W. J. NEIDIG.

TYPE WRITING MACHINE.

APPLICATION FILED DEC. 17, 1909.

1,110,641. Patented Sept. 15, 1914.

2 SHEETS—SHEET 1.

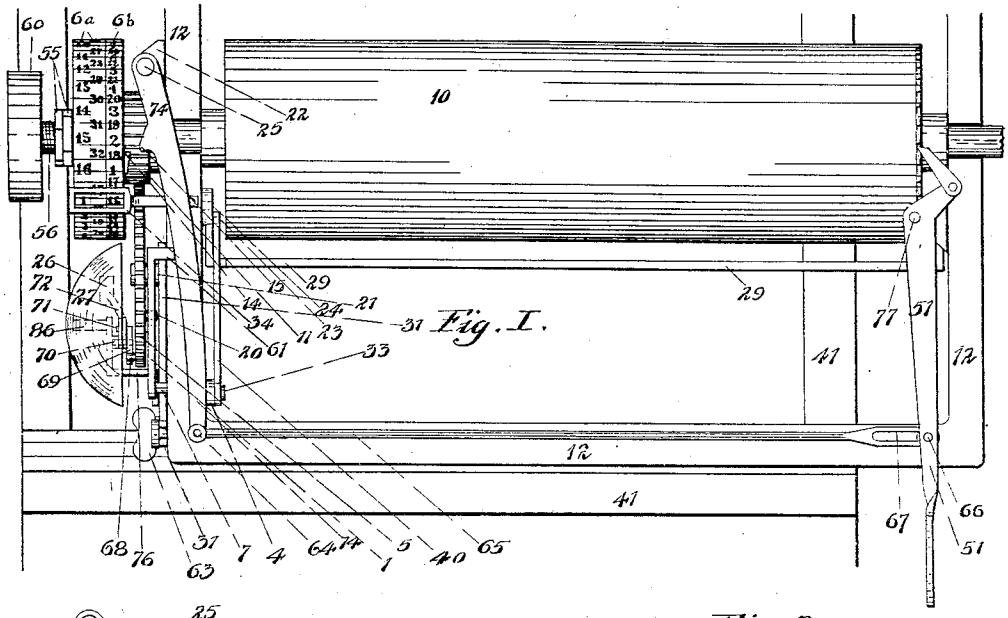


Fig. 1.

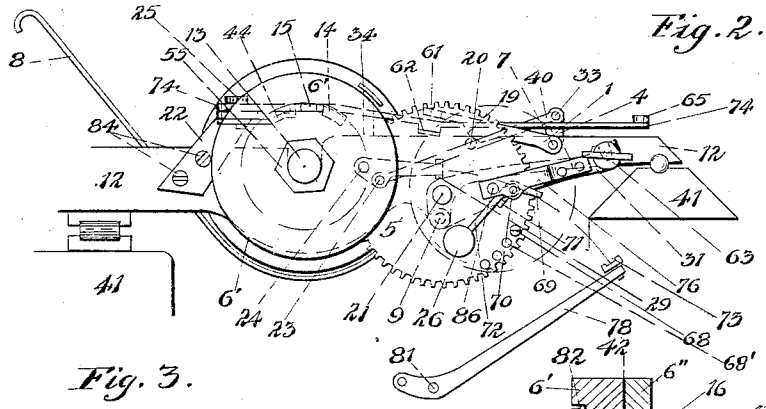


Fig. 2.



Fig. 5.

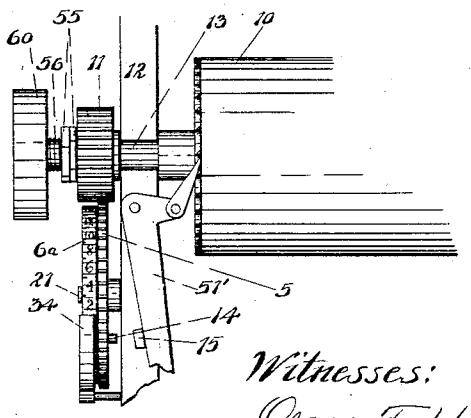


Fig. 3.

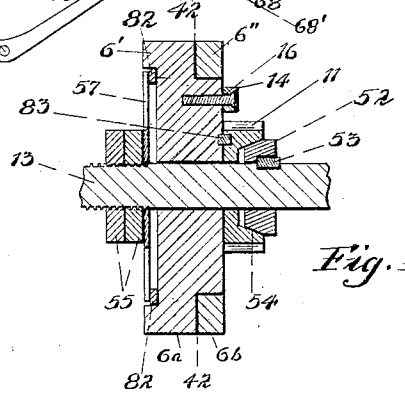


Fig. 4.

Witnesses:

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2 SHEETS—SHEET 2.

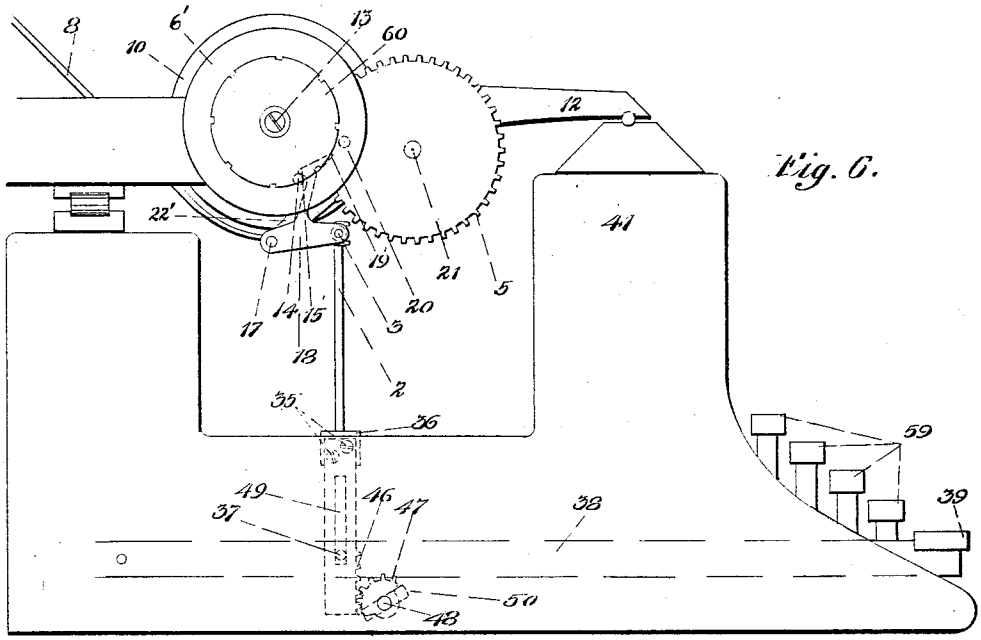


Fig. 6.

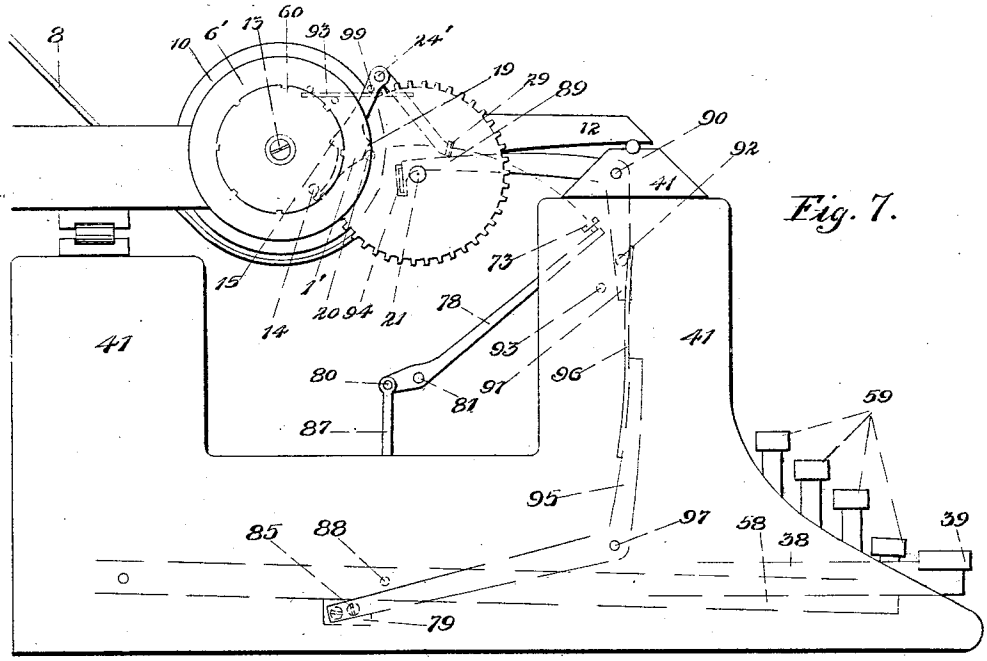


Fig. 7.

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UNITED STATES PATENT OFFICE.

WILLIAM J. NEIDIG, OF MADISON, WISCONSIN, ASSIGNOR, BY MESNE ASSIGNMENTS, TO CHICAGO TITLE AND TRUST COMPANY, TRUSTEE, A CORPORATION OF ILLINOIS.

TYPE-WRITING MACHINE.

1,110,641. Specification of Letters Patent. Patented Sept. 15, 1914.

Application filed December 17, 1909. Serial No. 533,725.

To all whom it may concern:

Be it known that I, WILLIAM JONATHAN NEIDIG, a citizen of the United States, residing at Madison, in the county of Dane and State of Wisconsin, have invented a new and useful Improvement in Type-Writing Machines, of which the following is a specification.

Certain principles and features of my invention as described herein are included within the generic invention which is described and claimed in my co-pending application filed April 30, 1909, Serial No. 493,193. My general invention supplies the operator of a typewriting machine with automatic indicating means, under the novel control of a typewriter-mechanism part used in the operation of typewriting, whereby without exercising preliminary care he is able to inform himself of the position of his advancing sheet either with respect to the first line printed thereon or to some other point on the sheet. It also supplies him with additional or with substitute indicating means under the novel control of such a typewriter-mechanism part, whereby such types as may be desired of signaling devices and of machine-lock devices may be employed to indicate the arrival of the sheet into a predetermined line-position. The present branch or division of the invention supplies the operator with such indicating means. The embodiment thereof shown in Figures 1, 2, 4 and 5 of the drawings employs an operative member that is actuated from the platen under the control of the line-space lever of the typewriter-mechanism, and the use of said line-space lever as a controlling agent for the indicating means constitutes on of the leading features of the present invention. Another of the leading features thereof is the use of detent means for giving the operative member its initial or starting position. Other features are as hereinafter described and claimed.

One of the leading objects of my present invention is to supply special types of driving and controlling means adapted to be used in other combinations or separately for similar sheet-position indicating purposes.

In the drawings.—Fig. 1 is a top or plan view of an embodiment of my invention; Fig. 2 is an end view of the same, but showing the mechanism in a different operative position; Fig. 3 is a top or plan view of a typical modification; Fig. 4 is an enlarged sectional view of the platen arbor and the rotary parts I have added thereto; Fig. 5 is an enlarged view of the adjustable pin 68; Fig. 6 is an end view of another typical modification, represented more or less diagrammatically; and in Fig. 7 still another modification is somewhat diagrammatically represented.

Similar symbols of reference refer to similar parts throughout the several drawings.

My invention as more particularly illustrated herein consists of a rotary part having a yielding or accommodating connection with the platen; stopping means to detain the rotary part at a constant rotative point; controlling means for the stopping means, consisting first of means to render the stopping means effective, and second, of means to release the parts detained from the control of the stopping means; and indicating means controlled or operated by the rotary part, comprising upward-counting indices, downward-counting indices, a signaling means, and a means rendering the machine inoperative, whether one or all, the same being in various ways adjustable.

The preferable application of the principle underlying my invention is that illustrated in Figs. 1, 2, 4 and 5, in which the platen carriage frame 12, carried upon the main frame 41 of the typewriting machine in the usual manner, has journaled in its ends the platen arbor 13, bearing the platen 10, which is revolved by the usual line spacing lever 51. The usual paper table 8 for the support of the entering sheet is shown, as is also a type-bar 78, bearing the printing type 73, and pivoted on the axis 81, all in the usual and well-known manner of certain standard typewriting machines, as will be understood. Taking now this already-provided structure as a basis, I place upon the platen arbor 13 outside the carriage frame 12 the friction collar 52, Fig. 4, attaching the same fixedly to the platen arbor by means of the key 53. This piece 52 may take a quite different form from the cone form shown in Fig. 4. I place upon the platen arbor next adjacent said friction collar the toothed wheel 11, having a friction surface engaging with that upon the piece 52, whatever that may be. Attached to this wheel 11 so as to revolve therewith as a unit is the rotary part 6′, bearing the projection

14. This part 6′ is terraced as shown, and upon the step or shoulder thereof is seated an annular part 6″, adjustable relative thereto and in frictional engagement with the said step or shoulder and also on the line 42. Both of these parts I construct of a light material like wood or aluminum. Against the part 6′ is placed the metal friction-ring 82, and the washer-like spring 57, the latter adjustable laterally upon the said arbor 13 by means of the screw-threads 56 and the pair of adjusting and lock-nuts 55. The platen arbor has the usual twirler 60 on the end thereof. I attach to the rear part of the carriage frame 12 the frame extension 22, and upon this by means of the pivot-pin 25 is hung the lever 74, mounted to swing horizontally and having thereon the laterally projecting stop-lug 15. This lever is connected with the line-space lever 51 by means of the pins 64 and 66 and the horizontal connecting rod 65, the latter being supplied with the slot 67 at one end thereof. The lever 74 is also furnished with the spring 44, Fig. 2, the action of which is such that the lever is pressed always toward the left, away from the platen, and also is furnished with the horizontally projecting lip or stop-seat 62, shown more clearly in Fig. 2. I attach to the carriage frame 12 the hinged frame extension 31, by means of the pivot-pin 9 at the one end, and the thumb-screw 63 at the other. This hinged frame extension 31 bears the axle 21, upon which is journaled the toothed wheel 5 adapted to mesh with the toothed wheel 11 on the platen arbor. The wheel 5 should be in diameter some other multiple of the diameter of the wheel 11—twice the diameter, preferably. Projecting inwardly from that side of this toothed wheel 5 nearest the platen is the pin 20; and between this wheel and the frame 12, and pivoted upon the frame 12 by means of the shaft or axle 7, lies the lever or latch 1, provided with the turned-in stop-end 61, and an irregularly-shaped working under face 19, the latter in certain positions of the latch jutting downwardly into the path of the pin 20 before named. The carriage frame 12 has attached to it also the pointer or index-guide 34.

The action of the structure thus far described is as follows: Suppose the mechanism to stand in the position as shown in Fig. 2—the pin 20 by its action upon the lever or latch 1 has raised the stop-end 61 from the stop-seat rest 62, upon lever 74 into a position above the lever 74, so that when the line-spacing lever 51 after its working stroke returns in the usual manner toward the left ready to begin another stroke, the lever 74 is also permitted to swing toward the left. The swinging action brings the stop 15 of said lever into the path of the projection 14 on the rotary part 6′. This will be the approximate position of the parts upon the completion of a given sheet. Suppose now that the sheet is twirled out of the machine in the usual manner by means of the twirler 60, and another sheet inserted and brought around into position for the printing of the first line: it will readily be seen that the turning movement of the platen will bring the projection 14 against the stop 15, which will detain the part 6′ so that it can thereafter no longer revolve with the platen, but must remain stationary in a predetermined position. The first line upon the sheet will now be printed in the usual manner. Upon the completion of the line, the operator will press the lever 51 to the right in the usual manner for the purpose of advancing the paper sheet and shifting the carriage. This movement of lever 51, at the very beginning thereof and before the line-spacing mechanism has acted upon the platen, will result in movement of lever 74 away from part 6′ and consequently in the withdrawal of the stop 15 from its stopping engagement with the projection 14, as shown in Fig. 1. The part 6′ will now be free to revolve with the platen 10; and upon the further pressing of the lever 51 toward the right to space forward the platen for the printing of the next line, it will so revolve; and it will continue to revolve with the platen until again detained by the action of the stop 15 upon the projection 14. The complete movement of the lever 74 to the right occasioned through the connections between the said lever and the line-space lever 51 carries the body of said lever out from under the laterally projecting lug or stop-end 61 of the latch 1, so that the latch is permitted to swing downward until said lug or stop-end 61 rests upon the stop-seat 62, shown more clearly in Fig. 2. When now the line-space lever 51 returns in its usual manner toward the left after having made its working stroke, the lever 74 will follow its movement only so far as the stop 61 will permit—that is to say, not far enough for the stop 15 to act detainingly upon the projection 14. The stop 15 will remain in this position relatively to the path of projection 14 until the pin 20 again comes around and lifts latch 1 out of engagement with the lever 74, the slotted end 67 upon the connecting rod 65 permitting the space-lever to swing to the left independently of the lever 74, during the time while the lever 74 is detained in an intermediate position by stop 61.

It will now be seen that I have described a means whereby the rotary part 6′ is brought to a stop always at the same rotative point, namely the stopping action of the stop 15 upon the projection 14, and a means whereby it is then released to revolve with the platen, namely the action of the

space-lever 51 upon the stopping means. I have also described a yielding connection with the platen that will accommodate itself to such a stopping action upon the part 6′, namely a frictional connection. Since the part 6′ comes to a stop always at the same rotative point, it follows that it resumes its movements always from the same initial or starting point. Suppose now that I supply the periphery of my part 6′ with indices, preferably numerals, using marks that will indicate the position of the current line-point relatively to the first line on the sheet, and placing these indicating marks in each case so that when, respectively, in indicating position, each thereof will appear within the contour of the index-guide or pointer 34—I furnish that point upon my periphery lying within the said index-loop 34 during the printing of my first line with the numeral 1, and as during the printing of the said line the part 6′ has not yet been released from the action of the stop 15, this numeral would represent the stopping point of the part 6′ as so acted upon. The index-point upon my periphery during the printing of my second line I likewise furnish with the numeral 2, the released part 6′ having moved forward with the platen between the printing of the two lines, and so on, as high as I wish to count, my released periphery sustaining now always a constant relation to the advancing sheet. Such an indexed periphery might take the form of the line indicator or scale 6^a in my drawings. In my Fig. 1 this scale is shown as counting by the ordinary double-spaced line-unit during two full revolutions of the platen, or to thirty-three double lines, the platen-periphery in the case of most typewriting machines today being divided into thirty-three single-line printing positions, or in any event into single-line printing positions up to some odd number. If such a platen be spaced forward by double lines instead of single, the same peripheral point can come into the indicating position only upon alternate revolutions of the platen. The indicating marks as shown relating to the second revolution of the platen will not therefore interfere with those relating to the first, but can be placed in a series side by side with them, or if desired between them, as in my indicating scale 6^b. In my modification shown in Fig. 3 is illustrated a more flexible method of counting lines beyond the lines printed during one revolution of the platen, the scale 6^a and projection 14 being attached to a toothed wheel revolving less often than the platen. When the lettered periphery is geared down as in Fig. 3 to make but one revolution to the two (say) of the platen, it can be made to count by single, double or triple line-spacings at will.

My indices 6^b are described as follows: Upon the periphery of the annular part 6″ are placed indicating marks, preferably numerals, arranged to count progressively downward, instead of upward, also by line-positions. This annular part 6″ is adjustable to the rotary part 6′, as has been explained. I show it indexed to count by the double-spaced line, the numerals counting during the second revolution of the platen falling between those counting during the first revolution. It could however be combined in adjustable manner with the scale 6^a shown in Fig. 3, and lettered to count by single, double or triple line-spacings. Its use is as follows: Suppose I am printing sixteen lines upon my sheet, and wish to remove my sheet when the sixteenth line is printed; and suppose also that I am printing matter like tabular matter, that cannot well be divided, and wish to know line by line how far distant my sixteenth or last line is, in order not to begin upon matter that will not go into the space I have left;—by bringing the numeral 16 of my indices 6^b opposite the numeral 1 of my indices 6^a and leaving it there, it will follow that during the time that my indices 6^a are counting the lines upward on my sheet, beginning from line 1, my indices 6^b will be counting them downward toward the last line, and I will be enabled to tell at a glance, without making any mental computations, just how much printing space I have left upon the sheet. Or, I could set the scale 6′ to tell the distance to the extreme bottom edge of the sheet, instead of to the last line I intend to print, at my pleasure, by adding the depth in line-units of the bottom margin.

Any mechanism having a mode of operation such as has been described,—that is to say, having an operative member that is first brought into a constant starting or initial position, and then at a suitable moment given a movement constant with that of the sheet,—can be made not only to operate indices, but to control and operate almost any form of signaling apparatus as well. In my drawings I show means for attracting the operator's attention through the striking of a bell, and means for then rendering the machine inoperative, all operated or controlled by such an operative member.

My warning signal is given by the following means: I attach to the pivoted carriage frame extension 31 the further frame extension 76. Upon this I place the outwardly-projecting pin 86 bearing the bell 27, shown clearly in Fig. 1, but only in dotted outline in Fig. 2. The frame extension 76 carries also the inwardly-projecting pivot-pin 70, the same serving as a supporting axis for the trip-lever 69 having on it the outwardly projecting lug 71, and for the clapper-stem 72 bearing the bell-clapper or hammer 26, the said lug 71 extending under-

neath the said clapper-stem 72 and acting liftingly upon it. The toothed wheel 5 carries near its periphery a series of threaded holes 68′, in one of which the outwardly projecting pin 68 is seated adjustably to the said wheel. When now the toothed wheel revolves, as it does upon the release of the detained rotary part 6′, sooner or later the pin 68 will be brought around against the trip-lever 69 lying in its path, and through its action upon this trip-lever the clapper 26 will be raised and afterward released, falling against the bell and ringing it. I prefer the bell signal given in this manner, but other bell-signals may be employed, or signals other than bell-signals.

The means whereby the machine is rendered inoperative are described thus: The lever 1 already described is fixedly attached at one end to the short shaft or arbor 7, journaled in the carriage frame 12. Upon the inner end of this shaft and fixedly attached thereto is the crank-lever 4, bearing the pin 33. Extending from end to end of the carriage frame 12, and attached thereto operatively by means of the pivot-pins 24, is the bail-shaped stop-bar 29. This stop-bar is so stationed and shaped that it can be rocked into a position in which the printing types 73 will strike upon it instead of upon the platen, or rocked into another position in which the action of the printing parts is not affected; and it is connected with the crank-lever 4 before named by means of the pins 23 and 33 and the connecting rod 40. When it is time for the machine to be rendered inoperative, the pin 20, inwardly projecting from the wheel 5, presses against the downwardly projecting portion 19 of the lever 1, thus raising the lever 1, and through the connecting parts raising the stop-bar or bail 29 into a position blocking the printing action of the type 73. This position of the parts is clearly shown in Fig. 2. The working face 19 of the lever 1 referred to will be so shaped that one spacing stroke will raise the stop-bar 29 into the blocking position, and another spacing stroke will be required to lower it. The parts are to be so weighted and balanced that the stop-bar 29 will fall of itself into an idle position when released.

I will now describe more particularly the use of my invention.

Suppose I wish to print a small page, say sixteen lines in length: I first turn my indexed periphery 6^a until the numeral 16 thereon lies within the index-loop, or at the pointer. I then loosen the thumb-screw 63 and rock the frame extension 31 downward on its pivot 9 until the toothed wheels 5 and 11 are disengaged. I now turn the wheel 5 in its normal direction on its axis until the bell-signal is given. I have now only to throw the two toothed wheels into mesh again by raising the frame extension 31 into place and fastening it. My signal bell will now always ring when the platen is spaced forward for the printing of the sixteenth line, and my machine will always be rendered inoperative if the platen is then spaced forward for the printing of an additional line. If for any reason I wish to add further matter to my page, I can always do so by turning my rotary part 6′ forward or backward relatively to the platen, the light frictional connection readily permitting of the movement. Such a manipulation would not in the least affect the operation of my mechanism relatively to the printing of the next sheet. And in addition to my bell signal and to my means for rendering the machine inoperative if the bell signal be disregarded, I have the entire series of indices 6^b, to indicate as already described the number of lines I can still print on my sheet, beginning with my first and ending with my last.

In certain typewriting machines the line-spacing lever 51 is placed adjacent to the left end of the carriage; and I wish to show a means whereby the mechanism may be more directly connected therewith, some of the parts being omitted. In my Fig. 3 is shown such a modification. The toothed wheel 11 here has a frictional connection with the platen as before, but the indices 6^a are attached to revolve with the toothed wheel 5. The toothed wheels in this arrangement may be of any diameter relatively to one another. The wheel 5 turns on the pin 21, here stationed on the carriage frame 12 in a fixed relation to the platen arbor. The spacing lever 51′ has attached to it the projecting detent 15, and normally stands in a position in which this detent lies in the path of the pin 14. During the twirling out of the completed sheet and the positioning of the new one this pin 14 will be stopped by the detent 15, and the indices stand with the numeral 1 or the peripheral position therefor in the indicating position above the pointer 34, as before; and during the writing of the first line this will be the position of the parts. The line-space lever 51′ will now be pressed to the right, instantly removing the detent 15 from its detaining engagement upon the pin 14. A further movement to the right of this lever—namely to the position occupied by it in Fig. 3—will space the platen forward for the printing of the second line, in the usual way. This movement of the platen will affect the now released toothed wheel 5, and the numeral 2 of the said indices will be brought into the indicating position, as shown in the figure. And so on, to the end of the sheet. Signaling and locking mechanisms may be added, corresponding to those shown in Fig. 1, as may be desired, and the scale 6^b as well.

In the figures thus far explained, the detent 15 is shown as removed from its engagement upon the pin 14 by the action of the line-spacing lever 51, but other parts used in typewriting could be employed for the purpose. In Fig. 6 is illustrated an arrangement whereby the space-key 39 can be so employed instead of the line-spacing lever. Levers 71 and 1 are omitted, and a different bail-bar arrangement is employed. The rotary member, gears, etc., are or may be the same as in Figs. 1, 2 and 4. The carriage frame 12 here has attached to it the frame extension 22', bearing the pivot-pin 17, on which rocks the arm 18 supporting one end of the rocking bail-bar 3. This bail-bar 3 extends from end to end of the carriage frame 12 and lies parallel to the platen axis 13; and it must be imagined as supported at the farther end of the frame 12 by a similar frame extension piece 22', pivot-pin 17 and arm 18, so that when one end is raised or lowered the other will be raised or lowered also, without affecting its parallel relations with the platen axis. Upon the bail-bar 3 hangs the connecting rod 2, a slide-bearing on the end thereof receiving the bail-bar within its opening and permitting the said bail-bar to play backward and forward therein without affecting the lateral position of the rod. The rod 2 extends downwardly, and is fixedly attached to the cross-piece 36 at a point about central between the ends thereof, the cross-piece also lying parallel with the platen axis, and extending almost from frame to frame. This cross-piece 36 has attached thereto at either end by means of the screws 35 the slotted rack 46, in the slot 49 of which plays the pin 37, outwardly projecting from the space-key lever 38. Journaled between the two frames 41 of the machine, by means of the arbor 48 and its bearing at either end, is stationed the rocking lock-gate 50, in such a position that when turned vertical the upper edge thereof will lie adjacent to the lower edge of the usual type-bar operating levers 58 (shown clearly in Fig. 7), and the said levers cannot be depressed, but having a length sufficiently short that the space-key levers 38 at either end thereof will be cleared and not locked. Fixedly attached to this rocking gate and turning with it upon its axis is the toothed segment 47, engaging with the rack 46. The rotary part 6' carries as before the inwardly projecting piece or pin 14, and the toothed wheel 5 as before carries the pin 20, here shown as projecting outwardly. Into the path of the pin 14 can be projected the detent 15' of the adjacent arm 18, and into the path of the pin 20 can be caused to project the toe 19' of the said arm 18. The mechanism is shown in the position assumed immediately before the printing of the first line, the indices 6^a standing at 1. When now the first line is printed, the space-bar 39 will be used in the usual manner, the pin 37 will act downwardly upon the rod 2 and it upon the bail-bar 3, and the detent 15' will be rocked toward the wheel 5 out of the path of the pin 14. The indices will now count the lines as before, until the last line-position is reached. The pin 20 meanwhile has come around into a position adjacent to the toe 19', which now lies in its path. When now the sheet is spaced forward for the printing of still another line, the pin 20, pressing against the toe 19', will brush it aside toward the left, lifting the bail-bar 3 and the rack 46, and turning the gate 50 until it stands upright under the type-key levers 58 and locks them. A further movement forward of the platen will now be effected to remove the sheet, the toe 19 will be pressed still farther to the left, and the machine will be again in the position shown in Fig. 6. The bell-signal of course may be added at will.

In my modification shown in Fig. 7, still another controlling means is made use of. The bail-shaped stop-bar 29^2 here is similar to that shown in Fig. 1, except that it is journaled at either end upon the carriage frame 12 by the arbor 24' and a suitable bearing. The said arbor 24' is shown as extended outwardly past the plane of the wheel 5, and having upon it the fixedly attached lever 1', bearing the detent 15^2 and the projecting part 19^2. A ribbon-bearing mechanism of the general type employed in the well-known Fox typewriting machine is also diagrammatically shown, the ribbon being carried in the loop 94, and lifted into position by the arm 89, the said arm being operated through the depression of the key-bars 58 upon the universal bar 79 lying therethe first line will now raise the ribbon-arm lever 95 and the spring 96 attached thereto upon the pin 92 projecting from the lower portion of the elbow-lever 91, the upper portion of which constitutes the said arm 89. As the pin 20 on the wheel 5 comes into the position as shown, it presses the lever 1' to the left so that the detent 15^2 will detain the pin 14 as before. In this position the machine is inoperative, the stop-bar 29^2 being depressed into the path taken by the printing-type 73, thus preventing the type from meeting the paper sheet, and moreover being locked in this position by the action of the pin 20 on the lever 1', so that when the type-key is depressed the arm 89 is unable to lift it. The sheet will now be twirled out of the machine in the usual manner, whereupon the pin 14 will be brought against the detent 15^2 and detained. The indices 6^a will now stand at 1, as before. Meanwhile the pin 20 has cleared the portion 19^2 of the lever 1' before being brought

to a stop. The printing of the first letter of the first line now raise the ribbon-arm 89, the stop-bar 29^2 will be lifted clear of the type-path to the platen, and the detent 15^2 will be rocked back away from the pin 14. The spacing forward of the paper sheet for the printing of the second line will now bring the numeral 2 into the indicating position, and so on to the end of the sheet, as before. The spring 93, bearing upwardly against the pin 99 on the lever 1′, and attached to the carriage frame 12, assists in maintaining the parts described in their locked and unlocked positions respectively. It will be understood that type-bar 78, its axis 81, and its connections with the frame 41 and with the lever 58, constitute well-known parts of various standard machines, and it is therefore unnecessary to describe the same in detail.

The modifications illustrate the ease with which various parts operative during the printing of the first line or some action related thereto may be made to control the action of an indicating mechanism of this general nature.

The series of indices 6^a and 6^b are preferably carried upon a periphery as shown, but the invention is not necessarily restricted to the peripheral arrangement, nor is it in all cases essential that they should revolve upon an axis as shown, nor need the part controlling them be rotary. Markings or symbols other than numerals may be employed, and units other than the line unit. The invention is not necessarily restricted to the precise means of adjustment between the one series and the other or between the projection 14 and the pin 20, and not the means shown, or between the pin 68 and the pin 20, and between the pin 68 and the pin or projection 14. The indices 6^a may be used alone, without the indices 6^b, and the indices 6^b alone without the indices 6^a, or both series of indices may be omitted and the bell signal alone used, or the means rendering the machine inoperative alone, or either it or the bell signal used alone with the two series of indices named, or with either of them. The invention is not necessarily restricted to the bell signal herein shown, or to the illustrated means for rendering the machine inoperative and various changes within the scope of my general invention are permissible in the means and methods of bringing an operative member into a constant starting or initial position are possible. It is to be noted also that although I have shown my rotary member connected with the platen, the platen may be considered in one broad aspect of the invention as merely one element of the train of connections intermediate said member and the line-space-lever. The direct connection with the platen is preferable, for it furnishes the simplest means of correlating the movements of working parts such as I have described with the movements of the sheet.

The preferable form of my invention is that shown in Fig. 1, with alternative features as shown in Figs. 3 and 6 for use with certain types of machine, as explained.

My general invention has as its pith the fact that I show means whereby an operative part, preferably rotary, controlling an indicating or signaling means, automatically is brought into a constant initial or starting position before or by the time the sheet is brought into a relatively constant line position, and then is given a movement constant with that of the sheet. As more specifically disclosed in the present application, I show means whereby such a rotary part is given a normal movement with the sheet through a yielding or accommodating connection with the platen, specifically a frictional connection, and then detained at a constant rotative point by a detaining means, specifically a stop, until the sheet attains its relatively constant line position, when it is released to resume its movements with the platen, the said detaining means being supplied with an automatic control, specifically a releasing control operated by a part used in printing the first line on the sheet or in some action related thereto, preferably the line-space-lever, and an engaging control operated by a projection operatively connected with the rotary part before mentioned.

It is to be noted that the platen as regarded herein is the principal feed-roll for advancing the sheet through the machine. It is to be noted also that for convenience the principal line-space actuating means of the typewriter is referred to herein as a line-space lever, for the reason that although in practice such actuating means is not always of the lever type it is commonly such, and whatever the type its line-space or sheet-advancing function is the same, and old, as will be understood, said actuating means constituting a part of usual sheet-advancing means well known in the art.

Having thus clearly explained the nature and objects of my invention, and the manner of applying it, I claim as new and desire to secure by Letters Patent—

1. In a typewriting machine, in combination, line-space devices, a platen actuated from said devices, indicating means operated from the platen, and means between said indicating means and said line-space devices, independent of the operating connection between the indicating means and the platen, for controlling the operation of said indicating means.

2. In a typewriting machine, in combination, line-space devices, a platen actuated from said devices, indices operated from the

platen to indicate successive positions of the sheet, and means between said indices and said line-space devices independent of the platen for controlling the operation of said indices.

3. In a typewriting machine, in combination, line-space devices, a platen actuated from said devices, a revoluble member actuated from the platen under the direct control of said line-space devices, and indicating means called into operation through said member.

4. In a typewriting machine, in combination, a line-space lever, a platen actuated from said lever, an operative member actuated from the platen under the direct control of said line-space lever, and indices called into operation through said member to indicate the progress of the sheet.

5. In a typewriting machine, in combination, a line-space lever, a platen actuated from said lever, an operative member actuated from the platen under the direct control of said line-space lever, and an audible signaling means called into operation through said operative member.

6. In a typewriting machine, in combination, typewriter-mechanism parts including a line-space lever and a platen actuated from said lever, an operative member actuated from the platen under the direct control of said line-space lever, and means called into operation through said operative member for rendering a part or parts of the typewriter mechanism inoperative for use.

7. In a typewriting machine, in combination, a platen, an operative member actuated to move with the platen, indicating means called into operation through said member, a detent for controlling the movement of said operative member, and a part having also a function in the typewriting operation connected to control the detaining action of said detent.

8. In a typewriting machine, in combination, a platen, an index-carrier actuated from the platen, a stop adapted to detain said carrier in initial position, and a part having also a function in the typewriting operation connected to control the detaining action of said stop.

9. In a typewriting machine, in combination, a platen, an operative member actuated from the platen, an audible signaling means called into operation through said member, a stop for detaining said operative member in starting position, and a part having also a function in the typewriting operation connected to control the detaining action of said stop.

10. In a typewriting machine, in combination, typewriter-mechanism including a platen, an operative member actuated from the platen, means called into operation through said member for rendering a part or parts of said typewriter mechanism inoperative for use, a stop for detaining said member in starting position, and a part having a function in the typewriting operation connected to control the detaining action of said stop.

11. In a typewriting machine, in combination, a platen, an operative member actuated from the platen, indicating means called into operation through said member, a stop for controlling the movement of said operative member with the platen, and line-space devices connected to control the detaining action of said stop.

12. In a typewriting machine, in combination, a platen, an index-carrier actuated from the platen, a stop for controlling the movement of said carrier, and a line-space lever connected to control the detaining action of said stop.

13. In a typewriting machine, in combination, a platen, an operative member actuated from the platen and having a projection in connection therewith, indicating means called into operation through said member, a controlling part having also a functon in the typewriting operation, and means connecting said controlling part to control the movement of said operative member, through said projection.

14. In a typewriting machine, in combination, a platen, an index-carrier actuated from the platen to bring indices into indicating position, a projection in connection with said carrier, a controlling part having also a function in the type-writing operation, and means connecting said controlling part to control the operation of said index-carrier, through said projection.

15. In a typewriting machine, in combination, a platen, an operative member actuated from the platen and having a projection in connection therewith, indicating means called into operation through said member, and a line-space lever connected to control the movement of said member, through said projection.

16. In a typewriting machine, in combination, a platen, an index-carrier actuated from the platen, a projection in connection with said carrier, and a line-space lever connected to control the operation of said carrier, through said projection.

17. In a typewriting machine, in combination, a platen, an operative member, indicating means called into operation through said member, frictional connecting means between said member and the platen, a controlling part having also a function in the typewriting operation, and a stop for detaining said operative member in a constant starting position, under the control of said controlling part.

18. In a typewriting machine, in combination, typewriter-mechanism parts includ-

ing a platen, an index-carrier having a frictional connection with the platen, and a stop for detaining said carrier in starting position, under the control of one of said typewriter-mechanism parts.

19. In a typewriting machine, in combination, typewriter-mechanism parts including a platen, an operative member having a frictional connection with the platen, indicating means called into operation through said member, a stop for detaining said member in starting position, and a line-space lever connected to control the detaining action of said stop.

20. In a typewriting machine, in combination, a platen, an index-carrier bearing indices, frictional connecting means between said carrier and the platen, a stop for detaining said index-carrier in starting position, and a line-space lever connected to control the detaining action of said stop.

21. In a typewriting machine, in combination, a platen, an operative member, indicating means called into operation through said member, frictional connecting means having spring-pressed closure between said member and the platen, a stop for detaining said member in starting position, and a controlling part having also a function in the typewriting operation for controlling the detaining action of said stop.

22. In a typewriting machine, in combination, typewriter-mechanism parts used in the typewriting operation; including a carriage and line-space devices; an operative member actuated from said line-space devices; and means on said carriage called into operation through said operative member under the independent control of one of said typewriter-mechanism parts for rendering a part or parts of the typewriting machine inoperative for use.

23. In a typewriting machine, in combination, printing means, a carriage, a platen, an operative member actuated from the platen, a bail on said carriage called into operation through said operative member so as to be interposed between the said printing means and the paper, and line-space devices actuating said platen and also connected to control the operation of said operative member.

24. In a typewriting machine, in combination, printing means, a carriage, a line-space lever, a platen on said carriage actuated by said lever, and a bail connected to be operated by said platen under the direct control of said line-space lever so as to render said printing means inoperative for use in printing in every position of the carriage.

25. In a typewriting machine, in combination, typewriter-mechanism parts including a platen, an operative member actuated from the platen and having a projection in connection therewith, indicating means called into operation through said member, and a stop having a normal position in the path of said projection and connected to be actuated out of said path by one of said typewriter-mechanism parts.

26. In a typewriting machine, in combination, typewriter-mechanism parts including a platen, an operative member actuated from the platen and having a projection in connection therewith, indicating means called into operation through said member, a stop spring-pressed into the path of said projection, and means connecting said stop to be actuated out of said path by one of said typewriter-mechanism parts.

27. In a typewriting machine, in combination, a platen, an operative member actuated from the platen and having a projection in connection therewith, indicating means called into operation through said member, a stop spring-pressed into the path of said projection, and a line-space lever connected to actuate said stop out of said path.

28. In a typewriting machine, in combination, a platen, an operative member actuated from the platen and having a projection in connection therewith, indicating means called into operation through said member, a stop having a normal position in the path of said projection, and a latch for holding said stop out of said path.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM J. NEIDIG.

Witnesses:
CHAS. F. RANDALL,
ALICE H. MORRISON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."