

953,083.

C. B. YAW.
TYPE WRITING MACHINE.
APPLICATION FILED JAN. 5, 1907.

Patented Mar. 29, 1910.

5 SHEETS—SHEET 1.

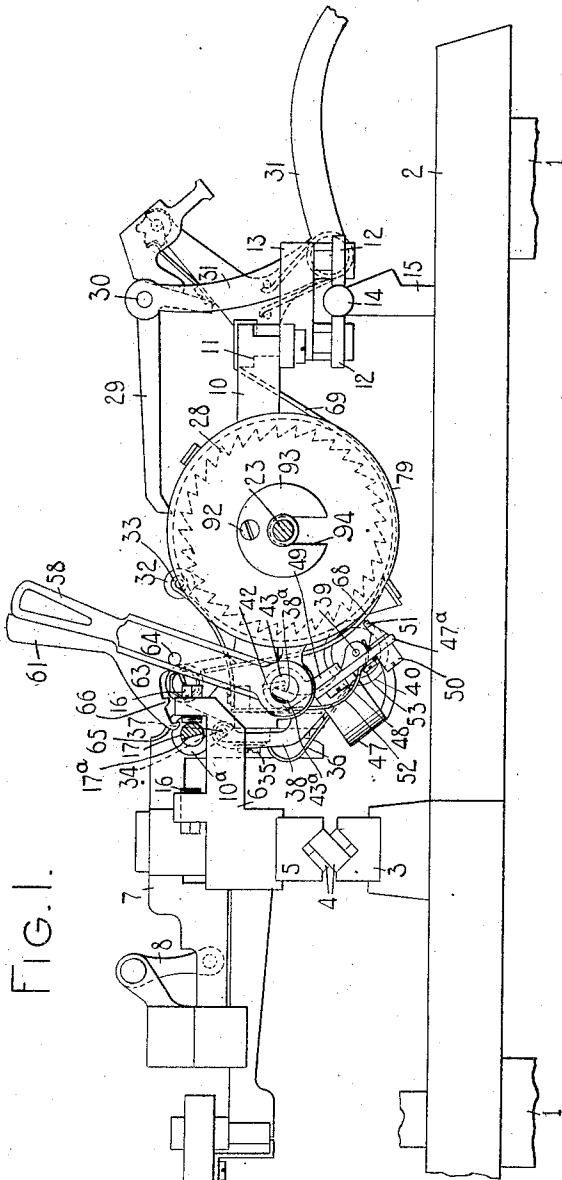


FIG. 1.

WITNESSES:

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m. w. Pool

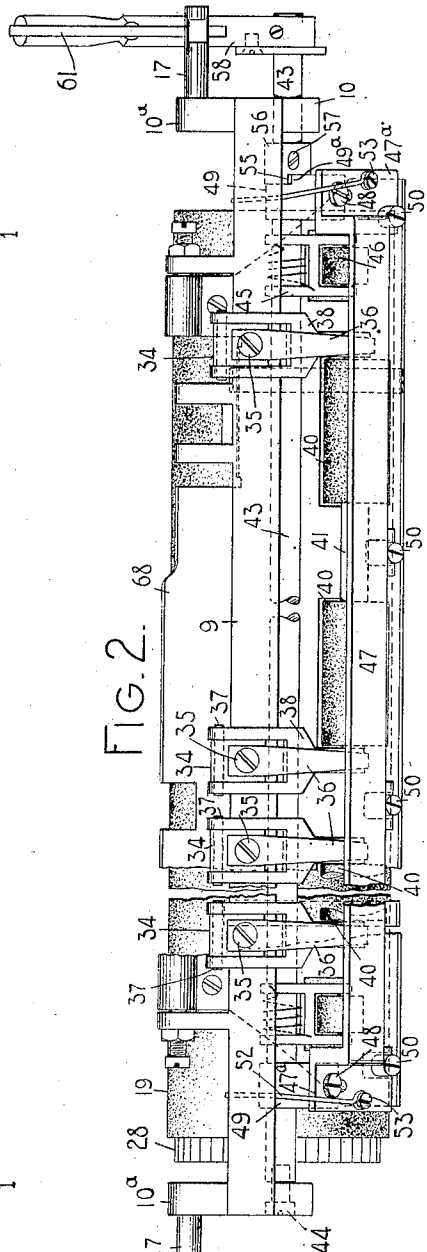


FIG. 2.

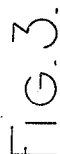
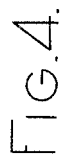
INVENTOR.

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5 SHEETS—SHEET 2.

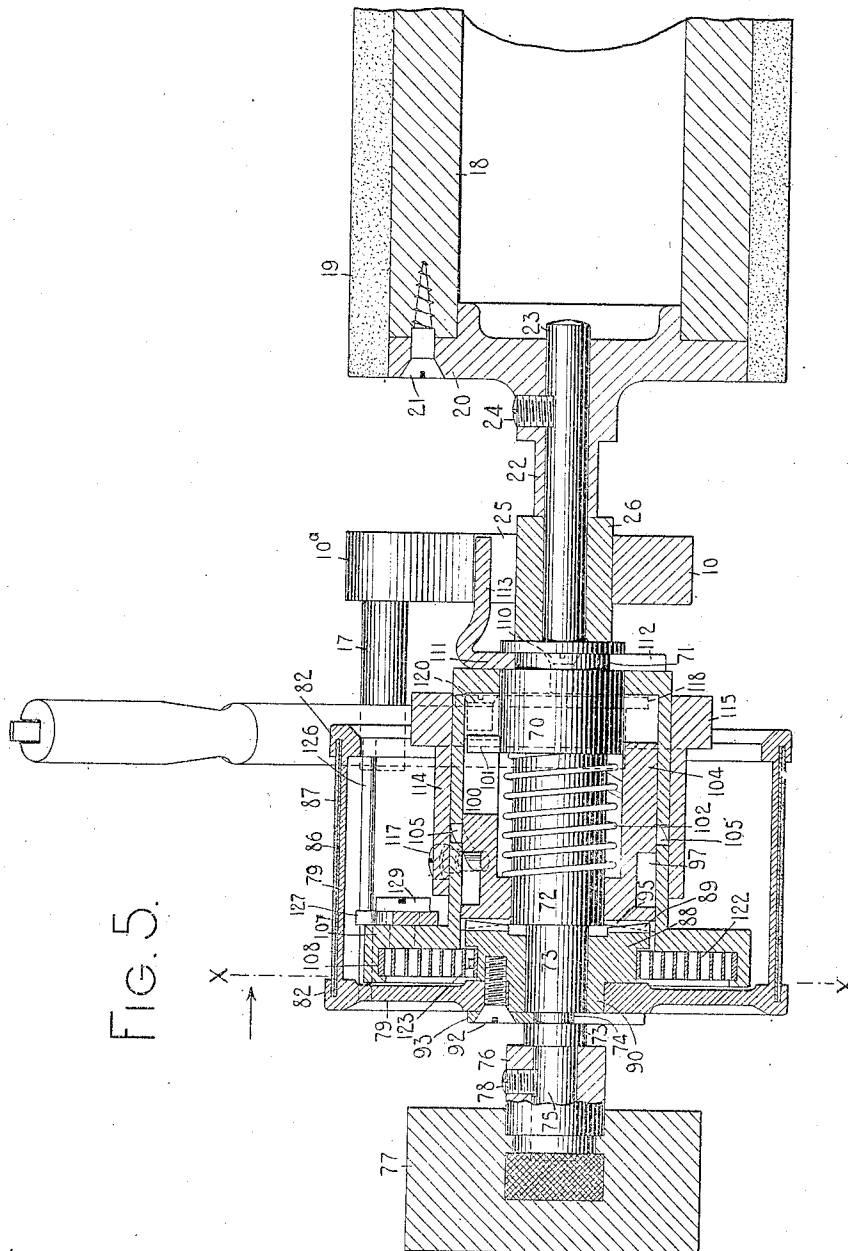


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5 SHEETS—SHEET 3.



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5 SHEETS—SHEET 4.

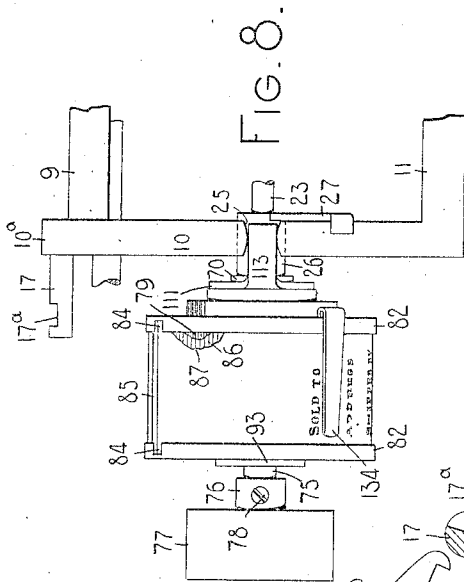


FIG. 8.

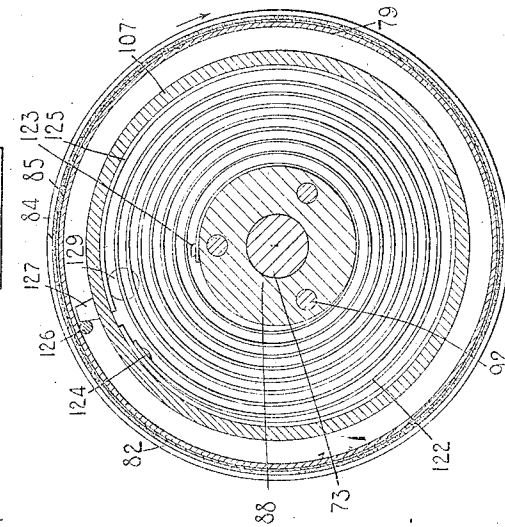


FIG. 6.

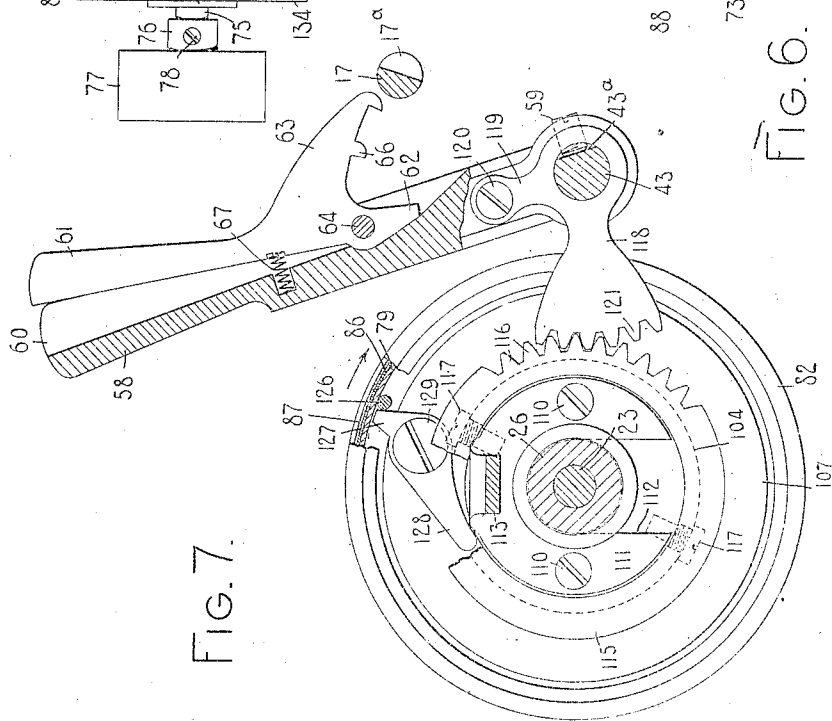


FIG. 7.

WITNESSES.

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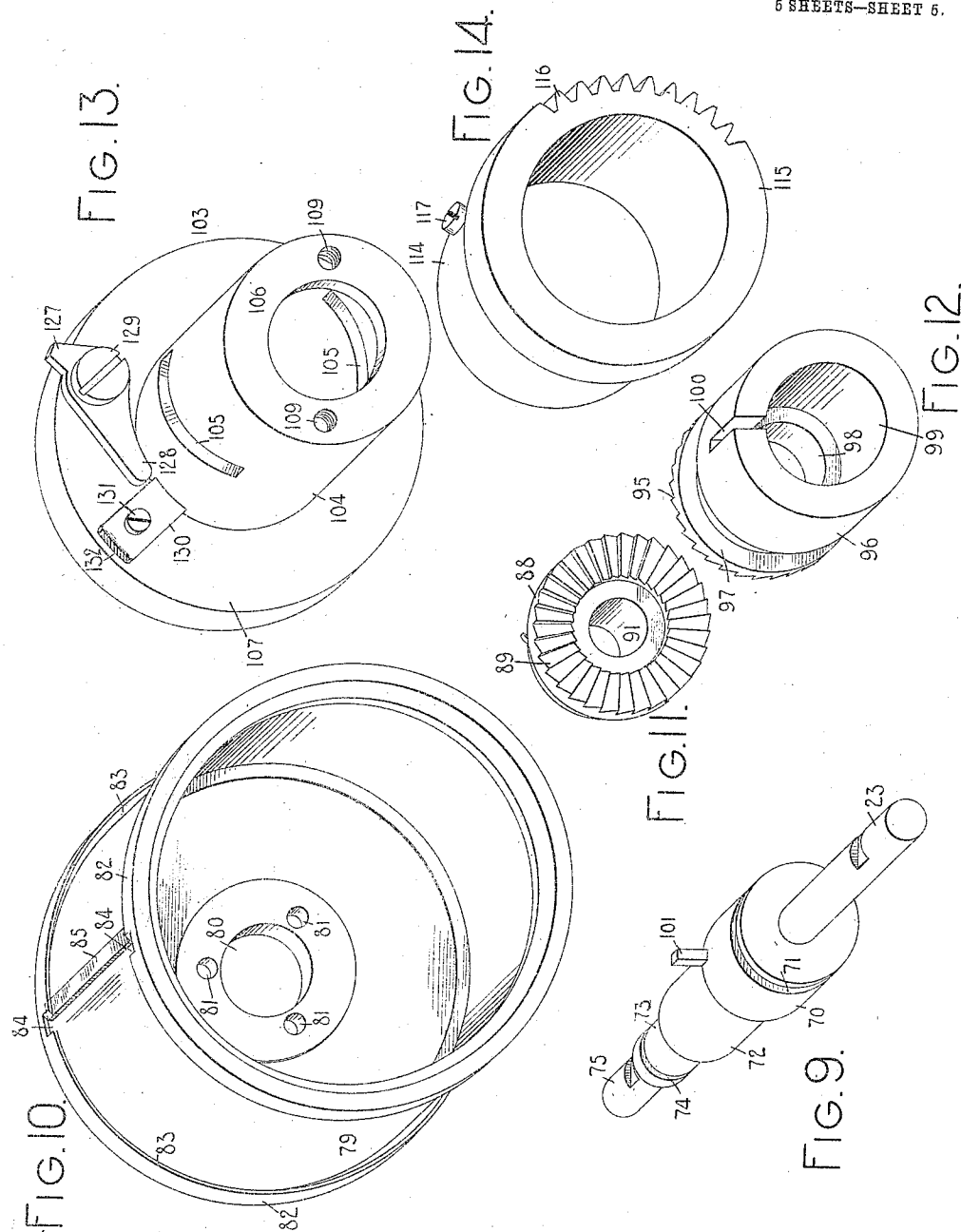
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TYPE WRITING MACHINE.
APPLICATION FILED JAN. 5, 1907.

Patented Mar. 29, 1910.

6 SHEETS—SHEET 5.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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ILLION, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

953,083.

Specification of Letters Patent.

Patented Mar. 29, 1910.

Application filed January 5, 1907. Serial No. 350,948.

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 indicating and paper feeding and controlling mechanisms of typewriting machines.

One object of the invention is to provide an indicating device or form holder normally turning with the platen during the line spacing movements thereof, but adapted to be uncoupled from the platen and automatically restored to initial position.

Another object is to provide means for locking the paper feed roller and paper stop devices of a typewriting machine in abnormal positions, leaving both hands of the operator free to adjust or remove the paper or work sheet.

Still another object is to combine the indicating device or form holder mechanism with the paper feeding mechanism so that at the same time that the latter mechanism is released the indicating device or form holder is automatically released and restored to normal position.

Other objects will hereinafter appear.

To the above and other ends, my invention consists in the features of construction, combinations of devices and arrangements of parts hereinafter described and particularly pointed out in the claims.

My invention is illustrated as applied to a No. 8 Remington typewriting machine, but it is to be understood that the nature of the invention is such that it may be adapted in whole or in part to other styles of writing machines.

In the accompanying drawings, Figure 1 is a fragmentary side elevation of the upper part of a typewriting machine embodying my invention, parts of the machine being shown in section and other parts being omitted. Fig. 2 is a fragmentary rear elevation of the platen and platen frame having my invention applied thereto, parts of the machine and parts of my invention being omitted in this view. Fig. 3 is an enlarged fragmentary end view partly in section showing certain features of my invention,

certain parts being in abnormal position. Fig. 4 is an enlarged fragmentary end view resembling Fig. 3, but showing parts of my invention in abnormal positions different from those in which they appear in Fig. 3. Fig. 5 is an enlarged fragmentary sectional view taken on a vertical plane embracing the longitudinal axis of the platen. Fig. 6 is a view taken on a plane represented by the line $x-x$ in Fig. 5 and looking in the direction of the arrows at said line. Fig. 7 is a right-hand end view of the form holder, parts being shown in section and parts broken. Fig. 8 is a fragmentary top plan view of the left-hand portion of the platen frame and platen axle and showing certain features of my invention. Fig. 9 is an enlarged perspective view of part of the platen axle or shaft. Figs. 10 to 14 inclusive are enlarged detached perspective views of different parts of the mechanism embodying my invention.

Referring more especially to Figs. 1, 2 and 8 of the drawings, the main frame of the machine comprises a base frame (not shown) from which rise corner posts 1, supporting a top plate 2. A fixed grooved track-way 3 is supported on the top plate and receives bearing rollers 4, said rollers also cooperating with a grooved track-way 5 carried on a carriage truck 6. The usual connections comprising slide bars 7 and the links 8 connect the carriage truck with the platen carrier or frame, said frame comprising a rear bar 9, side or end bars 10 and a front bar 11. Guide rollers 12 carried by a bracket 13 fixed to the front rail of the carriage engage at opposite sides of a shift rail 14, said shift rail being carried by arms 15 pivoted in the usual manner to the machine frame at their lower ends. The shift rail 14, it will be understood, is movable at will to shift the platen frame fore and aft of the machine on the carriage truck, this shifting movement being for the purpose of changing from upper to lower case and vice versa and being limited by adjustable screw stops 16 supported on the carriage truck 6 and cooperating with stop pins 17 projecting laterally from the usual extensions or arms 10^a rising from the rear of the side bars 10 of the platen frame. Besides its sliding motion on the carriage truck, the platen frame has a pivotal movement thereon, said pivotal movement, as is well understood, being

for the purpose of exposing the writing. The carriage truck and the platen frame comprise a platen carriage for a platen which, as shown clearly in Fig. 5, comprises the usual wooden core 18 inclosed in a sheath 19 of rubber. At its left end the platen is provided with a platen head 20 secured in place by wood screws 21 and having a perforated hub 22 which receives the inner reduced end portion 23 of a platen axle, which axle will be described more in detail hereafter. A set screw 24 serves to secure the platen axle in fixed relation with the platen head 20 and the platen. The left-hand side bar 10 of the platen frame is provided with a slot 25 (Figs. 5 and 8) which receives a bushing 26 having an integral positioning arm 27, the normal position of which is shown in Fig. 8. The bushing is perforated to provide a bearing opening for the portion 23 of the platen axle and normally the outer end of the hub 22 of the platen head abuts the inner end of the bushing 26. The opposite or right-hand end of the platen may be supported on the platen frame in the usual or any other suitable way. It will be understood that the diameter of the bushing 26 is greater than the width of the mouth of the slot 25, the construction being such that the bushing normally prevents the lifting of the platen axle out of said slot while the arm 27 prevents lateral displacement of the bushing 26 and serves to prevent endwise movement of the platen in the platen frame. By turning the arm 27 until it is upright and registers with the mouth of the slot 25 the bushing 26 and the platen may be moved endwise until the reduced end portion of the hub 22 lies within the slot 25, whereupon the platen may be removed from the platen frame. These features of construction do not differ materially from the usual construction found in the No. 8 Remington machine. At its right-hand end the platen is operatively connected with a line spacing ratchet wheel 28 coöperative with which is the usual line space pawl 29, the latter being pivoted at 30 to the upper arm of the angular line spacing lever 31, the latter being operative in the usual way to communicate rotary line space movements to the platen. As the platen is turned or rotated in its bearings on the platen frame or carrier, the teeth of the ratchet wheel 28 coöperate with a detent roller 32 carried by a spring arm 33 secured to the platen frame, said roller serving to maintain the platen in proper line space position.

Referring now to the paper feed and controlling devices, these are best shown in Figs. 1-4 inclusive and comprise two sets of supporting or bearing brackets 34 which are secured to the rear bar 9 of the platen frame by screws 35, said screws also securing

in place pressure springs 36. Each bracket 34 provides a bearing for a pivot pin 37 fixed to the projecting end portions of which are the bifurcated end portions of a Y-shaped hanger arm 38, the hanger arms being bifurcated to embrace the associate brackets 34. Two feed roller shafts 39 arranged end to end, are supported at their ends by the hanger arms 38, and said shafts in turn carry feed roller sections 40 suitably spaced apart by sleeves 41 on the shaft 39. As will be understood from an inspection of Fig. 2, each pair of hanger arms 38 carries a feed roller shaft 39, the two hanger arms of each pair being spaced apart at one side of the middle of the platen frame and the inner hanger arms being close together. Each shaft 39 is provided with two feed roller sections 40 so that, as shown, there are four feed roller sections in all, these four sections being arranged substantially equal distances apart at the rear of the platen and being normally maintained in operative position, that is to say, in contact with the platen or the paper thereon, by the springs 36 which at their lower or free ends press against the lower end portions of the hanger arms 38. It is to be understood, however, that though four feed roller sections 40 are shown mounted in pairs on two separate shafts, this being a convenient and efficient arrangement, yet as far as my present invention is concerned other arrangements of feed roller sections or a single long feed roller may be employed. The hanger arms 38 are each provided with a forwardly and upwardly extending lug 38^a with which coöperates a fin 42 fixed to a rock shaft 43 extending from side to side of the machine at the rear of the platen, said rock shaft, at its right-hand end, bearing on a screw pivot 44 and at its left-hand end extending through a bearing opening in the left-hand side bar 10 of the platen frame. This rock shaft is hand controlled and is adapted to be turned or rocked by means presently to be described so as to cause the fins 42, acting on the tips of the lugs 38^a, to press the hanger arms 38 downwardly and rearwardly against the springs 36, thereby releasing the feed roller sections 40 or, in other words, moving them to inoperative position.

Supported and bearing on the rock shaft 43, one at each side of the set of supporting brackets 34, are small H-shaped hangers 45, each carrying at its lower or free end a small feed roll 46, said feed roll being constantly pressed toward the platen by a wire spring surrounding the rock shaft 43 between the upper arms of the associate H-shaped hanger 45, one end of said spring coöperating with the hanger and the other end with the rear bar 9 of the platen frame, as clearly shown in Fig. 2. The small feed roll sections 46 will be termed hereinafter

terminal feed rollers, while the feed roller sections 40 will be termed collectively the main paper feed roller. It will be understood that the terminal feed rollers 46 are adapted to cooperate with the side portions of a wide work sheet usually called a record sheet, while the main paper feed roller is adapted to cooperate both with the wide record sheet and a narrow sheet, usually a bill or sales sheet, which bill sheet is of such width that at no time is it controllable by the terminal paper feed rollers between which it passes during the paper feeding movements.

A U-shaped stop frame or stop bar 47 extends lengthwise of the platen behind the main feed roller and is provided with lateral extensions or ears 47^a which receive headed screws 48, said screws serving to secure the stop frame or arm 47 to bearing blocks 49, the latter being mounted loosely on the rock shaft 43 outside of the supplementary hangers 45. Secured at intervals, lengthwise of the stop bar 47 are hollow cylindrical boxes or casings 50 in each of which is mounted an individual spring-pressed stop pin 51, some of the stopping pins or stops 51 being adapted to contact with the platen between the sections of the main feed roller, while the two outermost bearing boxes 50 are mounted on the ears 47^a of the stop bar so that the associate stops 51 are outside both feed rollers. The outermost stops 51 are useful only when the terminal feed rollers 46 are dispensed with. The stops 51 are normally maintained in inoperative position at some distance from the platen as shown in Fig. 3 by a pair of wire springs 52, each spring being secured by a headed screw 53 to one of the ears 47^a of the stop frame or bar, said springs extending upwardly through holes 54 in the rear bar 9 of the platen frame and bearing against the sides of said holes. As shown in the rear view, Fig. 2, the left-hand bearing block 49 of the stop frame is cut-away to form a shoulder 49^a and adapted to cooperate with this shoulder is a shoulder 55 formed on a collar 56, which collar is secured by a screw 57 to the rock shaft 43. Normally the shoulders 49^a and 55 are separated as shown, but when the rock shaft is turned or rocked rearwardly the shoulder 55 is adapted to engage with the shoulder 49^a and, overcoming the springs 52 to swing the stop bar 47 and stops 51 forwardly and upwardly toward the platen, bringing the stops 51 into operative position. The parts are arranged so that this movement of the stops 51, however, will not take place until after the main feed roller has been released by the cooperation of the fins 42 with the lugs 38^a.

The rock shaft 43 is manually controlled by means of an arm or hand lever 58 secured to the left-hand end portion of the rock

shaft 43 which projects outwardly through and beyond the left-hand side bar 10 of the platen frame, as shown in Fig. 2. The details of the arm 58 are best illustrated in Fig. 7. The end portion of the rock shaft 43 is flattened as indicated at 43^a and the lower end portion of the arm 58 is perforated to fit over the rock shaft and receives a set screw 59, the inner end of which engages with the flattened face 43^a of the rock shaft 43 to maintain said rock shaft and the arm 58 in fixed relation. The rear face of the arm 58 is provided with a longitudinally extending slot 60 which receives a detent or latch, said detent or latch comprising a finger portion or handle 61, a tail 62 and a rearward extension 63 and being pivoted at 64 to the arm 58. The extension 63 is provided with two lugs 65 and 66 projecting from its lower face and adapted to cooperate with the closed end of a cut-away or notch 17^a formed at the rear of the left-hand stop pin 17. Normally the detent or latch is positioned as shown in Figs. 1 and 7 with its tail 62 against the bottom of the slot 60, said detent or latch being maintained in this normal position by a coiled spring 67 which is seated in a depression in the bottom of the slot 60 and bears against the detent or latch above the pivot 64.

The paper feeding and controlling devices thus far described are especially adapted to facilitate billing operations and their operation may be briefly referred to in connection with those billing operations in which a record and a sales sheet are fed through the machine and written upon simultaneously by means including an interposed carbon sheet or inlay. This method of billing generally stated is well understood in the art and it is thought unnecessary to refer to it at length. The various work sheets are entered in the machine over a paper table (not shown) and pass down between the usual paper apron 68 and the platen, thence between the platen and the feed rollers and then upwardly and outwardly between the platen and the paper fingers which are conventionally shown in Fig. 1 and designated by the reference numeral 69. It will be understood that the terminal feed rollers are arranged to cooperate properly with the side edge portions of the record sheet and that substantially during the entire time that the record sheet is in the machine the record sheet will be controlled by said terminal feed rollers. The bill or sales sheet, however, although controlled by the main feed roller is narrower than the distance between the terminal feed rollers and so never cooperates with them. Assuming for the moment that a bill has been entered in the machine and written, its entries being duplicated through the interposed carbon sheet on the record sheet, and that it is desired to re-

move the written bill and introduce a fresh bill into the machine, the operator first presses rearwardly against the arm or hand lever 58 until the lug 65 on the detent or latch engages with the notch 17^a on the stop pin 17, as shown in Fig. 3. It will be understood that prior to the engagement of the lug with the notch the rounded face of said lug rides over the rounded face of the stop pin 17 in front of the notch 17^a, the detent spring 67 being compressed slightly to permit of this riding movement, and that as soon as the point of the lug 65 passes over the edge of the slot or cut-away 17^a said lug will be forced downwardly to the position shown in Fig. 3 by the detent spring 67. The rearward movement of the arm 58 from the normal position shown in Fig. 1 to that shown in Fig. 3 causes a corresponding movement of the rock shaft 43 during which movement the fins 42 on said shaft cooperate with the lugs 38^a on the hanger arms 38 to release the main feed roller or swing it away from the platen from the operative position shown in Fig. 1 to the inoperative position shown in Fig. 3. During this movement it will be understood the shoulder 55 on the collar 56 will approach the shoulder 49^a on the stop frame or bar, but these shoulders will not engage and hence the stop bar and the stops 51 will not be affected but will remain in normal inoperative position. It will, therefore, be apparent that with the parts positioned as shown in Fig. 3 the main feed roller will be locked out of operative position, the stops 51 will remain in inoperative position and the terminal feed rollers 46 will remain in spring-pressed engagement with the sides of the record sheet, although of course a relative turning movement has taken place between the terminal hangers 45 and the rock shaft 43 on which they are loosely mounted. As a result of the operation just described the bill sheet is freed and may be removed from the machine while the record sheet still remains under the control of the terminal paper feed rollers 46. After the removal of the bill sheet and prior to the entrance into the machine of a new bill sheet the operator again presses the arm 58 rearwardly until the lug 66 on the detent or latch, riding up over the rounded part of the stop pin 17, engages with the notch 17^a thereon, as shown in Fig. 4. During the turning movement of the rock shaft from the position shown in Fig. 3 to that shown in Fig. 4 the fins 42 will cooperate with the lugs 38^a to swing the main feed roller somewhat farther from the face of the platen and the shoulder 55 on the collar or device 56 will cooperate with the shoulder 49^a to overcome the springs 52 and bring the stops 51 into contactive engagement with the platen, as shown in Fig. 4. These stops 51, which are commonly termed leading edge stops,

will now be in position to cooperate with the leading edge of the new bill sheet which may now be introduced into the machine and moved downwardly over the paper table and paper apron and between the platen and the main feed roller until the leading edge of said bill sheet contacts with the stops 51. The locking engagement between the lug 66 and the notch 17^a serves, of course, to lock the parts in the positions shown in Fig. 4 so that the operator has the use of both hands to enter the new bill sheet and square or aline it by the aid of the leading edge stops 51. This being accomplished, the handle 61 of the detent or latch may be pressed forwardly to cause the lug 66 to swing upwardly about the pivot 64 until said lug disengages from the notch 17^a, whereupon the operator still maintaining the detent or latch against the pressure of the detent spring 67, may grasp the arm 58 and pull it forward, thereby restoring the main paper feed roller and the leading edge stops 51 to normal position.

From the operations just described it will be understood that means are provided for squaring each bill sheet as it is introduced into the machine and for starting it off under the control of the line spacing devices from a predetermined position. In order to determine when a work sheet has been fed far enough forwardly, either by the usual line spacing devices or by a manual turning of the platen, to begin the writing of the first line on said bill sheet without that portion of the work sheet itself which is to be written upon being visible to the operator, I provide means now to be described. Said means, generally stated, comprises a rotary indicating device or form holder which is normally connected by a two-part clutch with the platen so that as the latter is turned the form holder is turned with it. The form holder carries a removable form which corresponds with the bill sheet or other work sheet which is to be written upon, said form cooperating with a stationary pointer in the operator's view so as to indicate to him without the exercise of mental effort on his part that the corresponding parts of the work sheet or bill have been brought to the printing point on the platen. Means are further provided for unclutching the two-part clutch so as to uncouple the form holder from the platen, said means being automatically operative by the means for releasing the main feed roller, *i. e.*, the arm 58. The form holder is provided with a restoring spring which as soon as the clutch is unclutched returns said form holder to normal position, so that each time a new work sheet or bill sheet is introduced and fed around with the platen the form holder turns or is fed with it, starting always from the same normal position.

The indicating devices just referred to are preferably mounted upon or supported on the left-hand platen axle which is best shown in Figs. 5 and 9. Besides the reduced inner end portion 23 to which the left-hand platen head is secured, said axle comprises an enlarged cylindrical bearing portion 70 provided near its inner end with a circumferential groove or depression 71. The cylindrical portion 70 is to the left of the reduced portion 23 and following said portion 70 at its left is a somewhat smaller and longer cylindrical bearing portion 72 which is succeeded by a still smaller cylindrical portion 73, the latter being provided with a circumferential groove or depression 74 and being succeeded by a reduced end portion 75. The latter receives the hub 76 of the usual left-hand finger wheel 77, said finger wheel being secured in a fixed relation with the axle by a set screw 78 which engages a tapped hole in the hub 76 and abuts against the reduced end portion 75 of the platen axle. The form holder proper is shown detached in Fig. 10 and is in the form of a hollow cylinder or drum 79 open at its inner end and closed at its outer end, the closed outer end or head being provided with a central perforation 80 and with three openings 81. The form holder is provided with end flanges 82 having oppositely disposed circumferential undercut grooves 83, said grooves being provided with entrance slot-ways 84. Back of the slot-ways a bar-like stop 85 is suitably secured to the cylindrical face of the form holder. A form 86 made of a strip of paper or other suitable material of a width substantially equal to the distance between the bottoms of the oppositely disposed grooves 83 and provided with words or other matter corresponding to the printed matter on the work sheet or bill to which it serves as a guide, is entered in the slot-ways 84 and passed around the form holder 79 until the bottom edge of the form contacts with the stop or bar 85. Preferably a cover or guard 87, made of celluloid or other transparent material and of the same dimensions as the form 86, is passed around the form holder with said form, the cover 87 lying within the grooves 83 and covering the form 86 so as to prevent it from being soiled or defaced.

A clutch part 88 (shown detached in Fig. 11) having crown ratchet teeth 89, a hub 90 and a central bearing opening 91, is arranged with its hub 90 within the opening 80 in the form holder and is secured in a fixed relation with said form holder by screws 92 which pass through the openings 81 in the head of the form holder and enter tapped holes in the outer face of the body of the clutch part 88. The bearing opening 91 in the clutch part 88 bears on the cylindrical portion 73 of the platen

axle. A circular positioning plate 93 is secured to the outer face of the form holder by one of the screws 92. Said positioning plate, as best shown in Figs. 1 and 5, is provided with a slot-way 94 which enables the positioning plate to straddle the platen axle and engage with the groove 74 therein. The construction is such that the form holder, the clutch part 88 and the positioning plate 93 may turn freely together on the platen axle, the clutch part 88 serving as a sort of bushing for the form holder. Endwise movement of the form holder on the platen axle, however, is prevented by the positioning plate 93, the sides of which cooperate with the sides of the groove 74 to maintain the form holder and the platen axle in an unchanging relation lengthwise of said platen axle. The crown ratchet teeth 89 on the clutch part 88 preferably equal in number the teeth of the line space ratchet wheel. Normally cooperative with the teeth 89 are crown ratchet teeth 95 formed on a second clutch part 96, which part is shown detached in Fig. 12. The clutch part 96 is formed with a circumferential groove 97, and has a bearing opening 98, a counterbored opening 99 and a longitudinal slot-way 100. The bearing opening 98 cooperates with the left-hand end of the cylindrical portion 72 of the platen axle, while near its mouth the counter-bored opening 99 cooperates with the cylindrical portion 70 of said platen axle. The clutch part 96 is prevented from turning on the platen axle by a square pin 101 which is fixed to and extends radially from the portion 70 of the platen axle into the slot 100 in the clutch part 96, the construction being such that while said clutch part may be moved endwise of the platen axle it can never be turned independently of the latter. A wire spring 102 is coiled around the part 72 of the platen axle, said spring being seated within the counter-bore 99 in the clutch part 96 and bearing at one end against the bottom of said counter-bore and at the other end against the left-hand face of the large cylindrical part 70 of the platen axle. The spring 102 serves normally to maintain the ratchet teeth 95 engaged with the ratchet teeth 89 and thereby to render the two-part clutch operative, the ratchet teeth being so shaped that motion is transmitted from the clutch part 96 to the clutch part 89 when the platen is turned in line spacing direction. The result will be that normally the two-part clutch serves to connect the form holder with the platen so that as the platen is turned in line spacing direction the form holder will be turned with it. When the platen is turned in the opposite direction the form holder will normally be turned with it until said form holder is arrested by stop devices presently

to be described, after which arrest, if the platen be farther turned in the same direction, the cooperating ratchet teeth of the clutch parts will click over one another, the spring 102 yielding to permit this, and the result being that a relative turning movement between the platen and the form holder will take place.

As has been said, means are provided to unclutch the parts of the clutch to enable the form holder to be turned automatically independently of and relatively to the platen. Said unclutching or disconnecting devices will now be described. They comprise a cam member shown detached in Fig. 13 and designated as a whole by the numeral 103. The cam member comprises a hollow cylindrical body portion 104 provided with oppositely disposed cam slots 105. The inner end of the body portion 104 is provided with an annular internal flange 106, the inner wall whereof serves as a bearing opening cooperating with the part 70 of the platen axle. At the opposite or left-hand end of the body portion 104, and preferably formed integrally with it, is a spring casing or cover 107 formed with a groove 108 (Fig. 5). The sides of the annular flange 106 are provided with oppositely disposed threaded openings 109 which receive headed screws 110, the latter serving to secure a positioning member in a fixed relation with the cam member 103. The positioning member is best shown in Figs. 5, 7 and 8 and comprises a circular plate-like body portion 111 provided with a vertical slot 112 and having extending inwardly from its top a horizontally disposed lateral finger 113. The slot 112 enables the positioning member to straddle the platen axle and engage the groove 71 therein and the lateral finger 113 is adapted to enter the mouth of the slot 25 in the left-hand side bar 10 of the platen frame. The construction is such that movement of the cam member 103 endwise of the platen axle is prevented by the cooperation of the sides of the slot-way 112 in the positioning member with the sides of the groove 71 in the platen axle, while at the same time rotary movement of said cam member is prevented by the cooperation of the sides of the finger 113 with the sides of the mouth of the slot 25 within which said finger snugly fits, as shown in Fig. 8. The result is that the cam member will be held stationary during the turning movements of the platen, the form holder and the other rotary parts connected therewith. The bore of the body portion 104 of the cam member is such that the clutch part 96 which is inclosed within said cam member may be slid freely back and forth on the platen axle and may turn freely with said axle. Surrounding and bearing on the body portion 104 is a hand-actuated rotary part or sleeve 114 shown detached in Fig.

14, said rotary sleeve being provided at its right side with a flange 115, the flange 115 being formed with a plurality of gear teeth 116 and constituting a mutilated gear wheel. Connecting devices or members in the form of headed screw pins 117 are screwed into the sleeve 114 diametrically opposite each other, said screw pins passing through the cam slots 105 and entering the circumferential groove 97 in the clutch part 96, thereby serving to connect the sleeve 114 with the clutch part 96 through the interposed cam member. The construction is such that when the sleeve 114 is turned on the body portion 104 of the cam member forwardly, or in a direction opposite to the line spacing turning movements of the platen, the screw pins will cooperate with the cam slots 105 in the cam member to force the sleeve 114 to slide rightwardly longitudinally of said cam member, said sleeve consequently having simultaneously a turning or rotary and a sliding movement. As shown in Fig. 5 the inner ends of the screw pins 117 are normally very close to the right-hand side of the circumferential groove 97 in the clutch member 96 and consequently as the sleeve 114 is slid rightward on the outside of the cam member 103 the clutch part 96 will be slid rightward within said cam member and longitudinally of the platen axle, this sliding movement of the clutch part being, of course, transmitted to it through the screw pins 117. It will be obvious that as the screw pins move to the right they are also traversing the cam slots 105 and so turning circumferentially of the platen axle which itself remains motionless. Consequently at the same time that the screw pins are pressing the clutch part 96 to the right they are also moving around the groove 97 in said clutch part so that at each instant their points of contact with the inner side of said groove are changing. It will be understood that the sliding movement of the clutch part 96 rightwardly lengthwise of the platen axle causes a compression of the spring 102 and effects an unclutching of the two-part clutch, causing the ratchet teeth 95 to separate from the ratchet teeth 89. As a result the form holder 79 will be free to be turned independently of the platen.

The turning movements of the sleeve 114 to effect a disconnection of the connecting means or two-part clutch are under the control of the operator and they are preferably accomplished automatically by the operation of the releasing means for the main feed roller or paper controlling devices, said releasing means comprising the rock shaft 43 and the arm or throw-off lever 58 fixed thereto. As clearly shown in Fig. 7 a short gear segment 118 is fitted over the rock shaft 43 and is provided with a tail piece 119 which receives a headed screw 120, the latter se-

curing the gear segment to the inner face of the arm 58 and in a fixed relation therewith. The teeth 121 of the gear segment mesh with the gear teeth 116 on the flange 115 of the sleeve 114. The construction is such and the parts are so proportioned and arranged that when the arm 58 is pressed rearwardly from normal position to the position shown in Fig. 3, so as to release the main paper feed roller, the gear connection will cause a turning movement of the sleeve 114 on the cam member 103 sufficient to move the clutch part or member 96 longitudinally rightward far enough to disconnect it from the cooperating clutch part 88, thus leaving the form holder free so that it may be turned on the platen axle back to normal position by a restoring spring device presently to be described. When the sleeve 114 is turned in the manner just described, it also moves toward the right, on account of the screw pins 117 moving in the cam slots 105. The gear teeth 116 are of such width as to permit of this movement without running said teeth out of mesh with the teeth 121.

The spring restoring device is best shown in Figs. 5 and 6 and comprises a spring 122 coiled around the clutch part 88 within the casing 107. The inner end of the spring 122 is hooked over a lug or pin 123 fixed to the clutch part 88 and the outer end of said spring is secured by a rivet 124 to a friction band 125, said friction band expanding against the face of the groove 108 in the casing 107 and the friction between said friction band and said casing being sufficient to hold the outer end of the spring 122 until said spring is wound up tightly enough to do the work for which it is intended, but said friction band will slip in the casing before said spring is wound too tight. The tension of this spring opposes the line-spacing movement of the platen, and the device just described prevents said spring from ever acquiring sufficient tension to interfere with this movement. Said device also prevents injury to the spring. In the ordinary operation of the machine the spring 122 will not acquire sufficient tension to move the friction band in the casing, but the construction described is desirable in order to provide a sort of safety mechanism to prevent the spring 122 from being wound up to the breaking point by unskillful or careless manipulation of the parts. The spring 122, it will be understood, tends constantly to expand and to turn the clutch part 88 and the form holder 79 in the direction of the arrow in Fig. 6 which is opposite to the line space turning movements of the platen. Consequently as soon as the clutch part 96 is disconnected from the clutch part 88 the spring 122 will operate automatically to turn the form holder on the platen axle independently of the platen and in a direction

opposite to that in which the platen is turned in line spacing. This independent turning movement of the form holder will continue until it is arrested in normal position by stop devices comprising a stop rod 126 (Figs. 5, 6 and 7) extending within the form holder from side to side thereof and secured at its ends to said form holder, said stop rod 126 cooperating with the tooth 127 of a gravity pawl which comprises also a tail 128 and is pivoted on a headed screw 129 which is secured in the right-hand face of the casing 107. Normally the tail 128 of the gravity pawl is maintained by gravity in contact with the body portion 104 of the cam member 103, so that the pawl tooth 127 will normally be in position to cooperate with the stop 126 to arrest the form holder when it is turned backwardly either with the platen or automatically independently of the platen by the spring 122. When the form holder is turned in the opposite direction, however, or in the direction of the arrow in Fig. 7 (which turning movement will take place when the platen is turned in line spacing direction) the stop rod 126, if the platen and form holder are turned through a complete revolution, will, just prior to the completion of said revolution, engage with the opposite side of the pawl tooth 127 and will press said tooth downwardly out of the way, lifting the tail 128 of the gravity pawl, said gravity pawl of course returning to the normal position automatically as soon as the stop rod 126 has passed. It will be apparent that as soon as the gravity pawl drops back to normal position the pawl tooth 127 will again be in position to arrest the stop 126 so that if the form holder should now be released the spring 122 will operate only to turn it backwardly until the stop rod 126 engages with the pawl tooth 127 as shown in Fig. 7.

From what has been said it will be apparent that the stop devices comprising the stop rod 127 and the gravity pawl will cooperate to prevent a backward turning movement of the form holder greater in extent than substantially a single complete revolution. If the form holder has been turned almost through a complete revolution but is released before the stop rod 126 depresses and passes over the pawl tooth 127, the form may be turned backwardly just as far as it had been turned forward in line space direction with the platen; but if the form holder has been given a forward turning movement greater than a complete revolution, so that the stop rod 126 has passed over the pawl tooth and beyond it, then the backward turning movement of the form holder can continue only to an extent substantially equal to the amount by which the turning movement in line space direction has exceeded a complete revolution.

tion. If the platen be turned backward when the rod 126 is in contact with the stop 127, the form holder will remain stationary and the clutch teeth 95 will snap idly past the clutch teeth 89.

A fixed indicating device or pointer is preferably provided to cooperate with the indicating marks on the form 86 to enable the operator to accurately determine what part of the work sheet is at the writing line. In the present instance this indicating device or pointer is in the form of a metal strip which, as shown in Figs. 13 and 8, comprises an angularly disposed inner end portion 130 which is secured by a headed screw 131 to the right-hand face of the casing 107. Extending at right angles to the part 130 and within the form holder parallel to its axis is a part 132, said part being bent back parallel to itself at 133 where it clears the inner edge of the form holder. A part 134 extends leftwardly from the bend 133 outside the form holder and in such a position that its upper edge cooperates with the lines or indicating marks on the form 86.

From what has been said it will be understood that at the beginning of an operation the form holder will be in the position illustrated in Figs. 5, 6 and 7 with the stop devices, comprising the stop rod 126 and the gravity pawl, in cooperative engagement. Let it be assumed that a bill sheet has been entered in the machine and squared by the leading edge stops 51 and that the arm 58 has been released from the position shown in Fig. 4 and restored to normal position as shown in Figs. 1 and 7 in which position, of course, the bill sheet is controlled by the main paper feed roller. If now the platen be turned in line spacing direction, the form holder will be turned with the platen through the two-part clutch connection. This turning movement will be continued by the operator until the first line of the indicating marks on the form 86 is opposite the upper edge of the line pointer 134 as shown in Fig. 8. Assuming that the form 86 has been properly adjusted on the form holder and that the indicating marks on said form correspond with the blanks on the bill sheet which are to be filled in, it will, of course, be apparent that the first blank space on the bill sheet which is to be filled in will now be in line with the printing point on the platen. For purposes of description it has been assumed that a bill sheet is in use which has printed on it "Sold to" followed by a blank to be filled with the name of the purchaser and that the subsequent lines to be filled in are those for the "Address," "Shipped by" &c. The form illustrated in Fig. 8 is provided with corresponding indicating marks and it will be understood that after the turning movement of the platen and form holder

above described the indicating marks "Sold to" on the form holder will be in register with the stationary pointer 134. In commercial billing operations it is common to make use of a denominational tabulating mechanism, and assuming that such mechanism is employed in the present case, and that a tabulating scale for the special work in hand is also employed, the next step is to actuate the proper tabulating key to effect the release of the carriage and its subsequent arrest at the proper point in the line for filling in the name of the purchaser following the printed words "Sold to" on the bill sheet. After the name has been filled in, the platen is line spaced, causing the form holder to turn with it, the extent of line spacing being sufficient to bring the next indicating mark on the form holder *i. e.*, "Address," in register with the pointer 134. It will be understood that the "Address" line on the bill sheet will now be in register with the printing point and that by operating the tabulating mechanism as before the carriage may be brought to the proper point for filling in the address of the purchaser. In the same way the subsequent blanks on the bill sheet may be filled in by the aid of the form holder without the necessity of at any time raising the platen carrier or frame to inspect the writing. After the blanks have been filled in as described, the body of the bill may be written in the usual way by operating the tabulating mechanism and the printing instrumentalities. When the bill has been completed it may be released from the control of the main paper feed roller by pressing the arm or hand lever 58 rearwardly from the normal position to that illustrated in Fig. 3. This operation releases the main paper feed roller as has already been explained and also causes the gear teeth 121 and 116 to cooperate to turn the sleeve 114 and effect an unclutching of the two clutch parts 88 and 96, thereby releasing the form holder and enabling the spring 122 to turn it back automatically to normal position. As has been explained if the platen has been turned through less than a complete revolution in line spacing direction during the writing of the bill sheet, the automatic returning movement of the form holder will be of a corresponding extent, but if the filling in of the bill sheet has necessitated a turning movement of the platen of 360° or more, the automatic retruning movement of the form holder will only be of an extent corresponding to the excess over 360°. The written bill sheet having been released from the control of the main feed roller it may now be removed and the arm 58 may be pushed rearwardly to the position shown in Fig. 4, bringing the leading edge stops to operative position. A fresh bill sheet is next inserted and squared, whereupon the arm 58

is released and restored to normal position and the operations above described may be repeated as often as desired.

The above is an outline of one way of making use of my improvements, but the described routine may, of course, be departed from at pleasure and to suit the convenience of the operator. For instance, if it is not desirable or convenient to make use of tabulating mechanism or a special tabulating scale to enable the tabulating mechanism to be employed to position the carriage for filling in the blanks on the bill, a heading holder of any desired style may be attached to the platen carriage and a heading corresponding with the heading of the bill may be arranged in the heading holder, said heading of course extending lengthwise of the platen and registering with the usual carriage scale. When such a heading is employed the platen is turned to the proper line spacing position by the aid of the form holder and then the usual carriage release key is actuated and the carriage is moved by hand in the direction of its length until the desired mark on the heading registers with the usual or other pointer, indicating that the platen has been brought to the proper letter space position for beginning the writing.

In record billing, that is in billing work in which the items of each bill are duplicated on a record sheet as has been described above, it is preferable if the heading of the bill is a deep one to provide some means of "condensing," as it is called, the entries of different bills on the record sheet; that is of bringing the reproduction of the first line of one bill close to the reproduction of the last item of the preceding bill instead of having a space on the record sheet between these reproductions corresponding in width to the depth in whole or in part of the bill head. Various means have been made use of in the art for facilitating the condensation of the record. An example of such means is shown in my pending application, Serial No. 345,106, filed November 26th, 1906. My novel form holder may be used in conjunction with condensed record devices and when so used greatly facilitates the writing or filling in of the heading of the bill or of that part of the bill which precedes the items sold, the assistance afforded by the form holder increasing with the number of blanks in or elaborateness of the heading. When the form holder is used in connection with condensed record devices the latter may be employed to bring the first line of the bill opposite the printing point and thereafter the form holder may be made use of to facilitate the filling in of the remaining lines of the heading, enabling this work to be done without the necessity of raising the platen

carrier to inspect the writing. Or if desired, my novel form holder may itself be employed as a condensed record device. A brief description will be given of one way of so employing the form holder.

Assuming that it is desired to leave three line spaces between consecutive records, a mark may be made on the form in such a position that it would register with the pointer 134 when the form holder is advanced three line spaces. When a bill has been written, the form holder may be turned forwardly by hand, leaving the platen stationary, until the indication for the first writing line is in register with the pointer. During the turning movement the bill will remain stationary with its last line at the printing line next the platen and the form holder may be turned backward by the finger wheel until the mark above referred to registers with the pointer. The cast-off lever 58 may then be operated and the bill sheet removed and a new bill sheet inserted. The new bill sheet may be advanced to writing position in the usual way by the aid of the form holder which will be turned from normal position to the first writing line marked on the form (*i. e.*, the "Sold to" line) during the advance of the new bill. By this operation it will be apparent that the platen will be turned backward a distance equal to the depth of the heading less three line spaces, so that when the first writing line on the new bill is at the printing point the last written line of the record of the old bill will be three line spaces in advance of the printing point.

It will be obvious that instead of using the devices embodying my present invention in conjunction with each other as has been described, some of the devices may be used entirely independently of others. For example, the heading holder may be dispensed with and the locking devices for the main paper feed roller and the leading edge stops may be employed, while at the same time the terminal paper feed rollers may or may not be used according as the work is or is not to be duplicated for record purposes as it is written. Moreover the form holder may be employed in conjunction with all of the paper feeding and controlling devices as described or the use of part of said paper feeding and controlling devices may be dispensed with when the form holder is employed. The form holder, for example, has in practice proved of especial benefit in facilitating certain forms or styles of billing work in which the writing is not duplicated for record purposes. In some commercial houses, for instance, which are divided into departments handling different classes of goods, it is common to receive orders involving goods of a considerable number of classes. In such cases it is the practice in

some instances to render a bill from each department from which goods are ordered. The various departmental bills covering a single order from the same customer may be introduced into the machine at the same time in a single set, a carbon inlay being arranged previously between the heading parts only of each two bill sheets. The set of bill sheets may be properly alined by aid of the leading edge stops and then fed around with the platen until the form holder indicates that they have been brought to the proper position for filling in the first line. Usually the headings of such departmental bills will include blanks for filling in considerable data such as "Sold to," "Address," "R. F. D. No.," "Shipped by," "Cash," "When shipped," &c. These blanks may be filled in without lifting the carriage by the aid of the form holder and as each blank is filled in it will be reproduced on all of the set of bill sheets through the interposed carbon sheets or inlays. The blanks in the bill heads having been filled in, the operator, by the aid of the form holder, line spaces the platen to the position for writing in the first item of the first bill, and this having been written the remaining items of the bill are written in the usual way. As has been stated the carbon inlays only cover the heading portions of the bill sheets so that the items on the first bill will not be reproduced on any of the other bills. The first bill having been completed the operator may release the main feed roller by pressing back the arm 58 and the first bill may then be withdrawn. Preferably in this class of work the gear connections between the arm 58 and the sleeve 114 (which connections in the present case comprise the gear teeth 116 and 121) are so proportioned and arranged that the clutch members are not unclutched by the movement of the arm 58 to the first position illustrated in Fig. 3, and so that said clutch parts will be released or separated only when the further movement of the arm 58 to the position illustrated in Fig. 4 is made. This change obviously is simply a matter of adjustment of the parts, and when the form holder is so controlled it will be understood that the release of the main paper feed roller and the withdrawal of the outside or first bill sheet after completion may be effected without affecting the relation between the form holder and the platen. By using the form holder, after the first written bill sheet has been withdrawn, the platen may be turned backwardly, carrying with it the remaining bills until the second bill is in position for having its first item written on it. This item having been written, the bill is spaced forwardly and the remaining items on it are written in the usual way. Then said second bill may be withdrawn from the ma-

chine and the remaining bills turned backwardly by using the form holder until in proper position for beginning the writing of the items on the third bill. The operations above outlined may be repeated until all of the bills embraced in the single order have been finished. It will be apparent that by employing this method the headings of the large number of bills may all be written simultaneously, and that then without previously withdrawing the bills, the items of each bill, which of course will differ from the items of all the other bills, may be written one at a time and then the bills may be withdrawn as completed. Other methods besides those above referred to.

It will be noted that my improved form holder may be used in various ways and that by its use the operator is enabled to fill in a plurality of entries on a sheet without the necessity of inspecting the work; that the memory is not taxed in feeding the work sheet to the various line-space positions; and that the form holder is automatically positioned for new work sheets.

Various changes in the construction and arrangement of the different parts may be made within my invention. For example, it will be apparent that though the form holder is shown as arranged on the platen axle and connected therewith by a clutch device comprising cooperating ratchet teeth, yet said form holder may be arranged on another part of the machine and may be operatively connected with the platen by some means other than the clutch devices shown. It will also be understood that though I prefer to combine the parts so that the same hand operation may be effective to operate certain of the paper feeding and controlling devices and also to effect a disconnection between the form holder and the platen, yet these operations may be effected by actuating different parts.

It will be seen that by my invention I provide in combination with a rotary paper roller or platen, a rotary indicating device, line indicator or form holder, means normally connecting said device with said platen to cause said device to turn with the platen, said connecting device comprising a two-part clutch; that means are provided for disconnecting or uncoupling the indicating device or form holder by separating the parts of said clutch; that other means are provided for automatically returning said form holder or indicating device to a normal position, said form holder, under the control of the returning means, rotating relatively to and independently of the platen; that the means for clutching or separating the parts of the two part clutch are preferably brought into operation automatically and are operated at the same operation as or si-

multaneously with the actuation of the releasing means for the paper controlling devices, that the clutching and unclutching means comprise a stationary cam member provided with cam slots, a hand-actuated rotary part or sleeve outside of the cam member, and a connecting device or devices, namely the screw pins 117, which pass through the cam slots in the cam member and connect the rotary part or sleeve with one of the clutch parts inclosed within said cam member, the cam member controlling through its slots the position of the rotary part or sleeve and of the connecting clutch part when rotary movement is communicated to said sleeve by the hand-actuated mechanism comprising the gear teeth 116 and 121 and the arm or hand lever 58; and that the form holder is shaped like a hollow drum having one end open and that said form holder is of such dimensions that the connecting means or clutch, the disconnecting devices comprising the rotary sleeve and the connecting screw pins besides the returning spring for the form holder, as well as the greater part of the stationary cam member are all contained within the drum-like form holder, thereby conducing to the neat appearance of the mechanism and also assisting to prevent accidental derangements of the parts named by providing a suitable cover for them.

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

1. In a typewriting machine, the combination of a rotary platen, a rotary indicating device, means operatively connecting said device with said platen to cause said device to turn with said platen, means for automatically disconnecting said device and platen, and means operating automatically to effect a relative rotary movement between said device and said platen.

2. In a typewriting machine, the combination of a rotary platen, a rotary indicating device, means for operatively connecting said device with said platen to cause said device to turn with said platen, means for automatically disconnecting said device and platen, and a spring operating automatically to turn said indicating device independently of said platen.

3. In a typewriting machine, the combination of a rotary platen, a rotary indicating device, means for operatively connecting said device with said platen to cause said device to turn with said platen, means for automatically disconnecting said device and platen, means operating automatically to effect a relative rotary movement between said device and said platen, and a stationary pointer coöperative with said indicating device to indicate the writing line on the platen.

4. In a typewriting machine, the combi-

nation of a rotary platen, a rotary indicating device, means for operatively connecting said device with said platen to cause said device to turn with said platen, means for automatically disconnecting said device and platen, a spring operating automatically to effect a relative rotary movement between said indicating device and said platen, and a stationary pointer coöperative with said indicating device to indicate the writing line on the platen.

5. In a typewriting machine, the combination of a rotary platen, a cylindrical form holder rotatably mounted on the axle of said platen, a two-part clutch, one part of said clutch being fixed to the form holder and the other part having a pin and slot connection with the platen axle, a spring normally maintaining the parts of said clutch in engagement, a fixed cam member, a sleeve rotatable on and adapted to be cammed by said cam member, a connection between said sleeve and the second described part of said clutch, hand operated means for turning said sleeve on said cam member to disengage the parts of said clutch, and a spring operating to turn said form holder on the platen axle when the parts of the clutch have been disengaged.

6. In a typewriting machine, the combination of a rotary platen; a rotary indicating device; a clutch comprising two parts normally operative to connect said indicating device with said platen, and means for disconnecting the parts of said clutch, said means comprising a cam member, a hand-actuated rotary part, and a connection between said rotary part and one part of said clutch, said connection being controllable by said cam member.

7. In a typewriting machine, the combination of a rotary platen; a rotary indicating device; a clutch comprising two parts normally operative to connect said indicating device with said platen; and means for disconnecting the parts of said clutch, said means comprising a stationary cam member, a rotary sleeve, a connection controllable by said cam member between said rotary sleeve and one part of said clutch, and hand-actuated means for turning said sleeve.

8. In a typewriting machine, the combination of a rotary platen; a rotary indicating device; a clutch comprising two parts normally operative to connect said indicating device with said platen; and means for disconnecting the parts of said clutch, said means comprising a stationary cam member, one part of said clutch being at one side of said cam member, a rotary part at the opposite side of said cam member from said last named clutch part, a connection between said last named clutch part and said rotary part, said connection being controllable by said cam member, and hand-

actuated means for actuating said rotary part.

9. In a typewriting machine, the combination of a rotary platen; a rotary indicating device; a clutch comprising two parts normally operative to connect said indicating device with said platen; and means for disconnecting the parts of said clutch, said means comprising a stationary cam member inclosing one part of said clutch, a sleeve rotatable on said cam member, a connection between the inclosed clutch part of the sleeve, said connection being controllable by said cam member, and hand-actuated means for turning said sleeve on said cam member.

10. In a typewriting machine, the combination of a rotary platen; a rotary indicating device; a clutch comprising two parts normally operative to connect said indicating device with said platen; and means for disconnecting the parts of said clutch, said means comprising a stationary cam member inclosing one part of said clutch, a sleeve rotatable on said cam member, a connection between the inclosed clutch part and the sleeve, said connection being controllable by said cam, gear teeth on said sleeve, a gear segment meshing with said gear teeth, and a hand lever for communicating rotary movement to said gear segment.

11. In a typewriting machine, the combination of a rotary platen; a rotary indicating device; a rotary clutch comprising two parts normally connected to couple said indicating device with said platen; and means for disconnecting the parts of said clutch, said means comprising a hollow cylindrical stationary cam member, one part of said clutch being inclosed within said cam member, a sleeve surrounding said cam member and rotatable thereon, a connection between said sleeve and the inclosed clutch part, said connection being controllable by said cam member, and hand-actuated means for turning said sleeve.

12. In a typewriting machine, the combination of a rotary platen; a rotary indicating device; a rotary clutch comprising two parts normally connected to couple said indicating device with said platen; and means for disconnecting the parts of said clutch, said means comprising a hollow cylindrical stationary cam member provided with a cam slot and inclosing one part of said clutch, a sleeve surrounding said cam member and rotatable thereon, a connection between said inclosed clutch part and said sleeve, said connection passing through the cam slot in said cam member and being controllable thereby, and means for turning said sleeve at the will of the operator.

13. In a typewriting machine, the combination of a rotary platen; a rotary indicating device; a rotary clutch comprising two

parts normally connected to couple said indicating device with said platen; and means for disconnecting the parts of said clutch, said means comprising a hollow cylindrical stationary cam member provided with a cam slot and inclosing one part of said clutch, a sleeve surrounding said cam member and rotatable thereon, a connection between said inclosed clutch part and said sleeve, said connection passing through the cam slot in said cam member and being controllable thereby, hand actuated means for turning said sleeve to disconnect said clutch, and a spring device operative to turn said indicating device relatively to said platen.

14. In a typewriting machine, the combination of a rotary platen having a projecting axle; a rotary indicating device mounted on the platen axle, a clutch normally connecting said indicating device with said platen; means for rendering the clutch inoperative; and a spring device operative to turn said indicating device on the platen axle, said spring device comprising a stationary casing, a friction band engaging the inner surface of said casing, and a coiled spring within said casing and connected at one end to said friction band and at the other end to said indicating device.

15. In a typewriting machine, the combination of a rotary platen having a projecting axle; a rotary indicating device mounted on the platen axle; a two-part clutch, one part fast to said indicating device and the other part having a pin and slot connection with said platen axle; and means for separating the clutch parts and thereby disconnecting said indicating device and said platen, said means comprising a hollow stationary cam member, a sleeve rotatable on said cam member, one of said clutch parts being slidable within said cam member, a connection controllable by said cam member between said sleeve and said slidable clutch part, and means operative at will to turn said sleeve and communicate sliding movement to said slidable clutch part.

16. In a typewriting machine, the combination of a rotary platen; a rotary indicating device; means normally connecting said indicating device with said platen; means for automatically disconnecting said indicating device from said platen; a spring device operative to turn said indicating device relatively to the platen; and a stop mechanism operative to limit the extent of relative turning movement of said indicating device.

17. In a typewriting machine, the combination of a rotary platen; a rotary indicating device; means normally connecting said indicating device with said platen whereby the indicating device is caused to turn during the line spacing movement of said platen to an unlimited extent; means for auto-

5 matically disconnecting said indicating device from said platen; a spring device operative to turn said indicating device relatively to the platen; and stop mechanism
 10 operative to limit the extent of relative turning movement of said indicating device to less than a single revolution.

15 18. In a typewriting machine, the combination of a rotary platen; a rotary indicating device; means normally connecting said indicating device with said platen; means for disconnecting said indicating device from said platen; a spring device operative to turn said indicating device relatively to the platen; and a stop mechanism operative to limit the extent of relative turning movement of said indicating device, said stop mechanism comprising a stop on said indicating device, and a cooperating pawl pivoted on a stationary part.

20 19. In a typewriting machine, the combination of a rotary platen; a rotary drum-like form holder; connecting means normally coupling said form holder with said platen; a disconnecting device for disconnecting said form holder from said platen; and a spring device operative to turn said form holder relatively to the platen, said connecting means, said disconnecting device
 25 and said spring device all being inclosed within said drum-like form holder.

30 20. In a typewriting machine, the combination of a rotary platen; a cylindrical form holder, said form holder being provided with slots for receiving a removable form; and a stop on said form holder to properly position the form thereon.

35 21. In a typewriting machine, the combination of a platen; and a form holder connected to turn therewith, said form holder being provided with oppositely disposed circumferential grooves or slot-ways for the reception of a removable form and being provided with entrance slots through which
 40 said form may be inserted and being further provided with means for properly positioning the form.

45 22. In a typewriting machine, the combination of a platen; and a form holder connected to turn therewith, said form holder being provided with oppositely disposed circumferential grooves or slot-ways for the reception of a removable form and being provided with entrance slots through which
 50 said form may be inserted and being further provided with means for properly positioning the form, and a transparent covering of celluloid or the like receivable within the circumferential grooves in the form holder and adapted to cover and protect the form when in place.

55 23. In a typewriting machine, the combination of a platen; a paper feed roller normally in operative position; a stop device
 60 coöperative with an edge of the work sheet

to square the latter, said stop device being normally in inoperative position; and hand-actuated means operative to a limited extent to move the feed roller out of operative position and lock it and operative to a different extent to move the stop device into operative position and lock it.

24. In a typewriting machine, the combination of a platen; a paper feed roller normally in operative position; a stop device coöperative with an edge of the work sheet to square the latter, said stop device being normally in inoperative position; and hand-actuated means operative to a limited extent to move the feed roller out of operative position and lock it and operative to a greater extent in the same direction to move the stop device into operative position and lock it.

25. In a typewriting machine, the combination of a platen frame; a platen thereon; a feed roller support pivoted on said platen frame; a feed roller on said support and normally in operative position; a hand-operated rock shaft; devices on said rock shaft coöperative with said feed roller support to release said paper feed roller; a stop frame provided with stops coöperative with an edge of the work sheet to straighten the latter, said stops being normally in inoperative position; devices on said rock shaft coöperative with said stop frame to move it in position to render the stops operative; and locking devices for holding the rock shaft in abnormal position.

26. In a typewriting machine, the combination of a platen frame; a platen thereon; a feed roller support pivoted on said platen frame; a feed roller on said support and normally in operative position; a hand-operated rock shaft; devices on said rock shaft coöperative with said feed roller support to release said feed roller; a stop frame provided with stops coöperative with an edge of the work sheet to straighten the latter, said stops being normally in inoperative position; devices on said rock shaft coöperative with said stop frame to move it into position to render the stops operative; and locking devices for holding said rock shaft in either of two abnormal positions in one of which positions said feed roller and said stops are both inoperative and in another of which positions said paper feed roller is inoperative while said stops are operative.

27. In a typewriting machine, the combination of a platen frame; a platen thereon; hanger arms pivoted on said platen frame and carrying a paper feed roller which is normally operative; a hand-operated rock shaft; a stop bar; a stop on said bar coöperative with an edge of the work sheet to straighten the latter, said stop being normally inoperative; devices fixed to said rock shaft and coöperative with said hanger arms

to release said paper feed roller; other devices fixed to said rock shaft and cooperative with said stop bar to render said stops operative; and locking devices to hold said rock shaft in abnormal position.

28. In a typewriting machine, the combination of a platen frame; a platen thereon; hanger arms pivoted on said platen frame and carrying a paper feed roller which is normally operative; a hand operated rock shaft; a stop bar; stops on said bar cooperative with an edge of the work sheet to straighten the latter, said stops being normally inoperative; devices fixed to said rock shaft and cooperative with said hanger arms to release said paper feed roller; other devices fixed to said rock shaft and cooperative with said stop bar to render said stops operative; and locking devices operative to hold said rock shaft in either of two abnormal positions, in one of which the paper feed roller and the stops are both inoperative and in the other of which the paper feed roller is inoperative while the stops are operative.

29. In a typewriting machine, the combination of a platen frame; a platen thereon; a feed roller support pivoted on said platen frame; a paper feed roller on said support and normally in operative position; a hand operated rock shaft; devices on said rock shaft cooperative with said feed roller support to release said paper feed roller; a stop frame hung on said rock shaft and provided with stops cooperative with an edge of the work sheet to straighten the latter, said stops being normally in inoperative position; devices on said rock shaft cooperative with said stop frame to move it in position to render the stops operative; an arm on said rock shaft carrying a spring-pressed detent; and a fixed stop on the platen frame cooperative with said detent to lock said rock shaft in abnormal position.

30. In a typewriting machine, the combination of a platen frame; a platen thereon; a feed roller support pivoted on said platen frame; a feed roller on said support and normally in operative position; a hand operated rock shaft; devices on said rock shaft cooperative with said feed roller support to release said paper feed roller; a stop frame provided with stops cooperative with an edge of the work sheet to straighten the latter, said stops being normally in inoperative position; devices on said rock shaft cooperative with said stop frame to move it into position to render the stops operative; an arm on said rock shaft carrying a spring-pressed detent; and a fixed stop on the platen frame, said stop cooperating with said spring-pressed detent to lock said rock shaft in either of two abnormal positions in one of which said paper feed roller and the stops for the work sheet are both inoperative and

in the other of which said paper feed roller is inoperative while the stops for the work sheet are in operative position.

31. In a typewriting machine, the combination of a platen frame; a platen thereon; hanger arms pivoted on said platen frame and carrying a paper feed roller which is normally operative; a hand operated rock shaft; a U-shaped stop bar pivoted on said rock shaft; stops on said bar cooperative with an edge of the work sheet to straighten the latter, said stops being normally inoperative; devices fixed to said rock shaft and cooperative with said hanger arms to release said paper feed roller; other devices fixed to said rock shaft and cooperative with said stop bar to render said stops operative; an arm or hand lever fixed to said rock shaft and carrying a spring-pressed detent; and a stop fixed on said platen frame and cooperative with said detent to lock said rock shaft in either of two abnormal positions in one of which positions the paper feed roller and the stops for the work sheet are both inoperative and in the other of which positions the paper feed roller is inoperative while the stops for the work sheet are in operative position.

32. In a typewriting machine, the combination of a platen; a main paper feed roller normally operative; terminal paper feed rollers; a stop device cooperative with an edge of the work sheet to square the latter, said stop device being normally in inoperative position; and hand actuated means operative to a limited extent to move the main feed roller out of operative position and lock it and operative to a greater extent in the same direction to move the stop device into operative position and lock it, said hand actuated means being inoperative on said terminal feed rollers.

33. In a typewriting machine, the combination of a platen frame; a platen thereon; hanger arms pivoted on said platen frame and carrying a main feed roller which is normally operative; a hand operated rock shaft; terminal feed rollers; devices on said rock shaft cooperative with said hanger arms to release said main feed roller; a stop frame provided with stops cooperative with an edge of the work sheet to straighten the latter, said stops being normally in inoperative position; devices on said rock shaft cooperative with said stop frame to move it to position to render said stops operative; and locking devices to hold the rock shaft in either of two abnormal positions in one of which the main feed roller and the stops are both inoperative and in the other of which the main feed roller is inoperative while the stops are operative, said terminal feed rollers always remaining in operative position.

34. In a typewriting machine, the combination of a platen frame; a platen thereon; hanger arms pivoted on said platen frame and carrying a paper feed roller which is normally operative; a hand operated rock shaft; a U-shaped stop bar pivoted on said rock shaft; stops on said bar cooperative with an edge of the work sheet to straighten the latter, said stops being normally inoperative; devices fixed to said rock shaft and cooperative with said hanger arms to release said paper feed roller; other devices fixed to said rock shaft and cooperative with said stop bar to render said stops operative; an arm or hand lever fixed to said rock shaft and carrying a spring-pressed detent; and a stop fixed on said platen frame and cooperative with said detent to lock said rock shaft in either of two abnormal positions in one of which positions the paper feed roller and the stops for the work sheet are both inoperative and in the other of which positions the paper feed roller is inoperative while the stops for the work sheet are in operative position.

nation of a platen frame; a platen thereon; a pair of hanger arms hung on said platen frame and spring-pressed toward the platen, said hanger arms carrying a normally operative main paper feed roller; a hand operated rock shaft; terminal paper rollers spring-pressed toward the platen; devices on said rock shaft cooperative with said hanger arms to release the main feed roller; a stop bar spring-pressed toward the platen, said stop bar carrying a plurality of stops cooperative with an edge of the work sheet to straighten the latter, said stops being normally in inoperative position; devices on said rock shaft cooperative with said stop bar to move it to position to render said stops operative; a hand lever or arm on said rock shaft; and locking devices cooperative with said arm to lock said rock shaft in either of two abnormal positions, in one of which the main feed roller and the stops are both inoperative and in the other of which the main feed roller is inoperative while the stops are operative.

35. In a typewriting machine, the combination of a platen frame; a platen thereon; a pair of hanger arms hung on said platen frame and spring-pressed toward the platen, said hanger arms carrying a normally operative main paper feed roller; a hand-operated rock shaft; terminal paper rollers pivotally mounted on said rock shaft and spring-pressed toward the platen; devices on said rock shaft cooperative with said hanger arms to release the main feed roller; a U-shaped stop bar hung on said rock shaft and spring-pressed toward the platen, said stop bar carrying a plurality of leading edge stops which are normally in inoperative position; devices on said rock shaft cooperative with said stop bar to move it to position to render said leading edge stops operative; an arm or hand lever fixed to said rock shaft and carrying a spring-pressed detent; and a stop fixed on the platen frame and cooperative with said detent to lock said rock shaft in either of two abnormal positions, in one of which positions the main feed roller and the leading edge stops are both inoperative and in the other of which positions the main feed roller is inoperative and the leading edge stops are operative, the terminal feed rollers being in operative position at all times.

36. In a typewriting machine, the combination of paper feed devices; a line indicator; means for moving said indicator when the paper feed devices are operated; means for releasing said paper feed devices; and means controlled by said releasing means for restoring said line indicator to initial position.

37. In a typewriting machine, the combination of paper feed devices; a line indicator; means for releasing said paper feed de-

vices; and means whereby said line indicator is controlled by said releasing means.

38. In a typewriting machine, the combination of a rotary platen; a paper feed roller; a line indicator; and mechanical connections between said paper feed roller and said line indicator.

39. In a typewriting machine, the combination of a rotary platen; a line indicator connected with said platen; a paper feed roller cooperating with said platen; means for releasing said paper feed roller; and means for automatically restoring said line indicator to initial position when said paper feed roller is released.

40. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; an indicating device; means operatively connecting said indicating device with said platen to cause said indicating device to move with said platen; means operating automatically to disconnect said indicating device and platen when said releasing means is operated; and means for moving said indicating device independently of said platen.

41. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a rotary indicating device; means operatively connecting said indicating device with said platen to cause said indicating device to turn with said platen; means for disconnecting said indicating device and platen, said disconnecting means being controlled by said releasing means; and means for effecting a relative rotary movement between said indicating device and said platen.

42. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a rotary indicating device; means for connecting said indicating device and said platen to cause them to turn together; means for automatically disconnecting said indicating device and said platen when said releasing means is operated; and a spring operative automatically to turn said indicating device independently of said platen.

43. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a rotary indicating device; means for connecting said device and said platen to cause them to turn together; means for automatically disconnecting said indicating device and

said platen when said releasing means is operated; a restoring spring connected at one end to a fixed part and at the other end to the indicating device; and a pointer on a fixed part and coöperative with said indicating device to indicate the writing line on the platen.

44. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a rotary indicating device; a two-part clutch connecting said device with said platen to cause said device to turn when the platen is turned; means controlled by said releasing means for disconnecting the parts of said clutch; and a spring operative to turn said indicating device independently of said platen.

45. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a rotary indicating device; a two-part clutch connecting said device with said platen to cause said device to turn when the platen is turned; means controlled by said releasing means for disconnecting the parts of said clutch; a spring operative to turn said indicating device independently of said platen; and a stationary pointer coöperative with said indicating device to indicate the writing line on the platen.

46. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a rotary indicating device mounted on the axle of said platen and adapted to turn freely on said axle; a clutch normally operative to connect said indicating device with said platen to cause the two to be turned together; means operated when said releasing means is operated to unclutch said clutch; and a spring operative to turn said indicating device on the platen axle when the clutch is unclutched.

47. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a rotary form holder; means for operatively connecting said form holder with said platen so as to cause said form holder to turn with said platen when the latter is turned; and means operated when said releasing means is operated for disconnecting said form holder and said platen so as to enable relative turning movements to take place between said form holder and said platen.

48. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a rotary form holder; means for operatively connecting said form holder with said platen so as to cause said form holder to turn with said platen when the latter is turned; means operated when said releasing means is operated for disconnecting said form holder and said platen; means for turning said form holder independently of said platen when the two have been disconnected; and a form or indicating strip removably secured on said form holder.

49. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a rotary form holder; means for operatively connecting said form holder with said platen so as to cause said form holder to turn with said platen when the latter is turned; means operated when said releasing means is operated for disconnecting said form holder and said platen; means for turning said form holder independently of said platen when the two have been disconnected; a form or indicating strip removably secured on said form holder; and a stationary pointer coöperative with said form to indicate the writing line on the platen.

50. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a rotary form holder; a form or indicating strip removably secured to said form holder; a two-part clutch connecting said form holder with said platen to cause said form holder to be turned when said platen is turned; means operative to unclutch said clutch and actuate said releasing means at a single operation; and a spring operating when said clutch is unclutched to turn said form holder independently of said platen.

51. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a rotary form holder; a form or indicating strip removably secured to said form holder; a two-part clutch connecting said form holder with said platen to cause said form holder to be turned when said platen is turned; means operative to unclutch said clutch and actuate said releasing means at a single operation; a spring operating when said clutch is unclutched to turn said form

holder independently of said platen; and a stationary pointer cooperative with said form to indicate the writing line.

52. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a cylindrical form holder rotatably mounted on the axle of said platen; a two-part clutch normally coupling or connecting said form holder to the platen axle; means operative to disengage the parts of said clutch and actuate said releasing means at a single operation; and a spring operating to turn said form holder on the platen axle when the parts of the clutch are disengaged.

53. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a cylindrical form holder rotatably mounted on the axle of said platen; a form removably secured on said form holder; a two-part clutch, one part of which is fixed to the form holder and the other part of which has a pin and slot connection with the platen axle; a spring normally maintaining the parts of said clutch in engagement; a fixed cam member; a sleeve rotatable on and adapted to be cammed by said cam member; a connection between said sleeve and the second described part of said clutch; means for turning said sleeve on said cam member to disengage the parts of said clutch, said means being operative at the same time to actuate said releasing means; and a restoring spring operating to turn said form holder on the platen axle when the parts of the clutch have been disengaged.

54. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a rotary indicating device; a clutch comprising two parts normally operative to connect said indicating device with said platen; and disconnecting means operative when said releasing means is operated for disconnecting the parts of said clutch, said disconnecting means comprising a cam member, a rotary part controlled by said releasing means, and a connection between said part and one part of said clutch, said connection being controllable by said cam member.

55. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a rotary indicating device; a clutch comprising two parts normally operative to con-

nect said indicating device with said platen; and disconnecting means operative when said releasing means is operated for disconnecting the parts of said clutch, said disconnecting means comprising a stationary cam member, a rotary sleeve adapted to be turned by said releasing means, and a connection controllable by said cam member between said rotary sleeve and one part of said clutch.

56. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a rotary indicating device; a clutch comprising two parts normally operative to connect said indicating device with said platen; and disconnecting means operative simultaneously with said releasing means for disconnecting the parts of said clutch, said disconnecting means comprising a stationary cam member, a sleeve mounted thereon and adapted to be moved in one direction by said releasing means, and a connection controllable by said cam member between said sleeve and one part of said clutch through which connection said sleeve is movable in another direction.

57. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a rotary indicating device; a clutch comprising two parts normally operative to connect said indicating device with said platen; and disconnecting means operative simultaneously with said releasing means for disconnecting the parts of said clutch, said disconnecting means comprising a stationary cam member, one part of said clutch being at one side of said cam member, a rotary part at the opposite side of said cam member from said last named clutch part, and a connection between said last named clutch part and said rotary part, said connection being controllable by said cam member.

58. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a rotary indicating device; a clutch comprising two parts normally operative to connect said indicating device with said platen; and disconnecting means operative simultaneously with said releasing means for disconnecting the parts of said clutch, said disconnecting means comprising a hollow cylindrical stationary cam member, one part of said clutch being inclosed within said cam member, a sleeve surrounding said cam member and rotatable thereon, and a con-

nection controllable by said cam member between said sleeve and the inclosed clutch part.

59. In a typewriting machine, the combination of a rotary platen; normally operative paper controlling devices; releasing means operative to move said paper controlling devices to inoperative position; a rotary indicating device; a clutch comprising two parts normally operative to connect said indicating device with said platen; and disconnecting means operative simultaneously with said releasing means for disconnecting the parts of said clutch, said disconnecting means comprising a hollow cylindrical stationary cam member provided with a cam slot and inclosing one part of said clutch, a sleeve surrounding said cam member and both rotatable and slidable thereon, and a connection between the inclosed clutch part and said sleeve, said connection passing through the cam slot in said cam member and being controllable thereby.

60. In a typewriting machine, the combination of a platen frame; a platen thereon; hanger arms pivoted on said platen frame and spring-pressed toward the platen; a paper feed roller carried by said hanger arms and normally in operative position; a hand operated rock shaft; devices on said rock shaft coöperative with said hanger arms to release the paper feed roller when the rock shaft is turned; a rotary indicating device; connecting means operatively connecting said device with said platen to cause said device to turn with said platen; a device carried by said rock shaft and operative on said connecting means, when said rock shaft is turned, to disconnect said indicating device from said platen; and means for thereafter turning said indicating device relatively to said platen.

61. In a typewriting machine, the combination of a platen frame; a platen thereon; hanger arms pivoted on said platen frame and spring-pressed toward the platen; a paper feed roller carried by said hanger arms and normally in operative position; a hand operated rock shaft; devices on said rock shaft coöperative with said hanger arms to release the paper feed roller when the rock shaft is turned; a rotary indicating device; a two-part clutch for connecting said indicating device with said platen so as to cause said indicating device to turn when the latter is turned; a device carried by said rock shaft and operative when the latter is turned to disconnect the parts of said clutch; and a spring operative thereafter to turn said indicating device relatively to said platen.

62. In a typewriting machine, the combination of a platen frame; a platen thereon; hanger arms pivoted on said platen frame

and spring-pressed toward the platen; a paper feed roller carried by said hanger arms and normally in operative position; a hand operated rock shaft; devices on said rock shaft coöperative with said hanger arms to release the paper feed roller when the rock shaft is turned; a rotary form holder; a form removably secured thereon; a two-part clutch normally operative to connect said form holder with said platen so as to cause said form holder to be turned when said platen is turned; a device on said rock shaft operative to unclutch the parts of said clutch; and a spring operating to turn said indicating device thereafter independently of said platen.

63. In a typewriting machine, the combination of a platen frame; a platen thereon; hanger arms pivoted on said platen frame and spring-pressed toward the platen; a rock shaft coöperative with said hanger arms and normally in operative position; a hand operated rock shaft; devices on said rock shaft coöperative with said hanger arms to release the paper feed roller when the rock shaft is turned; a rotary form holder; a form removably secured thereon; a two-part clutch normally operative to connect said form holder with said platen so as to cause said form holder to be turned when said platen is turned; a device on said rock shaft operative to unclutch the parts of said clutch; a spring operating to turn said indicating device thereafter independently of said platen; and a stationary pointer coöperative with said form to indicate the writing line.

64. In a typewriting machine, the combination of paper feeding means; a line indicator; a releasable connection between said paper feeding means and said indicator; means for releasing the paper from said paper feeding means; and a single hand-actuated part for controlling said paper releasing means and said connection.

65. In a typewriting machine, the combination of a platen; a normally operative paper feed roller; a rotary indicating device normally connected to turn with said paper feed roller; a spring tending constantly to turn said indicating device in one direction; and hand-actuated means operative to render said paper feed roller inoperative and to disconnect said indicating device from said paper feed roller.

66. In a typewriting machine, the combination of a platen; a normally operative paper feed roller; a normally inoperative leading edge stop; a rotary indicating device normally connected to turn with said paper feed roller; a spring tending constantly to turn said indicating device in one direction; and hand-actuated means operative to move said paper feed roller to inoperative position.

tion, to move said leading edge stop to operative position and to disconnect said indicating device from said paper feed roller.

67. In a typewriting machine, the combination of a platen frame; a rotary platen thereon; a normally operative paper feed roller; a normally inoperative leading edge paper stop; a rotary form holder normally connected to turn with the platen; a spring tending constantly to turn said form holder in one direction; and hand-actuated means operative to release said paper feed roller to move said leading edge stop to operative position and to disconnect said form holder from said platen.

68. In a typewriting machine, the combination of a platen frame; a rotary platen thereon; a normally operative paper feed roller; a normally inoperative leading edge paper stop; a rotary form holder normally connected to turn with the platen; a spring tending constantly to turn said form holder in one direction; a hand-actuated rock shaft mounted on said platen frame; devices carried by said rock shaft for releasing said paper feed roller; other devices carried by said rock shaft for rendering said leading edge stop operative; and still other devices carried by said rock shaft for disconnecting said form holder from said platen.

69. In a typewriting machine, the combination of a platen frame; a rotary platen thereon; a normally operative paper feed roller; a normally inoperative leading edge paper stop; a rotary form holder normally connected to turn with the platen; a spring tending constantly to turn said form holder in one direction; a hand actuated rock shaft mounted on said platen frame; devices carried by said rock shaft for releasing said paper feed roller; other devices carried by said rock shaft for rendering said leading edge stop operative; still other devices carried by said rock shaft for disconnecting said form holder from said platen; the devices for releasing the feed roller and for disconnecting the form holder operating simultaneously and the devices for rendering the leading edge stop operative operating thereafter.

70. In a typewriting machine, the combination of a platen frame; a rotary platen thereon; a normally operative paper feed

roller; a normally inoperative leading edge paper stop; a rotary form holder normally connected to turn with the platen; a spring tending constantly to turn said form holder in one direction; a hand actuated rock shaft mounted on said platen frame; devices carried by said rock shaft for releasing said paper feed roller; other devices carried by said rock shaft for rendering said leading edge stop operative; still other devices carried by said rock shaft for disconnecting said form holder from said platen, all of said devices being brought into operation during the turning or rocking of said rock shaft; and means for locking said rock shaft in abnormal position.

71. In a typewriting machine, the combination of a platen; a paper feed roller normally in operative position; hand actuated means operative to move the feed roller a limited distance away from the platen; locking devices to hold said feed roller at said limited distance, said means being also operative at will to move the feed roller a greater distance away from the platen, and supplemental locking devices to hold said feed roller at said greater distance from the platen.

72. In a typewriting machine, the combination of a platen; a paper feed roller normally in operative position; hand actuated means operative to move the feed roller a limited distance away from the platen; locking devices to hold said feed roller at said limited distance, said means being also operative at will to move the feed roller a greater distance away from the platen, supplemental locking devices to hold said feed roller at said greater distance from the platen; and a normally inoperative leading edge stop device, said means also operating to move said stop device to operative position, and said supplemental locking devices operating to lock said stop device in operative position.

Signed at the borough of Manhattan, city of New York, in the county of New York, and State of New York, this 3d day of January A. D. 1907.

CLIO B. YAW.

Witnesses:

E. M. WELLS,
M. F. HAUNWEBER.