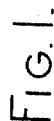


C. B. YAW.
TYPE WRITING MACHINE.
APPLICATION FILED NOV. 1, 1906.

3 SHEETS—SHEET 1



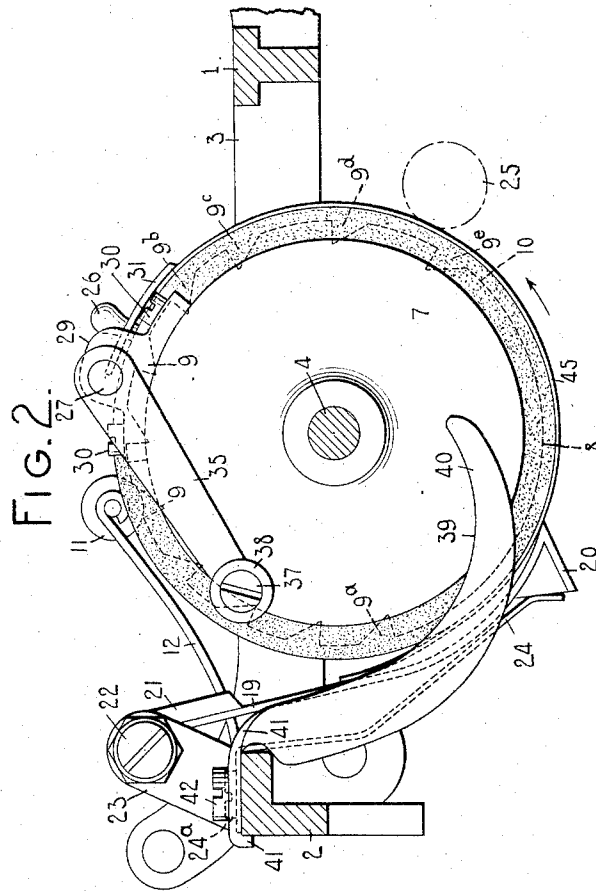
INVENTOR:

Chas B. Yaw
By Jacob Felder
HIS ATTORNEY

C. B. YAW.
TYPE WRITING MACHINE.
APPLICATION FILED NOV. 1, 1906.

927,203.

Patented July 6, 1909.
3 SHEETS—SHEET 2.



WITNESSES:

J. B. Reeves.
Wm. Pool

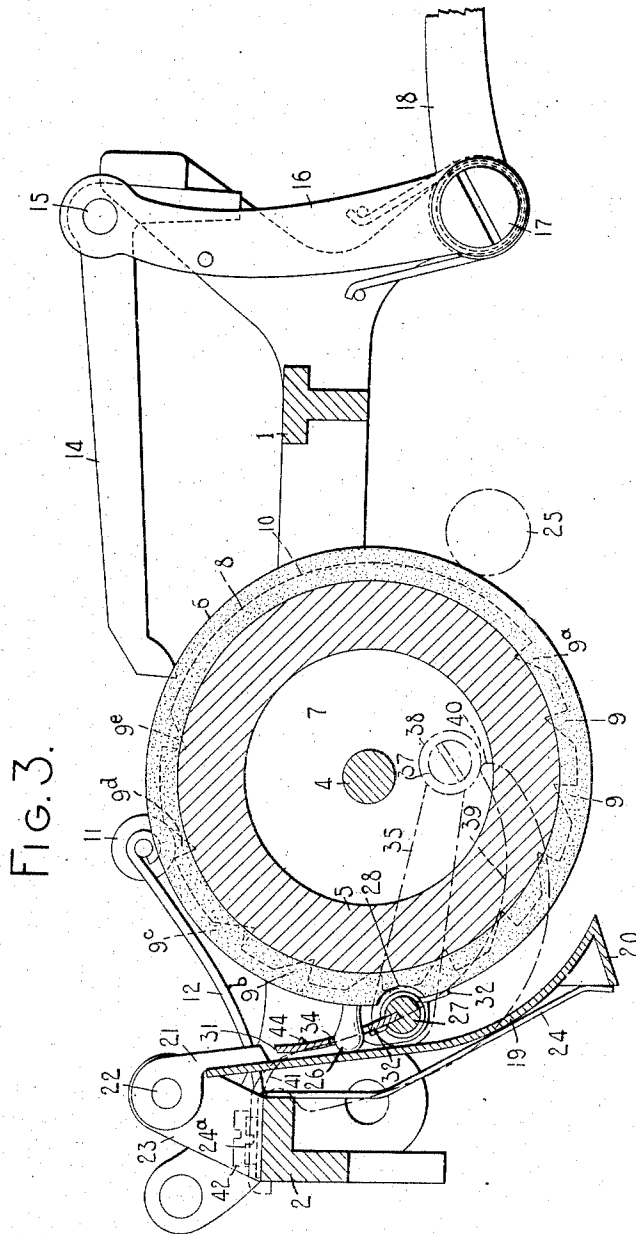
INVENTOR:

Clio B. Yaw
By Jacob Feldt
HIS ATTORNEY

927,203.

C. B. YAW.
TYPE WRITING MACHINE.
APPLICATION FILED NOV. 1, 1906.

Patented July 6, 1909.
3 SHEETS—SHEET 3.



WITNESSES:

J. B. Reeves
Wm. Pool

INVENTOR:

Clio B. Yaw
By Jacob Felbel
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.

No. 927,203.

Specification of Letters Patent.

Patented July 6, 1909.

Application filed November 1, 1906. Serial No. 341,594.

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 more especially to the paper feeding mechanism of typewriting machines and has for one of its objects to provide an improved automatic clamping device for the work sheet.

Another object of the invention is to provide means for squaring the work sheet prior to the operation of said clamping device so that the work sheet may be properly entered and alined in the machine before it is clamped or held in fixed relation with the platen.

Other objects of the invention will subsequently appear.

To the above ends the invention consists in the features of construction, combinations of devices and arrangements of parts herein-after fully described and particularly pointed out in the claims.

I have shown my invention as applied to a platen and platen frame of the Remington style, but the nature of said invention is such that it may be readily adapted to other styles of writing machines.

In carrying out the invention in the present instance I provide a plurality or set of stop pins which are driven or otherwise fixed in the platen and project from the surface thereof, the set of pins being in alinement and extending from one side of the platen to the other. A clamping plate or blade is pivoted in brackets screwed to the platen heads, said plate being constantly pressed toward the platen by coiled springs at its ends. The clamping plate is formed with openings through which the stop pins are protrusive. The bar or rod which supports the clamping plate projects beyond one of the bearing brackets and has secured to it a crank arm provided at its free end with a roller which is cooperative with a cam plate fixed to the platen frame. The roller on the crank arm cooperates with the cam plate at a predetermined point in the rotation of the platen to overcome the spring pressure constantly applied to the clamping plate and

swings the latter away from the platen so that the work sheet may be inserted in the opening thus made and brought into contact with the stop pins. Further rotary movement of the platen permits the clamping plate to spring back in place to clamp the work sheet. These devices are preferably employed to feed printed blanks such as insurance receipts and the like, and the platen is provided with a special line space ratchet wheel which is formed with a number of ratchet teeth corresponding with the number of lines to be written on the blank. The number of teeth is usually less than the usual number of ratchet teeth and consequently a portion of the periphery of the ratchet wheel is not formed with teeth but is left smooth, and the mechanism is arranged so that this smooth portion of the ratchet wheel will come into cooperation with the usual spring detent just after the clamp has become effective. As a result, as soon as the work sheet is clamped the operator may turn the platen to the first writing position quickly and with a minimum expenditure of power, the spring detent during this turning movement riding over the smooth part of the periphery of the ratchet wheel. The engagement of the spring detent with the notch at the end of the smooth portion of the line space ratchet wheel indicates to the operator that the platen is in position for writing the first line on the work sheet.

In applying my invention I preferably dispense with the usual paper feed rollers and paper fingers and retain only the usual paper apron or scale plate, providing the latter with a pair of flat springs which tend constantly to press it toward the platen.

My improvements are applied to the exterior of the platen and it is unnecessary to cut into the latter and arrange mechanism within its core.

In the accompanying drawings, Figure 1 is a full-sized fragmentary top plan view of the platen and platen frame of a No. 6 Remington machine with the features of my invention applied thereto, parts of the machine being omitted. Fig. 2 is an enlarged transverse sectional view of the same taken on the plane represented by the line $x-x$ in Fig. 1 and looking in the direction of the arrows at said line, certain parts shown in Fig. 1 being omitted from Fig. 2. Fig. 3 is a

transverse sectional view of the same taken on a plane represented by the line $y-y$ in Fig. 1 and looking in the direction of the arrows at said line, certain of the parts, however, in Fig. 3 being shown in relations different from those in which they appear in Fig. 1.

In the drawings the platen frame is rectangular in shape comprising front and rear bars numbered respectively 1 and 2 and joined at their ends by side or end bars 3. A platen axle 4 is journaled in the end bars and supports a platen of the usual or suitable construction comprising an interior core 5 and an exterior sheath 6. At the ends of the platen are the usual platen heads 7 and exterior of the right-hand platen head is mounted a line space ratchet wheel 8. As has been stated the ratchet wheel in the present instance is of a special form and is notched or serrated as indicated at 9 to form a plurality of teeth corresponding in number with the number of lines to be printed on blank forms to which the construction illustrated is particularly adapted. I have not deemed it necessary to illustrate the blank form or forms in the drawings.

With a paper clamp automatically movable toward and away from the surface of the platen during each rotation thereof, it is obvious that the work sheet employed must necessarily not be any longer at the utmost than the circumference of the platen.

In the present instance the particular work sheet which is an ordinary life insurance receipt blank, is considerably less in length than the circumference of the platen, and the notches in the ratchet wheel 8, which correspond with the first and last lines on the work sheet or blank form, and which notches for convenience of description are marked respectively 9^a and 9^b, are a considerable distance apart. The periphery of the ratchet wheel between the notch 9^b and the notch 9^a is left smooth save for certain notches marked 9^c, 9^d and 9^e, the purpose of which will appear when the operation is described more at length. The smooth portion of the ratchet wheel is indicated by the numeral 10. Coöperative with the ratchet wheel 8 is the usual detent roller 11 mounted on a spring arm 12 secured by a screw 13 to the rear bar 2 of the platen frame. A line space pawl 14 pivoted at 15 to a lever arm 16, pivoted to the platen frame at 17, is adapted to coöperate with the ratchet wheel 8 when a line space handle or lever arm 18 of the usual construction is actuated. I preferably dispense with all of the usual paper feeding devices save the feed rolls at the front of the platen and the paper apron. Said paper apron is shown in the drawings and designated by the numeral 19 and carries at its lower end portion the usual platen scale 20 and at its upper end portion is suitably se-

cured to pivot blocks 21, the latter being pivoted at 22 to lugs 23 rising from the rear bar 2 of the platen frame near the ends thereof. Outside the lugs 23 flat springs 24 are secured to the rear bar 2 by screws 24^a, said springs extending downwardly behind the paper apron 19 and normally maintaining the paper apron and platen scale in the relation with the platen shown in Fig. 2. The usual small feed rolls at the front of the platen, diagrammatically shown and designated by the numeral 25, may be retained to coöperate with the work sheet and prevent it from dropping downwardly on the top plate after being released by the automatic clamping means about to be described.

I provide gaging means for squaring the paper so that it may be written on in lines parallel with its top and bottom edges, said gaging means in the present instance comprising a set of stop pins, preferably five in number, designated by the numeral 26. The stop pins are spaced equal distances apart and are driven into openings in the platen or otherwise suitably secured on said platen in a fixed relation therewith in a straight line longitudinal thereof. These stop pins have bulbous or enlarged rounded heads, as shown. They are adapted to coöperate with an edge, preferably the leading edge, of the work sheet or sheets to square the latter and I provide means for automatically clamping or gripping the work sheet or sheets after the squaring operation has taken place. Said clamping means is preferably operated automatically during the rotary movements of the platen in line spacing direction and comprises a rod or bar 27 which extends longitudinally of the platen and is partially seated in a groove or depression 28 formed in the sheath 6 of the platen, as shown in Fig. 3. At its end portions the rod 27 bears in openings in bearing brackets 29, the latter being secured by screws 30 to the platen heads 7. Fixed to the rod 27 is a clamping plate or blade 31 which is constantly pressed toward the platen by wire springs 32 coiled around the rod 27, one near each end, the clamping plate or blade 31 being cut away as indicated at 33 to permit of the adjustment of the springs, one end of each spring bearing against the clamping plate and the other end against the platen. It is preferable to make the rod 27 and the plate 31 separately and to afterward secure the platen in a groove in the rod, and this is the construction illustrated, but, of course, if preferred the rod 27 and the plate 31 may be made of a single piece, or they may be made separately and fastened together in any suitable manner other than that shown. The clamping plate 31 is formed with openings 34 through which the stops or stop pins 26 protrude so that when the clamping plate is turned toward and away from the surface

of the platen with the pivotal rod 27, said clamping plate will not be interfered with or obstructed by the stop pins 26.

In order to swing the clamping plate away 5 from the platen to admit the work sheet and render the gaging means or stop pins 26 operative I employ automatic means comprising a crank arm 35 fixed by a set screw 36 or by any other suitable means to the left 10 end of the rod 27 which extends outwardly beyond the left-hand bearing bracket 29. The crank arm 35 is fixed to the rod 27 as clearly shown in Fig. 2, and said crank arm has secured to its free end a screw 37 on 15 which is pivoted a small roller 38. This roller is adapted when the platen has been turned to a predetermined point to cooperate with a cam surface 39 formed on a fixed cam plate or bar 40, said plate or bar being 20 twisted at its upper end portion, as indicated at 41, and secured to the rear bar 2 of the platen frame by a headed screw 42. After the engagement of the roller 38 with the cam surface on the plate 40, further 25 turning movement of the platen in line spacing direction will cause the crank arm 35 to swing about its pivotal axis, thereby communicating rotary movement to the rod 27 and swinging the clamping plate 31 away 30 from the surface of the platen against the pressure exerted by the coiled springs 32. This swinging movement of the clamping plate away from the surface of the platen will continue until the latter has been turned 35 far enough to cause the roller 38 to disengage from the cam plate, whereupon the springs 33 will act to force said clamping plate back toward the platen surface. Mean- 40 time, of course, the work sheet or sheets have been inserted between the platen and the clamping plate so that the latter will clamp or hold said work sheet or sheets in a fixed relation with said platen and will continue so to hold it or them until the cam plate 45 40 again becomes operative on the crank arm 35.

As I have heretofore stated, the form of my invention illustrated is especially adapted for filling in blanks such as are used by 50 insurance companies for premium receipts. At the same time that the receipt is filled in a reference card is also usually written by means of a sheet of carbon paper or other transfer medium arranged between said card 55 and the receipt proper at one end of the platen, while at the other end an envelop to contain the receipt is addressed by the aid of the interposed carbon sheet when a stub attached to the receipt proper is being filled 60 in by the operator. This makes three thicknesses of paper at each end of the platen, but sometimes the receipt has attached to it an additional stub for memoranda, which stub is folded back to inclose the outer ends 65 of the carbon paper and reference card,

thereby making four thicknesses of paper at one side of the platen, while there are but three at the other. This inequality in thicknesses of the work sheets at the two sides of the platen tends to cause that portion of 70 the clamping blade which engages the fewer thicknesses to clamp them less firmly, and to obviate this defect I preferably form the clamping blade near its edge with a number of depressions indicated by the numeral 43, 75 thereby forming on the under side of the blade a corresponding number of small cone-like projections 44 (Fig. 3). These projections bite into the work sheet or sheets, as it were, without tearing or mutilating them 80 and I have found in practice that when the clamping blade is provided with such projections 44 that it is much more efficacious and certain in operation.

Some features of the operation of my im- 85 provements may here be referred to somewhat more in detail. For convenience of illustration only one thickness of paper is shown as employed (Fig. 2), said paper or work sheet being designated by the reference 90 character 45. Assuming that the work sheet or blank is in the course of being filled in and that the platen has been turned until it and the work sheet thereon are in the positions illustrated in Fig. 2, it is to be under- 95 stood that the work sheet or blank is only partially filled in and that the last line thereon will not be written until the platen has been turned or line spaced in the direction of the arrow in Fig. 2 far enough to 100 enable the line space detent 11 to cooperate with the notch 9^b which corresponds with the last line on the blank. When the notch 9^b is engaged by the detent, the roller 38 on the crank arm 35 will have approached 105 closer to the cam surface 39 but will not yet be engaged therewith, so that the clamping plate 31 will still be operative on the work sheet 45. After the last line has been written it will be necessary to turn the platen 110 through a distance corresponding to the space between the notch 9^b and the notch 9^a in order to fully open the clamp. The space between the notches 9^b and 9^a is too great to be taken by the line spacing pawl 14, and, 115 in order that the latter may be employed in the usual way to communicate line space printing movement to the platen between the notches 9^b and 9^a, I preferably provide a notch 9^c between the two notches 9^b and 9^a 120 in order that the pawl 14 may operate on the line spacing wheel. It will be understood that, with this arrangement, the pawl 14 after cooperating with the notch 9^b will next cooperate with the notch 9^c and thereafter 125 with the notch 9^a, but it is further to be understood that the notch 9^c may be dispensed with and the platen may, if desired, be turned by hand in the usual way by manipulating the usual platen finger wheels. 130

As the platen is rotated to disengage the notch 9^b from the detent 11 and to cause the notch 9^a to engage with said detent, the roller 38 will cooperate with the cam surface on the cam plate 40 and the clamping plate 31 will be slightly opened, enabling the work sheet to be separated or disconnected from its positive connection with the platen and to be removed from the machine. After the unclamping and prior to removal, the work sheet will be held against the platen by the feed rolls 25 only. When the platen is further rotated to cause the notch 9^a to cooperate with the detent 11, the cam plate 40 and the crank arm 35 will further cooperate to swing the clamping plate 31 to its greatest distance away from the surface of the platen. The parts will now be in the positions illustrated in Fig. 3. From an inspection of this figure it will be seen that the clamping plate 31 is so far separated from the surface of the platen as to form therewith a sort of mouth or pocket to receive the work sheet and that said work sheet when inserted will cooperate at its leading edge with the stopping portions of the stop pins 26, that is at the points where said stop pins enter the platen. The enlarged heads of said stop pins join the body portions thereof in curves which facilitate the sliding of the leading edge of the work sheet against the platen and into cooperation with the stopping portions of the pins, and the fact that the relation between the stop pins and the platen is fixed and unvarying is more favorable to the maintenance of the paper in squared position against the pins than would be the case were said pins movable relatively to the platen as in some prior constructions. This fixed construction of the stop pins has therefore a considerable advantage. By reason of the fact that the pins are fixed to the platen in the present construction there is no tendency to displace the work sheet after it is alined and prior to its being clamped, as is sometimes the case in constructions which make use of stops movable relatively to the platen.

From a further inspection of Fig. 3 it will be noted that the roller 38 is engaged with the tip end of the cam plate 40 and it will be understood that a slight further turning of the platen in line space direction will disengage the roller from the cam plate and permit the springs 32 to force the clamping plate against the work sheet, clamping the latter against the platen. It will be understood that the clamping plate now covers the operating portions of the stop pins 26 and the latter are therefore inoperative to properly cooperate with the work sheet. The clamping action will take place during that turning movement of the platen which is effective to disengage the notch 9^a from the detent 11 and cause the notch 9^a to engage therewith. When the notch 9^a is en-

gaged with the detent it will be seen that further turning movement of the platen will bring the smooth part 10 of the periphery of the line space wheel 8 into cooperation with the detent, and that the part 10 will cooperate with the detent until the notch 9^a engages therewith. The turning of the platen between the notches 9^a and 9^a is, of course, done by hand, the operator turning the usual platen finger wheel and since the surface 10 is unserrated this turning is effected with a minimum expenditure of power, and is easily and simply accomplished. It will be recalled that the notch 9^a corresponds with the first line to be filled in on the work sheet so that when said notch is brought into cooperation with the detent 11 it is notification to the operator that the work sheet is properly positioned for beginning the writing.

From an inspection of Fig. 3 it will be seen that when the clamp is fully open the paper apron will be pushed away from the platen by the stop pins 26, the latter overcoming the springs 24. The paper apron or curved paper guide 19 will be held in inoperative position by the stop pins and by the rod 27 until said rod and stop pins have passed forwardly away from the lower end of said paper apron. As soon as they have passed, however, these springs 24 act on the paper apron to force the latter against the work sheet 45, as shown in Fig. 2, said paper apron thereafter serving to hold that portion of the work sheet between the clamping plate 31 and the platen scale 20 closely against the platen and conducting to a smooth and easy feeding of said work sheet. By this construction it will be seen that the paper feeding device or paper apron 19 is rendered automatically inoperative so that it will not interfere with the proper action of the clamping plate and is thereafter rendered automatically operative on the work sheet. The operations above outlined will, of course, be repeated with each succeeding work sheet or sheets to be written.

It will be noted that parts constituting my improvements are applied to the machine as usually constructed without the necessity of cutting into the platen and arranging any mechanism within its interior, the squaring or gaging devices 26 being simply driven into the surface of the platen and the clamping device being pivoted exteriorly thereof. This feature of my invention is in itself a decided advantage as the expense of prior construction is greatly lessened, as is also the liability of the parts to become deranged; while should any of such parts get out of order they are easily accessible for readjustment.

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 fixed thereto for squaring a work sheet; and an automatically operating clamping plate for clamping the work sheet, said clamping plate extending lengthwise of the platen substantially throughout its length and being pivoted on the platen near the ends thereof.

2. In a typewriting machine, the combination of a platen carrier; a platen; means fixed thereto for squaring a work sheet; a clamping plate for the work sheet, said clamping plate extending lengthwise of the platen substantially throughout its length and being pivoted on the platen near its ends, and a cam secured to the platen carrier and operative to open the clamp as the platen is turned.

3. In a typewriting machine, the combination of a platen carrier; a platen thereon; a curved paper guide yieldingly mounted on said carrier at the rear of the platen; gaging or stop pins fixed to said platen; a clamping plate extending lengthwise of the platen and pivotally mounted thereon; and means operating to open the clamping plate as the platen is turned, said paper guide being moved or swung away from the platen during turning movements thereof.

4. In a typewriting machine, the combination of a platen carrier; a rotary cylindrical platen thereon; stop pins spaced apart and fixed on said platen lengthwise thereof; a clamping plate extending lengthwise of the platen substantially throughout its length and pivoted to the platen near its ends, said clamping plate being provided with openings through which the stop pins are protrusive; means for turning the platen for line spacing; and a cam mounted on said carrier and operating to open the clamp as the platen is turned for line spacing.

5. In a typewriting machine, the combination of a rotary platen; hand-actuated means for turning said platen intermittently step-by-step; devices for squaring the work sheet and holding it against the platen in squared position, said devices being mounted on the platen and comprising stops fixedly secured to the platen and cooperative with one of the edges of the work sheet to square the latter and also comprising a clamping or holding part movable into and out of operative position; a spring tending constantly to maintain said clamping part in operative position; and automatic means cooperative with said clamping part to overcome said spring.

6. In a typewriting machine, the combination of a platen; hand actuated means for turning said platen intermittently step-by-step; gaging means for squaring the work sheet, said gaging means being secured to

said platen in fixed relationship therewith; and means for enabling said gaging means to be employed only when the platen is in a predetermined position.

7. In a typewriting machine, the combination of a rotary platen; hand actuated means for turning said platen intermittently step-by-step; gaging means for squaring the work sheet, said gaging means being secured to said platen in fixed relationship therewith; and means mounted on the platen and movable relatively to said gaging means to expose said gaging means for use.

8. In a typewriting machine, the combination of a rotary cylindrical platen; hand-actuated means for turning said platen intermittently step-by-step; a plurality of stops spaced apart lengthwise of said platen and fixedly secured thereto, said stops being cooperative with an edge of the work sheet to square the latter; and means for clamping the work sheet in squared position.

9. In a typewriting machine, the combination of a rotary cylindrical platen; a plurality of stops spaced apart lengthwise of said platen and fixedly secured thereto, said stops being cooperative with an edge of the work sheet to square the latter; and means for clamping the work sheet in squared position, said means comprising a spring-pressed plate pivotally mounted on the platen.

10. In a typewriting machine, the combination of a rotary cylindrical platen; a plurality of stops spaced apart lengthwise of said platen and fixedly secured thereto, said stops being cooperative with an edge of the work sheet to square the latter; means for clamping the work sheet in squared position, said means comprising a spring-pressed plate pivotally mounted on the platen; and means operating automatically to move said clamping means to position to admit the work sheet to position to be clamped.

11. In a typewriting machine, the combination of a rotary cylindrical platen; a plurality of stops spaced apart lengthwise of said platen and fixedly secured thereto, said stops being cooperative with an edge of the work sheet to square the latter; means for clamping the work sheet in squared position, said means comprising a spring-pressed plate pivotally mounted on the platen; and means operating automatically to render said clamping means operative to receive the work sheet at a predetermined point in the rotation of the platen.

12. In a typewriting machine, the combination of a rotary platen; hand-actuated means for turning said platen intermittently step-by-step; devices for squaring the work sheet and holding it against the platen in squared position, said devices being mounted on the platen and comprising stops fixedly secured thereto and cooperative with the

leading edge of the work sheet to square the latter and also comprising a clamping or holding part movable into and out of operative position; a spring tending constantly to maintain said clamping part in operative position; and automatic means cooperative with said clamping part when the latter is at the rear of the platen to overcome said spring and move said clamping part to position to receive the leading edge portion of the work sheet as it is introduced into the machine behind the platen.

13. In a typewriting machine, the combination of a platen; hand actuated means for turning said platen intermittently step-by-step; gaging means for squaring the work sheet, said gaging means being secured to said platen in fixed relationship therewith; and means automatically operating to expose said gaging means for use at a point where said gaging means will cooperate with the leading edge of the work sheet as said work sheet is introduced into the machine, said means at other times preventing the exposure of said gaging means for use.

14. In a typewriting machine, the combination of a rotary cylindrical platen; hand-actuated means for turning said platen intermittently step-by-step; a plurality of stops spaced apart lengthwise of said platen and fixedly secured thereto, said stops being cooperative with the leading edge of the work sheet to square the latter; and means for clamping the work sheet in squared position, said means operating as the platen is being rotated in line spacing direction.

15. In a typewriting machine, the combination of a rotary cylindrical platen; a plurality of stops spaced apart lengthwise of said platen and fixedly secured thereto, said stops being cooperative with the leading edge of the work sheet to square the latter; and a spring-pressed plate pivotally mounted on the platen and automatically operating, when it has been turned to a position at the rear of the platen, to open and close and thereby to receive and clamp the leading edge of the work sheet.

16. In a typewriting machine, the combination of a rotary cylindrical platen; a plurality of stops spaced apart lengthwise of said platen and fixedly secured thereto, said stops being cooperative with an edge of the work sheet to square the latter; and means for clamping the work sheet in squared position, said means comprising a spring-pressed plate pivotally mounted on the platen, said plate being provided with openings through which said stops are protrusive.

17. In a typewriting machine, the combination of a rotary cylindrical platen, a plurality of stops spaced apart lengthwise of said platen and fixed thereto, said stops being cooperative with an edge of the work sheet to square the latter; means for clamp-

ing the work sheet in squared position, said means comprising a spring-pressed plate pivotally mounted on the platen, said plate being provided with openings through which said stops are protrusive; and means for swinging said plate away from the platen to render said stops operative.

18. In a typewriting machine, the combination of a rotary cylindrical platen; a plurality of stops spaced apart lengthwise of said platen and fixed thereto; said stops being cooperative with an edge of the work sheet to square the latter; means for clamping the work sheet in squared position, said means comprising a spring-pressed plate pivotally mounted on the platen, said plate being provided with openings through which said stops are protrusive; and means for swinging said plate away from the platen to render said stops operative, said last named means operating automatically at a predetermined point in the rotation of the platen.

19. In a typewriting machine, the combination of a rotary platen; hand-actuated means for turning said platen intermittently step-by-step; gaging means fixedly secured to the platen for squaring the work sheet; clamping means for holding the work sheet in squared position; and means for automatically actuating said clamping means, part of said automatic means being controlled by rotative movements of the platen.

20. In a typewriting machine, the combination of a platen frame; a platen rotative thereon; hand-actuated means for turning said platen intermittently step-by-step; gaging means fixedly secured on the platen for squaring the work sheet; means movable independently of said gaging means for clamping the work sheet in squared position; and means on the platen frame operating automatically, during the rotative movements of the platen, on said clamping means to bring it to position to admit or receive the work sheet.

21. In a typewriting machine, the combination of a platen frame; a platen rotative thereon; hand-actuated means for turning said platen intermittently step-by-step; gaging means fixed on the platen for squaring the work sheet; a spring-pressed clamping plate or bar pivotally supported on the platen and carrying a crank arm; and a cam plate fixed to said platen frame and cooperative with said crank arm to overcome the effect of the clamping plate spring and render said clamping plate operative to admit the work sheet.

22. In a typewriting machine, the combination of a platen; hand-actuated means for turning said platen intermittently step-by-step; stops for squaring the work sheet, said stops being fixed on said platen and projecting from the surface thereof; and a paper clamp pivotally supported exteriorly

of the platen and coöperative with the work sheet after it has been squared.

23. In a typewriting machine, the combination of a platen; hand-actuated means for turning said platen intermittently step-by-step; stops secured on the platen for squaring the work sheet; a spring-pressed clamp pivotally supported exteriorly of the platen; and means for automatically actuating said clamp to coöperate with the work sheet after it has been squared.

24. In a typewriting machine, the combination of a platen; hand-actuated means for turning said platen intermittently step-by-step; stops spaced apart lengthwise of the platen and fixed on the platen for squaring the work sheet; bearing brackets; a clamping plate pivoted on said brackets and provided with a spring tending to constantly maintain it in engagement with the platen; and means for automatically actuating said clamping plate.

25. In a typewriting machine, the combination of a platen frame; a platen having a groove therein; stop pins on the platen for squaring the work sheet; bearing brackets on the platen heads; a bar or rod partially seated in said groove in the platen and pivotally supported at its ends in the bearing brackets; a clamping plate fixed to said bar and provided with openings through which the stop pins are protrusive; a spring tending constantly to press said clamping plate against said platen; a crank arm fixed to said bar or rod and provided with a roller at its free end; and a cam plate fixed to said platen frame and coöperative with the roller on said crank arm.

26. In a typewriting machine, the combination of a platen frame; a platen rotative thereon; spring-pressed paper controlling means mounted on the platen frame; means for squaring the work sheet mounted on the platen; means for clamping the work sheet also mounted on the platen; and automatic means for actuating said clamping means, the paper controlling means on the platen frame being automatically operative to engage with the work sheet after the latter has been clamped to the platen.

27. In a typewriting machine, the combination of a rotary platen; line space devices therefor comprising a spring detent

and a line space ratchet wheel provided with a plurality of teeth and having a portion of its periphery smooth; a clamping device supported on the platen and automatically operative to hold the work sheet in fixed relation with said platen, the arrangement being such that as the platen is turned in line spacing direction immediately after the clamping device operates, said spring detent will coöperate with the smooth portion of the periphery of the line space wheel.

28. In a typewriting machine, the combination of a platen frame; a platen rotative thereon; line space devices comprising a spring detent and a ratchet wheel provided with a plurality of teeth and having a portion of its periphery smooth; a clamping device on the platen; and means on the platen frame coöperating with said clamping devices during rotative movements to automatically clamp the work sheet, said automatic clamping taking place just prior to the coöperation between said spring detent and the smooth part of the periphery of the line space ratchet wheel.

29. In a typewriting machine, the combination of a platen, means for always maintaining a fixed relation between the work sheet and the platen, a line spacing wheel having ratchet teeth and an intermediate untoothed or smooth portion, a coöperating line spacing pawl, and a detent that operates with said line spacing wheel, the construction and arrangement of the parts being such that the platen will be properly positioned to receive the first line on the work sheet when the detent coöperates with a tooth on one side of the smooth or untoothed portion of the line spacing wheel and the platen will be positioned when the work sheet will receive the last line thereon when the detent coöperates with a tooth on the other side of the smooth or untoothed portion of the line spacing wheel.

Signed at the borough of Manhattan, city of New York, in the county of New York, and State of New York, this 31st day of October A. D. 1906.

CLIO B. YAW.

Witnesses:

J. B. DEEVES,
E. M. WELLS.