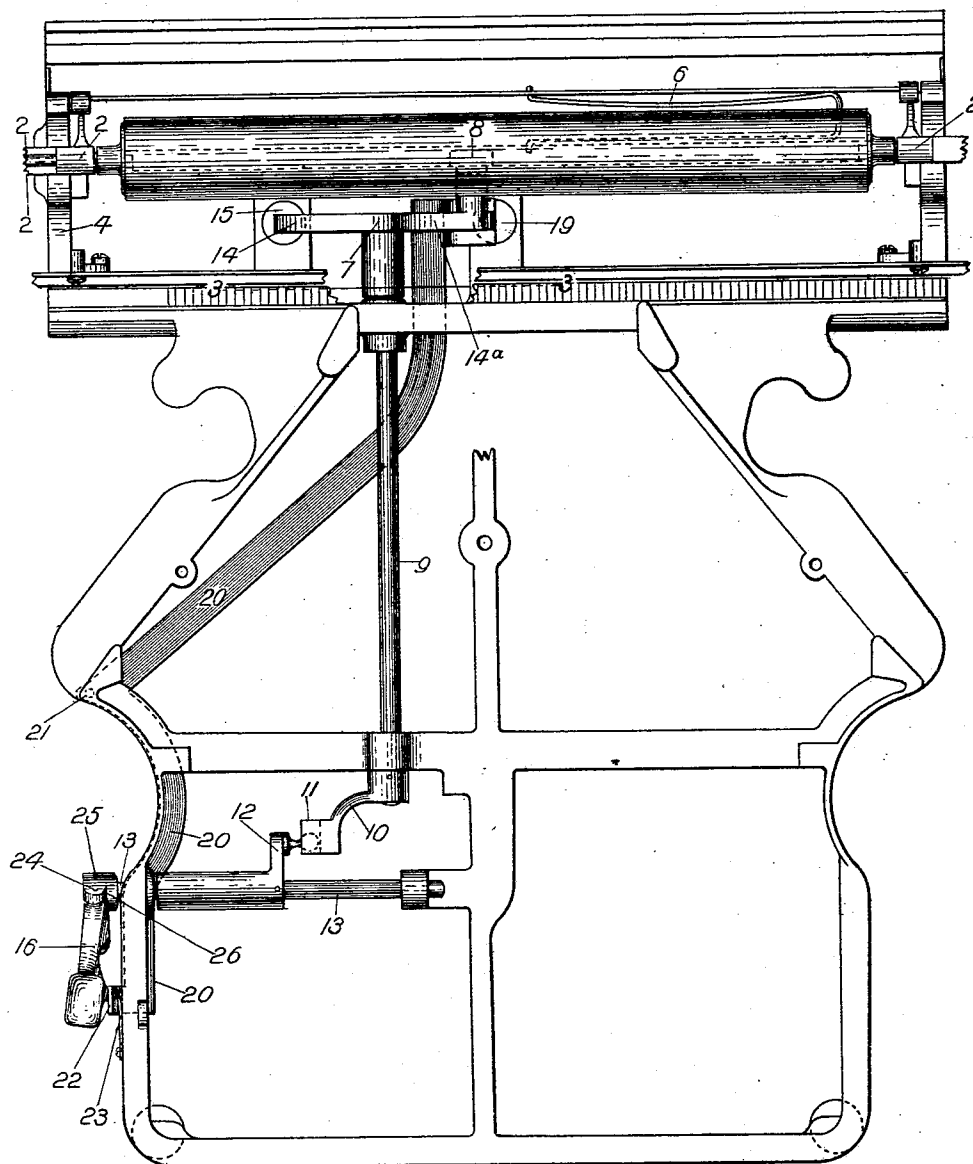


FIG. 1.

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(No Model.)

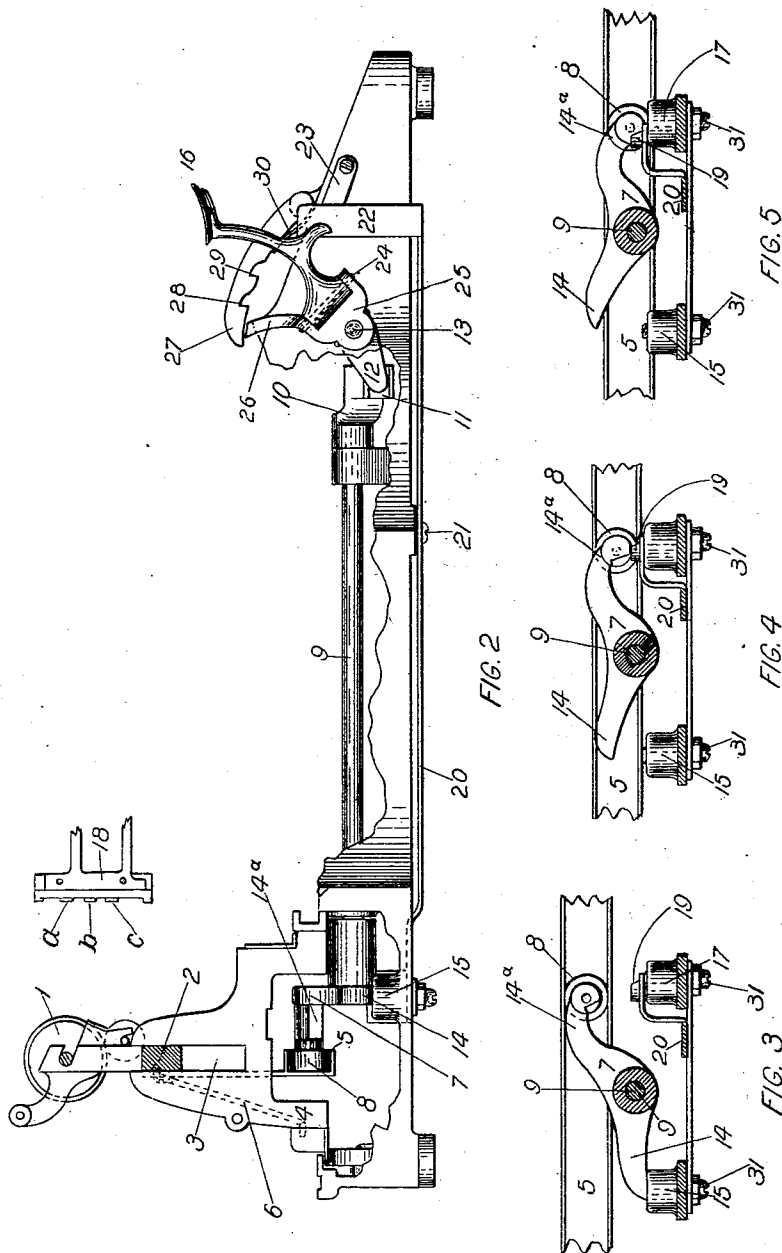
2 Sheets—Sheet 2.

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WITNESSES:

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UNITED STATES PATENT OFFICE.

WELLINGTON P. KIDDER, OF BOSTON, MASSACHUSETTS.

PLATEN-SHIFT FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 564,699, dated July 28, 1896.

Application filed November 16, 1894. Renewed April 7, 1896. Serial No. 586,608. (No model.)

To all whom it may concern:

Be it known that I, WELLINGTON P. KIDDER, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Platen-Shifts for Type-Writing Machines, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a top plan view of so much of one form of a type-writing machine as is necessary to show the nature of my invention, my improvement being attached. Fig. 2 is a side view illustrating my invention and is partly in section on line 2 2 of Fig. 1. Figs. 3, 4, and 5 are detail views, partly in section, on line 3 3 of Fig. 1 and show, respectively, a part of the platen-frame in its normal, intermediate, and lowest position for impression, my movable stop being in the platen-shifting path in Figs. 3 and 4 and out of that path in Fig. 5.

The object of my invention is to produce a cheap, simple, and efficient mechanism by manipulation of which a sidewise-shifting platen is brought into position to receive impression from any desired type-face on a type-head.

My invention consists, mainly, in a combination, a new element of which is a stop that is swung into and out of the path of the platen when the platen is shifted, the function of the swinging stop being to arrest the platen in an impression position between its normal and extreme impression positions in order that the platen may be moved by a single-shift key from a normal position to a plurality of new printing positions in the same direction, one in advance of the other, corresponding with the positions of the several types on the type-heads.

In the drawings, 1 is a platen movable both endwise and sidewise in the usual manner. Platen-frame 2 reciprocates in grooves 3 of carriage 4 and is provided with a lengthwise groove 5, the platen-frame being kept normally in its highest position, as shown in Fig. 2, by stress of spring 6, against the force of which the platen is vibrated or shifted into each of its other impression positions.

For shifting the platen from its normal or highest impression position to its other impression positions, I employ a double rocker-

arm 7, roll 8 thereon moving in groove 5, so that the platen-frame 2 and rocker-arm 7 are mechanically connected. Rocker-arm 7 is fast on rocker-shaft 9, journaled in the frame of the machine and provided with an arm 10, recessed at 11 to receive the end of the rocker-arm 12 from rocker-shaft 13. When platen-frame 2 is in its highest position under the stress of spring 6, one arm 14 of the double rocker-arm 7 engages an abutment 15, Fig. 3, so that the platen-frame is limited in its tendency to move upward, but of course the upward movement of the platen-frame under the stress of spring 6 might be arrested by any other suitable stop. Rocker-shaft 13 is provided with a shift-key 16, and movement of this key causes the roll-carrying arm 14^a of rocker-arm 7 to move downwardly, so that the platen-frame 2 is moved away from its normal position against the force of spring 6. When the roll-carrying arm 14^a of the double rocker-arm 7 strikes against the abutment 17, it arrests the platen at its extreme shiftable position from the normal. Its said normal position is of course one extreme impression position and its extreme shifting position from the normal is another impression position, and at each of these positions the platen is held for impression positively, owing to the contact, respectively, of one arm 14 of double rocker-arm 7 with abutment 15 and of its other arm 14^a with abutment 17.

In its normal position the platen is in place to receive impression from type "a" (for example) on type-head 18, and in its lowest position from type "c." To arrest the platen-frame 2 positively at its intermediate impression position, to receive impression of type "b," the movable stop 19 is employed. The normal position of this stop 19 is preferably in the shifting-path of the platen-frame, as shown in Fig. 4, and stop 19 is moved out of this path when the platen is moved to its lowest position. (See Fig. 5.) Stop 19 is carried by a swing-bar 20, pivoted at 21 to the frame of the machine and having an upturned end 22, which is pressed outwardly from the opposed portion of the machine-frame by a spring 23, this spring tending to keep the farther or stop-carrying end of the bar 20 in the path of the platen between the extreme impression positions, as already explained and as in-

indicated by Fig. 4. Pressing the outer end of bar 20 inwardly of course swings stop 19 out of the path of the platen, as shown in Fig. 5, and rocking of shaft 13 depresses the platen 5 then to its lowest position.

For the sake of speed and convenience I utilize the shift-key 16 not only for rocking shaft 13, but also for moving the stop-carrying bar 20. That is a single, and one and the 10 same, key 16 is both a shift-key and a shift-controller. To accomplish this, key 16 is not only so connected with shaft 13 as to serve as a rocker-arm therefor, but is so mounted in the machine that it moves the stop-carrying 15 bar 20 at the will of the operator to swing stop 19 out of the path of the platen, being, in order to attain this object, conveniently hinged at 24 to a bracket 25, fast on shaft 13. Bracket 25 is preferably formed with an arm 20 26, with which a latch 27 engages by either tooth 28 or 29 to lock the rock-shaft 13, (through bracket 25 and its arm 26,) and consequently the platen, in any desired impression position. Latch 27 is held normally out 25 of position for engagement with arm 26 by a spring 30. When the latch 27 and arm 26 are brought together, the tendency of the parts is to pull apart, and the force then exerted is sufficient to keep them locked together.

30 In ordinary operation of the machine, the shift-key is depressed in the usual manner if it be desired to shift the platen from its upper or normal position to its next lower or intermediate impression position; but if a 35 shift to the lowest impression position is desired the operator pushes the shift-key downwardly and sidewise, and the object is attained.

It will be plain to all mechanics that my 40 construction may be varied in several mechanical details without departing from my invention.

The abutments 15 and 17 are each provided with an adjustable portion 31, best formed of 45 a set-screw, as shown, so that the platen may be shifted into the exact position required by adjustment of the abutments when the parts become worn.

What I claim is—

50 1. In a type-writing machine, the combination of a vibrating platen; a carriage therefor; and a type-head having a plurality of type, with stops for arresting the platen in two of its impression positions and a movable 55 stop for arresting the platen in another of its impression positions, said movable stop being connected with and under the control of a key, substantially as and for the purpose set forth.

60 2. In a type-writing machine, the combination of a vibrating platen and a type-head having a plurality of type with platen shift-

ing and stopping mechanism, and a shift-key having a duplex movement, one to actuate the platen-shifting mechanism, and the other 65 to actuate the platen-stopping mechanism, the stopping mechanism comprising a lever which is engaged by the shift-key to swing its stop end into the path of the shifting platen, substantially as and for the purpose 70 set forth.

3. In a type-writing machine, the combination of a shifting platen; platen-shifting mechanism; a type-head having a plurality 75 of type; a platen shift-key and a swinging bar carrying a stop for the platen, said key being adapted to engage said stop-carrying bar, whereby the swinging bar is moved to swing the stop into the path of the platen as it shifts from its normal printing position for 80 another printing position, substantially as and for the purpose set forth.

4. In a type-writing machine, the combination of a shifting platen and a swinging 85 stop therefor on a movable bar; a hinged key adapted to engage said bar to swing it; and platen-shift mechanism with which said key is connected to actuate it, substantially as described.

5. In a type-writing machine, the combination of a shifting and longitudinally-traveling 90 platen; a type-head having a plurality of type; a single shift-key; mechanism substantially such as described for connecting the shift-key with the platen; a swinging 95 platen-stop; the shift-key being movable sidewise to cause the swinging platen-stop to move into the path of the platen when the shift-key is moved to shift the platen from one impression position to another, all sub- 100 stantially as and for the purpose set forth.

6. In a type-writing machine, the combination of a shifting and longitudinally-traveling 105 platen; a type-head having a plurality of types; a single shift-key; mechanism, substantially such as described, for connecting the shift-key with the platen to move it from its normal position to a plurality of new 110 printing positions in the same direction, one in advance of the other, corresponding with the positions of the several types on the type-heads, a complete movement of the key shifting the platen from its normal position to its extreme printing position; and a movable 115 stop adapted to be moved into the path of the platen between the normal and extreme printing positions thereof by a supplementary motion of the shift-key, all substantially as and for the purpose set forth.

WELLINGTON P. KIDDER.

Witnesses:

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