

C. W. WALKER.
TYPE WRITING MACHINE.
APPLICATION FILED AUG. 1, 1907.

1,017,717.

Patented Feb. 20, 1912.

6 SHEETS—SHEET 1.

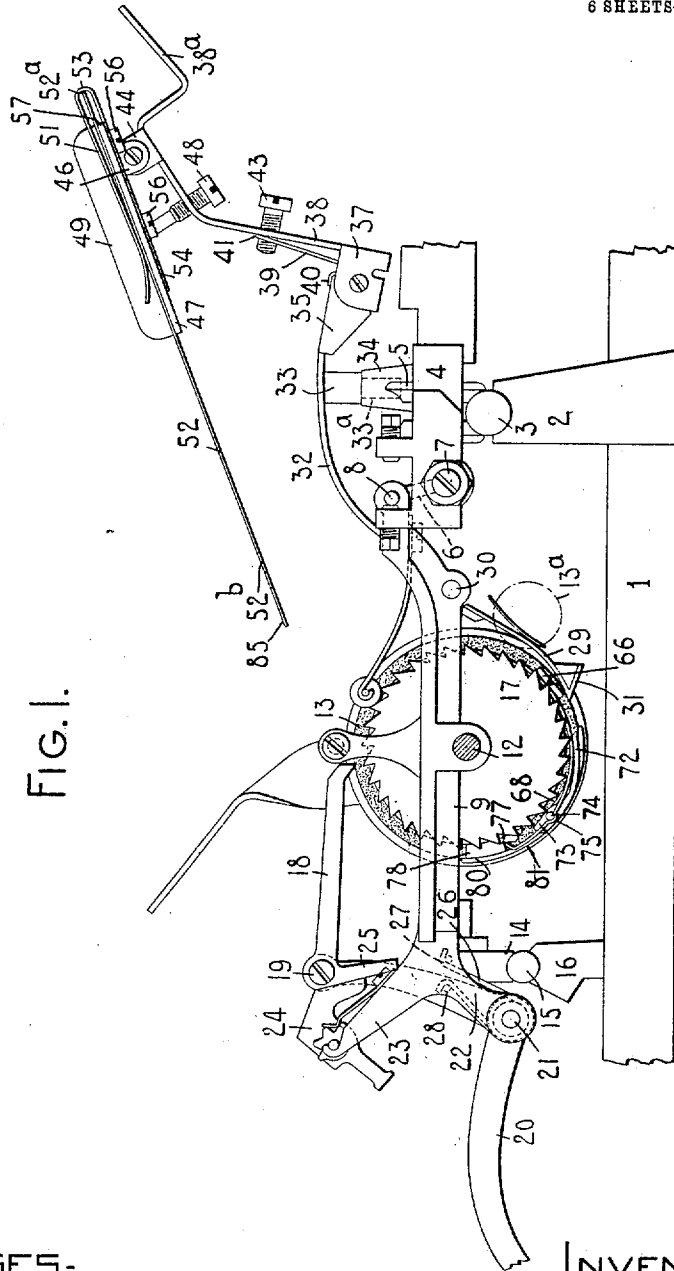


FIG. 1.

WITNESSES:

J. B. Reeves.
Walter Smith.

INVENTOR:

Charles W. Walker
By Jacob Felbel
HIS ATTORNEY

1,017,717.

Patented Feb. 20, 1912.
 6 SHEETS—SHEET 2.

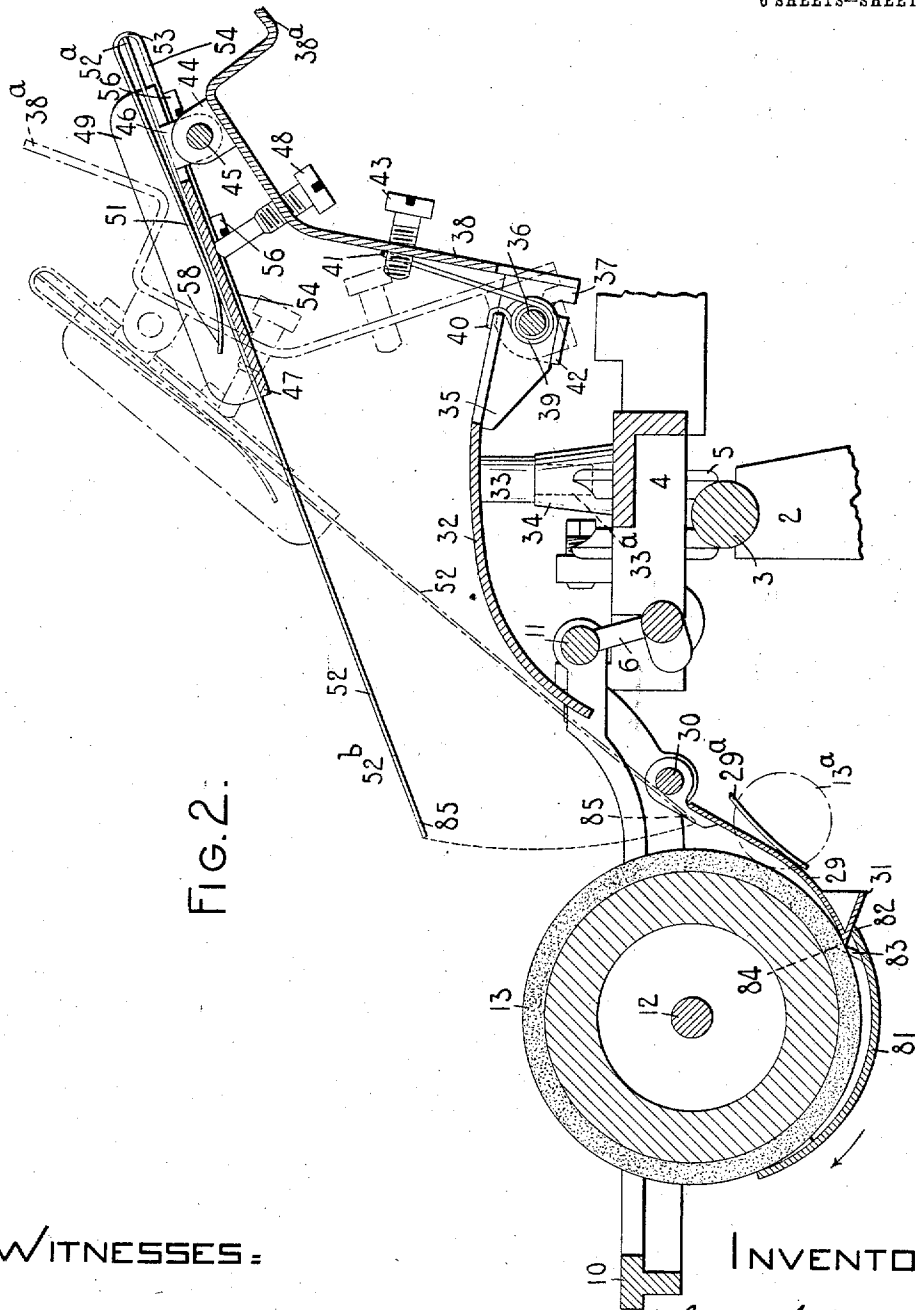


FIG. 2.

WITNESSES:

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Charles E. Smith

INVENTOR:

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1,017,717.

Patented Feb. 20, 1912.
6 SHEETS—SHEET 3.

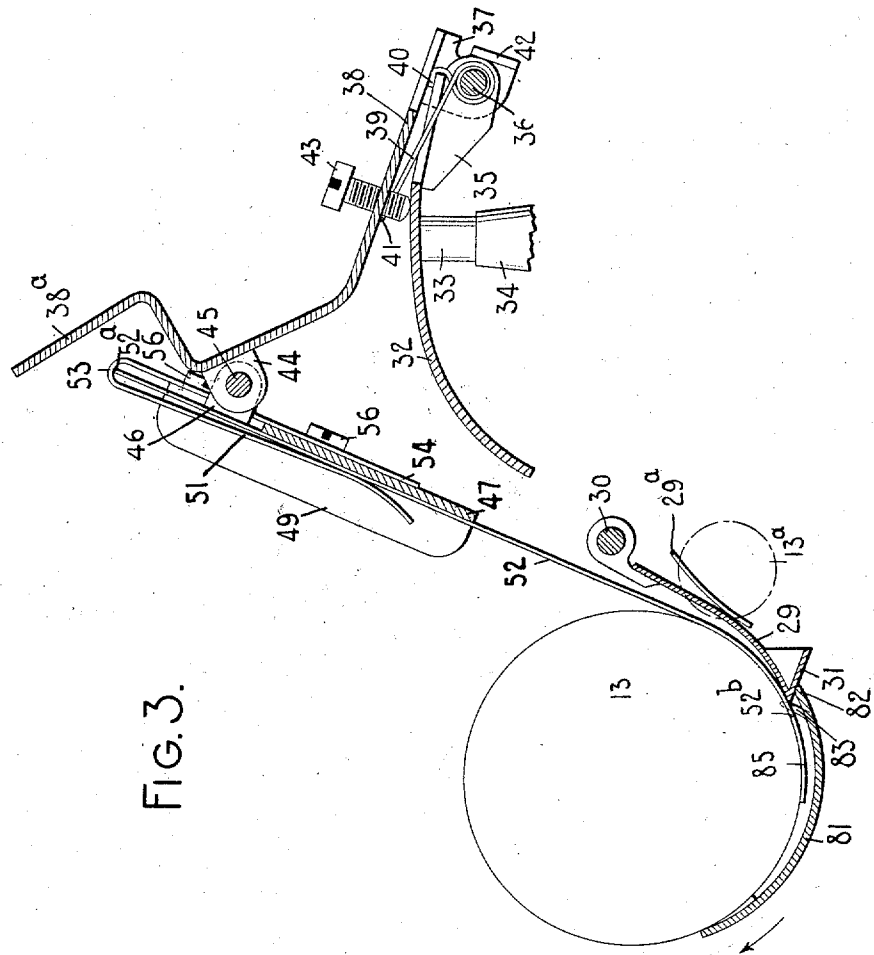


FIG. 3.

WITNESSES:

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6 SHEETS—SHEET 4.

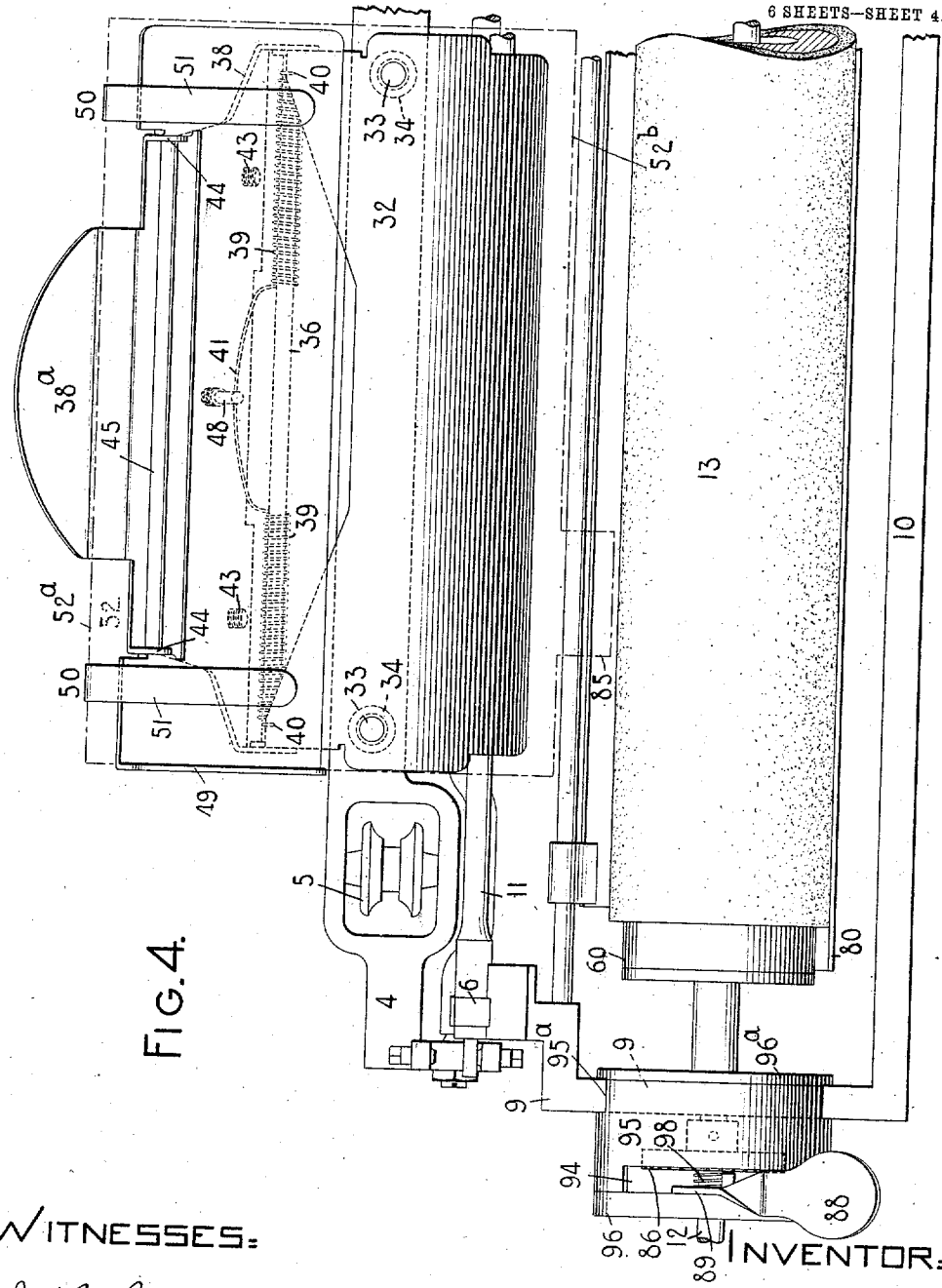


FIG. 4.

WITNESSES:

J. B. Reeves
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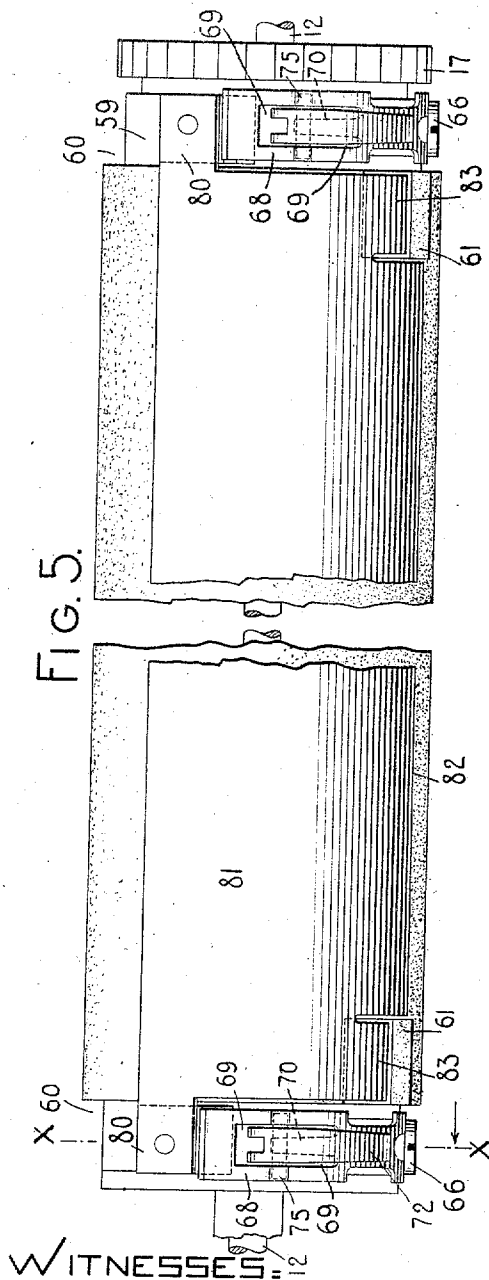
INVENTOR:

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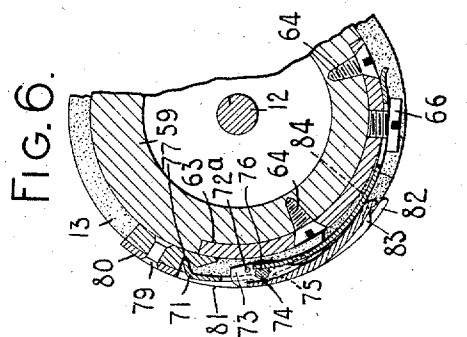
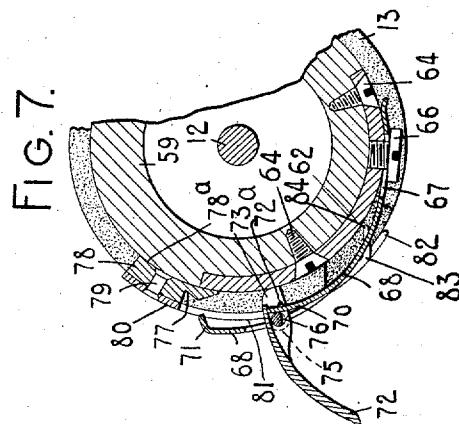
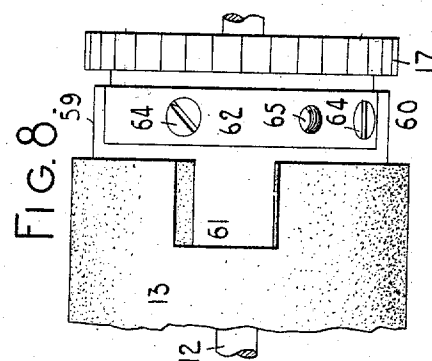
1,017,717.

Patented Feb. 20, 1912.

6 SHEETS—SHEET 5.



J. B. Newes.
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1,017,717.

Patented Feb. 20, 1912.

6 SHEETS—SHEET 6.

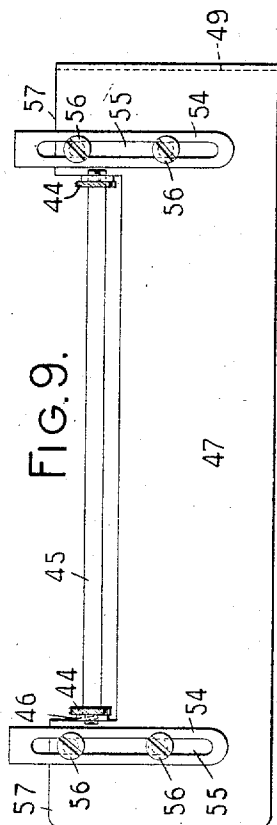


FIG. 9.

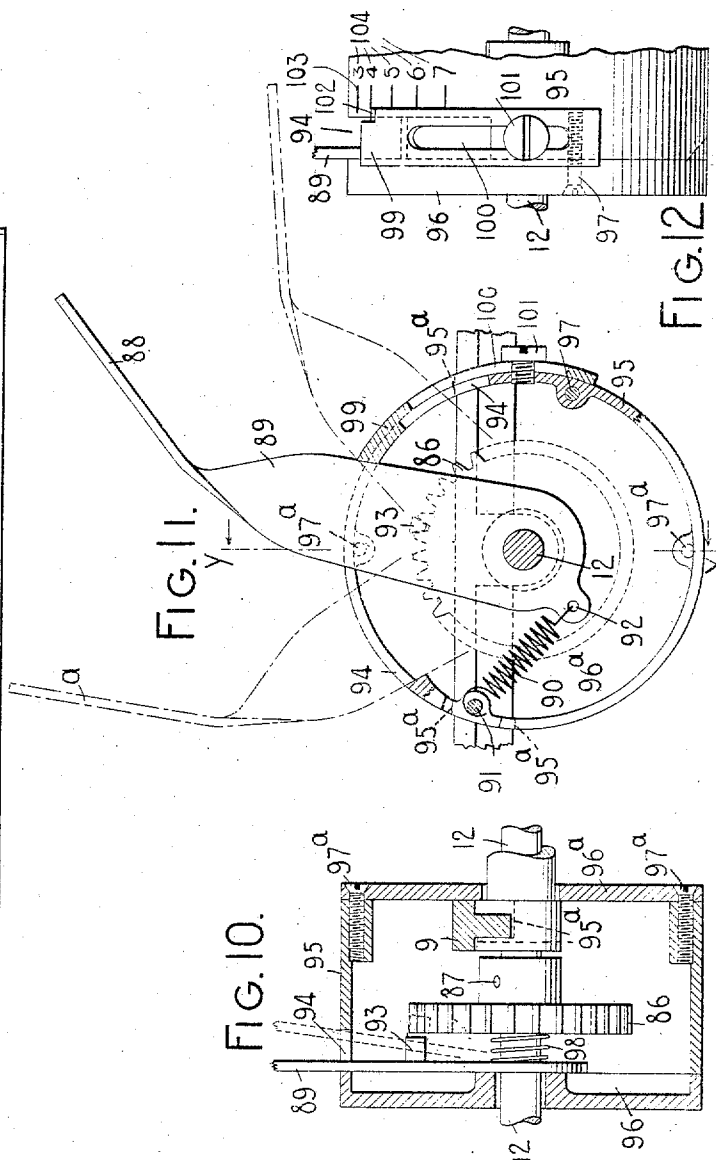


FIG. 11.

FIG. 10.

FIG. 12.

WITNESSES:

J. B. Reeves.
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INVENTOR:

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By Jacob Felber
 HIS ATTORNEY

UNITED STATES PATENT OFFICE.

CHARLES W. WALKER, OF STRATFORD, CONNECTICUT, ASSIGNOR TO WYCKOFF, SEAMANS & BENEDICT, OF ILION, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

1,017,717.

Specification of Letters Patent.

Patented Feb. 20, 1912.

Application filed August 1, 1907. Serial No. 386,586.

To all whom it may concern:

Be it known that I, CHARLES W. WALKER, citizen of the United States, and resident of Stratford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates to typewriting machines and more particularly to means for introducing, properly positioning, feeding and controlling the feed of work sheets or cards.

The object of my invention is to provide simple and efficient means of the character specified.

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

In the accompanying drawings wherein like reference characters indicate corresponding parts in the various views, Figure 1 is a detail side elevation with parts broken away and parts sectioned away showing the upper portion of one form of typewriting machine embodying my invention, the parts being shown in normal position. Fig. 2 is an enlarged, detail, vertical, sectional view showing some of the parts illustrated in Fig. 1. Fig. 3 is a view that corresponds to Fig. 2, except that some of the parts shown in Fig. 2 are omitted in Fig. 3 and the work sheet holder is shown in the operative position in Fig. 3. Fig. 4 is an enlarged top plan view of the carriage and some of the parts carried thereby, the right-hand end of the carriage being broken away. Fig. 5 is an enlarged, detail, front view of the platen and some of the parts carried thereby, the view showing the parts disposed as they appear in Fig. 6 and as seen from the direction of the arrow in Fig. 6. Fig. 6 is an enlarged detail fragmentary transverse sectional view taken on the line $x-x$ of Fig. 5 and looking in the direction of the arrow at said line, the view showing the fastening latch and clamp in the closed positions. Fig. 7 is a like view of the same with the latch of the clamp released. Fig.

8 is a fragmentary front view showing the right-hand end of the platen with the clamping plate removed. Fig. 9 is a detail rear elevation of the work sheet or card carrier or holder. Fig. 10 is an enlarged detail vertical sectional view of the spacing mechanism at the left-hand end of the platen, the section being taken on the line $y-y$ of Fig. 11 and looking in the direction of the arrow at said line. Fig. 11 is an enlarged detail left-hand end view of the parts shown in Fig. 10 with the cover of the casing removed and with parts in section. Fig. 12 is an enlarged fragmentary front elevation showing the casing and some of the other parts shown in Figs. 10 and 11.

I have shown my invention in connection with a No. 6 Remington machine though it should be understood that the invention may be embodied in other styles of typewriting machines.

Difficulty has been encountered heretofore in providing a machine which could be employed efficiently for feeding in cards for card indexes. One of the reasons for this is that the cards are stiff and difficult to handle. Another reason is that the index tabs project from the top edge of the card at different points in the width thereof and interfere with the proper positioning or introduction of the cards into the machine. By my present invention these and other difficulties are overcome and the cards may be quickly and accurately positioned in the machine and quickly and accurately fed through the machine.

The top plate 1 of the machine has upwardly extending lugs 2 thereon which support a guide rod 3. A carriage truck 4 carries rollers 5 which cooperate with the guide rod 3 to support and guide the carriage, comprising the truck 4 and a platen frame, in its movement across the top plate from side to side of the machine. Links 6 are pivoted to the truck at 7 and to the platen frame at 8. The platen frame comprises a rectangular frame having end bars 9, a front cross bar 10 and a rear cross bar 11. A platen shaft 12 is journaled in bearings in the end bars of the platen frame and supports a cylindrical rotary platen 13 with which the usual feed rollers 13^a cooperate. The feed roller releasing means used in the

No. 6 Remington machine may be employed to cast off the feed rollers 13^a. The front cross bar 10 of the platen frame carries a roller 14 which is supported on a shift rail 15 carried by upright lever arms 16 actuated in the usual manner to effect a forward and backward shift of the platen to change the case position thereof. A line spacing wheel 17 is secured at the right-hand end of the platen for coöperation with a line spacing pawl 18 pivoted at 19 to a hand lever 20. The hand lever is pivoted at 21 to a downwardly projecting arm 22 of a bracket on the right-hand end of the platen frame. An upwardly projecting arm 23 extends from the bracket and carries an adjustable regulating device 24 which coöperates with a depending arm 25 on the line spacing pawl to limit the forward movement of the pawl and the upper end of the hand lever which carries it. The purpose of this device, as is well understood, is to regulate the extent of line spacing movement of the platen for one, two or three tooth space distances to determine the extent of line spacing movement effected at each actuation of the hand lever 20. A restoring spring 26 is connected at one end 27 to the bracket arm 22 and at its other end 28 to the upright arm of the hand lever 20. A paper apron 29 is pivoted on a rod 30 and is pressed toward the platen by springs 29^a in the usual manner. The usual scale plate or platen scale 31 is carried by the paper apron at the lower end thereof.

The parts thus far described constitute portions of the well-known No. 6 Remington machine and a further detailed description thereof is deemed unnecessary.

A curved paper table 32 is provided with depending studs 33 by which the table and the parts carried thereby are detachably secured to the upwardly projecting hollow studs 34 on the truck, the reduced ends 33^a of the studs 33 being seated in the hollow studs. The rear side edges of the paper table are bent downwardly to form ears 35 which are perforated to receive a pivot rod 36 which also extends through ears 37 formed on a pivoted support 38 in order to pivotally connect said support to the paper table. A spring 39 is coiled around the pivot rod 36 and bears at its free ends 40 (see Figs. 2 and 4) against the rear edge of the paper table and at its looped central portion 41 against the front face of the pivoted support. The tension of this spring is exerted to normally maintain the pivoted support in the full line position shown in Fig. 2 with inwardly projecting stop lugs 42 formed on the ears 37 bearing upwardly against the ears 35 to limit the rearward movement of the pivoted support. The forward swinging movement of the pivoted support is effected by hand, a finger piece

38^a being provided for this purpose. The support is tapped to receive two screw stops 43 at different portions in the length thereof, said stops being situated at the same distance from the pivot rod 36 of the support 38 and adapted to bear against the top of the paper table as shown in Fig. 2 when the support is swung forward. The side edges of the pivoted support are formed with upwardly projecting ears 44 which are perforated to receive a pivot rod 45 that likewise extends through perforations in ears 46 formed on a pivoted work-sheet or card carrier or holder 47. A centrally located screw stop 48 extends through a threaded opening in the pivoted support 38 and coöperates at its upper end with the lower side of the pivoted card holder 47 when the parts are in their normal positions as shown in Fig. 2, the card holder being held by gravity against the upper end of the stop. A side edge guide 49 projects upwardly from the left-hand side of the pivoted card holder and extends in a plane at right angles to the plane of the holder and at right angles to the printing line for coöperation with the left-hand side edge of the card or work sheet.

Two combined work sheet clamps and stops 50 are connected with the work sheet holder or carrier. Each of these combined clamps and stops comprises a spring metal finger or clip 51 which presses down upon the upper face of the card or work sheet 52 to clamp it to the upper face of the holder and is curved at 53 to form a stop gage or abutment with which the bottom edge 52^a of the card or work sheet coöperates, it being understood that the edge of the card which is uppermost in Figs. 1, 2 and 3 is the bottom edge of the card. The metal from which each member 50 is formed is then bent downwardly in the same direction as the spring finger 51 so as to form a portion 54 which extends in the rear of or beneath the bottom of the pivoted work sheet holder and is slotted at 55 (Fig. 9) to receive the stems of two headed screws 56 which are received in threaded openings in the pivoted work sheet holder. The heads of the screw 56 are adapted to bear against the rear or under face of the portion 54 of each clamp in order to secure it in its adjusted position, the screw and slot connection affording an adjustment of the clamp and stop members toward and away from the top or rear edge of the work sheet holder. These combined stop and clamp members are secured to the pivoted card holder at or near the opposite ends thereof as shown in Fig. 9 and should be adjusted so that the loops or stop portions 53 of the members are at the same distance from the rear edges 57 of the card carrier. The forward or lower end 58 of each clamp member is bent

upwardly or forwardly away from the front face of the card holder so that the card or work sheet may be readily introduced beneath the spring arm 51 and may be moved rearwardly until the bottom edge 52^a of the card contacts with the loop or stop portions 53 of the members 50.

From the foregoing description it will be understood that the stops or gages 49 and 53 coöperate with edges of the card which are at right angles to each other so that the card may be properly squared before it is introduced into the machine and may be introduced into the machine properly positioned or squared with reference to the printing line.

The parts are normally disposed as shown in Fig. 1 and as indicated in full lines in Fig. 3. In order to introduce a work sheet or card carried by the holder 47 into the machine it is merely necessary to swing the pivoted support 38 forward around its pivot 36. The effect of this movement is first to swing the leading edge 52^b or the lowermost edge of the card or work sheet, as it is shown in the drawings, to a position adjacent to the paper table and to the paper apron 29 as shown in dotted lines in Fig. 2. A further movement of the pivoted support 58 is effective to introduce the lower or leading end 52^b of the card into the machine between the platen and paper apron as shown in Fig. 3. The movements of the parts are arrested when the stops 43 about the paper table as shown in Fig. 3.

Referring now more particularly to Figs. 5, 6, 7 and 8 it will be seen that the sheath or outer covering of the platen is cut away from the wooden core 59 near the ends of the platen as indicated at 60 and that a notch 61 is formed in the sheath of the platen near each end thereof. A segmental metallic shoe 62 is received in a countersunk portion 63 of the core 59 of the platen near each end thereof so that the outer face of each metallic shoe will register with the outer face of the core as indicated in Figs. 6 and 7. Wood screws 64 are employed to secure the metallic shoes in place in the face of the core. The metallic shoes are each tapped at 65 to receive the stem of a headed screw 66, which projects through a slot 37 in a spring 68 which is bent to conform to the curvature of the platen core or to the curvature of the metallic shoes 62 secured thereto. The head of each screw 66 bears against a spring and secures one end of it rigidly to the metallic shoe so that the pressure of the spring is exerted toward the platen core. The form of each spring is best shown in Fig. 5 from which it will be seen that there is a central apertured portion 69 therein and that a central longitudinally extending spring tongue 70 projects from the body portion of the spring at one

end of the slot or aperture 69, whereas the free end of the spring member is bent to form an inwardly extending projection 71. A fastening latch 72 is provided with parallel flanges 73 between which a trunnion-like pivot 74 extends and is secured. The ends of the trunnion-like pivot project beneath the spring 68 at opposite sides of the recessed portion 69 thereof and are seated in depressed pocket-like portions 75 formed in the spring. The under side of the pivot at the central portion 69 thereof is flattened as indicated at 76 for coöperation with the central extension or spring tongue 70 so as to tend to hold the fastening latch against pivotal movement when it is in the closed position shown in Fig. 6.

When the parts are disposed as shown in Fig. 6 the tension of the spring 68 at each end of the platen is exerted to force the bent end 71 thereof into a V-shaped notch 77 formed in a metal block 78. Each block has a curved face 78^a that bears against the outer face of the platen core and is connected by a rivet 79 to an outwardly projecting end 80 (Fig. 5) of a plate-like clamp 81 which is bent to conform to the curvature of the platen and extends throughout or substantially throughout the length thereof. The pressure of the springs 68 is therefore effective, when the parts are disposed as shown in Fig. 6, to press the curved faces 78^a of the block-like member 78 against the platen core 59 and to press the clamp 81 against the face of the platen. The edge 82 of the clamp is, however, adapted to swing away from the face of the platen, as indicated in Fig. 2, against the tension of the springs 68, the blocks 78 at this time turning on the face of the platen core. As long as the fastening latches 72 are maintained in what may be termed the locked position shown in Fig. 6 the tension of the spring 68 is effective to press the work sheet or card clamp 81 against the surface of the platen and to afford a slight turning movement thereof against the tension of the springs as will hereinafter more clearly appear. If, however, the latches 72 be turned to the position indicated in Fig. 7, the free ends 71 of the springs 68 will be moved out of the notches 77 by the flanges 73 bearing against the faces of the metallic shoes 62 so as to effect a camming action of the free end of the springs away from the platen. The latches are limited in this opening movement by pins 72^a carried by the latches and abutting the under sides of the spring tongues 70 when the parts are in the positions shown in Fig. 7. At this time the clamp 81 is entirely disconnected from the platen and may be removed therefrom. It will be seen therefore that the purpose of the springs 68 and the latches 72 is to con-

nect the clamping plate 81 to the platen and to afford a spring pressure of the clamp against the platen and yet permit it to be turned against the tension of said springs, and that the construction is such that when the latches 72 are turned to the position shown in Fig. 7 the clamping plate may be detached from the platen so that the machine may be used for ordinary work when desired. The ends of the clamp 81 near the edge 82 thereof are provided with inwardly bent portions 83 which extend into the notches 61 in the sheath of the platen so as to extend inwardly beyond the face of the platen whether the clamp be open as shown in Fig. 3 or closed as shown in Figs. 5 and 6. These bent portions 83 constitute stops for cooperation with the lower edge of the paper apron 29 or with the scale plate 31 as will hereinafter more clearly appear.

During the forward rotation of the platen, or a rotation thereof in the direction of the arrow in Fig. 2, the scale plate or paper apron will receive a slight movement rearwardly against the tension of the springs 29^a by the paper or work sheet clamp 81 contacting therewith so that there is no obstruction in the rotation of the platen in this direction. When, however, the platen receives a backward rotation in a direction opposite to that indicated by the arrow in Fig. 2, the edge 84 where the scale plate and paper apron join will be forced beneath the edge 82 of the work sheet clamp as shown in Fig. 2 and the inclined face of the scale plate will force or cam the clamp away from the face of the platen. The edge 82 of the work sheet clamp and the stop members 83 will also cooperate with the platen scale and paper apron to arrest the rearward rotation of the platen, the point of arrest always being at the same point. When the clamp 81 is automatically opened and the platen arrested in the manner described the clamp is held open in a position to receive the leading edge 52^b of the card when the latter is forced into the machine, past the previously cast off feed rollers 13^a, by a movement of the pivoted support 38 as indicated in Fig. 3. When the parts are disposed as shown in this figure the leading edge of the card or work sheet is beneath the clamp 81 and has been moved to a predetermined position with reference to the platen and clamp by the movement of the pivoted support and the pivoted work sheet or card carrier. As the platen receives a forward rotation in the direction of the arrows in Figs. 2 and 3 the edge 82 of the clamp will move down out of cooperation with the cam-like scale plate and the clamp will be forced by the pressure of the springs 68 against the face of the card or work sheet in order to clamp the leading end thereof against the face of the

platen and cause it to be fed with the platen as the latter receives a forward rotation. The pressure of the springs 68 is sufficient to overcome the pressure of the spring fingers 51 so that if the card is moved forwardly with the platen it may be readily withdrawn from beneath the spring fingers 51.

From what has been said it will be understood that the screws 43 constitute adjustable means for limiting the forward movement of the pivoted support and that these adjustable means determine or aid in determining the extent of movement of the work sheet or card as it is introduced into the machine. It will also be understood that the adjustable stops 53 which cooperate with the bottom edge of the work sheet or card likewise constitute adjustable means for determining the extent to which the work sheet or card may be introduced into the machine by the swinging movement of the pivoted support 38. As the stops 53 cooperate with the bottom edge 52^a of the work sheet, the tabs or projections such as the tab 85 (see Fig. 4) sometimes employed on the top edge of index cards do not interfere with the proper positioning of the work sheet or card in the machine as would likely be the case if leading edge stops or the like were employed to cooperate with the leading edge of the card or work sheet to determine the proper positioning of said sheet in the machine.

In addition to the usual line spacing mechanism hereinbefore described which is provided at the right-hand end of the platen I have, in the present instance, provided an auxiliary spacing means for turning the platen in order to properly position the work sheet with reference to the printing line by a single actuation of said spacing means.

The spacing means in question are not ordinarily intended for spacing between lines on the work sheet but are intended merely for moving the work sheet to the proper position, after it has been introduced into the machine by the work sheet holder, to receive the first line of writing. These means are shown in Figs. 4, 10, 11 and 12 and comprise a toothed wheel 86 secured to the platen shaft 12 outside of the left-hand end bar 9 of the platen frame by a pin 87 which extends through openings in the hub of the wheel and platen shaft. A finger piece 88 is carried by a lever 89 pivoted to turn on the platen shaft 12 against the tension of a contractile spring 90 secured at one end to a screw 91 and at its opposite end in an opening 92 in said lever. The lever is likewise free to receive a slight lateral movement on the platen shaft as indicated in dotted lines in Fig. 10 in order to bring a tooth 93 on the lever into engagement with the toothed wheel 86. The lever projects through a slot

94 in a casing 95 slotted in one end thereof as at 95^a in order that the casing may be slipped into position over the left-hand end bar 9 of the platen frame and secured thereto. The casing has cover plates 96 and 96^a detachably secured thereto by screws 91—97 and 97^a respectively. The width of the slot 94 is sufficient to enable the lever to swing from the full line to the dotted line position shown in Fig. 10 against the tension of a coiled expansion spring 98 which surrounds the platen shaft and bears at one end against a side of the lever and at its opposite end against the toothed wheel and tends to force the lever to the full line position in Fig. 10 and thereby disengage it from the toothed wheel. The length of the slot is determined by an adjustable stop plate 99 which conforms to the curvature of the casing and constitutes one end wall of the slot 94. This plate has a slot 100 therein for the reception of the stem of a headed screw 101 which is threaded into an opening in the casing and the head of the screw bears against the outer face of the plate 99 in order to secure it in its adjusted position. An edge 102 on the plate is adapted to register with the index marks 103, adjacent to each of which is an index numeral 104. The stop plate 99 is shown in Fig. 12 set to limit the forward rotation of the lever 89 in a position where it is effective to give a forward rotation to the platen corresponding to four line space movements, or a distance corresponding to four teeth of the line spacing ratchet wheel 17, although the plate may be adjusted to afford a movement of the lever 88 to effect a rotation of the platen from three to seven line spaces as may be desired.

After the card has been introduced into cooperative relation with the clamp as shown in Fig. 3 the operator moves the finger piece 88 laterally, thereby moving the lever 89 to the dotted line position in Fig. 10, in order to effect the engagement between said lever and the toothed wheel 86. A rearward movement of the finger piece to the dotted line position *a*, indicated in Fig. 11, is then effective to turn the platen a distance corresponding to four single line spaces, in order to move the clamping plate 81 out of the path of the types and to bring that portion of the leading end of the card or work sheet which is just in the rear of the edge 82 of the clamp to the printing line by a single operation of said lever. The operator may then proceed to write upon the card near the upper edge thereof. After the line is completed the usual line spacing mechanism at the right-hand end of the platen may be employed to effect the spacing between the lines of writing. After the card has been written the platen may be turned rearwardly to disengage the clamp from the work sheet, which latter may then

be removed from the machine at the introductory side of the platen. After the work sheet is removed the platen remains in position to receive another card which is introduced into the machine and properly positioned therein with reference to the work sheet clamp by turning the support 38 on its pivot as indicated in Fig. 3.

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

1. In a typewriting machine, the combination of a rotative platen, a clamp carried thereby and adapted to receive and clamp the upper edges of cards when the cards are introduced into the machine from the rear of the platen, and means for maintaining said clamp closed during the forward rotation of the platen and for automatically opening the clamp by a backward rotation of the platen.

2. In a typewriting machine, the combination of a rotative platen, a clamp carried thereby and adapted to clamp the upper edges of cards having tabs, and means for maintaining said clamp closed during the forward rotation of the platen and for automatically opening the clamp by a backward rotation of the platen, and a gage for the bottom edge of the card.

3. In a typewriting machine, the combination of a rotative platen, a clamp carried thereby and adapted to clamp the upper edge of a card, a gage for the lower edge of the card, and means for maintaining said clamp closed during the forward rotation of the platen and for automatically opening the clamp and arresting the platen by a backward rotation thereof and when the clamp reaches a given point.

4. In a typewriting machine, the combination of a rotative platen, a spring pressed clamp carried by and rotative with the platen and operative to clamp a card or work sheet against the platen, and automatically operating means for opening said clamp and arresting the platen at a predetermined point in the backward rotation thereof and for affording a free forward rotation of the platen to any desired extent.

5. In a typewriting machine, the combination of a rotative platen, a spring pressed clamp carried thereby and operative to clamp a card or work sheet against the platen, and a plate fixed against rotation with the platen and extending longitudinally thereof, the construction and arrangement of the parts being such as to render said plate cooperative with the advancing edge of said clamp to open it.

6. In a typewriting machine, the combination of a rotative platen, a spring pressed clamp carried thereby and operative to clamp a card or work sheet against the platen, and a plate fixed against rotation with the platen, the construction and ar-

5 rangement of the parts being such as to render said plate coöperative with said clamp during the backward rotation of the platen to open the clamp and to arrest the rotation of the platen.

10 7. In a typewriting machine, the combination of a rotative platen, a spring-pressed clamp which is normally maintained closed and which is carried by the platen and is operative to clamp a card or work sheet against the platen, and a platen scale plate, the construction and arrangement of the parts being such as to render said plate coöperative with said clamp to open it.

15 8. In a typewriting machine, the combination of a rotative platen, a spring-pressed clamp which is normally maintained closed and which is carried by the platen and operative to clamp a card or work sheet against the platen, and a platen scale plate, the construction and arrangement of the parts being such as to render said platen scale plate coöperative with said clamp to open it by a rotation of the platen in one direction and to afford a rotation of the platen in an opposite direction without affecting said clamp.

30 9. In a typewriting machine, the combination of a carriage, a rotative platen carried thereby, a spring-pressed clamping plate carried by and extending throughout the length of the platen and normally pressed into engagement with the platen, a platen scale plate carried by the carriage, the construction and arrangement of the parts being such as to render said platen scale plate coöperative with said clamping plate during a backward rotation of the platen to release the clamping plate from its engaged position but affording a free forward rotation of the platen to any extent, and stops carried by said clamping plate for coöperation with said scale plate during the backward rotation of the platen to arrest said platen.

45 10. In a typewriting machine, the combination of a rotative platen, a spring-pressed paper clamping plate operative to clamp a card or work sheet against the platen, the spring means operating also to hold the clamping plate detachably and pivotally upon the platen, and means for effecting a pivotal movement of said plate.

55 11. In a typewriting machine, the combination of a rotative platen, a paper clamping plate operative to clamp a card or work sheet against the platen, spring mechanism which when in working position operates to hold the clamping plate on the platen so that it may have a pivotal movement thereon and which when in inoperative position enables the clamping plate to be detached from the platen, and means for effecting a pivotal movement of said plate.

65 12. In a typewriting machine, the combination of a rotative platen, and a movable work sheet receiver independent of the platen and operative to present the work sheet to the platen, said receiver having a receiving position and a delivering position and a definite extent of movement between the two, the extent of movement of the receiver determining the position of the card or paper relatively to the platen when the card or paper is presented to the platen by said receiver.

70 13. In a typewriting machine, the combination of a rotative platen, paper feed rollers, a movable work sheet receiver independent of the platen and which at the limit of its movement in one direction is adapted to receive the card or paper to be written upon and at the limit of its movement in the opposite direction presents the leading edge of the card or paper past the feed rollers and in definite given position with reference to the platen and in a position to be taken by the platen and fed around there-with.

14. In a typewriting machine, the combination with a rotative platen and paper feeding means, of an auxiliary paper or card receiver independent of the platen and mounted to receive a definite extent of movement and to take the material to be written upon while in one position and adapted then to be moved to another position to present the leading edge of said material to a definite given position with reference to the platen.

100 15. In a typewriting machine, the combination of a rotative platen, an oscillating card holder which supports a card before it is introduced into the machine and which is mounted for movement independently of the platen to introduce a card into the machine, the extent of movement of the card holder determining the position of the card relatively to the platen when the card is introduced into the machine, and adjustable means for determining the extent of movement of said card holder.

115 16. In a typewriting machine, the combination of a carriage, a rotative platen carried thereby, an oscillating card carrier pivoted on the carriage and movable independently of the platen to introduce a card into the machine, the extent of independent movement of the card carrier determining the position of the card relatively to the platen when the card is introduced into the machine, means carried by the card carrier for holding a card on said carrier, and adjustable means for determining the extent of movement of said card carrier.

125 17. In a typewriting machine, the combination with a rotative platen and its paper feed devices, of an oscillatory card carrier movable independently of the platen and its paper feed devices to introduce a card by the oscillatory movement of the carrier

130

directly into the machine and into a definite given relation with reference to said rotative platen and paper feed devices, and spring pressed means carried by said card carrier 5 for pressing a card against the face of the card carrier and thus holding the card in place thereon in the movement of the card with the carrier.

18. In a typewriting machine, the combination of a rotative platen, an oscillatory work sheet holder movable independently of the platen to introduce a work sheet into the machine, adjustable means for determining the extent of movement of said 15 holder, and spring-pressed means for holding a work sheet on said holder in the movement of the work sheet with the holder.

19. In a typewriting machine, the combination of a rotative platen, a gage with which the bottom edge of the work sheet 20 coöperates before the sheet is introduced into the machine, and means for affording a movement of said gage to introduce the work sheet top edge foremost into the machine.

20. In a typewriting machine, the combination of a rotative platen, a gage with which the bottom edge of the work sheet coöperates, means for affording a movement of said 30 gage to introduce the work sheet top edge foremost into the machine, and adjustable means for determining the position of the work sheet relatively to the platen when the work sheet is introduced into the machine by said gage.

21. In a typewriting machine, the combination of a rotative platen, a card carrier movable independently of the platen and movable bodily to introduce a card into the 40 machine and directly to said platen, and a gage carried by said carrier.

22. In a typewriting machine, the combination of a rotative platen, a card carrier movable independently of the platen and movable bodily to introduce a card into the 45 machine and directly to said platen, and a gage carried by and adjustable on said carrier.

23. In a typewriting machine, the combination of a rotative platen, a card carrier movable independently of the platen to introduce a card into the machine, a gage carried by and adjustable on said carrier, and adjustable means for determining the extent 55 of movement of said carrier.

24. In a typewriting machine, the combination of a rotative platen, an oscillating card carrier mounted to move independently of the platen, and spring clips carried by 60 and adjustable on said card carrier and coöperative with a card to press it against the face of the carrier and thus hold the card in place on said carrier as the carrier is moved to introduce the card into the machine.

25. In a typewriting machine, the combi-

nation of a rotative platen, an oscillating card carrier mounted to move independently of the platen, and combined clips and gages carried by and adjustable on said card carrier and coöperative with a card to press it 70 against the face of the carrier and thus hold the card in place on said carrier as the carrier is moved to introduce the card into the machine, the gage portions of said combined clips and gages coöperating with the bottom edge of a card.

26. In a typewriting machine, the combination of a rotative platen, an oscillating card carrier mounted to move independently of the platen, spring clips carried by and adjustable on said card carrier and coöperative 80 with a card to press it against the face of the carrier and thus hold the card in place on said carrier as the carrier is moved to introduce the card into the machine, and adjustable means for determining the extent of said independent movement of said carrier.

27. In a typewriting machine, the combination of a rotative platen, an oscillating card carrier mounted to move independently of the platen, and combined clips and gages carried by and adjustable on said card carrier and coöperative with a card to hold it 90 in place on said carrier as the carrier is moved to introduce the card into the machine, the gage portion of said combined clips and gages coöperating with the bottom edge of a card, and adjustable means for determining the extent of said independent movement of said carrier.

28. In a typewriting machine, the combination of a carriage, a rotative platen carried by said carriage, a pivoted member carried by said carriage, a plate-like card carrier carried by said pivoted member, the pivoted member and card carrier being movable 105 to introduce a card into the machine, and adjustable means for determining the extent of movement of said pivoted member and card carrier.

29. In a typewriting machine, the combination of a rotative platen, a card carrier mounted for movement independently of the platen and for bodily movement toward and away from the platen to introduce a card directly into the machine, and spring means 115 for restoring said carrier to normal position.

30. In a typewriting machine, the combination of a rotative platen, a work sheet holder movable independently of the platen 120 to introduce a work sheet into the machine, adjustable means for determining the extent of movement of said holder, and spring means for returning said holder to normal position.

31. In a typewriting machine, the combination of a rotative platen, a gage with which the bottom edge of the work sheet coöperates, means for affording a movement of said gage independently of the platen to in- 130

roduce the work sheet top edge foremost into the machine, and spring means for returning said gage to normal position.

32. In a typewriting machine, the combination of a rotative platen, an oscillating card carrier mounted to move independently of the platen, spring clips carried by and adjustable on said card carrier and coöperative with a card to press it against the face of the carrier and thus hold the card in place on said carrier as the carrier is moved to introduce the card into the machine, and spring means for returning said card carrier to normal position.
33. In a typewriting machine, the combination of a carriage, a rotative platen carried by said carriage, a pivoted member carried by said carriage, a spring for returning said pivoted member to normal position on the carriage, and a plate-like card carrier pivoted on said pivoted member, and having a bodily movement toward and away from the platen, the pivoted member and card carrier being movable to introduce a card into the machine.
34. In a typewriting machine, the combination of a carriage, a rotative platen carried by said carriage, a pivoted member carried by said carriage, a spring for returning said pivoted member to normal position on the carriage, and a plate-like card carrier carried by said pivoted member, the pivoted member and card carrier being movable to introduce a card into the machine, and adjustable means for determining the extent of movements of said pivoted member and card carrier.
35. In a typewriting machine, the combination of a rotative platen, a card carrier movable independently thereof, means whereby the card carrier is rendered effective to introduce a card directly into the machine and in a given relation to the printing line, and a side-edge gage carried by said card carrier.
36. In a typewriting machine, the combination of a rotative platen, a pivoted plate-like card carrier movable independently of the platen, means whereby the card carrier is rendered effective to introduce a card directly into the machine and into coöperative relation with the platen, and a guide or gage carried by said carrier and with which a side edge of a card coöperates.
37. In a typewriting machine, the combination of a platen, a card carrier movable independently thereof, means whereby the card carrier is rendered effective to introduce a card directly into the machine and into coöperative relation with the platen, and gages carried by said carrier and coöperative with two edges of a card which are at right angles to each other.
38. In a typewriting machine, the combination of a rotative platen, a card car-

rier movable independently thereof to introduce a card into the machine top edge foremost, and gages carried by said card carrier, one of said gages being coöperative with the bottom edge of the card and another gage being coöperative with a side edge of the card.

39. In a typewriting machine, the combination of a rotative platen, a work sheet clamp carried by said platen for clamping a work sheet to the platen to rotate therewith, and means independent of the platen for moving a work sheet into coöperative relation with said clamp.

40. In a typewriting machine, the combination of a rotative platen, a card clamp carried by said platen and operative to clamp a card or work sheet against the platen, and a card carrier movable independently of the platen to introduce a card into the machine and into coöperative relation with said card clamp.

41. In a typewriting machine, the combination of a rotative platen, a card clamp operative to clamp a card or work sheet against the platen, means controlled by the rotation of the platen for automatically opening and closing said card clamp, and a card carrier movable independently of the platen to introduce a card into the machine and to position it in coöperative relation with said card clamp.

42. In a typewriting machine, the combination of a rotative platen, a clamp carried thereby and operative to clamp a card or work sheet against the platen, means for maintaining said clamp closed during the forward rotation of the platen and for automatically opening the clamp by a backward rotation of the platen, and a card carrier movable independently of the platen to introduce a card into the machine and into coöperative relation with said clamp.

43. In a typewriting machine, the combination of a rotative platen, a clamp carried thereby and operative to clamp a card or work sheet against the platen, means for maintaining said clamp closed during the forward rotation of the platen and for automatically opening the clamp by a backward rotation thereof and for then arresting the platen, and a card carrier movable independently of the platen to introduce a card into the machine and into coöperative relation with said clamp.

44. In a typewriting machine, the combination of a rotative platen, a spring pressed clamp carried thereby and operative to clamp a card or work sheet against the platen, a plate fixed against rotation with the platen and coöperative with said clamp to open it, and a card carrier movable independently of the platen to introduce a card into the machine and into coöperative relation with said clamp.

45. In a typewriting machine, the combination of a rotative platen, a spring pressed clamp carried thereby and operative to clamp a card or work sheet against the platen, a plate fixed against rotation with the platen and coöperative with said clamp during the backward rotation of the platen to open the clamp, and means for arresting the rotation of the platen when the clamp is opened, and a card carrier movable independently of the platen to introduce a card into the machine and into coöperative relation with said clamp.

46. In a typewriting machine, the combination of a rotative platen, a spring-pressed clamp which is normally maintained closed and which is carried by the platen and operative to clamp a card or work sheet against the platen, a platen scale coöperative with said clamp to open it, and a card carrier movable independently of the platen to introduce a card into the machine and into coöperative relation with said clamp.

47. In a typewriting machine, the combination of a carriage, a rotative platen carried thereby, a spring pressed clamping plate carried by and extending throughout the length of the platen and normally pressed into engagement with the platen, a platen scale plate carried by the carriage and coöperative with said clamping plate during a backward rotation of the platen to release the clamping plate from its engaged position but affording a free forward rotation of the platen to any extent, stops carried by said clamping plate for coöperation with said scale plate during the backward rotation of the platen to arrest the platen, and a card carrier movable independently of the platen to introduce a card into the machine and into coöperative relation with said clamp.

48. In a typewriting machine, the combination of a rotative platen, a clamp carried thereby and operative to clamp a card or work sheet against the platen, means for maintaining said clamp closed during the forward rotation of the platen and for automatically opening the clamp by a backward rotation of the platen, and a card carrier movable to introduce a card into the machine, the extent of movement of the card carrier determining the position of the card relatively to the platen.

49. In a typewriting machine, the combination of a rotative platen, a clamp carried thereby, means for maintaining said clamp closed during the forward rotation of the platen and for automatically opening the clamp by a backward rotation of the platen, a work sheet holder movable independently of the platen to introduce the work sheet into the machine, and adjustable means for determining the extent of movement of said holder.

50. In a typewriting machine, the combination of a rotative platen, a clamp carried thereby, means for maintaining said clamp closed during the forward rotation of the platen and for automatically opening the clamp by a backward rotation of the platen and for arresting the platen after the clamp has been opened, a work sheet holder movable independently of the platen to introduce the work sheet into the machine, and adjustable means for determining the extent of movement of said holder.

51. In a typewriting machine, the combination of a rotative platen, a spring pressed clamp carried by and rotative with the platen, means for opening said clamp and arresting the platen, a work sheet holder movable independently of the platen to introduce the work sheet into the machine, and adjustable means for determining the extent of movement of said holder.

52. In a typewriting machine, the combination of a rotative platen, a spring pressed clamp carried thereby, a plate fixed against rotation with the platen and extending longitudinally thereof and coöperative with an edge of said clamp to open said clamp, a work sheet holder movable independently of the platen to introduce the work sheet into the machine, and adjustable means for determining the extent of movement of said holder.

53. In a typewriting machine, the combination of a rotative platen, a spring-pressed clamp which is normally maintained closed and which is carried by the platen, a platen scale coöperative with said clamp to open it, a work sheet holder movable independently of the platen to introduce the work sheet into the machine, and adjustable means for determining the extent of movement of said holder.

54. In a typewriting machine, the combination of a carriage, a rotative platen carried thereby, a spring-pressed clamping plate carried by and extending throughout the length of the platen and normally pressed into engagement with the platen, a platen scale plate carried by the carriage and coöperative with said clamping plate during a backward rotation of the platen to release the clamping plate from its engaged position but affording a free forward rotation of the platen to any extent, stops carried by said clamping plate for coöperation with said scale plate during the backward rotation of the platen to arrest the platen, a work sheet holder movable independently of the platen to introduce the work sheet into the machine, and adjustable means for determining the extent of movement of said holder.

55. In a typewriting machine, the combination of a rotative platen, a clamp carried thereby, means for maintaining said clamp

closed during the forward rotation of the platen and for automatically opening the clamp by a backward rotation of the platen, a gage with which the bottom edge of the work sheet coöperates, and means for affording a movement of said gage to introduce the work sheet into the machine.

56. In a typewriting machine, the combination of a rotative platen, a clamp carried thereby, means for maintaining said clamp closed during the forward rotation of the platen and for automatically opening the clamp by a backward rotation of the platen and for arresting the platen after the clamp has been opened, a gage with which the bottom edge of the work sheet coöperates, and means for affording a movement of said gage to introduce the work sheet into the machine.

57. In a typewriting machine, the combination of a rotative platen, a spring pressed clamp carried by and rotative with the platen, means for opening said clamp and arresting the platen, a gage with which the bottom edge of the work sheet coöperates, and means for affording a movement of said gage independently of the platen to introduce the work sheet into the machine.

58. In a typewriting machine, the combination of a rotative platen, a spring pressed clamp carried thereby, a plate fixed against rotation with the platen and extending longitudinally thereof and coöperative with the advancing edge of said clamp to open it, a gage with which the bottom edge of the work sheet coöperates, and means for affording a movement of said gage to introduce the work sheet into the machine.

59. In a typewriting machine, the combination of a rotative platen, a spring-pressed clamp which is normally maintained closed and which is carried by the platen, a platen scale coöperative with said clamp to open it, a gage with which the bottom edge of the work sheet coöperates, and means for affording a movement of said gage to introduce the work sheet into the machine.

60. In a typewriting machine, the combination of a carriage, a rotative platen carried thereby, a spring pressed clamping plate carried by and extending throughout the length of the platen and normally pressed into engagement with the platen, a platen scale plate carried by the carriage and coöperative with said clamping plate during a backward rotation of the platen to release the clamping plate from its engaged position but affording a free forward rotation of the platen to any extent, stops carried by said clamping plate for coöperation with said scale plate during the backward rotation of the platen to arrest the platen, a gage with which the bottom edge of the work sheet coöperates, and means for affording a movement of said

gage to introduce the work sheet into the machine.

61. In a typewriting machine, the combination of a rotative platen, a clamp carried thereby and operative to clamp a card or work sheet against the platen, means for maintaining said clamp closed during the forward rotation of the platen and for automatically opening the clamp by a backward rotation of the platen, an oscillating card carrier mounted to move independently of the platen, and spring clips carried by said card carrier and coöperative with a card to hold it in place on said carrier as the carrier is moved to introduce a card into the machine.

62. In a typewriting machine, the combination of a rotative platen, a spring pressed clamp carried by and rotative with the platen and operative to clamp a card or work sheet against the platen, automatically operating means for opening said clamp and arresting the platen, an oscillating card carrier mounted to move independently of the platen, and spring clips carried by said card carrier and coöperative with a card to hold it in place on said carrier as the carrier is moved to introduce a card into the machine.

63. In a typewriting machine, the combination of a rotative platen, a spring-pressed clamp which is normally maintained closed and which is carried by the platen and operative to clamp a card or work sheet against the platen, a platen scale coöperative with said clamp to open it, an oscillating card carrier mounted to move independently of the platen, and spring cups carried by said card carrier and coöperative with a card to hold it in place on said carrier as the carrier is moved to introduce a card into the machine.

64. In a typewriting machine, the combination of a carriage, a rotative platen carried thereby, a spring-pressed clamping plate carried by and extending throughout the length of the platen and normally pressed into engagement with the platen, a platen scale plate carried by the carriage and coöperative with said clamping plate during a backward rotation of the platen to release the clamping plate from its engaged position but affording a free forward rotation of the platen to any extent, stops carried by said clamping plate for coöperation with said scale plate during the backward rotation of the platen to arrest the platen, an oscillating card carrier mounted to move independently of the platen, and spring clips carried by said card carrier and coöperative with a card to hold it in place on said carrier as the carrier is moved to introduce a card into the machine.

65. In a typewriting machine, the combination of a platen carrying a work sheet clamp, an oscillating work sheet carrier

mounted to move independently of the platen to introduce a work sheet into the machine and into cooperative relation with said clamp, and combined work sheet clips and gages carried by and adjustable on said work sheet carrier.

66. In a typewriting machine, the combination of a platen carrying a card clamp, a card carrier movable independently of the platen to introduce a card into the machine in a given relation to the printing line and in cooperative relation with said card clamp, and a gage carried by said carrier and cooperative with a side edge of a card.

67. In a typewriting machine, the combination of a platen, a work sheet clamp carried thereby, a work sheet carrier movable independently of the platen to introduce a work sheet into the machine and into cooperative relation with said clamp, and gages carried by said carrier and cooperative with two edges of the work sheet at right angles to each other.

68. In a typewriting machine, the combination of a platen, a work sheet clamp carried thereby, a work sheet carrier movable independently of the platen to introduce a work sheet into the machine and into cooperative relation with said clamp, and gages carried by said carrier, one of said gages cooperating with the bottom edge of a work sheet and another of said gages cooperating with a side edge of said work sheet.

69. In a typewriting machine, the combination of a platen carrying a work sheet clamp, an oscillating work sheet carrier mounted to move independently of the platen to introduce a work sheet into the machine and into cooperative relation with said clamp, combined work sheet clips and gages carried by said work sheet carrier, and means for affording an adjustment of said combined clips and gages on the carrier.

70. In a typewriting machine, the combination of a rotative platen, a toothed wheel connected therewith, a hand actuated pawl movable around the axis of the platen to turn the toothed wheel and platen and movable longitudinally of the platen to move into and out of cooperative engagement with said toothed wheel, a spring which tends to move said pawl out of engagement with said toothed wheel, and a second spring which tends to turn said pawl around the axis of the platen.

71. In a typewriting machine, the combination of a rotative platen, a platen shaft, a hand lever mounted to turn on said platen shaft and to move axially thereof, an engaging tooth on said lever, and a toothed wheel fixed to turn with the platen, said engaging tooth being adapted to be moved into and out of engagement with said

toothed wheel by an axial movement of said lever, and said lever having an extent of turning motion equal to a plurality of line spaces.

72. In a typewriting machine, the combination of a rotative platen, a platen shaft, a hand lever mounted to turn on said platen shaft and to move axially thereof, an engaging tooth on said lever, and a toothed wheel fixed to turn with the platen, said engaging tooth being adapted to be moved into and out of engagement with said toothed wheel by an axial movement of said lever, and adjustable stop means with which said lever is adapted to cooperate in its movement in one direction around the platen shaft, said lever having an extent of turning motion equal to a plurality of line spaces.

73. In a typewriting machine, the combination of a carriage, a rotative platen carried thereby, a platen shaft, a casing secured to the carriage and having an opening therein, a hand lever which projects through said opening in the casing and which is mounted to turn around the platen shaft and to move axially thereof, and a toothed wheel fixedly connected with the platen and contained within said casing, an axial movement of said lever being effective to throw the lever into and out of engagement with said toothed wheel and a rotative movement of said lever around its platen shaft being effective to rotate the platen when said lever is in engagement with said toothed wheel.

74. In a typewriting machine, the combination of a rotative platen, a clamp carried thereby, means for maintaining said clamp closed during the forward rotation of the platen and for automatically opening the clamp by a backward rotation of the platen, and platen rotating means operable by a single operation to bring the first writing line position on the work sheet to the printing line when the platen is rotated from a position where said clamp is maintained open.

75. In a typewriting machine, the combination of a rotative platen, a clamp carried thereby, means for maintaining said clamp closed during the forward rotation of the platen and for automatically opening the clamp by a backward rotation of the platen and for arresting the platen after the clamp has been opened, and platen rotating means operable by a single operation to bring the first writing line position on the work sheet to the printing line when the platen is rotated from a position where it is arrested and where said clamp is maintained open.

76. In a typewriting machine, the combination of a rotative platen, a spring pressed clamp carried by and rotative with the platen, means for opening said clamp and

arresting the platen at a predetermined point in the backward rotation thereof and for affording a free forward rotation of the platen to any desired extent, and platen
 5 rotating means operable by a single operation to bring the first writing line position on the work sheet to the printing line when the platen is rotated from a position where said clamp is maintained open.

10 77. In a typewriting machine, the combination of a rotative platen, a spring pressed clamp carried thereby, a plate fixed against rotation with the platen and extending longitudinally thereof and coöperative with
 15 an edge of said clamp to open it, and platen rotating means operable by a single operation to bring the first writing line position on the work sheet to the printing line when the platen is rotated from a position where
 20 said clamp is maintained open.

78. In a typewriting machine, the combination of a rotative platen, a spring pressed clamp carried thereby, a plate fixed
 25 against rotation with the platen and coöperative with said clamp during the backward rotation of the platen to open the clamp and to arrest the rotation of the platen, and platen rotating means operable
 30 by a single operation to bring the first writing line position on the work sheet to the printing line when the platen is rotated

from a position where said clamp is maintained open.

79. In a typewriting machine, the combination of a carriage, a rotative platen carried thereby, a spring pressed clamping
 35 plate carried by and extending throughout the length of the platen and normally pressed into engagement with the platen, a platen scale plate carried by the carriage
 40 and coöperative with said clamping plate during a backward rotation of the platen to release the clamping plate from its engaged position but affording a free forward rotation
 45 of the platen to any extent, stops carried by said clamping plate for coöperation with said scale plate during the backward rotation of the platen to arrest said platen,
 50 and platen rotating means operable by a single operation to bring the first writing line position on the work sheet to the printing line when the platen is rotated from a position where said clamp is maintained open.

Signed at the borough of Manhattan, city
 55 of New York, in the county of New York, and State of New York, this 29th day of July A. D. 1907.

CHARLES W. WALKER.

Witnesses:

J. B. DEEVES,

M. F. HANNWEBER.