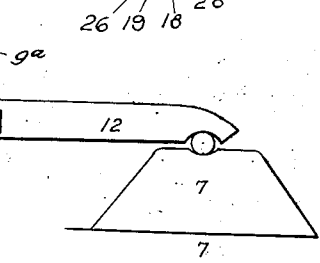
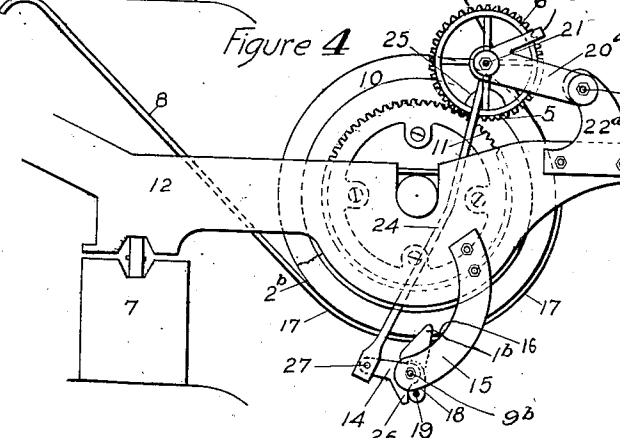
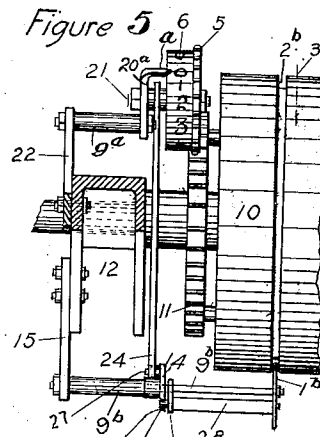
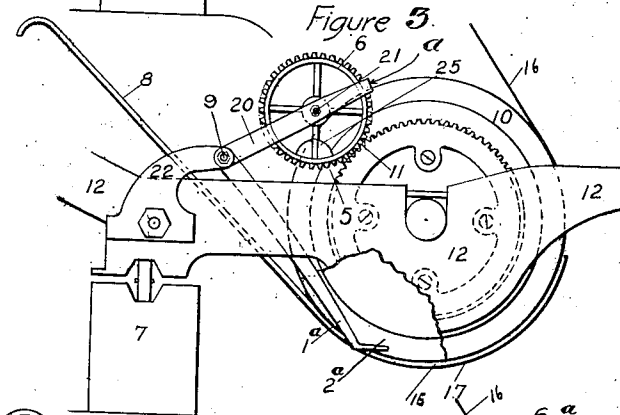
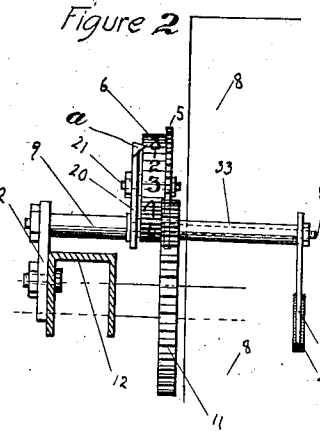
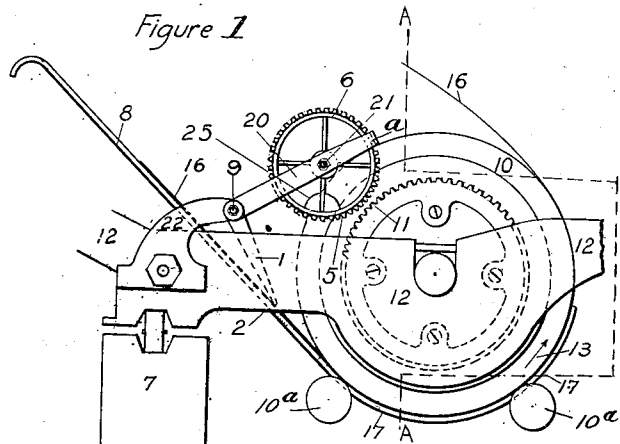


W. J. NEIDIG.
TYPE WRITING MACHINE.
APPLICATION FILED APR. 20, 1908.

1,053,919.

Patented Feb. 18, 1913.

2 SHEETS—SHEET 1.



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Inventor:

William Jonathan Neidig

1,053,919.

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2 SHEETS—SHEET 2.

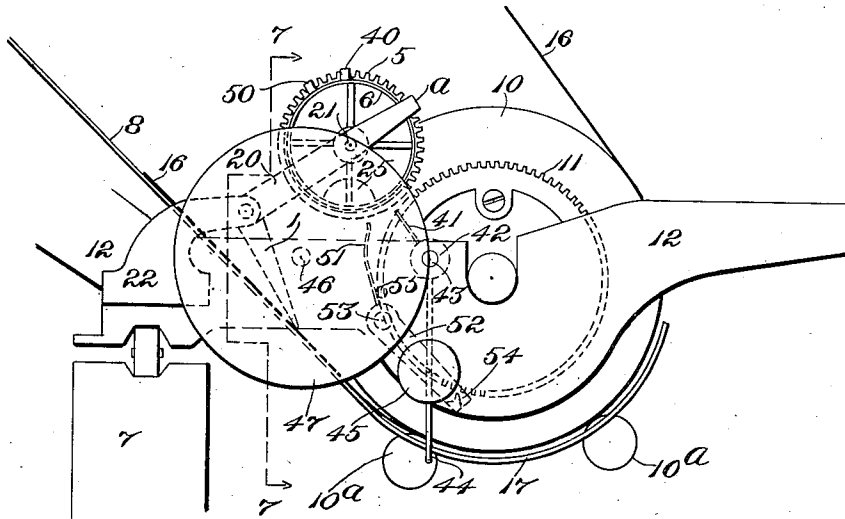


Fig. 6.

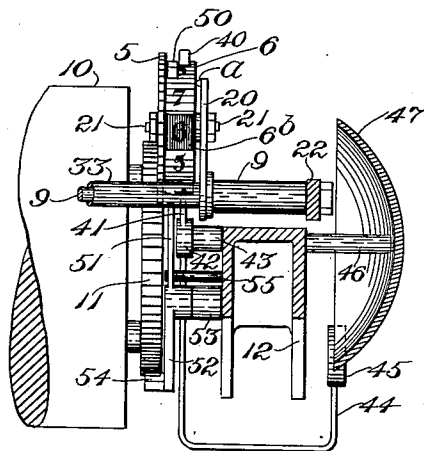


Fig. 7.

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UNITED STATES PATENT OFFICE.

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

TYPE-WRITING MACHINE.

1,053,919.

Specification of Letters Patent.

Patented Feb. 18, 1913.

Application filed April 20, 1908. Serial No. 428,212.

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.

The invention supplies the operator of a typewriting machine with automatic means, controlled by the sheet upon which he is writing, for indicating successive positions of the said sheet. It also supplies him with an improved sheet-controlled signaling means for warning him as to the position of the sheet-end.

The drawings show several different embodiments of the invention, each constructed to permit unobstructed backing-up of the sheet from any position of the latter.

A serious inconvenience experienced in the use of type-writing machines has been that the operator has been without foreknowledge of the exact position of the bottom end of the sheet, or of the distance to the said end from a current printing point near the same. This is true more especially in the case of front-strike and top-strike machines, because in them the platen usually can not be lifted and the bottom edge of the sheet passes entirely out of sight behind the platen while a large portion of the sheet remains unused, obliging the operator either to guess at the remaining distance to the bottom end thereof or wait until such end reappears, when there usually is very little distance remaining. In under-strike machines the position of the bottom end of the sheet may be ascertained by raising the platen, which is frequently done in practice, but this means interruption of the printing and loss of time.

Of the mechanisms heretofore proposed to give the operator a signal when time to remove his sheet, none is now in common use. My invention gives the operator such a signal in an improved and practicable manner. In addition it indicates for him line by line the decreasing amount of space for his use on the sheet, beginning considerably in advance of the time to remove the sheet and continuing as long as may be desired during the remaining progress of the sheet; all without preliminary care of any kind on his part. This function I believe has never

before been performed, but is novel to my invention. The operator thereby is given foreknowledge enabling him to discontinue printing at the proper point to leave the desired bottom margin, or to tell whether he has remaining on his sheet sufficient room for a group of matter like a table or a chapter heading that can not conveniently be divided.

In the drawings, Figure 1 is a side elevation of certain portions of a typewriting machine with one of the said embodiments of the invention applied thereto. Fig. 2 is a view looking from the front, with certain parts removed and the end of the carriage in vertical section. Figs. 3 and 4 are side elevations, with certain portions broken away, of other embodiments of the invention. Fig. 5 is a partial front view of certain of the parts of Fig. 4, with the end of the carriage in vertical section. Fig. 6 is a side elevation showing the embodiment of Figs. 1 and 2 with the addition of a bell signal and platen-locking means operatively combined with the part hereinafter called the operative member or index-carrier. Fig. 7 is a view showing certain of the parts of Fig. 6, mainly in rear elevation but partly in section on the line 7-7 of Fig. 6, and showing also a color signal.

Having reference to the drawings, at 7 is indicated a portion of the frame of a typewriting machine, and 12 is the movable carriage, 10 being the platen supported in the carriage. The platen 10 has combined therewith in practice line-space actuating devices not necessary to be shown, and which may be of any usual or approved character. A paper-table is shown at 8, at 17 curved paper-fingers extending from the paper-table under and partly around the platen to hold the paper sheet close to the surface of the platen, and at 10^a, 10^b, the two small rolls which are employed in some typewriting machines to press the sheet against the surface of the platen and render the latter more effective in feeding the sheet. It will be understood that the platen serves as usual as the principal feed-roll for feeding the sheet line by line through the machine.

The automatic means, controlled by the sheet, for indicating successive positions of the sheet, may vary considerably in construction, specific mode of operation, loca-

tion in a typewriting machine, and manner and means of operatively combining it with the parts of the machine, without necessarily involving departure from the principles of the invention. The embodiments of said principles which are specifically shown and described herein are chiefly illustrative of the general principles of the invention, although, in addition, they contain certain important specific features of invention. I usually employ an operative member, means for giving said member a constant starting position, and means for causing the member, under control of the sheet, to move coordinately with the sheet from said position. Preferably, the movement of the operative member is a turning one and is provided for by constructing the said member in the form of a wheel, as 6, although the invention in its broader phases is not restricted in these respects. In the present embodiments of the invention the operative member 6 is an index-carrier, indices being provided upon the periphery thereof, and a cooperating pointer or index being shown at *a*. The specific means in the said embodiments for giving the operative member its initial starting position consists of a weight 25, which is eccentrically connected with the operative member 6, so that the tendency of the unbalanced weight to gravitate to the lowest position will cause the member 6 to stand at rest always with the same point of its periphery uppermost, unless prevented. The portion of the periphery of the member 6 at this time presented at the pointer or index *a* may be blank, or may be furnished with any arbitrary mark, as for instance a zero, which will be understood as marking the non-indicating position of rest.

For the purpose of causing the operative member to move coordinately with the sheet, I preferably, as in the accompanying drawings, provide for communicating movement to the said member through the platen, and I have shown in the drawings one specific mode of doing so, comprising certain specific features which are included in the invention; although the broader phases of the invention are not restricted in respect of the particular means and manner of providing for the movement of the operative member. Nor is the invention, broadly considered, limited with respect to the precise means and manner of operatively combining the operative member with the platen; nor to the precise means and manner of giving the said member its initial or starting position.

In certain of its more specific phases the invention provides for imparting movement to the member 6 through the platen 10 by means of a driver element which is connected with the platen in convenient manner so as to rotate in unison with the latter, and a driven element to which the driving force is

applied by such active element or driver, the said driven element being connected with the member 6 in convenient manner. The specific form and character of the said driver element and driven element, and the mode and manner of their interaction and in which one thereof serves to cause movement of the other and of the operative member, may vary in different embodiments of the broad invention. In the drawings the driver element consists of a wheel 11, which is connected with the platen so as to rotate therewith, and the driven element consists of a wheel 5 which is connected with member 6 so that parts 5 and 6 rotate in unison. In the drawings the said elements or wheels are shown arranged for peripheral inter-engagement, although this is not essential in all cases, they are shown as intermeshing toothed gears, although it is not necessary in all cases that they should be toothed.

In the embodiments illustrated by the drawings, the turning of the operative member is controlled by mounting the operative member 6 and its wheel 5 upon a supporting pin 21 carried by an arm which in Fig. 1 is marked 20, which arm is mounted upon a supporting-pin or pivot 9, carried by a small stand or bracket 22, upon carriage 12. The arm 20 is movable upon the supporting-pin therefor, so that by movement of the same away from the axis of the platen the element 5 is taken out of driving engagement with the element 11, and the motion-transmitting means is prevented from turning the operative member in unison with the platen; and by movement of the arm in the opposite direction the element 5 is restored to driving engagement with the element 11, and the said motion-transmitting means is rendered effective to turn the operative member in unison with the platen. The pointer or index *a* is fixedly connected with arm 20, so that it always remains in proper relation to the operative member 6.

The control by the sheet itself of the actuation of the operative member is provided for through the employment of a paper-feeler which is in such operative control of the operative member that during the time the sheet controls the paper-feeler the operative member is prevented from being rotated and remains in its constant initial or starting position, but when the sheet ceases to control the paper-feeler the motion-transmitting means is rendered effective to give the operative member movement simultaneous with that of the platen from said position and thereafter cause it to turn coordinately with the platen.

The invention is not limited with respect to the specific form of the paper-feeler, nor with respect to its precise location, nor with respect to the precise manner in which it is combined with and controls the operative

member and the transmission of movement to the latter.

In Figs. 1 and 2, the paper-feeler is shown at 1. It is connected fixedly with one end of a sleeve 33, mounted upon the supporting-pin 9 aforesaid and having the arm 20 fixedly connected with its other end, so that the paper-feeler and arm are combined to swing in unison upon the supporting-pin 9. The paper-feeler 1 extends downwardly and forwardly from the pin 9, and is capable of movement into a position intersecting the path of the sheet 16. Its position transversely of the machine may vary. Usually it occupies a location within the width of the paper-table 8, and a slot or opening 2, Fig. 2, is made in the paper-table into which its acting portion may enter in the absence of a sheet. The paper-table serves as a backing for the sheet under the pressure of the paper-feeler. In entering the sheet into the machine, the leading end thereof, in passing forward between the paper-table and the paper-feeler, presses the latter out of the opening 2, raising the arm 20 so as to disengage the wheel 5 from the wheel 11. So long as the sheet is present between the paper-table and the feeler it bridges the opening 2 and supports the paper-feeler and the arm 20 in a position in which the wheel 5 is sufficiently separated from the wheel 11 to be out of engagement therewith, as in Fig. 1. When in the continued feeding movement of the sheet the bottom end of the latter passes the sheet-engaging portion of the paper-feeler, the paper-feeler is left free to enter the opening in the paper-table. The combined gravity of the paper-feeler 1, arm 20, and parts supported by the arm 20, causes the paper-feeler to enter the said opening 2, and the accompanying movement of the arm 20 carries the wheel 5 into instant engagement with the wheel 11. Obviously, this always will occur when the bottom end of the sheet is at a fixed distance from the printing point. The motion-transmitting means thereby will be rendered instantly effective to give the operative member 6 movement simultaneous with that of the platen, so that thereafter the operative member will move coördinately with the sheet. As it begins to move thus always when the sheet has attained a constant position, and thereafter moves coördinately with the sheet, the positions successively attained thereby are necessarily related to those assumed by the sheet, so that the former serves to indicate the latter. The first advance of the operative member will move said member from its constant initial or starting position to one indicating the remaining distance from the current printing point to the bottom end of the sheet, or to a point related thereto, the movement, and the displacement of one index by

another of different appearance, serving to signal to the operator that the bottom of the sheet is near. At each succeeding movement of the platen and sheet the successive movements of the operative member will present the respective indices at the indicating point as the end of the sheet arrives at constant distances from the printing point, and thereby indicate or tell off the successive positions of the sheet-end, or other related point of the sheet, relative to the printing point, so that the operator will be kept fully informed regarding the amount of space remaining to him for printing. I prefer to use for indices a series of numerals counting downward, as in the drawings, and constituting a downwardly-counting scale, but the invention is not limited to the use of any particular kind, order or number of indices. The highest numeral of the downwardly-counting scale will preferably be carried by that portion of the operative member which is presented at the fixed pointer or index *a* by the first advancing movement of the said member, and the lowest by that portion presented coördinately with the arrival of the last line position on the sheet into printing position, but it is not essential that the indices should begin and end at such points on said member.

In Figs. 1 and 2 the paper-feeler 1 is mounted above the path of the sheet and rests thereon. It is short, and its acting or feeling end engages with the sheet entirely at the rear of the platen and at a considerable distance from the printing point. This has the advantage that a much greater range of notice is given the operator, no mutilation of the platen is required, and the action of the working parts is not cramped. The parts are readily accessible. It is important in the case of sheet-controlled devices or mechanisms on the order of those comprised within my invention that they should be constructed to permit unobstructed backing-up from any position of the sheet and to any required extent. This result is provided for in each of the specific embodiments of the said invention that are shown in the drawings. In Figs. 1 and 2 the top surface or edge of the paper-feeler 1 constitutes a deflecting surface or edge by means of which, if the platen is turned backwardly after the bottom end of the sheet 16 has passed the said feeler and the latter has entered opening 2 in the paper-table, and consequently after the member 6 has begun to move with the platen, the said end of the sheet will be deflected or switched upwardly into an entirely open or clear secondary path or by-path so as to pass upward and cut over the top of the paper-feeler and its support, and without being obstructed by the paper-feeler or said support in doing so.

In Fig. 3 the paper-feeler, 1^a, is considerably longer than in Figs. 1 and 2, and its acting or feeling end projects under the platen and occupies a circumferential slot or recess 2^a in the platen, located at or adjacent one end of the platen. The said acting or feeling end projects in advance of the front end of the paper-table 8, to rest upon that portion of the sheet 16 which is then under and around the platen. When the sheet is present under the said end of the paper-feeler, the said acting end is retained thereby within the circumferential slot or recess 2^a, inasmuch as the sheet is held close against the surface of the platen by the curved fingers 17. Thereby the arm 20 is held retracted, with wheel 5 out of engagement with wheel 11. When the bottom end of the sheet passes the acting portion of the paper-feeler, the latter is permitted to move outward within the circumferential slot or recess 2^a in the platen, so that the accompanying movement of the arm 20 causes wheel 5 to become engaged with the wheel 11. In entering a sheet into the machine, as the leading end thereof is carried by turning movement of the platen forward between the surface of the platen and the fingers 17, and against the acting portion of the paper-feeler it presses the paper-feeler inward within the circumferential slot or recess 2^a, thereby moving the arm 20 to disengage the wheel 5 from the wheel 11. In Fig. 3 the paper-feeler 1^a is formed with an upwardly-inclined surface or edge beyond the acting portion which rests upon the sheet when the latter is present under the paper-feeler, and the free extremity of the paper-feeler does not leave the circumferential slot or recess 2^a of the platen when the bottom-end of the sheet passes the feeler. In case of backing-up after the bottom-end of the sheet has passed the feeler, the said end of the sheet will pass under such upwardly-inclined surface or edge, thereby raising the paper-feeler into the circumferential slot or recess 2^a so as to permit the sheet to move backward to any required extent without obstruction from the paper-feeler. The paper-feeler and associated parts are light and freely-movable around the supporting-pin 9, so that they are readily lifted by the action of the bottom-end of the sheet in backing-up.

Figs. 4 and 5 show a paper-feeler, 1^b, which instead of being mounted above the path of the sheet, and resting upon the sheet as in Figs. 1, 2 and 3, is located under the platen, where it is mounted pivotally upon a supporting pin 9^b, carried by a small bracket 15 attached to the carriage 12, and said feeler bears upwardly against the sheet. It is arranged to enter a circumferential slot 2^b in the body of the platen, and is weighted by means of a weight 28, Fig. 5, connected

therewith, so that its acting portion rises into the said circumferential slot 2^b, thereby extending into the path of the sheet 16 under and around the platen. The weight 28 extends parallel with pin 9^b, one end thereof being connected with the lower portion of the paper-feeler and the other end with a supporting-arm 18 which also is hung upon pin 9^b. The paper-feeler, weight, and arm 18 rock as a unit upon the pin 9^b. When a sheet is entered into the machine and advanced by feeding movement of the platen, its leading end is carried thereby against the acting portion of the paper-feeler 1^b and acts to rock the same. This rocking of the paper-feeler is utilized, as in the other embodiments of the invention already described, to render the motion-transmitting means ineffective to move the operative member, but in this embodiment the paper-feeler 1^b controls such means indirectly through an intermediate feeler-controlled device. Thus, with the paper-feeler is combined a rocker 14, also mounted upon pin 9^b, such rocker having connected therewith by a pivot 27 one end of a link 24, the other end of which is engaged with pin 21 carried by arm 20^a pivoted at 9^a to frame extension 22^a. Operative member 6 and toothed wheel 5 are mounted upon the said pin 21. A pin 19 carried by the arm 18 is adapted to engage with a projection 26 of rocker 14, in the sheet-induced movement of the paper-feeler 1^b, weight 28, and arm 18, so as thereby to rock the rocker 14 and through the link 24 move arm 20^a so as to separate the wheel 5 from the wheel 11. When the bottom-end of the sheet passes the paper-feeler, releasing the latter, the arm 20^a is permitted to move so as to carry wheel 5 into engagement with wheel 11. In Figs. 4 and 5 the paper-feeler 1^b is capable of swinging in two directions around the supporting pin 9^b. When pressed forwardly by the sheet 16 it carries the rocker 14 with it in its rocking movement in consequence of the engagement of the pin 19 that moves with the paper-feeler with the projection 26 of the said rocker. If, after the bottom-end of the sheet passes the paper-feeler, releasing the latter so as to permit the same to assume its normal position projecting into the slot or recess 2^b of the platen, the sheet is backed-up so as to move its bottom end backward against the paper-feeler, a free swinging movement of the latter will take place, merely separating pin 19 from projection 26 so that rocker 14 will not be rocked, permitting unobstructed backing-up of the sheet to any required extent.

Figs. 6 and 7 are intended to be illustrative of something of the range of indicating means possible to be used in connection with my invention. The operative member, means for giving the same a constant start-

ing position, and means under the control of the sheet for giving the said member movement coördinated with that of the sheet from such position, are or may be as has been described; as specifically shown in these figures, such means are the same as those shown in Figs. 1 and 2. The operative member, however, in addition to being supplied with numeral-indices, has one indicating portion thereof further differentiated from the remaining portion, in this case by the use of a plain colored surface or colored segment 6^b, shown in Fig. 7. Member 6 also here bears a projection 40, in the plane of which is mounted lever 41 radiating from hub 42 journaled on laterally extending shouldered pin 43 on carriage frame 12. Also radiating from hub 42 is hammer-stem 44, which is given a U-form for convenience, Fig. 7, to extend outward under the end of carriage-frame 12, and which carries bell-hammer 45 affixed at its free end. Laterally projecting pin 46 on carriage-frame 12 serves to support bell 47 in such position that hammer 45 may strike thereon. Member 6 is also supplied with a projection 50, in the plane of which is lever 51, springing from the hub portion of lock-lever 52, which is journaled on laterally extending shouldered pin 53 on carriage-frame 12. The said lock-lever has projecting laterally from the free end thereof tooth 54, adapted to enter the interdental spaces on toothed wheel 11, which has been described as connected to rotate in unison with the platen, said tooth being pawl-formed so as to lock said wheel against forward rotation, though not against backward. The weight of said lock-lever gives it normally a position with tooth 54 disengaged from wheel 11, and with lever 51 engaging against laterally-projecting position-stop 55 on carriage-frame 12. Levers 41 and 51 aforesaid are preferably constructed as light springs, adapted to yield when backed against. During the control by the sheet of the paper-feeler, as in Fig. 6, projections 40 and 50 on member 6 have a path adjacent to said levers but entirely clear of them, so that said member may be given its initial position by weight 25 without interference, but after the passage of the sheet and the change in position of arm 20 and its supported parts, as hereinbefore described, the said projections have a new path into which the said levers 40 and 50 project.

When the sheet-end passes the paper-feeler, member 6 is caused to move from its position of rest by driver 11 through wheel 5, whereby in the continued advance of the sheet the red segment 6^b hitherto lying behind the indicator is brought over the top thereof into view, thereby giving the operator a visual signal that a predetermined position has been attained by the sheet. The same move-

ment of member 6 will cause projection 40 sooner or later to be actuated against lever 41, moving bell-hammer 45 away from bell 47. When said projection passes from control of said lever the bell-hammer is released and falls by gravity against the bell, giving the operator an audible signal. The movement aforesaid of member 6 also brings projection 50 into engagement with lever 51 at the proper time, whereupon tooth 54 on lock-lever 52 is moved toward wheel 11 and into one of the interdental spaces thereon, thereby giving the operator a signal by locking the platen against rotation, so as to render the sheet-advancing mechanism inoperative to advance the sheet. Each of these several signals will be given at a sheet-position as determined by the angular position with relation to member 6 of color-segment 6^b, projection 40 and projection 50, respectively. Upon the giving of the lock-signal the operator may release the machine for further printing without loss of line-position by lifting arm 20, whereby projection 50 is removed from engagement with lever 51 and said engaging parts assume the position shown in Fig. 6. The mechanism may be actuated backwardly from any position, the spring give-way construction of the levers permitting such movement. It will be understood that the force required to perform the several signaling functions is very small, so that said construction is an advantage in both the forward and backward action of the mechanism, since thereby the parts may be made lighter.

The devices shown in the drawings and described herein are part of a series of closely related inventions or improvements which are presented in a number of co-pending applications for Letters Patent filed by me. The indicating means illustrated more specifically in Figs. 6 and 7, namely the bell signal, the machine-lock signal, and the color-segment signal, are not specifically claimed herein, but are made the subject of specific claim in my applications filed Dec. 13, 1909, Serial No. 532,928, and Dec. 15, 1909, Serial No. 533,309.

The special features of the embodiment of the invention which is shown in Figs. 4 and 5 of the drawings form the subject-matter of my divisional application filed December 22, 1909, Serial No. 534,559.

I claim as my invention:

1. In a typewriting machine, in combination, paper-feeding means, a series of indices, and sheet-controlled means for operating the same to present the respective indices at the indicating point as an end of the sheet arrives at constant distances from the printing point.

2. In a typewriting machine, in combination, a platen, and sheet-controlled indicating means for indicating the successive po-

sitions of the sheet as it is advanced in feeding the same through the machine.

3. In a typewriting machine, in combination, a platen, an indicator, and sheet-controlled means for giving the indicator a constant starting position and giving it movement simultaneous with that of the platen therefrom, and thereby coördinating the position of the said indicator with successive positions of the sheet.

4. In a typewriting machine, in combination, a platen, a paper-feeler, an operative member actuated from the platen under the control of said paper-feeler, and indices called into operation through said member.

5. In a typewriting machine, in combination, a platen, paper-feeler means, an index-carrier and coöperating index one of which is movable relatively to the other, and devices for operating said movable index element from the platen under the control of said paper-feeler means.

6. In a typewriting machine, in combination, a platen, a rotary member, indicating means called into operation through said member, means for giving said member a constant starting position, and means for giving said member rotation correlated with that of the platen from the said starting position, under the control of the sheet.

7. In a typewriting machine, in combination, a platen, a revoluble member, indicating means called into operation through said member, a paper-feeler, means rendered effective by the said paper-feeler under the control of the sheet for giving the said revoluble member a constant starting position, and means rendered effective by the passing of the sheet-end for giving the said member simultaneous movement with the platen from the said starting position.

8. In a typewriting machine, in combination, a platen, a paper-feeler, an index-carrier bearing indices, means for giving said carrier a constant starting position, and means for giving said carrier movement coördinate with that of the platen from the said starting position, under the control of said paper-feeler.

9. In a typewriting machine, in combination, sheet-advancing means, an index-carrier and a coöperating index, means for giving said index elements a constant position relatively to each other, and means for giving the said index elements movement relatively to each other in unison with the sheet from the said constant position, under the control of the sheet.

10. In a typewriting machine, in combination, a platen, an operative member, a series of indices and a coöperating index, one thereof moving in unison with said member, and sheet-controlled means for giving said member a constant starting position and giving it simultaneous movement with the

platen from said starting position, thereby causing said index elements to indicate progressively the position of the sheet.

11. In a typewriting machine, in combination, a platen, a rotary member, indicating means called into operation through said member, means rendered effective by the disconnecting of said member from the platen for giving said rotary member a constant starting position, and means controlled by the sheet for connecting said member to rotate with the platen from the said starting position.

12. In a typewriting machine, in combination, a platen, an index-carrier bearing indices, means acting to give said carrier an initial or starting position when disconnected from the platen, and devices controlled by the sheet for connecting the disconnected carrier to move in unison with the platen from the said starting position.

13. In a typewriting machine, in combination, a platen, an operative member, indicating means called into operation through said member, a weight connected to cause said member to assume a constant starting position when disengaged from the platen, and means controlled by the sheet for giving said member movement coördinate with that of the platen from the said starting position.

14. In a typewriting machine, in combination, a platen, a series of indices weighted to return into initial position, and sheet-controlled means for operatively connecting the indices with the platen.

15. In a typewriting machine, in combination, a platen having teeth connected therewith, a revoluble member, indicating means called into operation through said member, and means controlled by the sheet for operatively connecting the said member through the teeth with the platen so as to be revolved therewith.

16. In a typewriting machine, in combination, a platen, a paper-feeler, an index-carrier bearing indices, and toothed devices for connecting said carrier to move with the platen under the control of said paper-feeler.

17. In a typewriting machine, in combination, a platen, a paper-feeler, an operative member, toothed gearing between said member and the platen for giving said member movement with the platen under the control of said paper-feeler, and indicating means called into operation through said member.

18. In a typewriting machine, in combination, a platen, a series of indices, and operating means for said indices, including driver and driven wheels one of which is rotated in unison with the platen and one of which is driven thereby under the control of the sheet and is in connection with said indices.

19. In a typewriting machine, in combination, a platen, a paper-feeler, an index-carrier bearing indices, and sheet-controlled means for giving said carrier a constant starting position and giving it simultaneous movement with the

nation, a platen, an operative member, indicating means called into operation through said member, means for giving said member a constant starting position, a paper-feeler, and toothed gearing connectible under the control of said paper-feeler for giving said member movement with the platen from the said starting position.

20. In a typewriting machine, in combination, a platen, a paper-feeler, an index-carrier bearing indices, means for giving said carrier a constant starting position, and toothed gearing connectible under the control of said paper-feeler for giving said member movement with the platen from the said starting position.

21. In a typewriting machine, in combination, a platen, a revoluble member having a weight eccentrically disposed thereon for rotating the same into starting position when disconnected from the platen, a paper-feeler, and toothed gearing connectible under the control of said paper-feeler for connecting said member to move with the platen from the said starting position.

22. In a typewriting machine, in combination, a platen, an index-carrier bearing indices, a weight adapted to move said carrier when disconnected from the platen into initial position, a paper-feeler, and toothed gearing connectible under the control of said paper-feeler for giving said member movement with the platen from the said initial position.

23. In a typewriting machine, in combination, a platen, an operative member, a visual signaling means called into operation through said member, means for giving said member a constant starting position, and sheet-controlled means for giving said member movement coördinate with that of the platen from the said starting position.

24. In a typewriting machine, in combination, a platen, an operative member, a visual signaling means called into operation through said member, means rendered effective by the disconnecting of said member from the platen for giving said member a constant starting position, and means controlled by the sheet for connecting said member to move with the platen from the said starting position.

25. In an indicating mechanism for a typewriting machine, in combination, a platen, a paper-feeler acting to guide the sheet, in a backing-up movement of the sheet after passing the feeler, into an open secondary path permitting unobstructed complete backing-up of the sheet, and indicating means controlled by said paper-feeler.

26. In a typewriting machine, in combination, a platen, an operative member, indicating means called into operation through

said member, means for giving said member a constant starting position, a paper-feeler acting to guide the backing-up bottom edge of the sheet cut over the top thereof, and means for giving said member movement coördinate with that of the platen from the said starting position, under the control of said paper-feeler.

27. In a typewriting machine, in combination, a platen, paper-feeler means, an operative member, indicating means called into operation through said member, means for giving said member a constant starting position, and means for giving said member movement correlated with that of the platen from the said starting position, under the control of said paper-feeler, the said elements coöperating for indicating purposes when the platen is actuated forwardly and constructed to automatically permit backing-up from any position and to any extent.

28. In a typewriting machine, in combination, a platen, paper-feeler means, and an index-carrier actuated from the platen under the control of said paper-feeler means, the said elements coöperating for indicating purposes in the forward operation thereof and constructed to automatically permit backing-up from any position and to any extent.

29. In a typewriting machine, in combination, a platen, a paper-feeler having a sheet-controlled position and moving in a path intersecting the path of the sheet into a second position upon the passing of the sheet, and also adapted to permit a backing-up movement of the sheet after passing from the control thereof without removal from its second position, an operative member actuated from the platen under the control of said paper-feeler, and indicating means called into operation through said member.

30. In a typewriting machine, in combination, means for feeding the sheet, sheet-position-indicating means, and sheet-controlled means for operatively controlling said indicating means and for switching the sheet into an open by-path in a backing-up movement of the sheet.

31. In a typewriting machine, in combination, a platen, an operative member, indicating means called into operation through said member, means for giving said member a constant starting position, means for giving said member movement correlated with that of the platen from the said position, and a paper-feeler connected to control the said movement, said paper-feeler acting to switch the sheet into a secondary path in a backing-up movement of the sheet.

32. In a typewriting machine, in combination, a platen, a paper-feeler acting to switch the sheet into a secondary path in a backing-up movement of the sheet, and

an index-carrier actuated from the platen under the control of said paper-feeler.

33. In a typewriting machine, in combination, a platen, a revoluble member, indicating means called into operation through
5 said member, means for giving said member a constant starting position, a paper-feeler having a normal position in the path of the sheet and adapted to be moved out
10 of said path by the leading edge of the sheet, and means for giving said revoluble member rotation correlated with that of the platen from the said starting position, under the control of said paper-feeler.

34. In a typewriting machine, in combination, a platen, an index-carrier, means for giving said carrier a constant starting position, a paper-feeler having a normal position in the path of the sheet and adapted to be moved out of said path by the leading
15 edge of the sheet, and means for giving the index-carrier movement correlated with that of the platen from the said starting position, under the control of said paper-feeler.
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Witnesses:

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