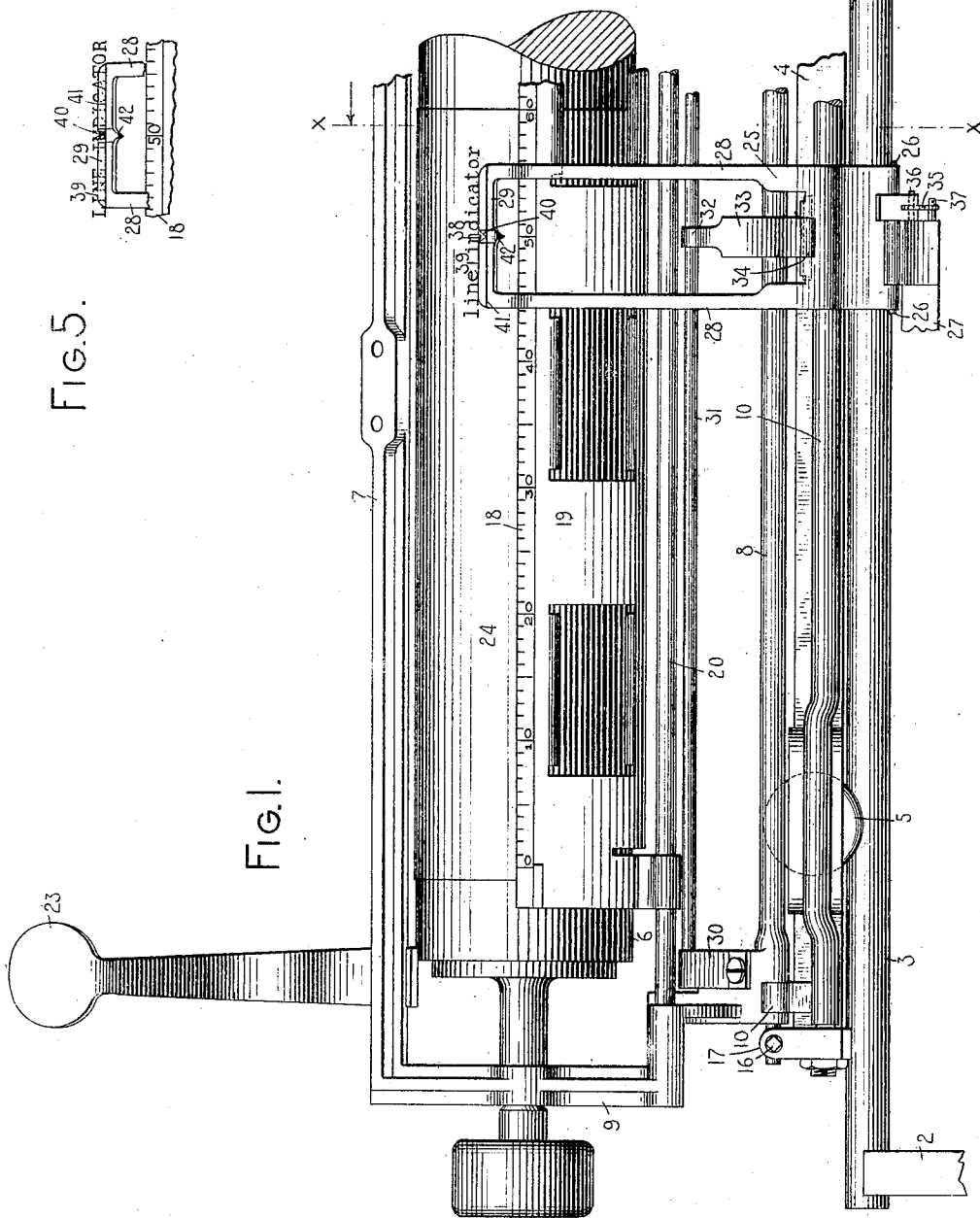


No. 824,418.

PATENTED JUNE 26, 1906.

W. C. FARNUM.
TYPE WRITING MACHINE.
APPLICATION FILED APR. 9, 1903.

3 SHEETS—SHEET 1.



WITNESSES:

K. V. Donovan.
E. M. Wells.

INVENTOR:

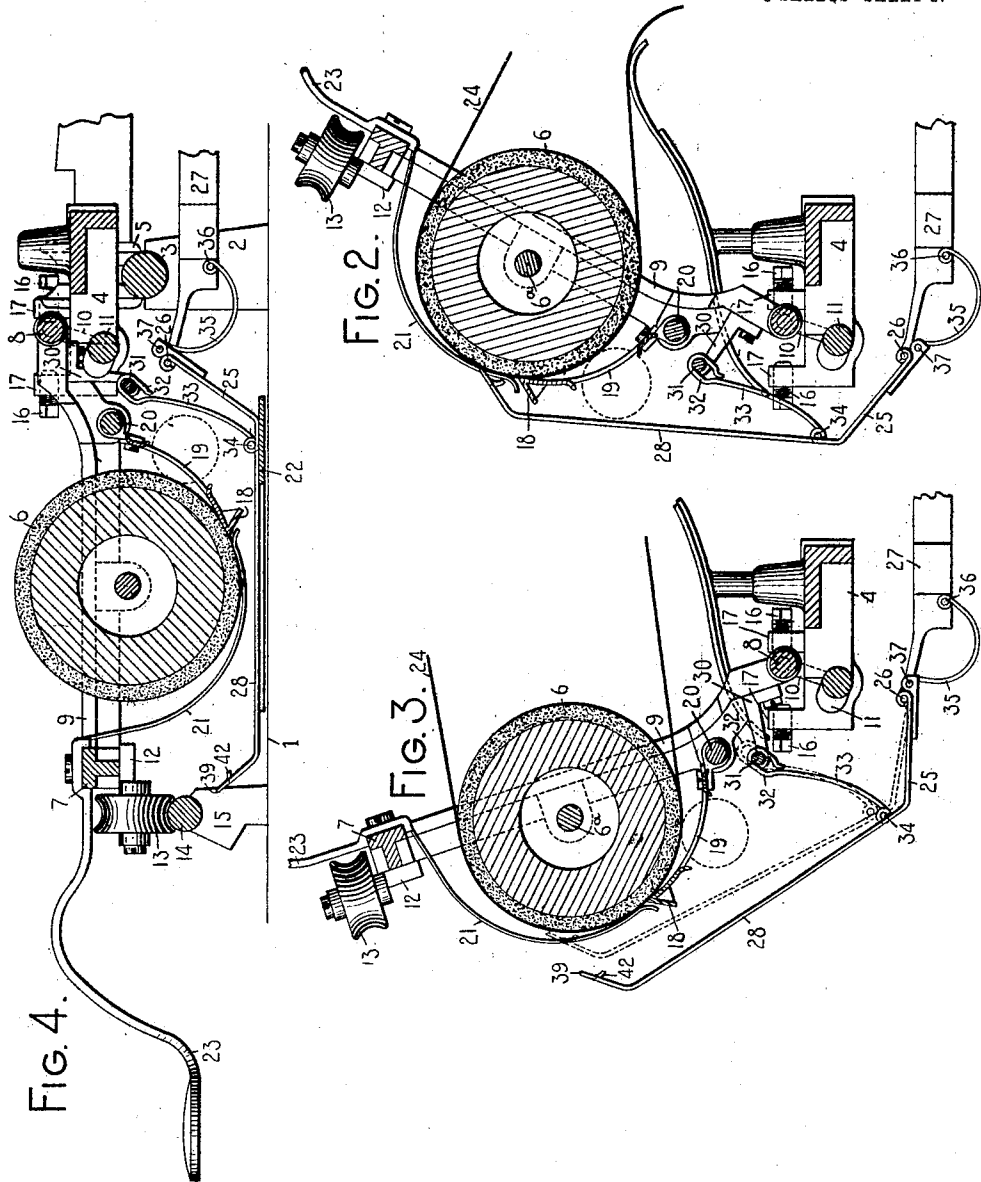
William C. Farnum
by *Jacob Felbel*
HIS ATTORNEY

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3 SHEETS—SHEET 2.



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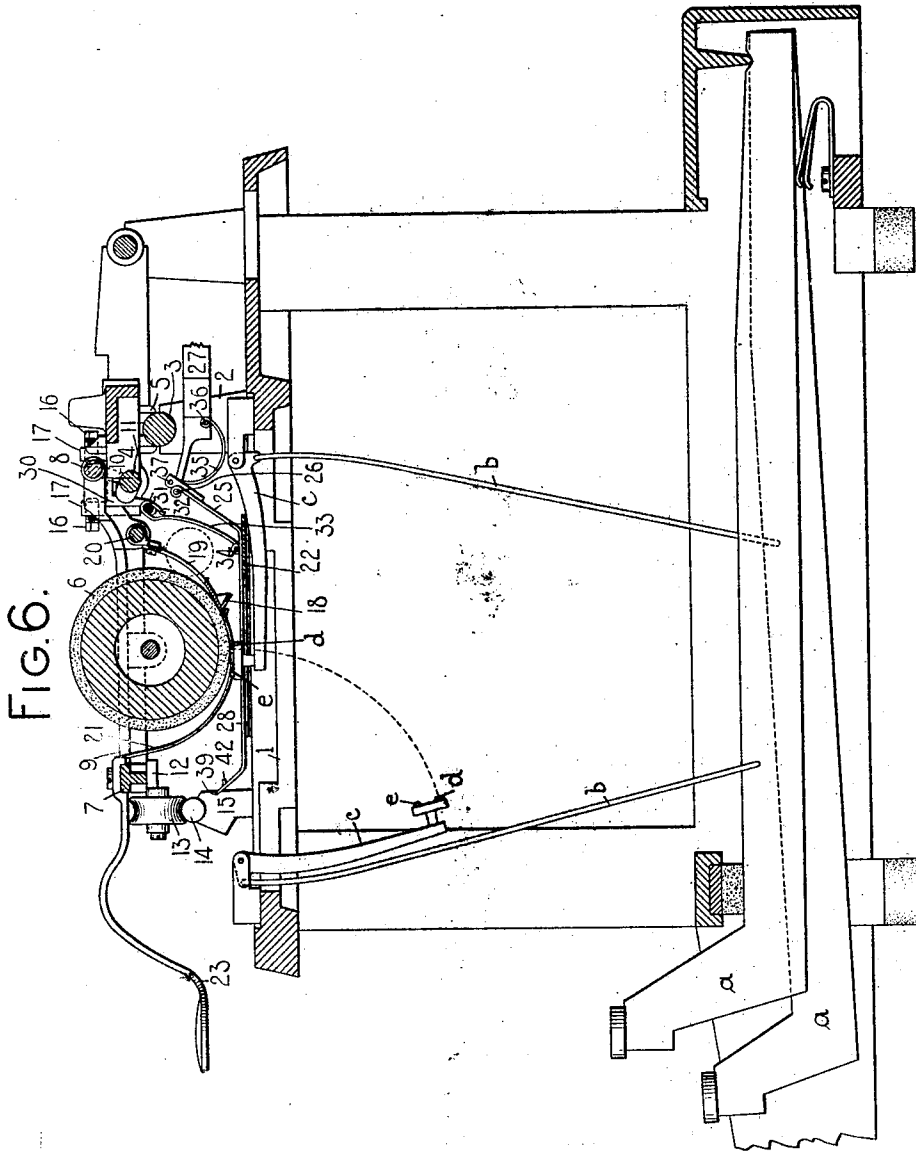
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

WILLIAM C. FARNUM, OF ARLINGTON, VERMONT, ASSIGNOR TO
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TYPE-WRITING MACHINE.

No. 824,418.

Specification of Letters Patent.

Patented June 26, 1906.

Application filed April 9, 1903. Serial No. 151,822.

To all whom it may concern:

Be it known that I, WILLIAM C. FARNUM, a citizen of the United States, and a resident of Arlington, in the county of Bennington and State of Vermont, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

More particularly my invention relates to printing point and line indicators for type-writing machines, and has for its object to provide improved means of the character specified.

To this end the invention consists in certain features of construction, arrangements of parts, and combinations of devices, as hereinafter set forth, and pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a fragmentary front view of the carriage of a type-writing machine raised to expose the printing-point with part of the rear bearing-rod and showing my invention in operating position. Fig. 2 is a sectional view on the line $x x$ of Fig. 1, but showing the carriage as shifted to print upper-case characters. Fig. 3 is a view similar to Fig. 2, but with the carriage intermediate the position shown in Fig. 2 and that shown in Fig. 4, in which latter view the carriage is shown as lowered and ready to print. Fig. 5 is a fragmentary view of the upper part of the indicator. Fig. 6 is a vertical front-to-rear sectional view of a type-writing machine embodying my invention.

In the several views, in which like parts are designated by like numerals of reference throughout, portions of the machine are omitted or broken away in order to disclose the invention more clearly.

I have shown my invention applied to a No. 6 Remington machine, the key-levers a , links b , and type-bars c being of the usual construction and each type-bar carrying an upper-case type d and a lower-case type e .

1 designates a top plate of a type-writing machine; 2, lugs or ears rising therefrom and supporting a rear bearing rail or track 3; 4, a carriage-truck whose wheels 5 guide and support it upon rail 3.

The platen 6 is carried on a rod 6^a in a frame comprising front bar 7, rear bar 8, and two side connecting-bars, of which only

the left-hand one, 9, is shown. The rear frame bar or rod 8 is hinged to lugs 10, carried by a rod 11, which is pivoted in the truck 4. Supported by the front carriage-bar 7 is a bracket 12, carrying a wheel 13, which runs upon the forward bearing rod or rail 14. The rail 14 is supported by two bars, of which only the left-hand one, 15, is shown, which bars are controlled by the shifting mechanism of the carriage in the usual manner, the amount of throw of the shift being limited by the adjustable pins 16, carried by the lugs 17, rising from the truck 4, as will be readily understood. The platen-scale 18 is carried by the web 19, which is supported by the rod 20. 21 is a paper-finger secured to the front bar 7, and 24 the ribbon plate or shield. The carriage is swung about the hinges at lugs 10 to expose the line of writing by the lift-piece 23. The carriage is propelled in the printing direction and caused to escape after each character is printed upon the paper 24 by the mechanisms commonly employed. All of the parts and mechanism above pointed out will be recognized as in use upon the Remington No. 6 type-writing machine, and it is not, therefore, considered necessary to describe them more in detail.

Coming now more particularly to the mechanism proper of my invention, 25 is an indicator or pointer pivoted or hinged at 26 to a bracket 27, screwed or otherwise attached to any convenient fixed part of the upper portion of the machine, at the rear thereof and at or near the center. I have shown the indicator as having the two side pieces 28 bent near their upper ends and joined at the top by the cross-piece 29, and this is the form I prefer as best combining lightness and stability; but it will be understood that I do not limit myself to the construction shown.

Attached to the rear carriage-rod 8 at or near its ends are two brackets 30, only the left-hand one of which is shown; and supported thereby is the light rod 31, which runs substantially the length of the platen. Loosely embracing the rod 31 at 32 is the connecting link or piece 33, which is hinged or pivoted to the pointer 25 at 34. The double-acting spring 35, which, with the link 33, controls the pointer or indicator 25 and which is here shown in the form of a light wire, is pivoted at 36 to the supporting-

bracket 27 and at 37 to the indicator or pointer 25 on a slight offset thereof, the pivot 37 being slightly to the rear of the pivot or hinge 26, which connects the indicator or pointer 25 to the bracket 27. The cross-piece 29 carries the indicating devices proper, which consist of line and letter indicators for both upper and lower case, as well as an indicator for the platen-scale 18.

Referring to Figs. 1 and 5, the lower-case-letter indicator is denoted by 38 and the corresponding line-indicator by 39. 40 denotes the upper-case-letter indicator, and 41 the line-indicator. 42 denotes the platen-scale indicator, which serves for both positions of the platen. The difference of position of the pointer 25 as to the line of writing is represented by the distance between the line-indicators 39 and 41 on the pointer 25 and is due to the change of relation between the fixed pivot 26 and the rod 31, controlling the pointer 25 when the platen-carrier by which the rod 31 is carried is shifted to change case.

The operation of my invention will now be described. Referring to Fig. 4, the platen is seen in printing position with the pointer 25 inoperative and lying contiguous to the ribbon-plate 22. The pointer 25 is held in this position by gravity, as well as by the action of spring 35 pressing at pivot 37, which in this position of the pointer 25 is above an imaginary line connecting pointer-hinge 26 with pivot 36. It will of course be understood that whatever be the position of the platen, longitudinally considered, in respect of the printing-point the pointer or indicator 25 will always be under control through its link 33, embracing the rod 31, carried by the platen-carriage. Suppose now that at any point of its travel in the printing direction the platen-carrier be swung about the hinges at 10 by the lift-piece 23 for the purpose of exposing the printing-point until it reaches that point in its upward travel shown in Fig. 3. The pointer 25 has been moved to the position shown in Fig. 3 by the connecting-link 33 and rod 31. The spring 35 has up to this point tended to assist gravity in keeping the pointer 25 as far from the platen 6 as the link 33 and rod 31 will permit. Just here, however, as pivot 37 aligns with pivots 26 and 36 the pressure of spring 35 is nullified, being exerted simply to press the pointer 25 against its pivot 26 away from pivot 37. A slight additional movement of the platen-carrier in the upward direction by means of finger-piece 23 will bring pivot 37 below the imaginary line connecting pivots 26 and 36, and thereupon the action of the spring 35 will be reversed and the pointer 25 will be forced thereby into close proximity to the platen, as shown by the dotted lines in Fig. 3. When the end of the upward swing of the platen is reached, the pointer 25 is in the position

shown in Fig. 2, the slight additional arc of movement of the rod 31 in the platen-frame permitting the spring 35 to force pointer 25 into substantial contact with the platen along the line of the cross-piece 29. The indicator proper will now be in the relation to the printing point and line as depicted in Fig. 5, the upper-case-letter indicator 40 (here shown as graved or cut into the cross-piece 29) indicating the printing-point, and the upper-case line-indicator 41, which in its present form is a line graved or cut into the metal of cross-piece 29, indicating the printing-line, and the pointer 42 indicating the corresponding printing-point on the letter-scale 18. Had the platen-carrier through its shift-rail 14 been shifted to its forward or lower-case position before being turned up to expose the line of writing, the indicator would appear in relation thereto as shown in Fig. 1, the lower-case-letter indicator (in its present form shown as a notch 38 in the cross-piece 29) indicating the printing-point, and the lower-case line-indicator (here shown as the upper edge 39 of cross-piece 29) indicating the printing-line, 42 indicating the printing-point on the platen-scale, as before.

In returning the platen-carrier with its platen 6 to printing position the reverse of the operation above set forth will take place, the double-acting spring 35 holding the pointer 25 in close proximity to the platen for a short distance of the arc of return movement and until pivot 37 crosses from below to above the imaginary line connecting pivots 26 and 36, whereupon spring 35 acts to force pointer 25 away from the platen. It will thus be seen that pointer 35 is positively restrained from contact with or close proximity to the platen, except at substantially the moment when the pointer 35 is needed to indicate the printing point and line. Unnecessary contact with the platen and consequent blurring of the work are thereby avoided, as is likewise any obstruction on the platen connected with the paper-feeding or other mechanism. It will thus be seen that the spring 35 has a double action, tending at one stage of the swing of the platen-carrier to force the indicator or pointer 25 away from and at another stage toward the platen. It will furthermore be understood that with a shifting platen the indicator or pointer serves to indicate the printing-point and the printing-line whether the printing is taking place in small or in capital letters—that is, in lower or upper case. Either of these features may be employed independently of the other.

While I have illustrated my invention in connection with a Remington No. 6 type-writing machine, it will of course be understood that it may be applied to any type-writing machine wherein it may be found available to employ the essential elements of

my invention, and, further, that various constructional changes may be made without departing from the spirit of my invention.

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

1. In a type-writing machine, the combination with a hinged platen-carrier and a platen that swings therewith, of a spring-pressed indicator contiguous to the platen and adapted, during one stage of the movement of the platen to expose the printing-point, to be pressed by its spring-pressure from the platen and at another stage to be pressed by its spring-pressure toward the platen, substantially as described.

2. In a type-writing machine, the combination with a hinged platen-carrier, of an indicator pivoted contiguous to the platen, a spring, and means for automatically applying the pressure of the spring for pressing the indicator from the platen when it is in printing position and during the first stage of its movement to expose the printing-point, and for automatically pressing the pointer toward and against the platen during the latter stage of and at the end of said upward movement, substantially as described.

3. In a type-writing machine, the combination with a hinged platen-carrier, of a pointer pivoted contiguous thereto and a double-acting spring operating to press the pointer in different directions at different stages of the upward movement of the platen to expose the printing-point, substantially as described.

4. In a type-writing machine, an indicator pivotally arranged contiguous to the hinged platen-carrier, a connection between the platen and the indicator whereby the indicator is raised as the platen is swung upward to expose the printing-point, and a double-acting spring tending to press the indicator away from and toward the platen at different stages of the upward movement.

5. In a type-writing machine, the combination with a hinged platen-carrier, of a pivoted spring-pressed pointer adapted to be pressed by its spring into contact with the platen when the latter has been raised to expose the writing, and to be pressed by the spring-pressure thereof from the platen as it is lowered to printing position.

6. In a type-writing machine, the combination with a shiftable platen-carrier, of a combined printing-point and printing-line indicator that is carried by a fixed portion of the machine and which is adapted to indicate the printing-point and the printing-line on the platen in both of its shift positions.

7. In a type-writing machine, the combination with a hinged and shiftable platen-carrier, of an indicator pivoted contiguous thereto to a fixed portion of the machine and adapted to indicate the printing-point and

printing-line when the platen is swung upward to expose the writing from either of its shift positions.

8. In a type-writing machine, the combination with a swinging and shiftable platen-carrier, of a combined line and printing-point indicator carried by a fixed portion of the machine and adapted to indicate both the printing-point and the printing-line on the platen in either of its shift positions, the movement of the indicator being controlled by the swinging movement of the platen-carrier.

9. In a type-writing machine, the combination with a hinged, swinging and shiftable platen-carrier, of an indicator, pivoted contiguous thereto on a fixed portion of the machine and adapted to automatically indicate the printing-point and the printing-line when the platen is swung upward to expose the writing from either of its shift positions.

10. In a type-writing machine, the combination with a hinged and shiftable platen-carrier, of an indicator, pivoted contiguous thereto, a loose connection with the platen-carrier and a double-acting spring cooperating with the indicator so that the indicator is held from contact with the platen until the latter nears the end of its upward swing to expose the printing-point, and then to be pressed against the platen to indicate the printing-point and the printing-line.

11. In a type-writing machine, the combination with a hinged and swinging platen-carrier, of an automatically-actuated combined printing-point and printing-line indicator pivoted to a fixed portion of the machine and adapted to indicate the printing-line and the printing-point on the platen and on the platen-scale simultaneously.

12. In a type-writing machine, the combination with a hinged or swinging and shiftable platen-carrier, of an automatically-actuated indicator connected to a fixed portion of the machine and adapted to indicate simultaneously the printing-line and the printing-point on both the platen and the platen-scale when the platen is in either of its shifted positions.

13. In a type-writing machine, the combination with a swinging and shiftable platen-carrier, and automatically-actuated spring-pressed indicator that is connected to a fixed portion of the machine, an index on the indicator that registers with the printing-point when the platen is in either shifted position, a printing-line index on the indicator that indicates the printing-line when the platen is in one of its shifted positions and another printing-line index on the indicator that registers with the printing-line when the platen is in its other shifted position.

14. In a type-writing machine, the combination with a swinging and shiftable platen-

carrier, an automatically-actuated indicator that is connected to a fixed portion of the machine, an index on the indicator that registers with the printing-point when the platen is in either shifted position, a printing-line index on the indicator that indicates the printing-line when the platen is in one of its shifted positions, another printing-line index on the indicator that registers with the printing-line when the platen is in its other shifted position, and a printing-point index on the indicator that registers with the platen-scale, so as to afford a simultaneous indication of the printing-point on the platen, a corresponding indication on the platen-scale and an indication of the printing-line in either shifted position of the platen.

15. In a type-writing machine, the combination with a swinging and shiftable platen-carrier, an automatically-actuated indicator that is connected to a fixed portion of the machine, an index on the indicator that registers with the printing-point when the platen is in either shifted position, a printing-line index on the indicator that indicates the

printing-line when the platen is in one of its shifted positions, another printing-line index on the indicator that registers with the printing-line when the platen is in its other shifted position, and a double-acting spring that presses the indicator toward the platen when it is swung back and presses it away from the platen when the latter is swung down.

16. In a type-writing machine having a series of upper and lower case types and a platen, one shiftable relatively to the other for upper and lower case printing, the combination of a combined printing-point and printing-line indicator which is carried by a fixed portion of the machine and which is adapted to indicate the printing-point and printing-line in both case-shift positions.

Signed at Arlington, in the county of Bennington and State of Vermont, this 7th day of April, A. D. 1903.

WILLIAM C. FARNUM.

Witnesses:

J. J. SHAKSHOHER,
O. E. ADAMS.