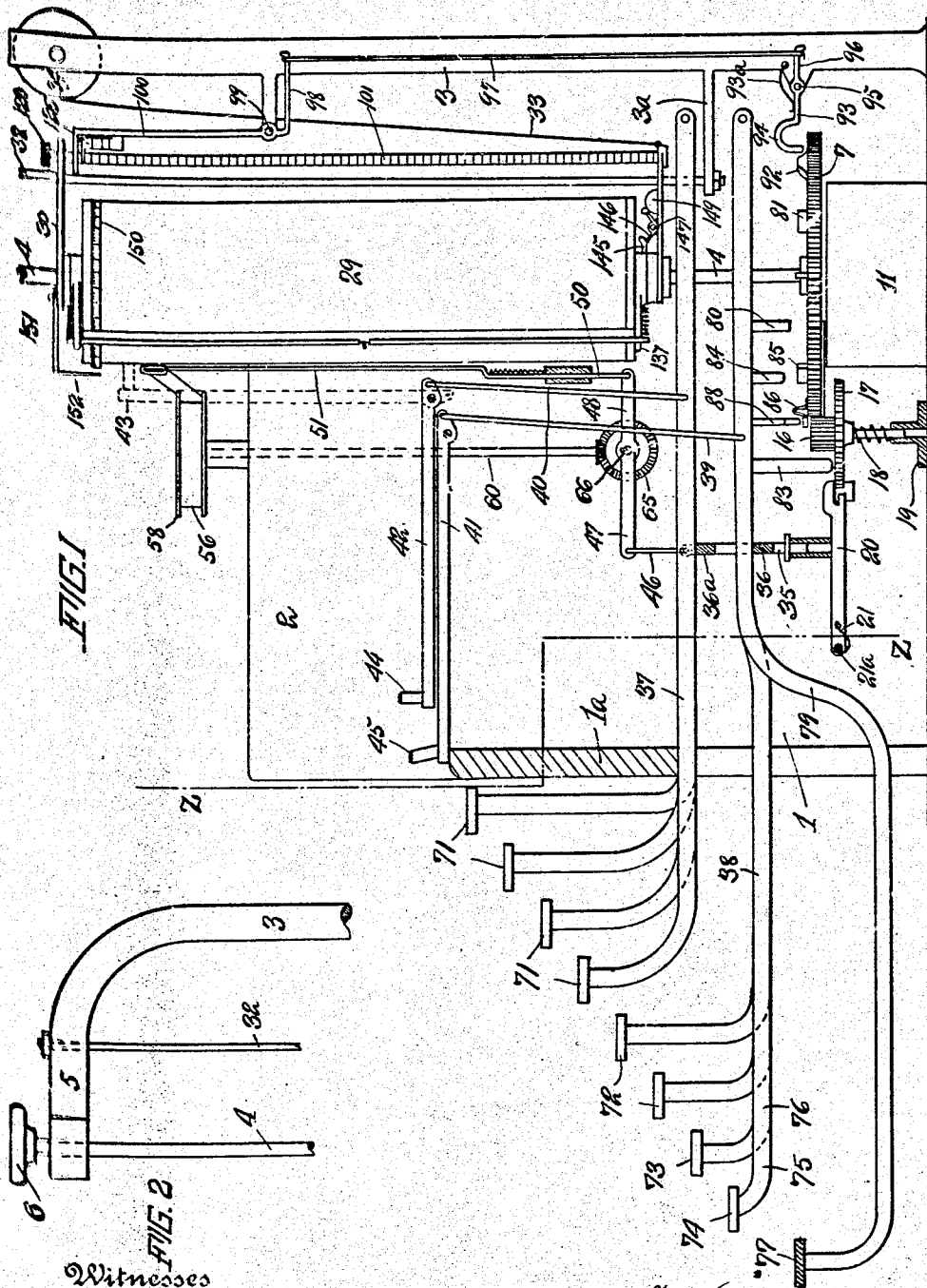


No. 860,321.

PATENTED JULY 16, 1907.

R. D. PARKER.
TYPE WRITING MACHINE.
APPLICATION FILED JULY 16, 1906.

5 SHEETS—SHEET 1.



Witnesses
O. Koenigberg
H. Sullivan

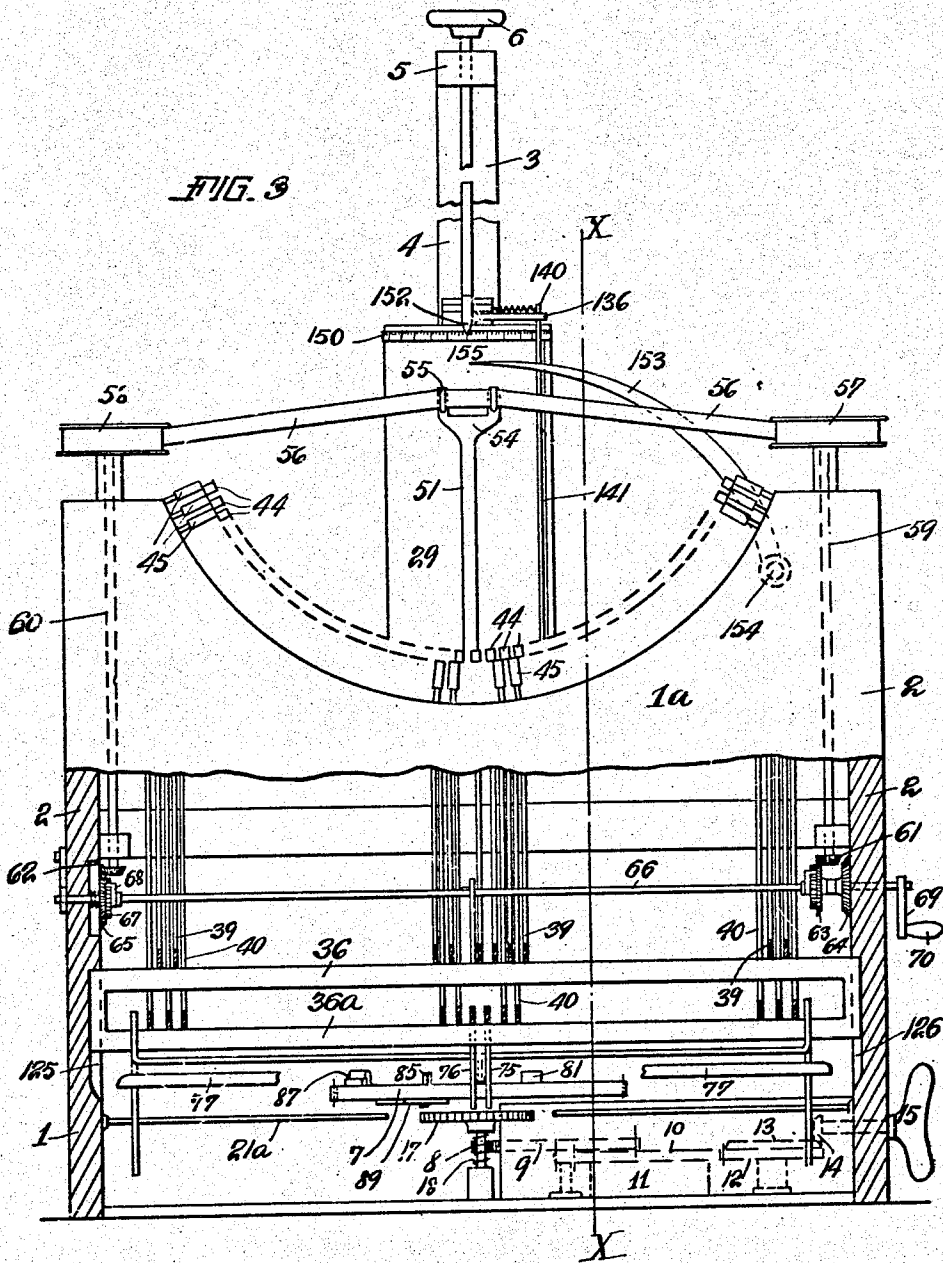
Inventor
Roy Dandford Parker
by J. H. Derrigson,
Attorney

No. 860,321.

PATENTED JULY 16, 1907.

R. D. PARKER.
TYPE WRITING MACHINE.
APPLICATION FILED JULY 16, 1906.

5 SHEETS—SHEET 2.



Witnesses
J. Koenigsberg
H. Sullivan

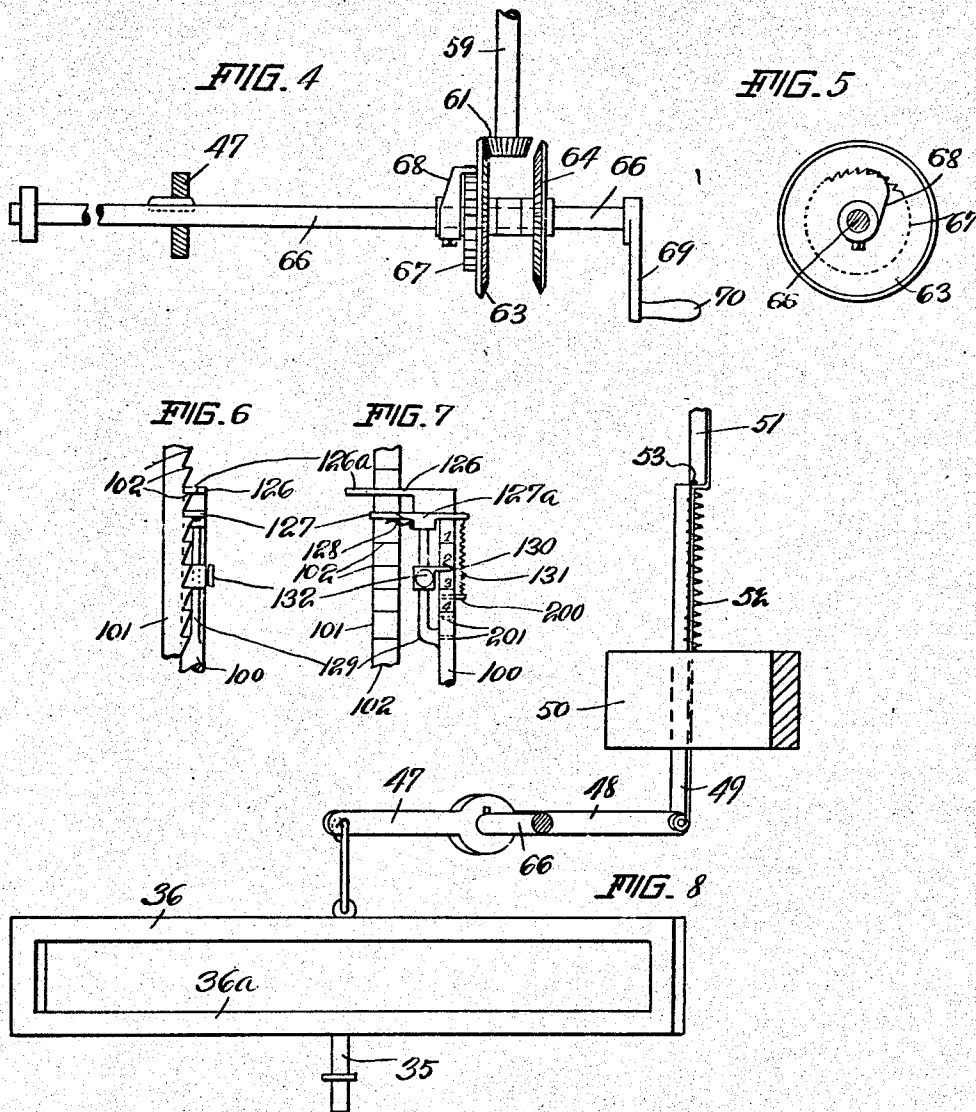
Inventor.
Roy Danford Parker,
By his Attorney,
H. H. Berrigan.

No. 860,321.

PATENTED JULY 16, 1907.

R. D. PARKER.
TYPE WRITING MACHINE.
APPLICATION FILED JULY 18, 1906.

6 SHEETS—SHEET 3.



Witnesses
O. Koenigsberg
H. Sullivan

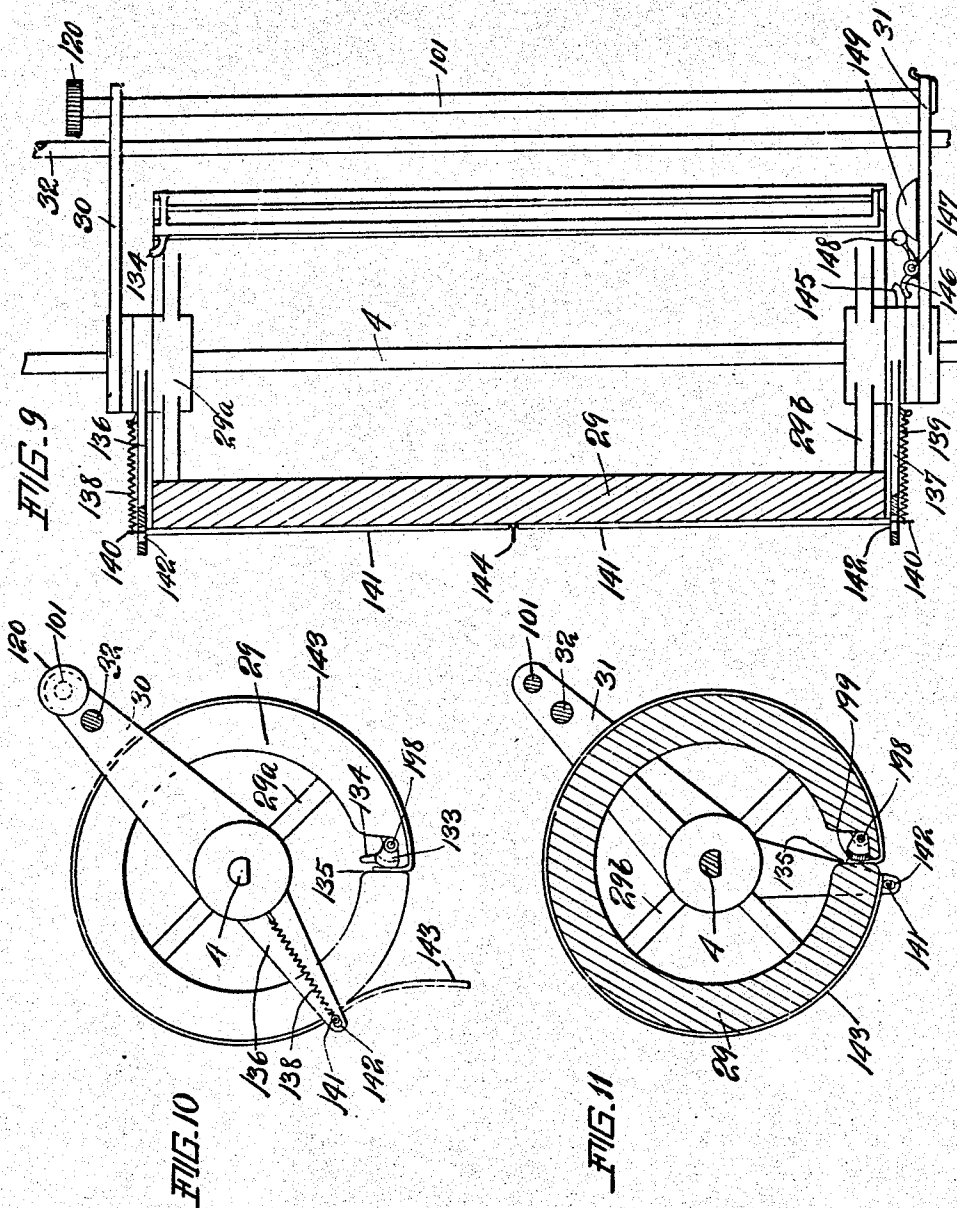
Inventor,
Roy Danford Parker,
By his Attorney, W. H. Berrigan.

No. 860,321.

PATENTED JULY 16, 1907.

R. D. PARKER.
TYPE WRITING MACHINE.
APPLICATION FILED JULY 13, 1906.

58 SHEETS—SHEET 4.



Witnesses
D. Koenigsberg
H. Sullivan

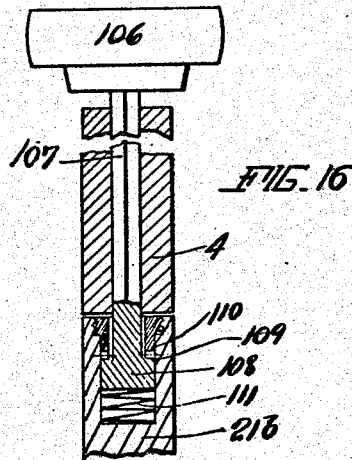
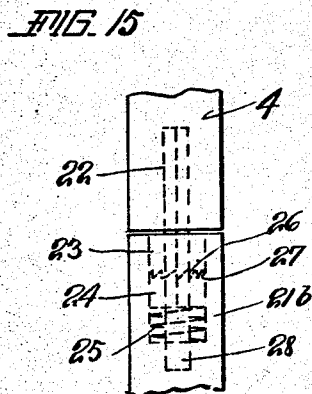
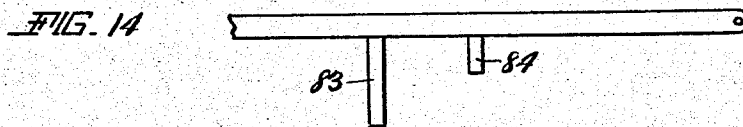
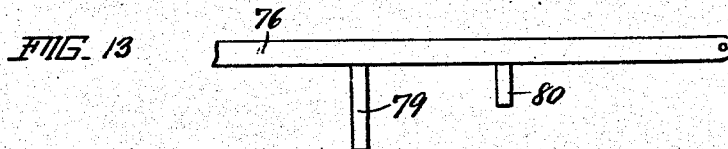
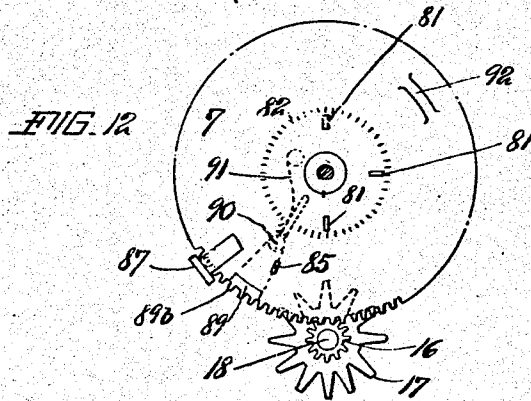
Inventor
Roy Danford Parker,
By his Attorney
A. H. Berrigan.

No. 860,321.

PATENTED JULY 16, 1907.

R. D. PARKER.
TYPE WRITING MACHINE.
APPLICATION FILED JULY 16, 1906.

58 SHEETS—SHEET 5.



Witnesses
J. Kornigsberg
H. Sullivan

Inventor
Roy Danford Parker,
By his Attorney
J. H. Barrigan.

UNITED STATES PATENT OFFICE.

ROY DANFORD PARKER, OF GOSHEN, NEW YORK.

TYPE-WRITING MACHINE.

No. 860,321.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed July 16, 1906. Serial No. 326,354.

To all whom it may concern:

Be it known that I, ROY DANFORD PARKER, a citizen of the United States of America, residing at Goshen, in the county of Orange, State of New York, have invented a new and useful Type-Writing Machine; and I do hereby declare the following to be a full, clear, and exact description of the same.

The present invention relates to typewriting machines, especially "visible writing" machines, and the especial object thereof is to provide a form of machine in which the platen or surface whereon the paper is held is automatically operated to commence a new line, and without requiring the operator to touch said platen or the carriage or frame supporting the same.

15 Prior to my present invention, it has been proposed to provide a typewriting machine having the platen horizontally disposed, with means usually controlled from the key-board for returning the platen (or carriage-frame carrying the same) to a common printing point 20 and for advancing such platen to present the paper for beginning a new line.

My invention, however, contemplates a form of machine wherein the platen is disposed preferably vertically and operates always in the same direction and 25 without the necessity of returning to begin a new line.

The typewriting machine devised by me and embodying my improvements in the form shown in the accompanying drawings, includes a platen which is vertically disposed and arranged to rotate about a vertical 30 axis. The paper is preferably secured and clamped around the platen, and the machine is provided with parts which cause the vertically-disposed platen to move step-by-step always in the same direction and, upon completion of the rotation, to move upwardly to 35 present the paper for beginning a new line of print. By this means, the operator is relieved from the necessity of restoring the platen to new line position, the operations therefor resulting from ordinary manipulations at the key-board for the purpose of writing.

40 Referring to the accompanying drawings, Figure 1 is a vertical section (from front to rear) on the line X—X of Fig. 3 of a machine embodying my improvements; Fig. 2 is a detail showing the upper end of the machine frame and parts supported thereby; Fig. 3 is a 45 vertical section (from one side to the other) on the line Z—Z of Fig. 1, of said machine; Fig. 4 is a detail of the inking-ribbon winding means; Fig. 5 especially illustrates the latch for controlling the same; Figs. 6 and 7 are side and front views of part of the escapement device controlling the lengthwise advance of the platen, 50 and for regulating the extent thereof; Fig. 8 is a detail showing the frame operated by the various keys of the key-board, the ribbon-vibrating device being shown connected therewith; Fig. 9 is a view partly sectional of the platen, its accessories and the platen frame; Figs 55 10 and 11 are, respectively, top and cross-sectional

views of such platen; Fig. 12 is a plan view of the escapement devices controlling the rotation of the platen; Fig. 13 is a detail illustrating the tabular bar; Fig. 14 is a detail illustrating the new line bar; Fig. 15 is a detail 60 illustrating a construction which permits rotation of the platen independently of the escapement; and Fig. 16 is a detail illustrating another device for the like purpose.

1 indicates the base or bottom frame of the typewriting machine, and is shown as provided with front plate 1^a and side plates 2, and with a rear frame or upright 3 having a forwardly-extending overhanging upper end 5 (see Figs. 2 and 3), and secured in any desired way to the part 1. 70

My new typewriting machine is provided with a vertically-disposed bar 4 rotatively supported at the overhanging end 5 aforesaid and, at its lower end connected (and preferably movable independently of) to the means for intermittently rotating the same. In the 75 form shown, the upper end of bar 4 is shaped to freely rotate through the overhanging end 5 and to have its end, projecting beyond the same, formed to receive a knob 6.

7 is a toothed wheel connected (preferably indirectly 80 as hereinafter explained) with the bar 4, and provided with a great number of peripheral teeth—usually as many as there are printing units in the maximum length of line which may be printed by the machine (say, seventy). Below wheel 7, and upon the same 85 axle, is wheel 8, which is in mesh with the train containing wheels 9 and 10, the last named being driven by a spring contained in a box or casing 11. For winding the motor, any suitable connections such as gears 12, 13 and 14, and the exterior handle 15 may be used. 90 The teeth of wheel 7 are in mesh with teeth of a smaller wheel 16 (see Figs. 1 and 12), made fast to a star wheel 17, having its projections corresponding in number with the teeth of wheel 16. The wheels 16 and 17 are connected with the same axle 18, which is slidably 95 mounted in the sleeve-block 19, and normally held in raised position by a spring surrounding axle 18 and pushing upon the underside of wheel 17. The points or projections of the last-named wheel are engaged by a vibrating dog of any suitable pattern (such as an arm 100 having fixed and yielding jaws). In the drawings (Fig. 1), I have shown an arm 20 pivoted at 21^a and yieldingly held in the position shown by a spring 21.

It is obvious that whenever the dog-arm 20 is vibrated (and it will, as hereinafter explained, be moved every 105 time there is a normal operation of a type-bar or space bar) the wheels 17, 16 and 7, will be allowed to travel forwardly one space under influence of the spring train 10, 9, 8.

The movements of wheel 7 are transmitted to the 110 vertical rotative bar 4, and I prefer to connect the said bar and wheel (at, say, 21) by means which permit

the bar to have independent movement, as and for the purpose hereinafter described.

In Fig. 15, I have shown means for effecting the independent drive mentioned. 21^b is a cylindrical part projecting upwardly, and bored downwardly to receive a bar 22 having an upper end squared or otherwise non-rotatively engaging the lower end of bar 4, and having its lower end 28 rotatively journaled in the bore of part 21. At its upper end, the bore carries a fixed inserted ring 23, through which the bar 22 may freely rotate, and which is provided with teeth 26. Rotatively arranged within the bore, and slidably though non-rotatively engaging the squared part of bar 22, is the ring 24 having teeth 27 and pressed into yielding engagement with the ring 23 by means of a spring 25. Upon examination of Fig. 15, it will be seen that the part 21 will communicate its movements to part 44, by engagement of the teeth of ring 23 with those of ring 24, and that the latter will directly cause the squared rod 22 to drive the rod 4. It will also be obvious that said rod 4 may also be independently turned backward by grasping the knob 6 to any extent desired.

In Fig. 16, I have shown another combination for effecting the same result, and which permits movement of rod 4 either forwardly or rearwardly independently of the toothed wheel 7 when desired. In this instance the part 21^b is bored as before described, and is provided with a fixed ring 110 having teeth 109. A squared rod 107, connected directly with knob 106, extends slidably downwardly through the bar 4, and at its lower end it carries a block 108 having teeth engaging the teeth 109 of ring 110, and yieldingly held thereto by the spring 111. Since the lower end of rod 107 freely rotates in the ring 110 and since the block 108 freely rotates in the bore of part 21, it follows that upon slightly pressing downwardly on knob 106, the block 108 will be moved from engagement with ring 110, and the rod 4 may be freely moved in either direction to any extent desired; while normally the said block and ring will be clamped together and the movements of wheel 7 positively contributed to bar 4.

The typewriting machine is provided with a cylindrical platen 29, disposed vertically as shown in the drawings, and surrounding the bar 4. The engagement of the platen and bar is such that the platen while freely slidable lengthwise of the bar, is compelled to rotate in unison therewith. Any suitable construction for accomplishing such result may be employed, and I have shown (see especially Figs. 9, 10, 11 and 12) the rod 4 as non-circular, and the platen as being provided with end hubs 29^a and 29^b which have axial openings corresponding to the exterior of bar 4. Such construction, it will be obvious, will result in giving to the platen every movement given to the bar. The cylinder's movements lengthwise of bar 4 under the influence of the operation of the machine are upwardly, and for controlling these movements I provide a frame comprising top and bottom plates 30 and 31 with which the platen's ends or heads are suitably rotatively engaged, and which freely slide lengthwise of a guide-rod 32 connected at its lower end to an arm 3^a extending forwardly from the upright 3 and at its upper end connected with the overhanging upper end 5 of said upright (see Figs. 1, 2, 9, 10 and 11). The frame referred

to also comprises a vertical rack-bar 101, the use of which will be hereinafter explained.

In order to cause the frame (and the carried platen), to move upwardly, I provide a strap or a metal band 33, one end of which is connected to the lower part of the frame and the other end of which is connected to and wound in any suitable way upon a suitable spring drum 34. Examination of the drawings, will show that the platen while rotatable in the frame described, is caused by said frame to travel lengthwise of the bar 4. A form of escapement whereby the extent of lengthwise travel of the cylinder is regulated, will be hereinafter described.

The paper is wound around the platen (by connections hereinafter described) and the printing is accomplished by striking the finger-keys, and causing the dog 20 to release the wheels 17, 16 and 7 step by step whereby corresponding step by step rotative movements are given to the platen: in my illustrated typewriting machine the length of the line of print is around the platen, not lengthwise of the same.

The means by which the finger-keys exercise such control, will next be described. Key-levers 37 and 38 are pivoted, in any suitable manner, to vibrate, and rest upon the upper and lower bars 36^a and 36 of a suitable frame (Fig. 8) whose side bars are arranged to slide (see Fig. 3) in grooves 125 and 126 in the side plates 2 of the base. Said frame is provided with a downward projection 35 which engages (see Fig. 1) the dog 20. Whenever, therefore, a key-lever is pressed the frame 36 and 36^a is pushed downwardly and, upon release of said key the frame is raised by the spring 21 connected with dog 20. The ribbon-vibrator spring also, as hereinafter described, assists in such return of the frame.

In order to dispense with shift mechanism, I prefer to provide the machine with a double key-board of which the key-levers 37 may represent the upper case while the key-levers 38 represent the lower case. The machine is also provided with two sets of type arranged to strike at the common printing point, 43. Key-levers 38 are shown as connected by rods 39 with type-bars 41 and types 45, and key-levers 37 are shown as connected by rods 40 with type-bars 42 and types 44.

The frame 36, 36^a, is connected by rod 46 with an arm 47 of a ribbon-vibrating mechanism. Said arm is slidably keyed to a bar 66, and an opposite arm 48 of the same lever is connected at 49 (see also Fig. 8) with a vibrator plate 51. Said plate is movable in a stop 50, and is moved upwardly against a spring 52 one end of which is connected to said stop and the other end 53 thereof is connected with a shoulder or bent portion of the plate. The plate is provided at its upper end (see Fig. 3) with fingers 55 for holding the ribbon in position. The operations of the key-levers 37 and 38 will, therefore, result in vibrating the ribbon (by raising and lowering the same) to and from in front of the printing point whenever a type is to be imprinted. Two spools 57, 58 (Fig. 3) are provided and the ribbon 56 winds on to one of said spools as it unwinds from the other. Spool 57 is driven by rod 59, and spool 58 is driven by rod 60. Rod 59 carries bevel wheel 61 and this is engaged by either wheel 63 or wheel 64 according to the desired direction of travel of the ribbon. Rod 60 carries a bevel wheel 62 which

may be engaged by and disengaged from wheel 65. Referring also to Figs. 4 and 5, it will be seen that each wheel 63 and 65 runs free of the shaft 66 (which passes therethrough) and each of said wheels carries a ratchet 67. Near to each of said wheels the shaft 66 carries (by means of clamping screws) a spring tooth or pawl 68. It will be obvious that the oscillations of the shaft 66 (due to vibrations of key-levers) are transmitted, by the means described and shown, as step by step

movements to the inking-ribbon.

The ribbon spools may be moved to any extent desired, by means of the arm 69 and handle 70, which are employed to first slide the rod so as to have the wheel 64 engage wheel 61 and then to rotate the rod 59 and spool 57.

The keys for the upper case of the machine are represented at 71, and those for the lower case are represented at 72. There may be as many of said keys as desired. In addition, I have shown the machine as being provided with a tabular key 73, a new line key 74, and a space bar 77.

The tabular key vibrates a lever 76 (see Fig. 13) which rests upon the bottom bar 36 of the frame, and is provided with two downwardly-extending projections or stops 79 and 80. The positions of said projections are shown in Fig. 1, the projection 79 being behind and hidden by a projection 83 and the projection 80 being located above the wheel 7. Said wheel is provided upon its upper face with a plurality of concentrically disposed plates 81 (see Fig. 12) adjustably connectible with said wheel at any of the points of a scale 82 corresponding with the position of teeth of wheel 7 and to the circumference of the platen, thus permitting the tabular stops to be placed at any predetermined point of line travel of the machine. Referring to Fig. 1, it will be seen that, upon depression of key 73, the lever 76 will be vibrated, and the stops or projections 79 and 80 will be moved downwardly. The first-named stop will push wheel 17 downwardly and with it wheel 16, while the stop 80 will be pushed into the path of movement of the plates 81, and when the wheel 16 has been entirely separated from wheel 7, the latter will be driven by the spring train until the first-presented plate 81 comes against the stop or projection 80. Upon the release of the key 73, the wheels 16 and 7 again engage before the stop 80 is lifted from contact with the abutting plate 81.

It will be obvious that by placing the plates 81 at say, 5, 15, 40 and 70, the platen may, by successive operations of the key 73, be intercepted at said points during its rotation; and any rearrangement of plates 81 will cause a relative change in the points of stoppage of the platen.

The "new line" key 74, vibrates a lever 75 (see also Fig. 14) which rests upon the bottom bar 36 of the frame, and is provided with two downwardly-extending projections or stops 83 and 84. The positions of said projections are shown in Fig. 1, the projection 83 being over the wheel 16 and the projection 84 being located above the wheel 7. The latter wheel is provided, on its upper face, with a plate 85 (see also Fig. 12), at a point corresponding to the beginning of a line of print. Referring to Fig. 1, it will be seen that, upon depression of key 74, the lever 75 will be vibrated, and the stops or projections 83 and 84 will be

moved downwardly. The first-named stop will (as in the case of 79 aforesaid) push wheels 17 and 16 downwardly, while the stop 84 will be pushed into the path of movement of the plate 85, and when the wheel 16 has been entirely separated from wheel 7, the latter will be driven by the spring train until the plate 85 comes against the stop or projection 84. Upon the release of the key 74, the wheels 16 and 7 again engage before the stop is lifted from contact with the intercepted plate 85.

The space-bar 77 is connected with one or more levers 78 arching together at 79 and resting upon lower bar 36 of the frame. A projection 88 (see Fig. 1) depends from either or both of the levers 78. During the printing of a line, the space-bar and connections are effective merely for operating the platen only at interword spaces of said line of print. When, however, the end of a full line of print is nearly reached, the space-bar operates to complete the rotation of the platen.

In typewriting, it very frequently happens that a word is concluded and the predetermined line still lacks a few units for completion. In such event, it is usually unwise to write anything more upon said line as only a very short word can be included. My improvements include means whereby when a space occurs near the conclusion of a predetermined line (say within four units of said concluding point), then the mere operation of the space-bar will cause the wheel 7 to be driven until the line-commencing point is reached. The means for accomplishing this result include the projection 88 (already spoken of) and a second projection carried by the bar or bars 79 and hidden behind the projection 84 in Fig. 1. Said means also include parts moved by the wheel 7 to position to be operated by the projection 88. These parts include a spring or elastic strip 86 secured at one end to said wheel, and carrying at its free end a short curved plate 87 (see also Fig. 12). Said plate is located so as to be within a few units of the concluding point of the line (which is also the point at which plate 85 is secured to the wheel), and the spring is so formed as to normally hold the plate 87 above the periphery of wheel 7, and is bent to permit said plate, when desired, to be pushed to a line coinciding with the bottom face of said wheel.

It will be obvious that the operations of the space-bar have no effect upon the plate 87 until the line is almost entirely filled. At that time, the plate 87 will be underneath the projection 88, and if the space-bar is depressed the projection 88 will strike plate 87, and the latter will push the wheels 16 and 17 downwardly until the wheel 7 is released and driven by the spring train to line-commencing position.

The connections already described control the rotation of the platen 29 step by step for ordinary copying, also rotation of the platen for tabulating purposes, also intentional rotation thereof to line-commencing position and automatic rotation of the platen to such position. As pointed out also, especially when describing Figs. 15 and 16, the bar 4 (and with it the platen) may be advanced or returned to any desired point, independently of the spring train, and by mere manipulations of the knob, 6 or 106. This last arrangement will be found very useful when corrections or changes are to be made in the written matter.

The typewriting machine devised by me, especially in the illustrated embodiment, is preferably provided with a buffer or brake mechanism, which restrains the wheel 7 (and consequently the platen 29) from being too

violently acted upon by the spring train at substantially the conclusion of a line of print. While any usual mechanism may be employed for this purpose, I prefer the means illustrated in Figs. 1 and 12, especially. Such means attached to the wheel 7 and brought to operative position thereby, comprises a plate 89 pivoted at 90 to the under side of the wheel 7. At its outer end, the plate 89 is provided with teeth 89^b which, in the normal position of the plate, lie in alignment with the teeth of the wheel 7 (or, in other words, concentric of the axis of said wheel), a part of the rim of said wheel being cut away and provided with teeth at the part occupied by the teeth 89^b. During engagement of the teeth 89^b with the teeth of wheel 16, the plate 89 will swing about its pivot 90, and the inner arm of said plate will press against spring 91, and the plate be restored by said spring when the teeth 89^b have passed from engagement with wheel 16.

My improved typewriting machine also comprises means whereby the cylinder or platen 29 is advanced lengthwise of the bar 4, and I prefer that the means referred to shall, upon completion of a rotation of the platen, operate without further thought upon the part of the operator.

The means illustrated in the accompanying drawings comprise a cam 92 (see Figs. 1 and 12) upon the upper face of wheel 7 and a lever 93 pivoted at 95 to the base of the machine and restored by spring 93^a. Said lever is looped (at 94) at one end, to permit the bent spring 86 to pass, and the other end 96 thereof is connected with a rod 97. Said rod exerts a pull upon an arm 98 of a lever pivoted at 99, and an escapement is operated as the result of movements of the arm 100 of said lever, and engages the rack bar 101 (heretofore mentioned) of the platen-carrying frame.

The escapement referred to is shown in Fig. 1, and in detail in Figs. 6 and 7. Referring to the latter figures, it will be seen that the rack 101 is provided with teeth 102 throughout its length. The arm 100 is provided with a plate 126 extending across the rack and normally out of engagement therewith; said plate, however, has an offset hooked outer end 126^a, and, as hereinafter described, said hooked end alternately engages and disengages the teeth 102 of the rack 101.

The arm 100 is provided with a rounded upright 129 and a stop or block 130 is adjustably fitted upon said upright, and held in any desired position by the set screw 132. Upon said upright 129 is also slidably secured a block 127^a, and at its forward end said block carries a leaf 127 hinged thereto, and yieldingly held in place by the spring 128. The other end of block 127^a is provided with a projection, and a spring 131 is secured to said projection and to a pin 201 insertible as desired in any one of the openings 201 in the arms 100.

In use, when the arm 100 is rocked by the parts 97 and 93 (Fig. 1), the plate 126 will be swung to the right (Fig. 7) until the hooked end 126^a engages the rack-teeth 102, and the leaf 127 is withdrawn from engagement therewith. Thereupon the spring 131 will draw the block 127^a as far down as the block 130 permits. Upon return of the arm 100 to forward position, the

leaf 127 will be advanced into engagement with the tooth 102 opposite the top of block 130, while the hooked end 126^a will be moved away from the rack, permitting the band 33 and spring-drum 34 to move said rack and the carried platen upwardly.

The length of movement is varied at the escapement by adjustably locking the block 132 to the upright 129. Thus, if the block 130 is locked opposite the numeral "1" (Fig. 7) it will be obvious that the platen will be moved but one space between lines; if the block is locked opposite the numeral "2" the platen will be moved two spaces between lines; if the block 130 is locked opposite the numeral "3," the platen will be moved three spaces between lines.

Whenever it is desired to move the platen 29 upwardly without operating the finger-keys, the knob 120 (Fig. 1) may be grasped by the fingers of one hand and the rack 101 thereby turned so as to carry the teeth 102 away from the escapement, and the platen then grasped by the other hand and raised to any extent desired. When the platen is to be moved downwardly (to commence printing of a new page, or for any other reason) the platen or its frame may be pushed downwardly, in which event the spring leaf 127 will yield against the pressure of the spring 128.

Another improvement characteristic of my typewriting machine is found in the means whereby the paper, or other material upon which copy is to be made, is fed into the machine. Ordinarily, the paper is fed into the machine merely by the grip between the platen and two smaller rollers, and the paper is not locked into engagement with the platen.

In my improvements, however, I have found it advantageous to fasten the paper around the platen, in such manner as to make it unnecessary for the operator to reinsert or touch the paper until the letter is completed or the page is filled.

Referring to Figs. 9, 10 and 11, it will be seen that I have shown the platen as provided with attachments whereby the paper is wound about the platen and grip- pingly held at or near its two side edges.

Within the platen and extending longitudinally thereof I provide a curved plate or jaw 199, secured at top and bottom to a rod 198, and normally held by a spring against the wall of the recess of the platen. The rod is provided, at its upper end, with a finger-piece 134, and upon manipulation of said finger-piece, the curved plate 199 is swung away from the platen sufficiently to permit one side edge of the paper to be evenly inserted, whereupon the plate is released and grip- pingly engages the side edge of the sheet. To secure the other edge of said sheet to the platen, I provide means comprising upper and lower plates 136 and 137 (Fig. 9) pivotally fitted upon the collars of the platen heads 29^a and 29^b, and provide the outer ends of said plates with slots 142. Within said slots, I fit the opposite ends of a rod 140. Said rod is provided with an outwardly extending finger-gripping portion 144 midway of its length, and also carries long and narrow rollers 141. The ends of rod 140 are connected by springs 138 and 139 with the plates 136 and 137, near the pivots thereof. One side edge of the paper having been gripped, as aforesaid, by the plate 199, the operator grasps the part 144 with one hand, and repeatedly presses the tabular key 73 (Fig. 1) until the 130

platen has revolved (under influence of the spring train 10, 9, 8, 7) sufficiently to have the side edge of the paper underneath the rod 141 and the rollers thereon, or nearly so. The springs 138 and 139 exert a constant pull upon the rollers, and compel the paper to tightly fit upon the platen.

It will be obvious that, with the devices just described, paper of any width may be securely fitted to the platen.

10 I have also provided the machine with a bell which is automatically sounded whenever a line is concluded or nearly so. Upon hearing the bell, the operator may press the "new line" key 74, and the platen will shift to line-commencing position and also be advanced 15 for a new line.

The bell referred to is indicated at 149 (Fig. 9 especially) and is carried by the member 31, of the platen-frame. A hammer 148 is provided to sound the bell and is pivoted at 147 to the member 31. The arm 146 20 of the bell-hammer, is located in the path of a projection 145 connected with the plate 137. Thus the bell will always be sounded when the line is concluded, no matter what width of paper is being printed upon.

The machine is provided with a scale 150 (Figs. 1 and 25 3) curved around and made fast to the upper end of the platen, and with a pointer 152 on plate 151 which is connected with the arm 30 of the platen-carrying frame. By consulting the pointer and scale, the operator will always be able to ascertain the exact point 30 of a line whereat the next type will print. The numerals on the scale 150 will preferably correspond, so far as relative position to the axis of the platen is concerned, with the previously mentioned scale 82 upon the upper face of wheel 7.

35 I have also provided a second pointer (see Fig. 3), which will indicate the exact line, or point lengthwise of the platen, whereat the next type will print. For this purpose, I may use an elastic metal strip 153 fastened at 154 to the body of the machine and having 40 a pointed end 155 indicating the common printing point for the machine.

What I claim is:

1. In a typewriting machine, a vertically-disposed cylindrical platen mounted for rotation about a vertical axis 45 and for vertical advance step by step, connections for rotating the platen and for advancing it vertically, and finger-keys and connections controlled thereby for permitting the said connections to move the platen rotatively, in combination with means controlled by and operating in unison with the platen-rotating connections for allowing 50 the platen to advance vertically as desired.

2. In a typewriting machine, a vertically-disposed cylindrical platen mounted for rotation about a vertical axis and for progressive vertical advance step by step, finger-keys and connections positively controlled thereby for moving the platen rotatively, means controlled by and operating in unison with the platen-rotating connections for allowing said platen to advance vertically as desired, and settable means for varying the extent of vertical advance of the platen and for holding it in advanced position. 55

3. In a typewriting machine, a cylindrical platen mounted for rotation upon its longitudinal axis and for progressive longitudinal advance step by step, connections for rotating the platen, and connections including a part 60 carried by the platen-rotating connections for controlling the longitudinal advance aforesaid.

4. In a typewriting machine, a cylindrical platen mounted for rotation upon its longitudinal axis and for progressive longitudinal advance step by step, finger keys 70

and connections controlled thereby for rotating the platen step by step, and connections including a part operating in unison with the platen for allowing the latter to advance longitudinally.

5. In a typewriting machine, a cylindrical platen, a 75 keyboard including character and space keys, connections controlled by said keys for moving the platen step by step as said keys are operated to print a line, and means actuated simultaneously with said platen and including a projection carried by the driving means therefor for allowing the platen to advance to position for printing another line. 80

6. In a typewriting machine, a rotatable platen, releasable means for giving step by step movements to the platen in the direction of its length, and a part driven in unison with the platen and operating the releasable means aforesaid. 85

7. In a typewriting machine, a frame provided with an upright having an overhanging end, a rotatable bar sustained by the overhanging end of the upright, a vertically-disposed platen slidably mounted upon and rotatable with said bar, and a spring and parts driven thereby for rotating the bar, in combination with an escapement comprising two meshing gears in driving engagement with said bar, a dog engaging one of said gears, finger-keys for operating the dog, and a finger-key and connections for throwing the two gears out of mesh. 90

8. In a typewriting machine, a platen and a spring and parts driven thereby for moving said platen to feed the paper lengthwise of the line of print, in combination with an escapement comprising a gear rotated by said spring, a second gear meshing with that first-named, a dog engaging the second-named gear, finger-keys for operating the dog, and a finger-key and connections for throwing said two gears out of mesh. 100

9. In a typewriting machine, a platen and a spring and parts driven thereby for moving said platen to feed the platen lengthwise of the line of print, in combination with an escapement comprising a gear rotated by said spring, a second gear meshing with that first-named, one of said gears being mounted for sliding movement upon its axis, a dog engaging the second-named gear, finger-keys for operating the dog, and a finger-key and connections for pushing the slidably-mounted gear out of mesh with the other gear. 105

10. In a typewriting machine, a platen and a spring and parts driven thereby for moving said platen to feed the platen lengthwise of the line of print, in combination with an escapement comprising a large gear rotated by said spring, a smaller gear mounted for sliding movement upon its axis, and meshing with that first-named, a dog engaging the smaller gear, finger-keys for operating the dog, and a finger-key and connections for pushing the smaller gear out of engagement with the large gear. 110

11. In a typewriting machine, a space-bar and lever connected therewith, a platen, means for moving the platen to feed the same lengthwise of the line of print, and means operated by said lever for moving said platen to present the paper for a new line, and including a device positionable by the first-named means for operation by said lever. 115

12. In a typewriting machine, a platen, means for rotating the platen to feed the same lengthwise of the line of print a wheel movable in unison with the platen and carrying a projection, means for advancing the platen longitudinally and an escapement for controlling the extent of such advance and having a movable part in the path of and operated by said projection. 120

13. In a typewriting machine, a frame, a rotatable vertically-disposed bar sustained by said frame, a platen slidably mounted upon and rotatable with the bar, a spring and parts driven thereby for rotating the aforesaid bar, a toothed wheel fixed to said bar and having a plurality of stops and a projection thereon, a dog controlling said wheel, finger-keys for operating the dog, a tabular key and connections movable thereby to and from position to engage and disengage the stops on the toothed wheel, means connected with the frame and with the platen for advancing the latter along the bar, and an escapement for controlling said advance and having a movable part in the path of and operated by said projection. 125

14. In a typewriting machine, a vertically-disposed ro- 130

tatable platen, a paper-gripping device adjustable around said platen, a bell-trip connected with and operated by said device, and a bell in the path of said bell-trip.

15. In a typewriting machine, a vertically-disposed rotatable platen, a paper-gripping device adjustable around said platen, a bell-trip connected with and operated by said device, means including a frame for advancing the platen longitudinally and paper-gripping device longitudinally, and a bell carried by said frame in the path of said bell-trip.

16. In a typewriting machine, a vertically-disposed rotatable platen, means including a frame for advancing the platen longitudinally, said frame having a vertically-disposed rotatable side-bar bearing a toothed rack, in combination with an escapement engaging the teeth of said rack, and with means for rotating the side-bar into and out of engagement with said escapement.

17. In a typewriting machine, a vertically-disposed cylindrical platen mounted for rotation about a vertical axis and for vertical advance step by step; and means for clamping paper to said platen and comprising a movable gripping member extending lengthwise of and contained in a recess formed lengthwise of said platen, and a roller journaled upon and independently movable around the exterior of said platen, in combination with means for rotating the platen and for advancing it vertically as desired.

18. In a typewriting machine, a vertically-disposed cylindrical platen mounted for rotation about a vertical axis and for vertical advance step by step, and means for clamping

ing paper to said platen, and comprising a movable gripping member carried upon and rotatable with said platen, and a roller journaled upon and independently movable around the exterior of said platen in combination with means for rotating said platen and for advancing it vertically as desired.

19. In a typewriting machine, a space-bar and lever connected therewith, a platen, means including a toothed wheel and a separable driving device therefor for moving the platen to feed the same lengthwise of the line of print, and means operated by said lever for moving said platen to present the paper for a new line, and including a flexibly-mounted plate and positionable by said wheel with relation to the aforesaid driving device and for operation by said lever.

20. In a typewriting machine, a space-bar and lever connected therewith, a platen, means including meshing gears for moving the platen to feed the same lengthwise of the line of print, and a plate flexibly mounted upon one of said gears and movable thereby above the other of said gears and in position to operate upon the last-mentioned gear and throw the two gears out of mesh.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

ROY DANFORD PARKER.

Witnesses:

GEORGE FARON GREGG.

ARTHUR CRANSTONE PERKINS.