

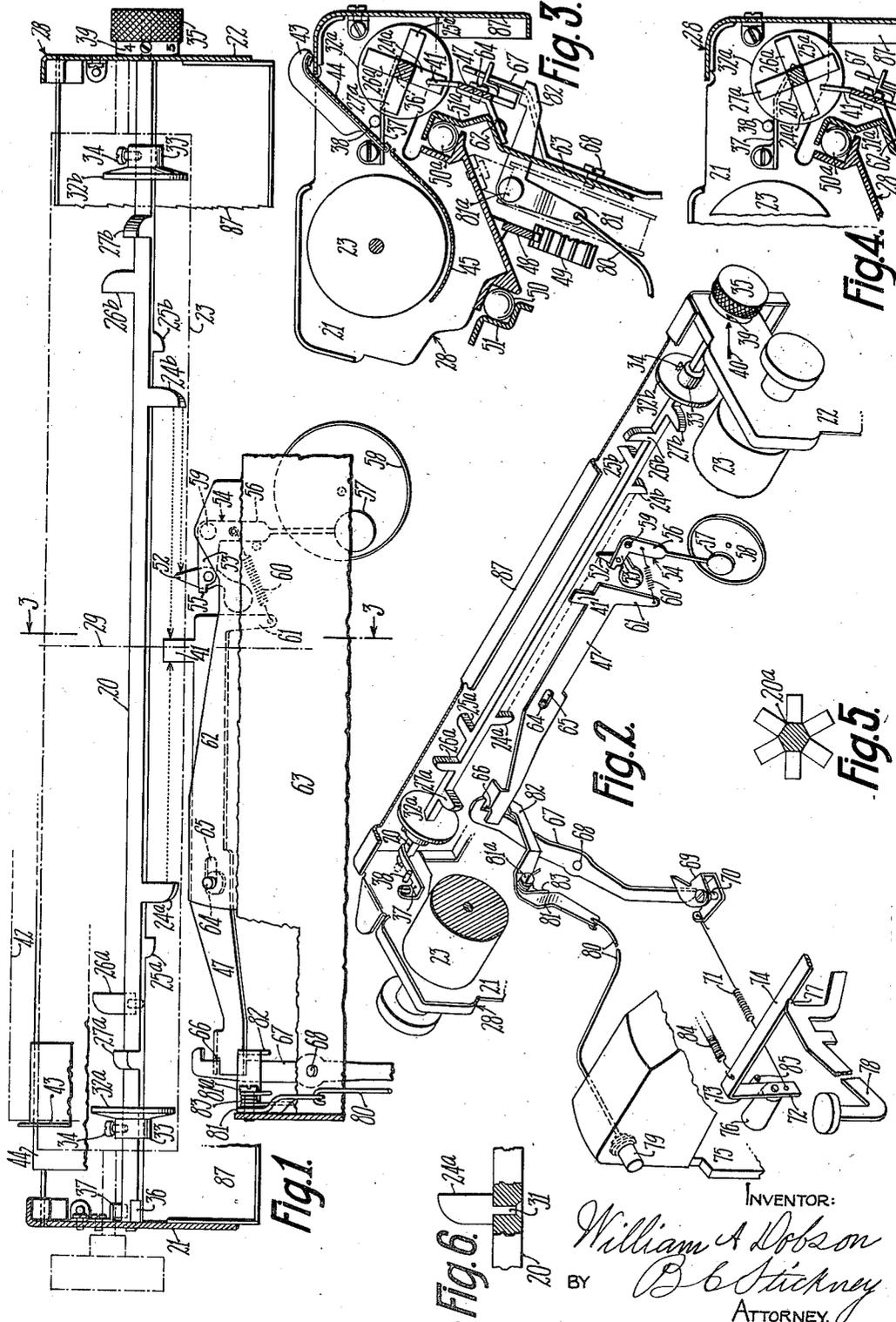
May 11, 1937.

W. A. DOBSON
TYPEWRITING MACHINE

2,079,605

Filed Oct. 26, 1935

2 Sheets-Sheet 1



INVENTOR:
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May 11, 1937.

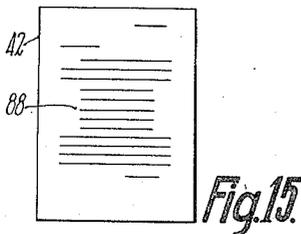
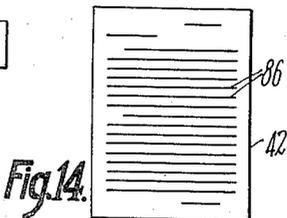
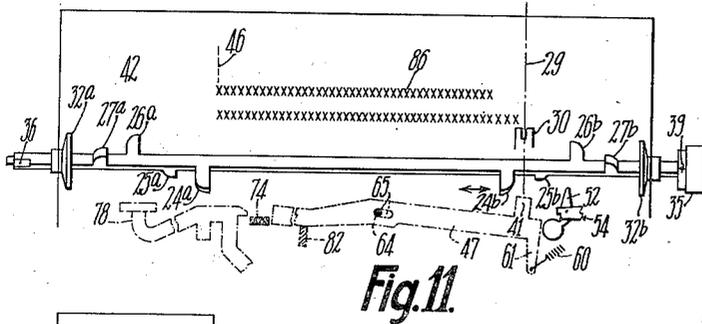
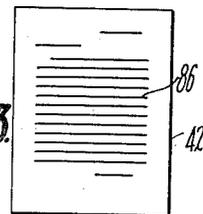
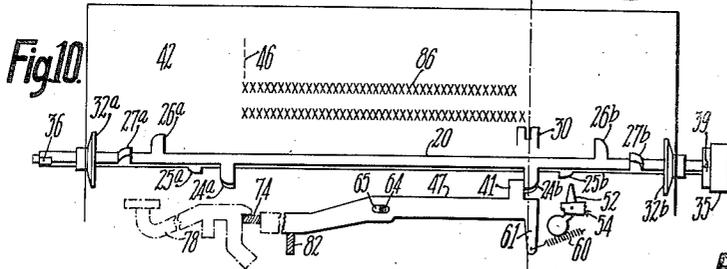
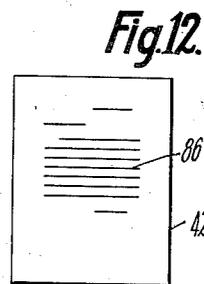
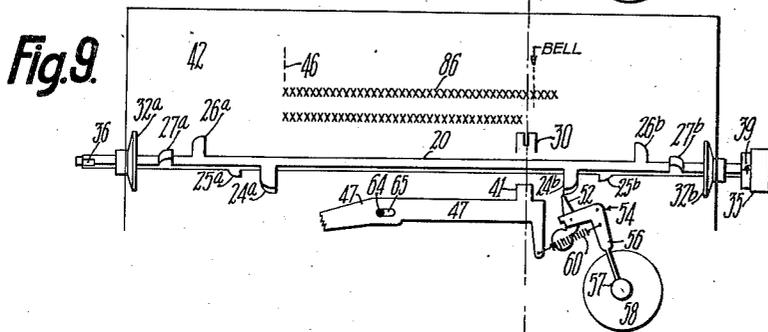
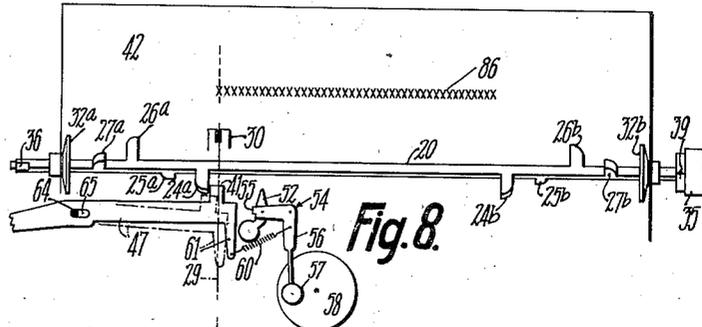
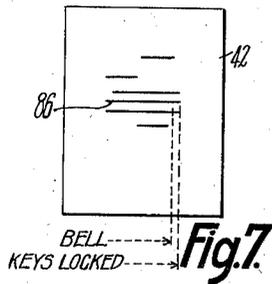
W. A. DOBSON

2,079,605

TYPEWRITING MACHINE

Filed Oct. 26, 1935

2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

2,079,605

TYPEWRITING MACHINE

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Application October 26, 1935, Serial No. 46,841

23 Claims. (Cl. 197-63)

This invention relates to improvements in typewriting machines and in particular to a simple and positive means for setting and altering margins at both ends of a typewritten line while the typewriting machine is in use.

The conventional typewriter has at both ends adjustable margin-stops for limiting the movement of the slidable carriage. These stops can be set by the operator at any desired point to determine the width of the margin on a typewritten sheet. Should the operator in the course of typewriting find it necessary with the present type of machine to vary the width of the margin so as to indent a paragraph for emphasis, for example, it is necessary to reset these margin-stops to the points desired. After the indented portion is written, and the operator wishes to return to the original margin, it is necessary to relocate the margin-stops at the original points.

Unless the operator has made a definite record of the exact position of the margin-stops as originally located, replacing them becomes a tedious operation, requiring considerable time, and often resulting in either spoiled sheets or work that appears slovenly.

The primary object of this invention is therefore to provide simple means, whereby the margin may be varied at will by the operator. This improvement is simple in construction and operation, requires no careful adjustments on the part of the operator and can be actuated in a minimum of time by an operator of ordinary skill.

The device further enables the operator to establish margins, for varying widths of sheets without the necessity of moving the conventional stops or moving from his seat, by merely turning a knob to the desired length of line.

The improvement may take the form of a rotatable, multi-faced shaft journaled between the end-plates of the carriage-frame, with each face of the shaft carrying a pair of tappets, which, by co-operating with the usual machine stop, limits the travel of the carriage. The tappets may be equidistantly located with reference to the center line of the machine, so as to provide equal margins at both ends of a sheet, or they may be arranged to provide any proportion of margins deemed advisable.

The space between the successive tappets around the shaft may be progressively increased by small increments so that the operator may vary the margin at will, in either large or small amounts, in the course of writing a single page.

This shaft may be rotated by a knob attached to one end of the shaft. Numbers identifying

each pair of tappets, and also the respective distances between the margin-tappets, may be indicated on this knob, to enable the operator to select the writing-length desired, without moving from his seat or writing position.

This device is particularly adaptable to the portable class of typewriter which is often operated by non-professional operators having less skill and experience in handling typewriting machines than that possessed by the usual operator of the large or commercial type of machine.

Other features and advantages will hereinafter appear.

In the accompanying drawings,

Figure 1 is a front sectional elevation of the rear portion of a typewriter.

Figure 2 is a perspective of the variable margin-control, showing a portion of the platen and the line-lock mechanism.

Figure 3 is a cross-section at 3-3 of Figure 1, showing the variable margin-control, in its relation to the platen.

Figure 4 is a partial cross-section, showing the margin-control mechanism with the margin-tappets, in an inoperative position.

Figure 5 is a cross-section through a hexagonal shaft, showing six sets of margin-stop tappets located radially thereon.

Figure 6 is a section through one of the margin-stop tappets, indicating one method of attaching the tappets to the shaft.

Figure 7 is a diagrammatic representation of a typed sheet, indicating typical points at which the line-signal bell rings and the typewriter-keys are locked.

Figure 8 is a diagrammatic representation of the margin-control mechanism in operation, at the beginning of a typewritten line.

Figure 9 is a diagrammatic representation of the margin-control mechanism, indicating the mechanism which signals the operator of the approach of the end of a line.

Figure 10 indicates the margin-control mechanism of Figure 9, when the end of a typed line has been reached.

Figure 11 is a diagrammatic representation of the margin-control mechanism, illustrating the method of releasing the stop in order to continue typing after the set margin is reached.

Figure 12 is a schematic arrangement of a typewritten sheet, showing a short writing line with wide margins.

Figure 13 is an arrangement of a sheet similar to that of Figure 12, showing a longer writing line than that of Figure 12, with narrower margins.

Figure 14 is a similar arrangement of a type-written sheet, indicating a long writing line with narrow margins at both ends.

Figure 15 is a similar schematic arrangement of a typed sheet, indicating indented matter, showing the effect of varying the margin-control width.

The detailed operation and arrangement of these improvements, as shown in the accompanying drawings, is as follows, the reference numerals indicating the same parts throughout the various views.

A margin-control shaft 20 is journaled at its ends in the carriage ends 21 and 22, behind the revoluble platen 23, of a typewriting machine. These ends 21 and 22 also restrain the shaft 20 from lateral movement with respect to the carriage 23. The shaft 20 may be square, hexagonal as indicated on Figure 5, or of other suitable cross-section depending upon the number of variations of writing-line length desired. With the exception of Figure 5, the mechanism shown in the drawings has a square shaft 20 with four pairs of fixed margin-tappets.

These pairs of fixed margin-tappets 24^a and 24^b, 25^a and 25^b, 26^a and 26^b, 27^a and 27^b, each pair being located on a separate face of the square shaft 20, are equidistantly located with respect to a center line 29 which marks the center of the machine and of the type-guide 30. Additional pairs of margin-tappets to give additional margin-settings may be desirable, and a hexagonal shaft 20^a, Figure 5, could be utilized, each face of the shaft mounting a suitable pair of tappets. The tappets may be integral with the face of the shaft, as indicated in Figures 1 and 2, permanently attached to the shaft or adjustably fitted to the shaft, depending upon the type of machine required. As indicated in Figure 6, the tappets may be riveted or fastened in any other suitable manner to the shaft. In this construction a pin extension 31 of tappet 24^a is riveted through the shaft 20.

The margin-control shaft 20 may additionally carry a pair of adjustable margin-gages as 32^a and 32^b, preferably disk shaped and located outside of the most widely-spaced fixed tappets 27^a and 27^b. The gages 32^a and 32^b may be secured to the shaft 20 by means such as an integral collar 33 and a set-screw 34.

The tappets 24^a and 24^b may be located on shaft 20 to give a four-inch length of line, the tappets, as stated, being equidistant from the center line 29 of the machine or the center of the type-guide 30. The pairs of tappets 25^a and 25^b, 26^a and 26^b, and 27^a and 27^b may be located so as to increase the line-length by one-inch increments from the four-inch line-length of the tappets 24^a and 24^b. While a one-inch increment was chosen for the purpose of the drawings, these increments may be made equal or unequal, and larger or smaller, depending upon the purpose for which the machine is to be used.

At preferably the right end of shaft 20, a knurled knob 35 may be provided for rotating the shaft. At the other end of the shaft 20, a fifth shaft-face 36 is milled at an angle between the two adjoining faces of the shaft. A spring detent 37 may be attached to the left carriage-end 21 to co-operate with any one of the faces of the shaft 20 to hold the shaft in any one of the four normal positions represented by the faces of the shaft or in a fifth position between two of the shaft-faces represented by the fifth shaft-face 36. A pin 38 fastened to the carriage-end 21

may be used to hold the detent 37 against a shaft-face.

A set of numerals 39 spaced around the circumference of the knob 35, each numeral indicating a pair of tappets and thereby the line-length corresponding to said tappets, enables the operator to select the line-length desired, by turning the knob 35 until the proper numeral is adjacent a suitable index-mark 40 as indicated in Figure 2. For example, when the numeral 4 appears at the front of the knob, the tappets 24^a and 24^b, providing a four-inch line-length, are in operative position.

The selection of the desired line-length by the operator brings a set of margin-tappets, 24^a and 24^b for example, into a position where, on suitable movement of the machine-carriage 28, one or the other of the tappets will engage a centrally located machine-stop 41.

The operator locates the stationery 42 with respect to the platen 23 by means of the usual paper side-gage 43 at the left side of the paper-table 44, and brings the stationery 42 between the paper-apron 45 and the platen 23 and thus into printing position in the usual manner. The operator then moves the machine-carriage 28 to the right until the left margin-tappet 24^a engages the stop 41, thus determining the left-hand margin-line 46. The stop 41 is attached to, or integral with, a slide 47. As the typewriting proceeds, the carriage moves to the left, in letter-space steps, by the co-operation of the usual escapement rack 48 and pinion 49, the carriage riding on the usual anti-friction balls 50, 50^a, in track 51—51^a, until the right margin-tappet 24^b reaches the edge of a pawl 52. Pawl 52 is pivoted to a horizontal arm 53 of a bell-crank 54, a suitable detent 55 on arm 53 preventing a leftward rotation of the pawl 52 with respect to the arm 53, as indicated in Figure 2. The downwardly extending vertical arm 56 of the bell-crank 54 is connected to a hammer 57, which is arranged to strike a bell 58. The pressure exerted by tappet 24^b against pawl 52 as the carriage 28 continues to move to the left causes the bell-crank 54 to rotate about the screw 59, which pivotally secures it to the machine-frame (not shown). As tappet 24^b releases the pawl 52, the bell-crank 54 swings sharply back to its original position, causing bell 58 to ring, signaling the operator of the approach of the end of a line. The vertical arm 56 of the bell-crank 54 is connected by means of a tension-spring 60 to a vertical extension 61 depending from the slide 47. This spring causes the bell-crank 54 to return to its original position sharply after pawl 52 is released by the tappet 24^b. As the bell rings before the end of the line, a few additional letters may be typed and the carriage travels to the left until the margin-tappet 24^b engages the stop 41, on the slide 47.

The slide 47 is slidably attached to the guide-brackets 62 on a back plate 63 of the machine-frame by means of a shouldered screw 64 which is fitted in a slot 65, near the center of slide 47. When the right tappet 24^b engages the stop 41, the slide 47 may move to the left until the right edge of the slot 65 strikes screw 64. A fork 66 cut in the left end of the slide 47 fits over and actuates the top of a pendent lever 67, which is pivotally mounted by means of a screw 68 to the back plate 63. The movement of the bottom of the lever 67 actuates a bell-crank 69, pivotally secured to the machine-frame (not shown) by screw 70, said bell-crank being connected by means of a tension-spring 71 or other

flexible means to the lower arm 72 of the side member 73 of a key-lever-locking bar 74. The side member 73 of the locking bar is pivotally mounted at each side 75 of the machine by a support 76 in such a manner that, when the bottom of the lower arm 72 is drawn rearwardly, it rotates the locking bar 74 under an extension or lip 77 with which each key-lever, as 78, is provided, thus preventing the operation of any key-lever until the carriage is moved to the right, releasing the stop 41 from the margin-tappet 24^b.

Where it is desired to continue writing beyond the set right margin corresponding to tappet 24^b, the operator presses the release button 79, at the left of the machine, which is connected by means of a push-rod 80 to a bell-crank 81, pivotally mounted, as by screw 81^a, to one side of the machine. The pressure on the push-rod 80 raises the horizontal arm 82 of the bell-crank 81, against the tension of a spring 83, thus raising the left end of the slide 47 and depressing the stop 41 until it assumes a position as shown in Figure 11, below the margin-tappet 24^b. When the stop 41 is disengaged from the tappet 24^b, the spring 60, attached to the vertical extension 61 of the slide 47, pulls said slide until the left end of the slot 65 engages the screw 64. The lateral movement of slide 47 disengages the top of the lever 67 from the fork 66, permitting a spring 84, attached to the locking bar 74 and in suitable manner to a support (not shown) on the machine, to withdraw the locking bar from its position under the lip 77 of the key-lever 78 until the side member 73 engages a suitable pin 85, thus releasing the key, as indicated in Figures 2 and 11. The writing may thus be continued as necessary. The slide 47 will resume its normal position when button 79 is released by the operator. The outer ends of the tappets 24^a, 24^b to 27^a, 27^b are beveled to permit them to pass the stop 41 on the slide 47 when the carriage 28 is moved to the right to its original position so as to begin another line.

Where it is desired to release the left-hand margin-tappet 24^a the release button 79 is also pressed, thus rotating the slide 47 and lowering the stop 41 as previously described to clear the tappet 24^a. The release button 79 is held in position while the carriage is moved to the right until the tappet 24^a passes over the stop 41 as indicated by dotted lines in Figure 8. When the carriage is again traveling to the left, during the typing operation, the beveled outer edge of the tappet 24^a permits it to pass the stop 41.

When the knob 35 is turned to bring any of the other pairs of tappets into their operative position, the operation of each pair of tappets is similar to that described with regard to tappets 24^a and 24^b. Due to the progressively longer distances between the pairs of tappets 25^a and 25^b, 26^a and 26^b, and 27^a and 27^b, as compared to that between the tappets 24^a and 24^b, the writing line resulting from the use of each of the above sets of tappets is progressively longer, and, with the same sheet width, the margin is narrower, as indicated in Figures 12, 13 and 14.

Where it is desired to use a line-length beyond the length of that controlled between the tappets 27^a and 27^b, the knob 35 is revolved until the spring detent 37 engages the fifth shaft-face 36 on the shaft 20. This sets shaft 20 so as to have adjoining tappets, as 24^a and 25^a, Figure 4, straddle the stop 41, making said tappets impotent to control the carriage-movement. The ad-

justable margin-gages 32^a and 32^b would then operate in the same manner as that described with reference to the tappets 24^a and 24^b.

In Figures 8, 9, 10 and 11, the stationery 42 is indicated in its position relative to the margin-tappets of the machine. A typical typed line 86 shows the beginning and the end of the type-writing as controlled by the margin-tappets.

The entire margin-control mechanism, with the exception of the knob 35, may be covered by means of a cover-plate 87 which extends along the entire length of the rear of the carriage 28. The upper end of this cover-plate is bent over and fastened under the rear paper-table 44, as indicated in Figure 3.

Where an indented paragraph, as indicated by 88 in Figure 15, is desired, the operator will first set the knob at one of the longer writing lines, i. e., a 7-inch line, until the indented portion is to be typed, when the knob is again turned to bring the tappets for one of the shorter writing lines, i. e., 24^a and 24^b, into their operative position. The typewriting will be continued until the end of the indented portion is reached when the shaft 20 is reset in its original position with tappets 27^a and 27^b in their operative position by means of the knob 35.

While in the above detailed description, each pair of tappets, as 24^a and 24^b, is spaced equidistant from the center-line 29 of the machine and the length increment between the left tappets 24^a, 25^a, 26^a and 27^a is equal to that between the right tappets 24^b, 25^b, 26^b and 27^b, the exact relation would depend largely upon the purpose for which a specific machine is to be used. The paper side gage 43 may thus be arranged to provide a wider margin on one edge of the stationery 42 than that on the other edge, and the increment between the tappets on one side may be made greater or less than that of the tappets on the other side.

Variations may be resorted to within the scope of the invention, and portions of the improvements may be used without others.

Having thus described my invention, I claim:

1. In a typewriting machine, the combination with two members constituting a frame and a letter-feeding carriage thereon, of a shaft rotatably mounted on one of said members, means for adjusting said shaft to different angular positions, a plurality of pairs of differently separated margin-stops on said shaft, said pairs being distributed angularly around said shaft, and a counter-stop, on the other of said members, co-operative with different pairs of margin-stops, depending on the different angular positions of said shaft, for limiting the lateral movement of said carriage in either direction.

2. In a typewriting machine, a laterally movable carriage, a multi-faced shaft rotatably mounted on said carriage, control means attached to said shaft, a pair of margin-tappets attached to each face of said shaft, and a mechanism operatively engaging successively a pair of said margin-tappets for limiting the lateral movement of said carriage in either direction.

3. In a typewriting machine having a frame and a carriage laterally movable in response to the typing operation, margin-setting means comprising a shaft rotatably mounted on said carriage, a plurality of pairs of variously spaced margin-tappets mounted about the periphery of said shaft, and substantially radial thereto; said margin-setting means co-operating with means in said typewriting machine so as to limit the

lateral movement of said carriage in either direction, and means attached to one end of said shaft for rotating said shaft to bring any pair of margin-tappets into operative position, each pair of tappets thereby acting to vary the carriage travel.

4. In a typewriting machine, in combination, a frame, a laterally-movable carriage thereon, a shaft rotatably mounted on said carriage, a pair of different-line-length-defining pairs of margin-tappets angularly disposed on said shaft, each tappet of a pair being located substantially equidistant relatively to the center line of said machine, a counter-stop on said frame co-operative with said margin-tappets, for limiting the lateral movement of said carriage in either direction, and means for setting said shaft to different angular positions, so as to bring any pair of said tappets into operative position relative to said counter-stop.

5. In a typewriting machine, the combination with a frame and a laterally-movable carriage, of a shaft rotatably mounted on said carriage, a plurality of different-line-length-defining pairs of margin-tappets angularly disposed on said shaft, the respective distances between the tappets of the several pairs being unequal, a mechanism mounted on said frame for operatively engaging successively a pair of said margin-tappets for limiting the lateral movement of said carriage in either direction, and a knob attached to one end of said shaft for rotating said shaft.

6. In a typewriting machine, the combination with a frame and a laterally movable carriage, of a multi-faced shaft rotatably mounted on said carriage, a pair of margin-tappets attached to each face of said shaft, the distance between each pair of said tappets being progressively increased around said shaft, a mechanism operatively engaging successively a pair of said margin-tappets for limiting the lateral movement of said carriage in either direction, and means attached to one end of said shaft for rotating said shaft.

7. In a typewriting machine, the combination with a frame and a laterally-movable carriage, of a shaft rotatably mounted on the ends of said carriage, control means attached to said shaft, a plurality of different-line-length-defining pairs of margin-tappets, angularly disposed around and on said shaft, means on said frame for operatively engaging said tappets for limiting the movement of said carriage in either direction, and a device for locking any pair of said margin-tappets in operative position.

8. In a typewriting machine, the combination with a frame and a laterally movable carriage, of a shaft, rotatably mounted on the ends of said carriage, control means attached to said shaft, a plurality of different-line-length-defining pairs of margin-tappets, integral with and angularly disposed around said shaft, the distance between said tappets being progressively increased around said shaft, means operatively engaging successively one pair of said tappets for limiting the lateral movement of said carriage in either direction, and a device for locking any pair of said tappets in operative position.

9. In a typewriting machine, the combination with a frame and a laterally movable carriage, of a shaft, rotatably mounted on the ends of said carriage, a plurality of different-line-length-defining pairs of margin-tappets, angularly disposed around and on said shaft, the distance between said tappets being progressively increased around said shaft, a mechanism operatively en-

gaging successively a pair of said tappets for limiting the lateral movement of said carriage in either direction, control means for said shaft attached to one end thereof, and means mounted on said carriage for locking said shaft in one operative position.

10. In a typewriting machine, the combination with a frame and a laterally movable carriage, of a multi-faced shaft rotatably mounted on the ends of said carriage, a pair of margin-tappets, attached to each face of said shaft, means operatively engaging one of a pair of said tappets for limiting the movement of said carriage in either direction, a knob attached to one end of said shaft for rotating said shaft, and characters located on said knob indicating relative radial positions of the margin-tappets.

11. In a typewriting machine, a frame, a carriage laterally movable on said frame, a shaft rotatably mounted on the ends of said carriage, a plurality of different-line-length-defining pairs of margin-tappets angularly disposed around and on said shaft, and means on said frame for operatively engaging said tappets for limiting the lateral movement of said carriage in either direction.

12. In a typewriting machine, a laterally movable carriage, a square shaft rotatably mounted on said carriage, a pair of margin-tappets attached to each face of said shaft, a pair of margin-stops slidably mounted on said shaft, and means operatively engaging said margin-tappets and stops for limiting the lateral movement of said carriage.

13. In a typewriting machine, a frame, a carriage laterally movable on said frame, a square shaft rotatably mounted on said carriage, a pair of margin-tappets attached to each face of said shaft, a pair of margin-stops slidably mounted on said shaft, means locking said slidable stops on said shaft, and a mechanism operatively engaging said margin-tappets and stops for limiting the lateral movement of said carriage.

14. In a typewriting machine, a laterally movable carriage, a shaft rotatably mounted on said carriage, a pair of margin-tappets, attached to each face of said shaft, a pair of margin-stops adjustably mounted on said shaft, means located substantially at one end of said shaft for rotating said margin tappets and stops into their operative position, a mechanism located substantially at the opposite end of said shaft for locking one pair of margin-tappets in their operative position, and means operatively engaging successively a pair of said tappets or said stops for limiting the lateral movement of said carriage in either direction.

15. In a typewriting machine, a laterally movable carriage, a polygonal shaft rotatably mounted on said carriage, a pair of margin-tappets attached to each face of said shaft, a pair of margin-stops slidably mounted on said shaft, means locking said slidable stops on said shaft, a knob attached to one end of said shaft for rotating said shaft, a mechanism for locking one pair of said tappets in their operative position, and means operatively engaging successively one pair of said tappets or said stops for limiting the lateral movement of said carriage in either direction.

16. In a typewriting machine, the combination with a carriage, and a square shaft rotatably mounted on said carriage with a pair of margin-stops attached to each face of said shaft, of a pair of margin-stops slidably mounted on said

shaft, means locking said slidable stops on said shaft, a knob attached to one end of said shaft for rotating said shaft, means locking one pair of said stops in their operative position, characters on the circumference of said knob identifying the position of said pairs of stops, and a mechanism operatively engaging successively a pair of said stops for limiting the lateral movement of said carriage in either direction.

17. In a typewriting machine, in combination, a frame, a laterally-movable carriage thereon, a shaft rotatably mounted on said carriage, a plurality of different-line-length-defining pairs of margin-stops angularly disposed on said shaft, a counter-stop on said frame, said shaft being rotatable to different angular positions, for effecting co-operation of said counter-stop and different pairs of said margin-stops, for limiting the lateral movement of said carriage in either direction, and means operable at will for withdrawing said counter-stop from engagement with either stop of any effectively positioned pair.

18. In a typewriting machine, the combination with key-levers, a frame, and a laterally-movable carriage on said frame, of a shaft rotatably mounted on said carriage, a plurality of different-line-length-defining pairs of margin-stops angularly disposed on said shaft, a counter-stop on said frame, said shaft being rotatable to different angular positions, for effecting co-operation of said counter-stop with different pairs of margin-stops, for limiting the lateral movement of said carriage in either direction, and a mechanism locking said key-levers in an inoperative position when the line-end stop of an effectively positioned pair of said margin-stops engages said counter-stop for line-end arrest of said carriage.

19. In a typewriting machine, a frame, a laterally-movable carriage thereon, a shaft rotatably mounted on said carriage, a plurality of different-line-length-defining pairs of margin-stops angularly disposed on said shaft, a counter-stop on said frame, said shaft being rotatable to different angular positions, for effecting co-operation of said counter-stop with different pairs of margin-stops, for limiting the lateral movement of said carriage in either direction, and means, co-operative with the line-end margin-stop of any effectively positioned pair, for signaling the approach of said line-end margin-stop to said counter-stop before the carriage reaches the end of the line.

20. In a typewriting machine having types, the combination with a letter-feeding carriage co-operative with said types, of a counter-stop, a unit affording, in rotatable array, a plurality of different-line-length-defining pairs of margin-stops,

said unit being manually rotatable at will to one or another of different angular positions to select and present a pair of said margin-stops in operative relation to said counter-stop to predetermine a corresponding line-length extent of carriage travel, and means for detenting said unit in any of said positions.

21. In a typewriting machine having singly-operable types, the combination with a letter-feeding carriage co-operative with said types, of a unitary assemblage of different-line-length-defining pairs of margin-stops, each pair representing a predetermined extent of carriage travel as between line-start and line-end positions, a counter-stop, and means operable at will for effecting relative shifts of said margin-stop assemblage and said counter-stop for positioning any pair of said margin-stops in operative relation to said counter-stop.

22. In a typewriting machine having singly-operable types, the combination with a letter-feeding carriage co-operative with said types, of a unitary assemblage of different-line-length-defining pairs of margin-stops, each pair representing a predetermined extent of carriage travel as between line-start and line-end positions, a counter-stop, means operable at will for effecting relative shifts of said margin-stop assemblage and said counter-stop for positioning any pair of said margin-stops in operative relation to said counter-stop, said counter-stop being retractable relatively to any effectively positioned pair of margin-stops preparatory to extra travel of the carriage in either direction, and an extra stop-device cooperative with said counter-stop, to limit the extra travel to a predetermined extent.

23. In a typewriting machine having singly-operable types, the combination with a letter-feeding carriage co-operative with said types, of a unitary assemblage of different line-length-defining pairs of margin-stops, each pair representing a predetermined extent of carriage travel as between line-start and line-end positions, a counter-stop, means operable at will for effecting relative shifts of said margin-stop assemblage and said counter-stop for positioning any pair of said margin-stops in operative relation to said counter-stop, said counter-stop being retractable relatively to any effectively positioned pair of margin-stops preparatory to extra travel of the carriage in either direction, and an extra stop-device cooperative with said counter-stop, to limit the extra travel to a predetermined extent, said extra stop-device being incorporated in said assemblage, and being operative to limit the extra carriage travel irrespective of said relative shifts of said assemblage and counter-stop.

WILLIAM A. DOBSON.