

C. B. YAW.
TYPE WRITING MACHINE.
APPLICATION FILED NOV. 26, 1906.

995,753.

Patented June 20, 1911.

6 SHEETS-SHEET

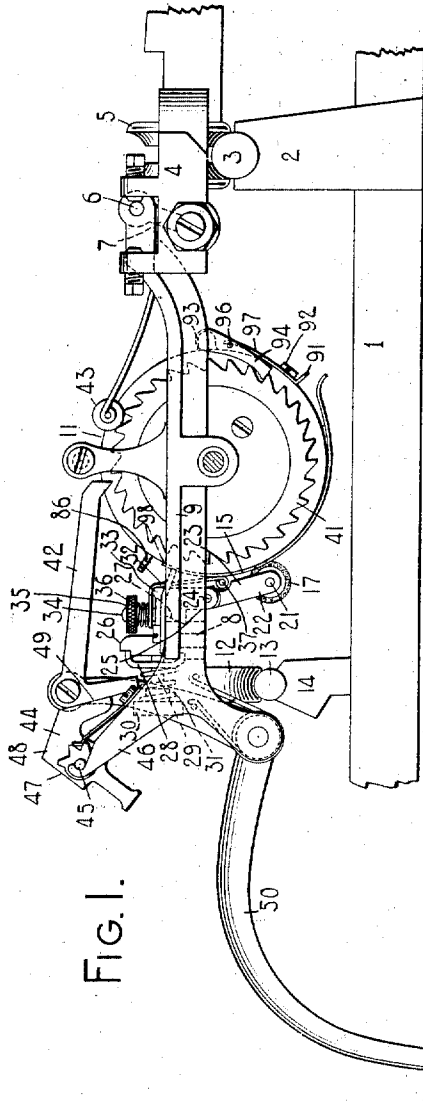


FIG. 1.

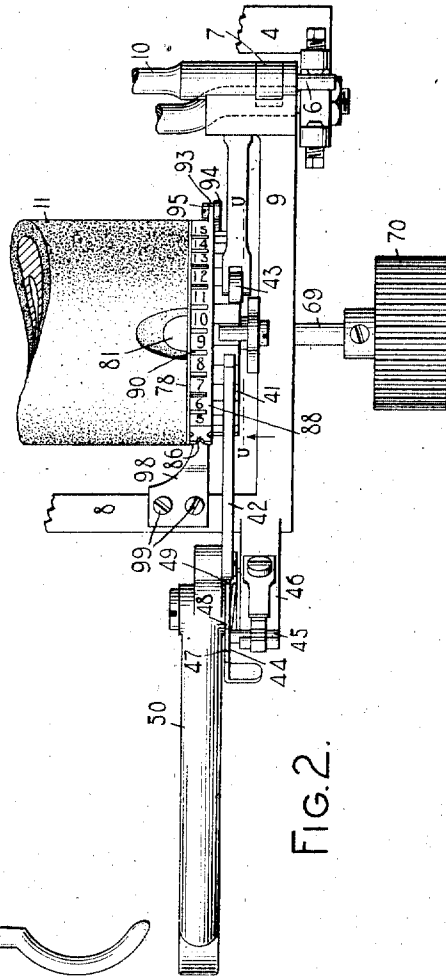


FIG. 2.

WITNESSES:

E. M. Waller
Walter Smith

INVENTOR:

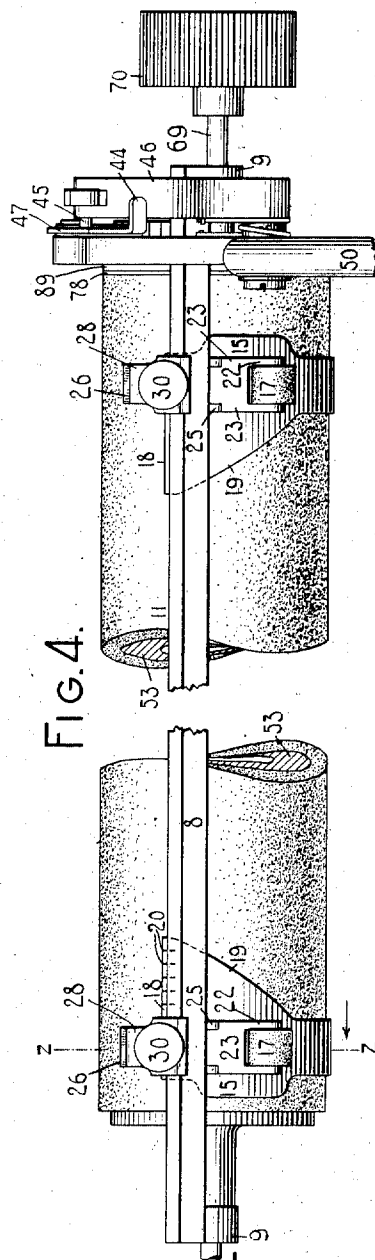
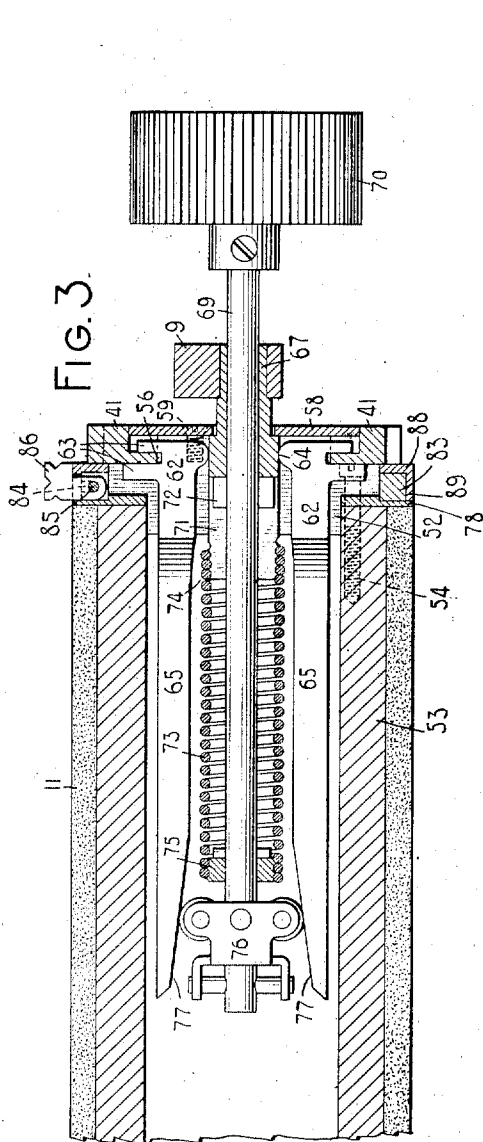
Clio B. Yaw
By Jacob Felbel
HIS ATTORNEY

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6 SHEETS—SHEET 2.



WITNESSES:

E. M. Wells
Charles Smith

INVENTOR:

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Patented June 20, 1911.

6 SHEETS—SHEET 3.

95,753.

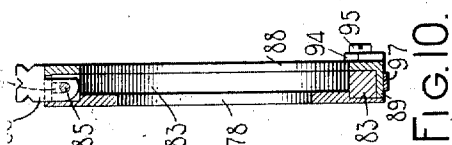


FIG. 10.

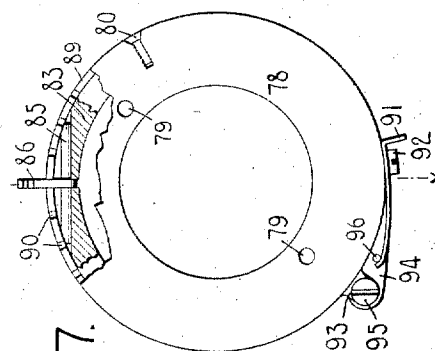


FIG. 7.

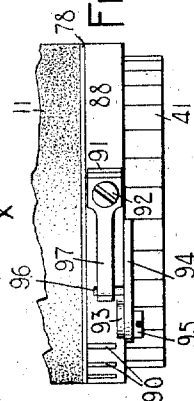


FIG. 8.

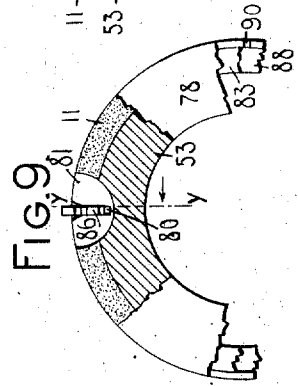
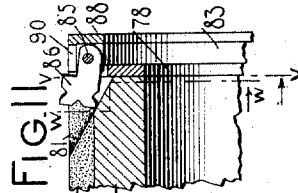


FIG. 9.

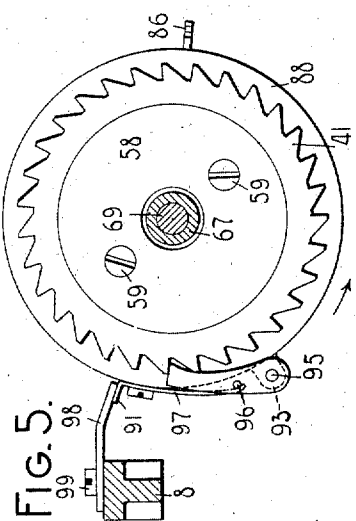


FIG. 5.

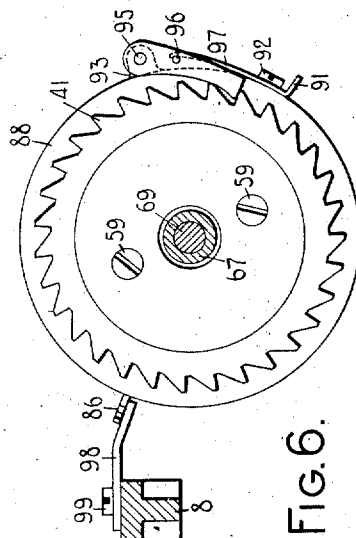


FIG. 6.

WITNESSES:

E. W. Wells.

Walter Smith

INVENTOR:

C. B. Yaw

By Jacob Felber

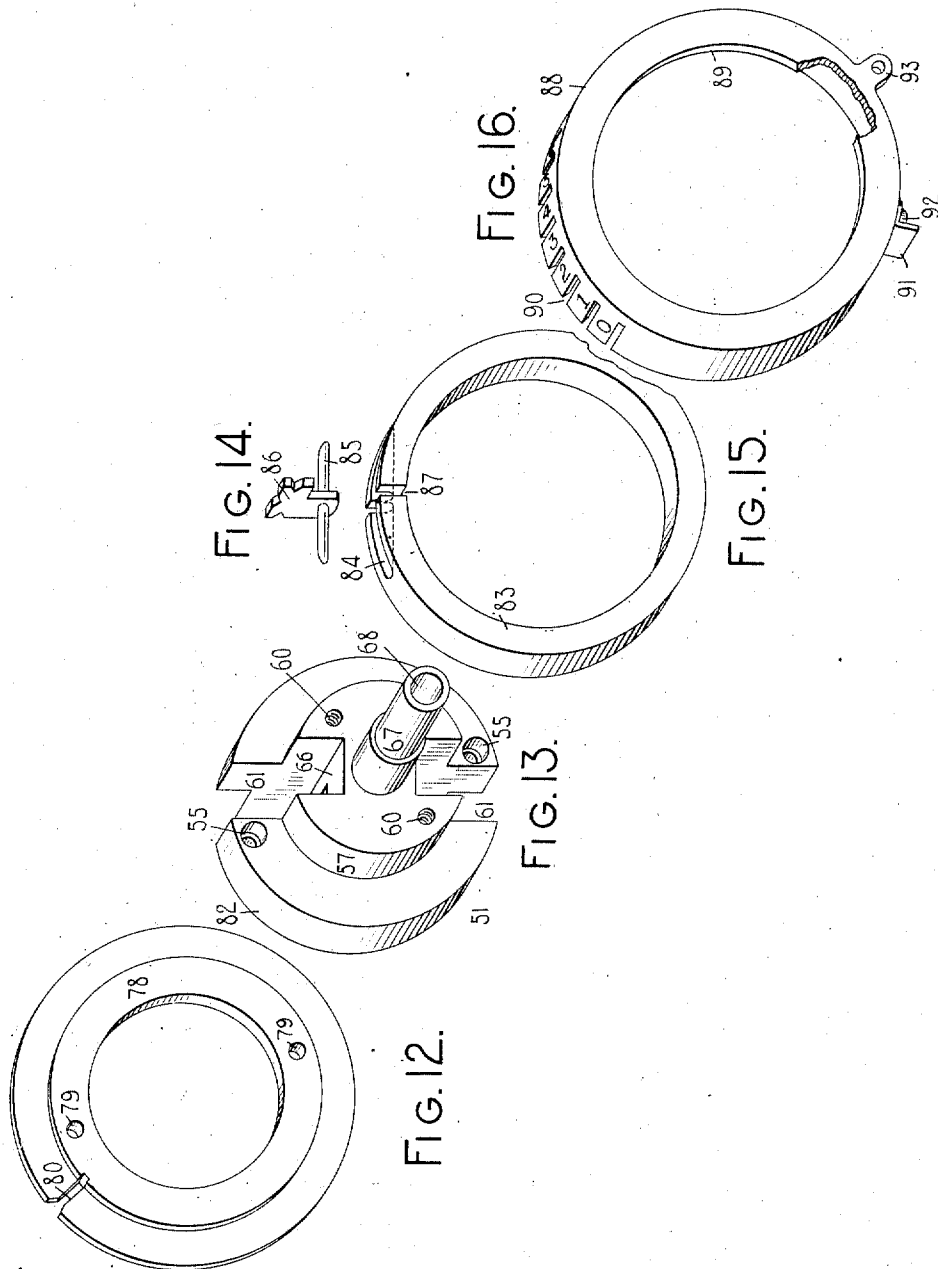
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APPLICATION FILED NOV. 26, 1906.

Patented June 20, 1911.

6 SHEETS—SHEET 4.



WITNESSES:

E. M. Wells
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C. B. YAW.
TYPE WRITING MACHINE.
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6 SHEETS—SHEET

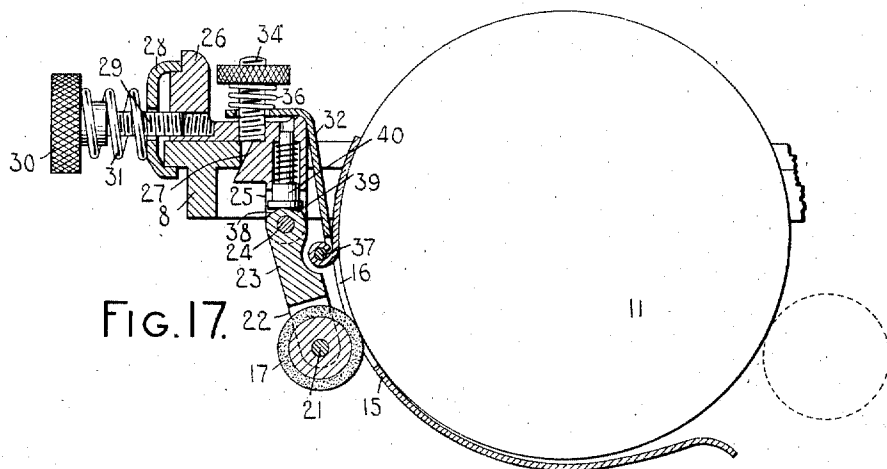


FIG. 17.

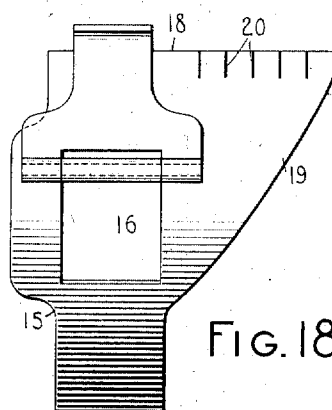


FIG. 18.

WITNESSES:

E. M. Wells

Wm. Smith

INVENTOR:

C. B. Yaw

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995,753.

C. B. YAW.
TYPE WRITING MACHINE.
APPLICATION FILED NOV. 26, 1906.

Patented June 20, 1911.
6 SHEETS—SHEET 6.

FIG. 19.

SMITH, JONES & BROWN.
CLOTHIERS AND XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

f New York, Nov. 5th, 1906.

e John Doe, Esq.,

d #99,989 East 76th St., New York.

c Dear Sir:

b We direct your attention XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

a XX
XX

WITNESSES:

E. M. Wells
Charles Smith

INVENTOR.

C. B. Yaw
By Jacob Felber
HIS ATTORNEY

UNITED STATES PATENT OFFICE.

CLIO B. YAW, OF NEW YORK, N. Y., ASSIGNOR TO WYCKOFF, SEAMANS & BENEDICT,
OF ILION, NEW YORK. A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

995,753.

Specification of Letters Patent. Patented June 20, 1911.

Application filed November 26, 1906. Serial No. 345,107.

To all whom it may concern:

Be it known that I, CLIO B. YAW, citizen of the United States, and resident of the borough of Brooklyn, city of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates to typewriting machines and more particularly to means for affording control of the paper or work sheet in a manner and for purposes which will hereinafter appear.

It has been customary heretofore to use circular letters in which the body of each letter was printed in imitation of typewriting or was reproduced by the mimeograph process, the date, name and address of the addressee being afterward filled in on the typewriting machine and reliance being had on the skill and judgment of the operator to properly space the date, name and address in accordance with the spacing employed in the body of the letter and to position each of the lines to be written on the typewriting machine in its proper place on the sheet.

One of the main objects of my present invention is to provide means for facilitating the accomplishment of work of the character specified above with mechanical accuracy, said means being simple in construction and operation; efficient in use, and their employment greatly increasing the output of each machine to which they are applied.

To the above and other ends which will hereinafter appear, my invention consists of the features of construction, arrangements of parts and combinations of devices to be described in the following specification and set forth in the appended claims.

In the drawings wherein like reference characters indicate corresponding parts in the various views, Figure 1 is a fragmentary right-hand end elevation with the finger-wheel sectioned away, showing the upper portion of a typewriting machine with the devices of my invention applied thereto. Fig. 2 is a fragmentary top plan view of the same. Fig. 3 is an enlarged fragmentary sectional view taken centrally through the platen, and showing various features of the construction forming the subject-matter of my invention applied thereto. Fig. 4 is a fragmentary front elevation of the platen and platen frame with the devices of my in-

vention carried thereby. Fig. 5 is an enlarged detail vertical sectional view showing the controlling devices and platen with parts shown in end elevation, the section being taken on the line *u-u* of Fig. 2 and looking in the direction of the arrow at said line. Fig. 6 is a like view of the same showing some of the parts in other positions. Fig. 7 is a side elevation, partly in section, of the parts shown in Fig. 10, Fig. 7 being a view corresponding to a section taken on the line *v-v* of Fig. 11 and looking in the direction of the arrow at said line, although the positions of the parts are somewhat different in the two views. Fig. 8 is a fragmentary top plan view of the right-hand end of the platen with parts shown in Figs. 5, 6 and 7 applied thereto. Fig. 9 is a fragmentary sectional view taken on the line *w-w* of Fig. 11 and looking in the direction of the arrow at said line. Fig. 10 is a transverse sectional view of the controlling devices shown in Fig. 7, the section being taken on the line *x-x* of Fig. 7 and seen in the direction of the arrow at said line. Fig. 11 is a transverse sectional view of the same taken on the line *y-y* of Fig. 9 and looking in the direction of the arrow at said line. Figs. 12, 13, 14, 15 and 16 are enlarged detail perspective views of parts of the mechanism to be hereinafter described. Fig. 17 is an enlarged detail transverse sectional view taken on the line *z-z* of Fig. 4 and looking in the direction of the arrow at said line. Fig. 18 is an enlarged detail front elevation of the combined paper guide and indicator. Fig. 19 shows a work sheet addressed on the machine with the aid of my invention.

My invention, which is applicable to typewriting machines generally, is more particularly adapted to a so-called "blind" or bottom strike machine and in the present instance I have shown the invention applied to a No. 6 Remington machine.

The specific construction of the stop carrying members and that of the pawl and ratchet mechanism by which said members are operatively connected to the platen, are not claimed herein except insofar as they enter into combination with other features, but are claimed in a companion application filed by me of even date herewith, said companion application bearing the Serial No. 345,106.

In the drawings, 1 indicates the top plate

of the machine carrying upwardly extending lugs 2 on which a guide rod 3 is supported. A carriage truck 4 of the usual construction carries rollers 5 which bear upon the guide rod 3. A platen frame is pivoted at 6 to the usual links 7 which, in turn, are pivoted to the truck. Said platen frame comprises a front cross bar 8, end bars 9, and a rear cross bar 10 to which the links 7 are pivoted. A platen 11 is journaled in bearings in the end bars 9 of the platen frame. A roller 12 is carried by the front cross bar of the platen frame and bears upon a shift rail 13 carried by upright arms 14 which may be shifted in the usual manner to effect a backward or forward shift of the platen to change the case position thereof. The usual main paper feed rollers (not shown) are employed. The usual paper fingers and marginal feed rollers are replaced by combined paper feeding fingers and indicating devices such as those shown in Figs. 4, 17 and 18. Each of these devices comprises a plate or paper finger 15 which is bent to conform to the curve of the platen and is apertured at 16 to enable a marginal feed roller 17 to extend therethrough and to bear against the face of the platen or the paper thereon. The member 15 extends rearwardly, under the platen, beyond the point where the usual platen scale is situated, and it extends upwardly in front of the platen, to a point which is preferably higher than the front cross-bar 8 of the platen frame as shown in Fig. 4. The upper end of the member 15 is broadened and the edge 18 thereof forms a line indicating gage with which a line for writing on the work sheet is adapted to register as will hereinafter more clearly appear. The plate 15 at its upper end is off-set inwardly as indicated at 19 so as to form the broad indicating gage 18, which latter is provided with scale or indicating marks 20 spaced apart according to carriage and platen scales or to the letter space feed of the carriage; that is to say, the spacing between the index marks 20 corresponds to letter spacing produced on the machine. Each of the marginal feed rollers 17 is pivoted at 21 in a bifurcated portion, formed by two arms 22, of a depending hanger 23 pivoted at its upper end as at 24 between arms 25 of an angle bracket 26. This bracket is provided with an inclined face 27 adapted to engage the front cross-bar 8 of the platen frame, as shown in Fig. 17, whereas another part of the bracket rests upon the top of the cross-bar. A clamping plate 28 bears against the bracket and is perforated for the free passage of a screw 29 provided with a knurled head 30. A coiled spring 31 surrounds the screw and bears at one end against the knurled head and at its opposite end against the clamping plate 28 in order to

maintain the bracket in the position to which it may be adjusted along the front cross-bar of the platen frame. An angular plate 32 bears at 33 against the bracket so as to receive a slight pivotal movement thereon. The horizontally disposed arm of this angular plate is perforated for the free passage of a screw 34 which is received in a threaded opening in the bracket. A nut 35 is received on the screw and bears against the upper end of a coiled spring 36, the lower end of said spring bearing against the angular plate and tending to force the substantially vertically disposed arm thereof toward the platen. The lower end of this vertically disposed arm of the angular plate is pivoted at 37 to the member 15 intermediate the ends of the latter. The construction is such that the pressure which is exerted by the spring 36 on the angular plate 32 and which is transmitted to the member 15 intermediate of the ends thereof causes the member 15 to bear with substantially even pressure at all points thereof which make contact with the platen, and causes the upper end of the gage 18 to bear snugly against the platen. The feed roller hanger 23 is provided at its upper end with two faces 38 and 39 which cooperate with a spring-pressed plunger 40 in the usual manner to either maintain the marginal feed roller against the platen as shown in Fig. 17 or to retain it in the inoperative position away from the platen when the hanger is moved so that the face 38 contacts with the plunger. The construction of the paper fingers, the marginal feed rollers, gages 18, etc., at both ends of the platen is the same except that letter spacing indices 20 need only be provided on one of the gages. The purpose of these gages 18 and the indices 20 will be presently described.

A line spacing wheel 41 is operatively connected to the platen in a manner to be hereinafter described, and the usual line spacing pawl 42 and spring-pressed roller detent 43 cooperate with the line spacing ratchet wheel to effect step-by-step line spacing movements thereof. The line spacing pawl 42 co-acts with a device 44 pivoted at 45 to a bracket 46 which projects upwardly from the right-hand end of the platen frame. The device 44 is provided with three faces 47, 48 and 49 which cooperate in the usual manner with the line spacing pawl to determine whether the platen shall be turned one, two or three teeth of the line spacing ratchet wheel at each actuation of the hand lever 50 by which the pawl is actuated. This mechanism is or may be of the same character as that employed in the No. 6 Remington machine and further description thereof is deemed unnecessary. I have shown in the present instance a line spacing wheel having thirty-one teeth, which

wheel is adapted to be connected with and disconnected from the platen by a clutch or fractional line spacing device of the character of that shown, described and claimed in the patents granted to Oscar Woodward, dated March 7th, 1905, Nos. 784,368 and 784,369.

Upon reference to Figs. 3 and 13 it will be seen that the right-hand platen head 51 has a reduced portion 52 which is seated in the core 53 of the platen, the platen head being secured to the core by wood screws 54 which pass through openings 55 in the platen head and pass into the core. The line spacing wheel 41 is in the nature of a ring, the inner bearing surface 56 of which is seated on a reduced hub-like portion 57 of the platen head so that the line spacing wheel and platen are free under certain conditions to turn relatively to each other to afford a rotation of the platen independently of the line spacing wheel. A securing plate 58 is rigidly connected to the outer end of the hub-like portion 57 by headed screws 59 which extend through openings in the securing plate and are received in threaded openings 60 in the platen head. The platen head is provided with oppositely disposed channels 61 in which clamping or gripping devices 62 are seated. Each of these clamping devices comprises a member which is bifurcated at one end to form clamping jaws 63, a bearing portion 64 and a lever arm 65 which extends longitudinally of the platen. The bearing portion 64 of each clutching device bears against the wall 66 of the channel in which it is received, whereas each set of clamping jaws cooperate with and are adapted to engage the line spacing wheel. The platen head is provided with an outwardly extending nipple 67 which is received in a bearing opening in the right-hand side bar of the platen frame as shown in Fig. 3. This nipple is hollow and its bore 68 is a continuous one which extends through the platen head for the reception of a spindle 69 provided at its outer end with a finger wheel 70. Extending laterally from the bore 68 are slots 71 formed in the platen head, thus forming spline grooves on each side of the bore which grooves receive a spline 72 to connect the spindle and the platen head to rotate together and to afford endwise movement of the spindle independently of the platen head. A contractile spring 73 surrounds the spindle within the core of the platen and is secured at one end to the platen head as indicated at 74, the opposite end of said spring being secured as indicated at 75, to the spindle. The inner end of the spindle carries a device 76 which cooperates with inclined faces 77 on the arms 65 of the gripping devices. This construction is such that the spring 73 tends to spread apart the inner ends of the arms 65,

thus effecting a clamping engagement between the gripping devices 62 and the line spacing wheel to connect the line spacing wheel with the platen. An inward movement of the finger wheel 70 will cause the device 76 to be moved to the left, thus releasing the pressure of the spring 73 on the gripping devices and enabling the platen to turn independently of the line spacing wheel which at this time is held by the spring-pressed detent roller 43. A plate or ring 78, shown in detail in Fig. 12, is secured to the core of the platen by the screws 54 which unite the platen head to the platen, said screws passing through openings 79 in the ring 78. This ring is provided with a slot 80 which is adapted to register under certain conditions, to be hereinafter described, with a cut-out 81 in the surface or sheath of the platen at the right-hand end thereof, as shown in Figs. 2 and 11. A circular flange 82 is formed on the platen head and a ring or stop carrier 83, shown in detail in Fig. 15, is situated between the line spacing wheel and the plate 43 and bears on the periphery of the flange 82. This ring 83 has a circumferential recess or groove 84 therein for the reception of a pivot 85 of a combined locking device and stop 86 shown in detail in Fig. 14. A lateral or transverse recess 87 is provided in the ring 83 to enable the stop 86 to move therein and to be turned on its pivot 85. A so-called stop carrying device or ring 88 (shown in detail in Fig. 16) which is angular in cross section as shown in Figs. 3, 10 and 11 surrounds the ring 83. An inwardly extending flange 89 on the stop carrying member 88 receives a bearing on the circular flange 82 of the platen head and the inner face of the flange 89 bears against the outer face or side of the ring 83. This stop carrying member 88 and the member 83 are situated between the line spacing wheel and the plate or ring 78 as shown in Fig. 3, and are prevented by said parts from moving longitudinally of the platen though they are loosely mounted on the platen head. The stop carrying member 88 has a series of slots 90 in one edge thereof to form a circular rack, sixteen of such slots being employed in the present instance though a greater or less number may be provided. An index numeral is provided adjacent to each slot, the numerals beginning at "0" and ending at "15" and being circularly arranged as shown in Fig. 16. The edge of the stop carrier in which the slots 90 are provided bears against the plate 78 so that when any one of the slots 90 in which the stop 86 may be seated is brought into register with the slot 80 (see Figs. 9 and 11), said stop may be turned on its pivot 85 to carry the stop out of the slot 90 and into the slot 80 and into the cut-out portion 81 of the platen as shown in Fig. 11. This

movement is effective to clear the stop 86 from the member 88 and to connect it and the ring 83 with the platen. In this manner the stop 86 may be connected either with the
 5 stop carrier 88 or with the platen 11 and a relative movement between the stop carrier and platen may be effected in order to bring any of the slots 90 opposite the slot 80 so that an adjustment of the stop 86 may
 10 be effected and so that the stop may be seated in any one of the slots 90 in the stop carrier 88. If, for instance, the stop 86 be seated in a slot 90 adjacent to the index numeral "4," so as to lock the members 86,
 15 83 and 88 together, and it is desired to seat the stop in the slot adjacent to the index numeral "8," the clutch which connects the platen and line spacing wheel is released and then the platen is turned independently of
 20 the line spacing wheel, the latter being held by its spring roller detent 43, until the slot 80 is opposite the slot 90 in which the stop 86 is seated and then the stop is turned on its pivot 85 to the position shown in Fig. 11.
 25 The platen clutch being released the platen with the stop 86 and the ring 83 to which it is pivoted may be turned independently of the member 88 and the line spacing wheel to which the member 88 is operatively con-
 30 nected as will hereinafter more clearly appear. When the stop 86 is opposite the slot 90 adjacent to the index numeral "8" the stop may be turned on its pivot 85 into said slot, thus disconnecting the stop from the
 35 platen and connecting the stop and the members 83 and 88 together as shown in Figs. 3, 7 and 10. The stop carrier 88 also carries a stop 91 which is in the nature of an angular piece or bracket rigidly secured to the periphery of the stop carrier by a screw
 40 92 as shown in Fig. 6. A lug 93 also projects from the periphery of the stop carrier 88 and a pawl 94 is pivoted at 95 to said lug. The pawl is provided with an inwardly
 45 projecting pin 96 against which the free end of a flat spring 97 bears, said spring being formed as an extension of the angular stop 91. The pawl 94 is situated at one side of the stop carrier 88 as shown in Figs. 5, 6,
 50 and 8, and the nose of the pawl cooperates with the teeth of the line spacing wheel, the spring 97 tending to force the pawl into engagement with said teeth. The disposition of the teeth of the line spacing wheel and
 55 pawl 94 and the construction and arrangement of the parts are such that when the platen clutch is in engagement so that the line spacing wheel and platen turn together, a backward rotation of the platen in the
 60 direction of the arrow in Fig. 5, effected through either finger wheel, will cause the members 83, 88 and 86 to rotate with the platen by reason of the positive engagement of the pawl 94 with the line spacing
 65 wheel. When a forward rotation of the

platen is effected these members will turn with the platen and they will be arrested and the platen will be allowed to rotate independently thereof as will presently appear. A stop member 98 is secured to the
 70 platen frame by screws 99, and extends into the path of the stops 86 and 91 for cooperation therewith.

From the foregoing description it will be understood that the platen and line spacing
 75 wheel being clutched together a backward rotation thereof, effected by either finger wheel, will bring the stop 86 against the fixed stop 98 to positively arrest the platen, because the teeth of the line spacing wheel
 80 during this movement of the platen engage the pawl and force the stop carriers around with the platen. When the platen is turned in an opposite direction the stops 86 and 91 and their stop carriers will be turned with
 85 the platen by reason of the friction between the parts and the spring pressure exerted by the pawl 94 on the teeth of the line spacing wheel. This rotation of the parts together will continue until the stop 91
 90 reaches the fixed stop 98 when the stops 91 and 86 and their stop carriers will be arrested and the platen may continue to rotate independently thereof, the pawl 94 at this time slipping over the teeth of the line
 95 spacing wheel. As soon as the platen starts to turn back in an opposite direction the stops 86 and 91 will immediately be taken up by the pawl and ratchet mechanism and the platen will be arrested when the stop
 100 86 contacts with the fixed stop 98.

The spacing of the teeth of the line spacing wheel corresponds to the character of spacing employed in the body of the circular letters to be addressed on the machine.
 105 In the present instance I have shown a ratchet wheel with thirty-one teeth. The edge 18 of the indicator is situated at such a distance from the printing line, this edge being at the forward side of the platen, that
 110 in a "blind" or understrike machine the operator may readily observe when the line written on the work sheet registers with said indicator at a regular line space position of the platen without swinging the platen back.
 115 In constructing the mechanism, one manner of determining the location of the indicating edge is as follows:—Place a circular letter of the character to be employed in the machine with the first line of the previously written
 120 or printed letter (indicated at *b* in Fig. 19) at the printing line. Then turn the platen forwardly a tooth of the line spacing wheel at a time until this first line *b* in the body of the work sheet appears at the front of the
 125 platen and at any point where it can be readily observed by the operator. The edge 18 of the indicator is made to register with the bottom of the letters of the line in question on the work sheet. While the platen
 130

was being turned forwardly a tooth space distance at a time in the manner described, the number of tooth spaces required to bring the first line *b* of the work sheet from the printing line to the edge of the indicator should be observed. In the particular example shown it requires ten spaces or the distance of ten teeth of the line spacing wheel to accomplish this result. The stop 91 should, therefore, be situated in this particular construction just ten tooth space distances from the first slot 90 in the member 88. A suitable number of slots 90 may be provided from this point around the member, sixteen being employed in the present instance and twelve being as many as is ordinarily required, as will presently appear. These slots 90 are spaced in accordance with the spacing of the teeth of the line spacing ratchet wheel.

In addressing letters, the bodies of which have been previously printed, written or produced by the mimeograph process, it may be assumed that the spacing between lines *a* and *b* (Fig. 19) in the body of each letter corresponds to the distance between two teeth of the line spacing ratchet wheel. The operator sets the device 44 of the line spacing mechanism so that the face 48 on said device is presented for cooperation with the tail of the line spacing pawl in order to provide a movement equivalent to two teeth of the ratchet wheel at each actuation of the hand lever 50 so that the spacing in the heading may correspond to that employed in the body of the letter. The operator may then release the platen clutch and adjust the stop 86 in the manner hereinbefore described so that said stop will be seated in the slot 90 beneath the index numeral "8". The reason for this is that it is necessary to locate the first or date line *f* just eight spaces from the first line *b* in the body of the letter. This will bring the name line *e* two spaces from the date line *f*; it will bring the address line *d* two spaces from the name line *e*; it will bring the salutation line *c* two spaces from the address line and the salutation two line spaces from the first line *b* in the body of the letter. In short it will provide for writing the lines *f*, *e*, *d* and *c* two spaces apart with the line *c* two spaces from the line *b*, such spacing corresponding to the spacing between the lines in the body of the letter. Thus, after the stop 86 is set at "8" in the manner described the platen is given a backward rotation until it is arrested by the contact of the stop 86 with the fixed stop 98. A previously written or printed letter of the character such, for instance, as that shown in Fig. 19, except that the lines *f*, *e*, *d* and *c* do not appear thereon, is introduced into the machine and the platen is turned forwardly until the line *b* registers with the indicator 18. The platen is then turned back until it

is arrested by the contact of the stop 86 with the fixed stop 98. This manipulation of the letter sheet brings it in position to write the date line *f*. After this line is written the line spacing handle 50 is actuated once, thereby bringing the sheet in position to receive the name line *e*. After this is written the handle is again actuated, thereby bringing the work sheet in position where the address line *d* may be written thereon. Another actuation of the handle 50 positions the work sheet to receive the line *c* after which the sheet may be removed, a new sheet introduced and the operation repeated.

It will be seen that by my invention letters or the like may be rapidly addressed on a blind machine with mechanical accuracy; without the necessity of raising the platen or examining the work at any time; that the spacing in the addresses of the different letters will be uniform and the spacing of each address will conform to the spacing in the body of the previously written or printed letter in which the address is inserted, and that the different addresses will be at a uniform distance from the bodies of the letters.

If the lines in the body of the letter are situated a single line space distance apart the ordinary line spacing device will be set for single spacing, the stop 86 will be set at "4" on the carrier and the addressing of the letter sheets will be carried out in the manner hereinbefore described and the spacing between the lines *f*, *e*, *d*, *c*, *b* and *a* will correspond to a single tooth space distance of the line spacing wheel. If three spaces are employed between the lines in the body of the letter then the line spacing mechanism is set for triple spacing and the lines will appear three spaces apart.

Most typewriting machines are provided with line spacing mechanism capable of single, double or triple spacing or of spacing one, two or three teeth of the line spacing ratchet wheel at a time and ordinarily four lines are required for an address. This being the case the stop 86 requires an adjustment equivalent to four, eight or twelve teeth of the line spacing wheel, four for single spacing, eight for double spacing and twelve for triple spacing. Although a twelve space adjustment is the maximum that is ordinarily required I have provided in the present instance sixteen slots 90 to enable the operator to set the device up to a maximum of a five line address with the lines situated three spaces apart.

It will be understood that all that is necessary to properly position each sheet is to effect a forward movement of the platen until the first line in the body of the letter is in register with the indicator 18, and then turn the platen back until it is arrested by the stop 86 contacting with the stop 98.

and the operator may proceed to address the letter.

The purpose of the letter space indices 20 is to bring the sheet into proper position so that the letter spacing in the address will correspond with that in the body of the letter. The operator in bringing a sheet forward so that the line *b* registers with the gage 18 should see at the same time that any of the letters in the line registers with the marks 20.

Various changes may be made without departing from the spirit and scope of my invention.

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

1. In a typewriting machine, the combination of a platen, means for feeding a work sheet forwardly and backwardly, means for indicating a predetermined position of the work sheet in its forward movement, and coöperative stop devices whereby a backward feed of the work sheet for a predetermined number of line spaces brings the work sheet to a position where the line of writing nearest the top of the work sheet will appear a predetermined number of line space distances from the body of the written or printed matter on the work sheet.

2. In a typewriting machine, the combination of a platen, means for feeding a work sheet forwardly and backwardly, means for indicating a predetermined position of the work sheet in its forward movement, coöperative stop devices whereby a backward feed of the work sheet for a predetermined number of line spaces brings the work sheet to a position where the line of writing nearest the top of the work sheet will appear a predetermined number of line space distances from the body of the written or printed matter on the work sheet, and adjusting means by which the said number of line space distances may be varied at will.

3. In a typewriting machine, the combination of a rotary platen, means for rotating the platen forwardly and backwardly, an indicating device coöperative with the work sheet whereby a predetermined line on the work sheet may be fed a predetermined extent past the printing point, and means for arresting the backward rotation of the platen when the work sheet has been fed back to a position to receive the first line of writing at a predetermined position thereon.

4. In a typewriting machine, the combination of a rotary platen, means for rotating the platen forwardly and backwardly, an indicating device coöperative with the work sheet whereby a predetermined line on the work sheet may be fed a predetermined extent past the printing point, means for arresting the backward rotation of the platen when the work sheet has been fed back to a position to receive the first line of

writing at a predetermined position thereon, and means by which the point of arrest of the platen in its backward rotation may be varied to vary the position of the first line of writing with reference to the body of the written or printed matter on the work sheet.

5. In a typewriting machine and mechanism for addressing previously written or printed work sheets, the combination of a rotative platen, means for effecting a forward and backward turning movement of the platen, and means for determining the extent of such forward and backward movements of the platen to so control the position of the work sheet with reference to the printing line that the first written line on the work sheet will appear at a predetermined distance from the first line of the previously written or printed body portion of the work sheet.

6. In a typewriting machine and mechanism for addressing previously written or printed work sheets, the combination of a rotative platen, means for effecting a forward and backward turning movement of the platen, means for determining the extent of such forward and backward movements of the platen and for positively arresting the platen in its backward movement to so control the position of the work sheet with reference to the printing line that the first written line on the work sheet will appear at a predetermined distance from the first line of the previously written or printed body portion of the work sheet, and adjusting means for affording a variation in the extent of backward movement of the platen to vary the distance between the first line written on the work sheet and the first line of the previously written or printed body portion of the work sheet.

7. In a typewriting machine and mechanism for addressing previously written or printed work sheets, the combination of a rotative platen, means for rotating said platen forwardly and backwardly and means for controlling the position of the work sheet with reference to the printing line through the control of the platen in its back and forth rotative movements and to thus position each sheet to receive the first line of writing at a predetermined distance from the body portion of the previously written body portion of each work sheet irrespective of the distance of the leading edges of the different sheets from said printed body portions on the sheets, said means comprising stop mechanism for arresting the platen at a predetermined point in the backward movement thereof and for affording a free forward movement of the platen to any desired extent.

8. In a typewriting machine and mechanism for addressing previously written or

printed work sheets, the combination of a rotative platen, means for rotating said platen forwardly and backwardly, and means for controlling the position of the work sheet with reference to the printing line through the control of the platen in its back and forth rotative movements and to thus position each sheet to receive the first line of writing at a predetermined distance from the first line of the previously written body portion of each work sheet irrespective of the distance of the leading edges of the different sheets from said printed body portions on the sheets, said means comprising stop mechanism for arresting the platen at a predetermined point in the backward movement thereof and for affording a free forward movement of the platen to any desired extent, and an indicator fixed against rotative movement with the platen and co-operative with the work sheet to determine the extent of forward movement to be given each work sheet.

9. In a typewriting machine and mechanism for addressing previously written or printed work sheets, the combination of a rotative platen, means for rotating said platen forwardly and backwardly, and means for controlling the position of the work sheet with reference to the printing line through the control of the platen in its back and forth rotative movements and to thus position each sheet to receive the first line of writing at a predetermined distance from the first line of the previously written body portion of each work sheet irrespective of the distance of the leading edges of the different sheets from said printed body portions on the sheets, said means comprising stop mechanism for arresting the platen at a predetermined point in the backward movement thereof and for affording a free forward movement of the platen to any desired extent, an indicator fixed against rotative movement with the platen and co-operative with the work sheet to determine the extent of forward movement to be given each work sheet, and means by which the extent of rearward movement of the platen before arrest may be varied, to vary the distance between the first line to be written on a sheet and the previously written or printed body portion thereof.

10. In a typewriting machine and mechanism for addressing previously written or printed work sheets, the combination of a rotative platen; means for rotating said platen forwardly and backwardly; and means for controlling the position of the work sheet with reference to the printing line through the control of the platen in its back and forth rotative movements, said means comprising a relatively fixed stop on the platen frame, a co-operative stop that rotates with the platen, and a fixed indicator

on the platen frame that co-operates with the work sheet.

11. In a typewriting machine, the combination of a rotative platen; and means for positioning said platen to begin a line of writing at a predetermined position from a previously written or printed line thereon, said means including means for arresting the platen in its backward rotation to determine the position of the work sheet to receive the first line of writing at a predetermined position thereon, and an indicator adapted to register with a predetermined previously written or printed line on the work sheet.

12. In a typewriting machine, the combination with a platen having a stop receiving notch therein, of stop mechanism including a stop carrier having a series of notches therein, any one of which is adapted to be brought into register with the notch in the platen, a stop shiftable from the notch in the platen to any of the notches in the stop carrier, means for operatively connecting the stop carrier with the platen, and an indicator co-operating with the paper.

13. In a typewriting machine, the combination with a platen having a stop receiving notch therein, of stop mechanism including a stop carrier having a series of notches therein any one of which is adapted to be brought into register with the notch in the platen, a stop shiftable from the notch in the platen to any of the notches in the stop carrier, means for operatively connecting the stop carrier to move with the platen during its movement in one direction and to afford a movement of the platen independently of the stop carrier in the opposite direction, and an indicator co-operative with the paper.

14. In a typewriting machine, the combination with a platen having a stop receiving notch therein, stop mechanism including a stop carrier having a series of notches therein any one of which is adapted to be brought into register with the notch in the platen, a stop shiftable from the notch in the platen to any of the notches in the stop carrier, pawl and ratchet mechanism between said stop carrier and platen, and an indicator co-operative with the paper.

15. In a typewriting machine, the combination with a platen having a stop receiving notch therein, of stop mechanism including a stop carrier having a series of notches therein any one of which is adapted to be brought into register with the notch in the platen, a stop shiftable from the notch in the platen to any of the notches in the stop carrier, a line spacing ratchet wheel, clutch mechanism between the line spacing ratchet wheel and the platen, a pawl carried by the stop carrier and co-operative with said line

spacing wheel, and an indicator coöperative with the paper.

16. In a typewriting machine, the combination with a platen, of stop mechanism including a line spacing ratchet wheel, a stop carrier, a pawl carried by the stop carrier and coöperative with the line spacing ratchet wheel, and an indicator coöperative with the paper.

17. In a typewriting machine, the combination of a platen, a line spacing ratchet wheel, a stop carrier, a pawl carried by said stop carrier and coöperative with said line spacing ratchet wheel, a stop carried by and adjustable to different set positions on the stop carrier, a coöperative stop on the platen frame, and an indicator coöperative with the paper.

18. In a typewriting machine, the combination with a platen, a stop mechanism including a line spacing ratchet wheel, a clutch between the line spacing wheel and platen, a stop carrier, a pawl carried by the stop carrier and coöperative with the line spacing ratchet wheel, a fixed stop, and an indicator coöperative with the paper.

19. In a typewriting machine, the combination of a rotary platen, a stop carrier having a circular rack, circularly arranged indices associated with said rack, a stop ad-

justable on said rack, a stop fixed to said stop carrier, a coöperative stop connected with the platen frame, a constantly engaged pawl and ratchet wheel between said stop carrier and platen, and an indicator coöperative with the paper.

20. In a typewriting machine, the combination of a platen, a stop carrier, a stop shiftable to engage either the platen or the stop carrier, means which coöperate with the stop to arrest the platen, said means including pawl and ratchet mechanism between the stop carrier and platen, and an indicator coöperative with the paper.

21. In a typewriting machine, the combination of a platen, a stop carrier that is mounted to turn with or to afford a rotation of the platen independently thereof, a stop shiftable to engage either the platen or the stop carrier, a coöperative stop on the platen frame, and an indicator carried by the platen frame and coöperative with the paper.

Signed at the borough of Manhattan, city of New York, in the county of New York and State of New York, this 23d day of Nov. A. D. 1906.

CLIO B. YAW.

Witnesses:

E. M. WELLS,

J. B. DEEVES.