

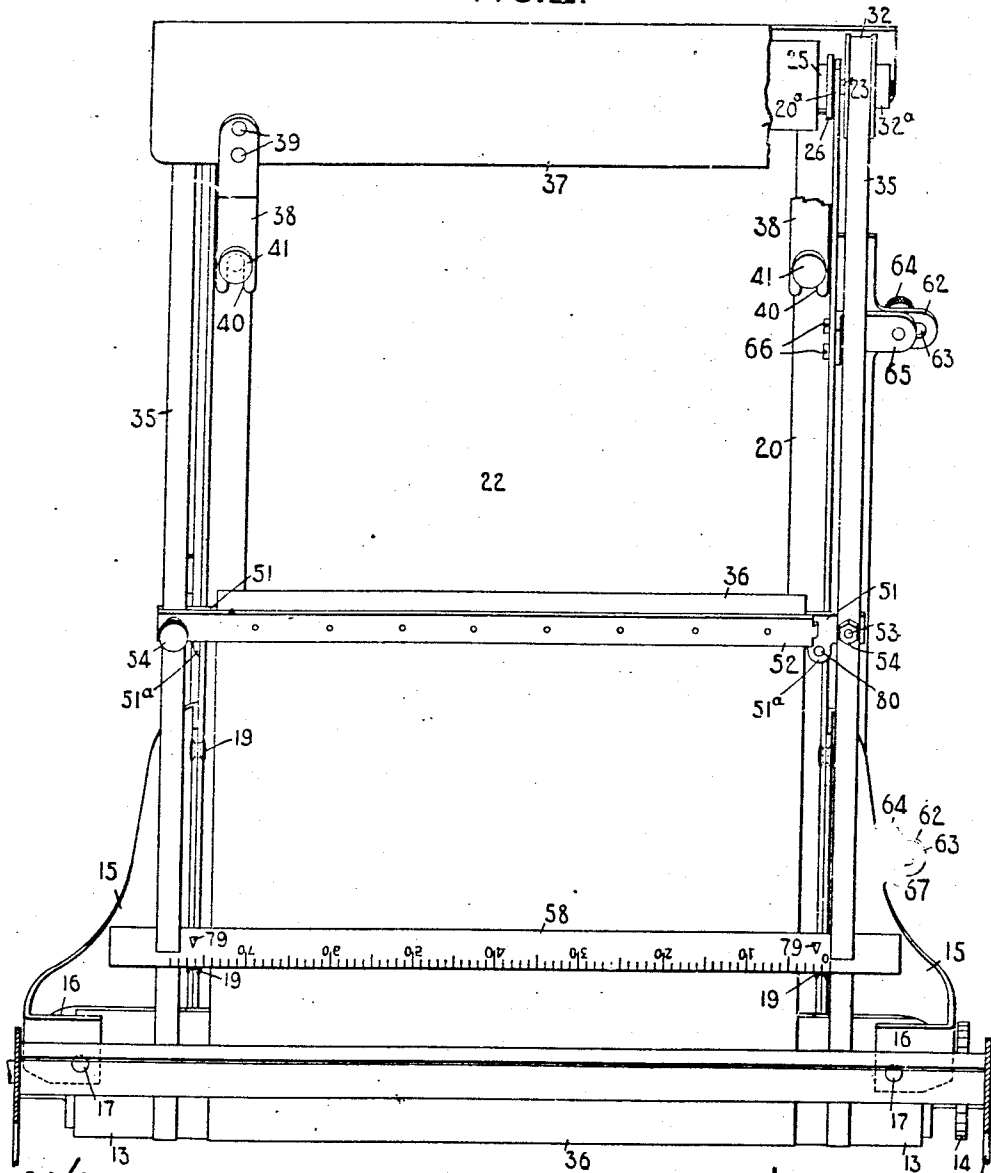
A. W. HEWITT.
TYPE WRITING MACHINE.
APPLICATION FILED FEB. 11, 1907.

945,325.

Patented Jan. 4, 1910.

5 SHEETS—SHEET 2.

FIG. 2.



WITNESSES:

J. B. Deves.
Wm. Pool

INVENTOR:

Allen H. Hewitt
By J. B. Deves
HIS ATTORNEY

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5 SHEETS—SHEET 3.

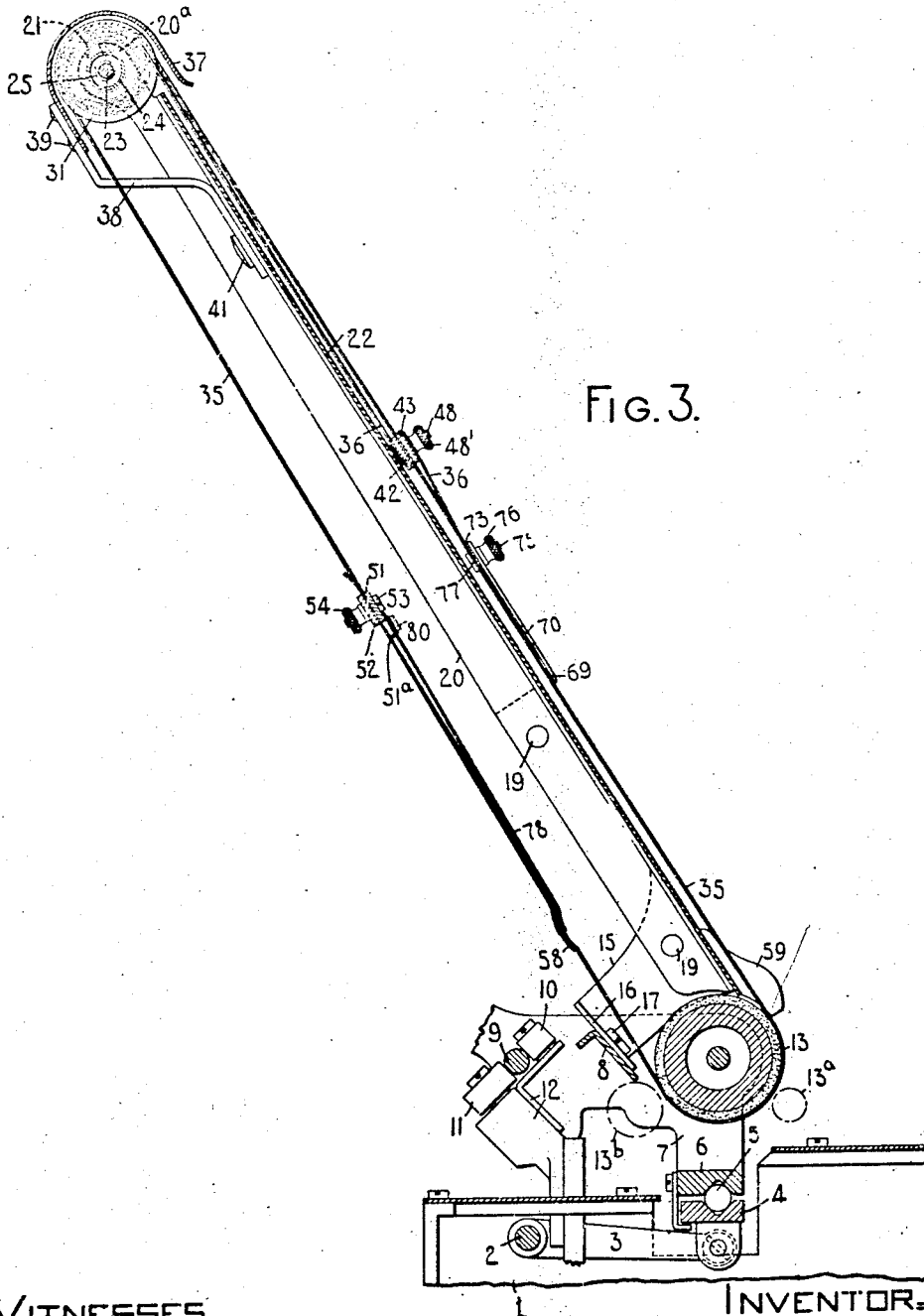


FIG. 3.

WITNESSES.

J. B. Reeves
W. W. Pool

INVENTOR.

Allin H. Hewitt
By Jacob Field
HIS ATTORNEY

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5 SHEETS—SHEET 4.

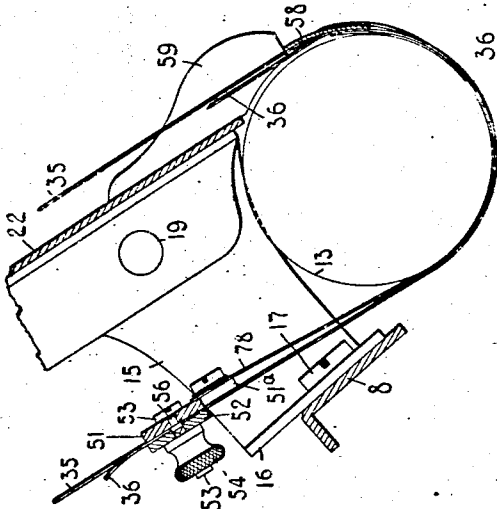


FIG. 4.

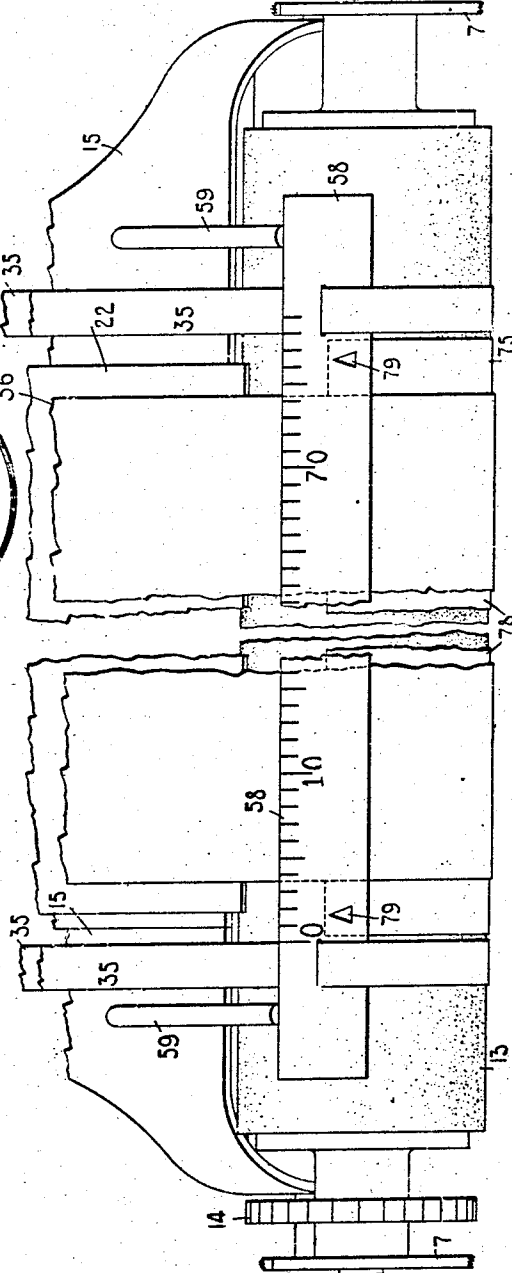


FIG. 5.

WITNESSES:

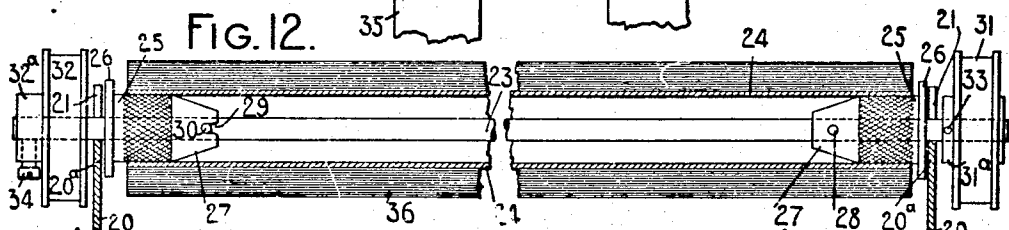
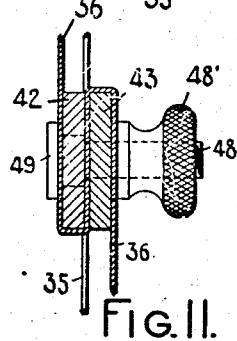
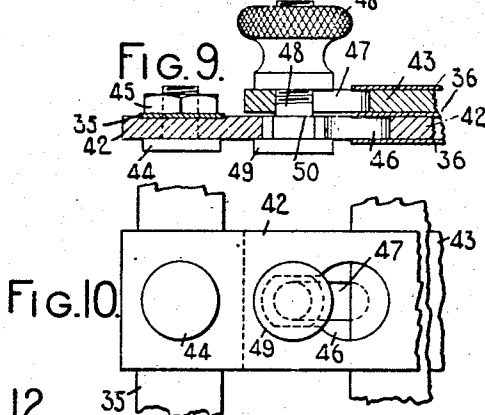
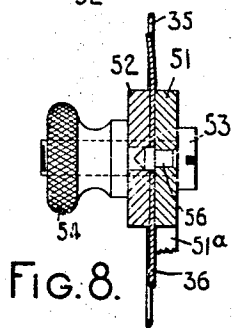
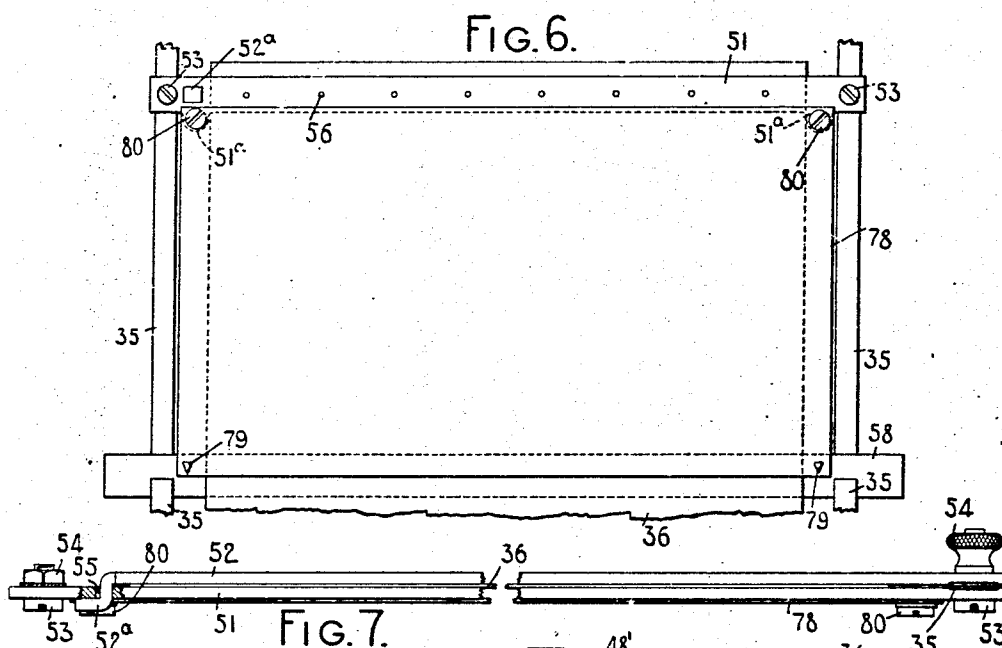
J. B. Reeves
mw. Pool

INVENTOR:

Allen W. Hewitt
By Jacob Zibel
HIS ATTORNEY

945,325.

6 SHEETS—SHEET 5.



WITNESSES:

J. B. Reeves
m.w. Pool,

INVENTOR:

Allin H. Hewitt
 By Jacob Feld
 HIS ATTORNEY

UNITED STATES PATENT OFFICE.

ALLIN W. HEWITT, OF BOGOTA, NEW JERSEY, ASSIGNOR TO WYCKOFF, SEAMANS & BENEDICT, OF ILION, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

Specification of Letters Patent.

Patented Jan. 4, 1910.

945,325.

Application filed February 11, 1907. Serial No. 356,777.

To all whom it may concern:

Be it known that I, ALLIN W. HEWITT, a citizen of the United States, and resident of Bogota, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates more especially to paper supply and paper feeding devices for typewriting machines.

One of the objects of the invention is to provide an improved rotary material carrying mechanism holder which is connected with the rotary platen of the machine so as to be turned when rotary movement is communicated to the platen for line spacing or other purposes.

Another object is to provide holding or clamping devices carried by the connections between the material carrier or roll holder and platen and coöperative with the material carried by the roll holder, said clamping devices serving to positively connect said material with said connections.

Another object is to provide a paper controlling device which is carried by the connections between the roll holder and the platen and coöperates with the latter to align and hold the work sheet, said work sheet being separate from the material carried by the roll holder.

Another object is to provide an indicating device and work holder carried by the connections between the roll holder and the platen and serving as a combined side guide, end guide and work holder for the work sheet.

Still another object is to combine the various devices above referred to in a complete and operative mechanism which may be employed to facilitate various kinds of commercial billing work.

Various other objects will appear in the course of the following specification.

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

In carrying out my invention in the present instance, I detachably secure to the platen carrier or frame a combined supporting frame and paper table, said supporting frame extending upwardly and rearwardly

from the top of the platen and having mounted at its top a rotary material carrying device or roll holder. The shaft or spindle of the roll holder projects beyond its ends and has secured to it a pair of flanged wheels which receive endless metal bands or straps, the latter extending around the platen and connecting it with the wheels in such a way that when rotary movement is communicated to the platen a corresponding rotary movement will be communicated to the roll holder. The roll holder is adapted to carry a roll of carbon paper or other material and the carbon paper passes downward over the combined supporting frame and paper table and is fed over the platen at the front side thereof. A pair of clamps are connected at their ends to the endless bands or straps and serve to hold between them a portion or section of the carbon paper, and maintain it in a fixed relation with the bands during the operation of the machine.

The devices above described may be used to advantage in connection with folded bill sheets of the kind commonly employed in large commercial houses, each bill sheet being first arranged to embrace the section of the carbon between the clamps, the back part of said bill sheet lying against the combined supporting frame and paper table.

Various aligning and holding devices to be hereinafter described in detail are made use of to properly position and hold the folded bill sheet which, it will be understood, is first fed downwardly at the front of the platen along with the carbon paper until the first line of the work sheet is in position for receiving the printing. After the first line has been written the feeding movements are reversed and the bill sheet is fed back upwardly during the line spacing movements of the platen and until the writing on the bill has been completed. It will be understood that imprints on the outer or front part of the bill are made through the usual inking ribbon of the machine while the imprints on the rear part of the bill are made from the interposed portion or section of the carbon paper.

The invention is shown as applied to a Royal typewriting machine but it is to be understood that the various features of the invention are not limited to any particular style of machine and may be readily adapted

to other forms of writing machines than the one shown.

In the accompanying drawings, Figure 1 is a front elevation of the platen and platen carrier of a typewriting machine and showing my invention applied thereto, parts being omitted and parts broken away. Fig. 2 is a rear view of Fig. 1, parts being in section and parts being broken away. Fig. 3 is a sectional view taken on a plane represented by the line *x--x* of Fig. 1 and looking in the direction of the arrows at said line, said Fig. 3 also showing the mounting of the platen carrier and part of the main frame of the machine. Fig. 4 is a fragmentary sectional view corresponding with Fig. 3 but drawn to a larger scale, some of the parts in Fig. 4 being shown in a different relation from those in which they appear in said Fig. 3. Fig. 5 is a fragmentary front elevation drawn to the same scale as Fig. 4 and showing the parts in the relations in which they appear in said Fig. 4. Fig. 6 is a fragmentary front view taken behind the combined paper table and roll holder support and showing parts of the endless bands or straps and certain devices carried thereby, a portion or section of the carbon paper being also shown. Fig. 7 is a fragmentary top plan view partly in section of the parts shown in Fig. 6 and drawn to a larger scale than said Fig. 6. Figs. 8, 9, 10 and 11 are enlarged detail views of the clamping devices for the carbon paper. Fig. 12 is a fragmentary longitudinal sectional view of the rotary material carrying device or roll holder and its supporting devices, part of the feeding devices for said roll holder also being shown.

In the drawings, the main frame of the machine is shown as comprising side plates 1 (Fig. 3), said plates being joined at the rear by a rock shaft 2 which carries forwardly projecting horizontally disposed arms 3, said arms carrying a shiftable grooved track-way 4. Anti-friction balls 5 cooperate with the track-way 4 and with a grooved slide bar 6 forming part of a platen carrier or frame, said platen carrier also comprising side plates 7 which are connected by a rear bar or plate 8. A guide rod 9 is secured at its ends in the side plates 7 of the platen frame and cooperates with guide rollers 10 and 11 mounted on a shiftable bracket 12. Mounted in the platen carrier is a rotary platen 13 provided with a line space ratchet wheel 14 which is adapted to cooperate with the usual or suitable line spacing devices for communicating line space movements to the platen. The platen may also be turned or rotated by means of the usual platen finger wheels (not shown). It will be understood that the platen is adapted to be moved from side to side of the machine with the platen carrier for let-

ter spacing, the slide bar 6 of said carrier being guided and supported during these movements on the anti-friction balls 5, and the guide rod 9 moving endwise between and cooperating with the guide rollers 10 and 11. It will further be understood that a case shift mechanism is provided which is operative to shift the track-way 4 and the guide bracket 12 and its rollers 10 and 11 up and down so as to raise and lower the platen carrier and platen.

Referring now more especially to Figs. 1, 2, 3 and 4, the combined supporting frame and paper table is shown mounted on the platen carrier. Said supporting frame is adapted to carry certain of the parts of my invention and comprises brackets 15 preferably formed of sheet metal and having lateral ears 16 at their lower ends, said ears being provided with holes which receive headed securing screws 17, the latter engaging threaded openings in the rear bar 8 of the platen carrier and serving to secure the brackets 15 and the supporting frame of which they are part in a fixed relation with the platen carrier. As clearly shown in Fig. 2 the inner end portions of the brackets 15 are formed with angularly disposed lips 18 which are secured, as by rivets 19, to angled pieces 20. The angled pieces are inclined upwardly and rearwardly from the top of the platen and terminate at their upper end portions as shown at Fig. 3 in enlarged rounded bearing portions 20^a, each provided with an inclined bearing slot 21, which slots are adapted to serve as bearings for the support of a material carrying device presently to be described. The angled pieces 20 carry a plate-like paper table 22 which extends or inclines upwardly and rearwardly from the platen as clearly shown in Fig. 3 and is suitably fixed, as by riveting, to the angled pieces 20. The paper table serves to guide and support both the work sheets and the carbon paper or other transfer medium as will subsequently be explained more at length. It will be understood that the various parts which go to make up the combined supporting frame and paper table, viz., the brackets 15, the angled pieces 20 and the plate-like part 22, are fastened together or assembled prior to being mounted on the platen carrier, and constitute, in effect, a single supporting frame.

The bearing slots 21 at the upper end of the supporting frame receive a shaft or axle 23 which is best shown in Fig. 12. The shaft 23 has mounted on it a tubular material carrying device or roll holder 24 which is arranged between the end portions 20^a of the supporting frame. The terms "material carrying device" and "roll holder" mean respectively any device which carries the supply of material and any element which holds the roll or material. It is con-

ceivable that the material might not be in the form shown and that it might be carried by a device different from that shown; and also that even with a roll of material, the tube 24 might be dispensed with and the roll arranged on some other device which might or might not ordinarily be detachable or separable from the other elements with which it is connected in the structure or mechanism. Unless in the following claims there is an expressed limitation to that effect, it is not intended to be implied that the material carrier shall necessarily be rotatable or that the roll holder shall rotate. The end portions of the bore of the tubular roll holder 24 receive cylindrical core pieces 25, said core pieces being provided with outside flanges 26 and tapering at their inner ends as indicated at 27. The cylindrical outer faces of the core pieces are knurled or roughened and are adapted to cooperate frictionally with the bore of the roll holder, so that in the operation of the machine said roll holder and said core pieces are normally maintained by this friction in a fixed relation. The right-hand core piece 25 is fixedly secured to the shaft 23 in any suitable manner as by a pin 28 and the left-hand core piece is provided at its inner end on opposite sides of the shaft 23 with slots 29 which cooperate with a cross pin 30 which is driven through the shaft, thereby providing a pin and slot connection between the left-hand core piece 25 and the shaft 23. It will be understood that when it is desired to remove the roll holder from the shaft 23 the operator may pull outwardly on the flange 26 of the left-hand core piece to withdraw said core piece from engagement with both the shaft 23 and the roll holder 24, and thereafter the roll holder may be disengaged from the right-hand core piece 25 and slipped off the shaft 23. The end portions of the shaft 23 project laterally beyond the sides of the supporting frame and carry flanged wheels or pulleys 31 and 32. The right-hand wheel 31 is fixed to the shaft 23 by a pin 33 which passes through the shaft and through a hub portion 31^a on the wheel. The left-hand wheel 32 is provided with a somewhat thicker hub portion or boss 32^a which extends leftward from the wheel proper and receives a set screw 34 which abuts against the shaft 23 and serves to detachably secure the wheel 32 in a fixed relation with said shaft. Endless bands 35, preferably of metal, pass over the wheels or pulleys 31 and 32 between their flanges and cooperate with the end portions of the platen.

It will be apparent that when rotary movement is communicated to the platen the bands 35 will transmit this rotary movement through the wheels 31 and 32 to the roll holder and the material carried thereby.

said bands serving as connections between the roll holder and the platen. While a single connection or band 35 may be employed it is preferable to make use of a pair of them arranged as shown as this arrangement conduces to uniform feeding of the material. The roll holder carries a roll of carbon paper or other suitable material, said material being designated in the drawings by the numeral 36. The free end of the material which will hereinafter be referred to as carbon paper is drawn down over the top of the roll passing over the plate-like paper table 22. Preferably, a U-shaped shield or cover 37 is arranged over the carbon roll, so as to inclose and protect it, said shield being provided at its rear with two depending angled arms 38, the upper end portions of said arms being secured to the shield near its ends by rivets 39 and the lower ends of said arms being slotted as indicated at 40, the slots cooperating with headed pins 41 projecting from the back of the paper table as shown in Figs. 2 and 3, the construction being such that the shield 37 may be readily attached to and detached from the back of the supporting frame.

For the purpose of feeding the carbon paper and maintaining a portion or section of it in a fixed relation with the endless bands 35, a pair of holding or clamping devices are provided, said clamping devices being secured at their ends to the endless bands 35, one of said devices being at the front and the other at the back of the combined supporting frame and paper table. The front clamping device, as shown in Figs. 1, 3, 9, 10 and 11, comprises two clamping members or bars 42 and 43. The bar 42 extends from one endless band 35 to the other and is arranged under the front portions of said bands, being secured thereto by bolts 44 and nuts 45. This construction is best shown in Fig. 9 which is a longitudinal sectional view taken of the left-hand end portion of the front clamping device as it appears when viewed from the rear side. Near its left end the clamping bar 42, as will be understood from an inspection of Fig. 1, is provided with a slot which receives a tongue 43^a projecting angularly from the left end of the clamping bar 43. This tongue and slot connection between the clamping bars 42 and 43 serves as a hinge on which the bar 43 may swing toward and away from the clamping bar 42. The right end of the clamping bar 43 is adapted to be locked or clamped against the clamping bar 42 by means best shown in Figs. 9 and 10, Fig. 10 being a rear elevation of Fig. 9. The bar 42 is formed near its left end with a key-hole slot 46 and the bar 43 is formed with an elongated slot 47. A shouldered bolt 48 passes through said slots 46 and 47 from rear to front, the head 49 of said bolt engaging

with the back of the bar 42. The shoulder 50 of the bolt 48 is flattened on opposite sides, as will be understood from an inspection of Fig. 10, to cooperate with the narrow end of the key-hole slot 46, so that when positioned as shown in Figs. 9 and 10 the narrow portion of the key-hole slot prevents the bolt from turning or rotating. The bolt projects forwardly through the slot 47 and is arranged to receive a clamping nut 48', said clamping nut when screwed down cooperating with the front face of the bar 43 and serving to force the bars 42 and 43 toward each other. When the clamping nut is loosened, said nut and the bolt 48 may be moved longitudinally of the bars 42 and 43 until arrested by the left-hand end of the slot 47. This movement of the bolt brings its head 49 in register with the large end of the key-hole slot 46, said head 49 being of such size that it may be drawn through the large end of the slot, enabling the right-hand end portion of the bar 43 to be swung away from the bar 42 about the tongue and slot connection at the left of said bars as a hinge or pivot.

Fig. 11 is a transverse sectional view of the bars 42 and 43 looking toward the right. From an inspection of this figure it will be clearly understood how the carbon paper 36 is arranged between the two clamping bars. Said carbon paper is first passed downwardly behind both clamping bars and is then passed upwardly between the two bars, and thence over the top of the front bar 43 and then down over the front face of said bar 43. It will be apparent that after the carbon paper has been thus arranged, between the two bars, the tightening of the clamping nut 48' will serve to clamp or hold the carbon paper in a fixed relation with the two clamping bars. After being passed between the clamping bars 42 and 43, and prior to the clamping together thereof, the carbon paper is drawn down over the front bar 43, passing over the paper table and the front of the platen 13 and between it and the usual paper feed rollers 13^a and 13^b which are preferably maintained in released or inoperative positions. Thence the paper is led or drawn upwardly at the back of the platen and is clamped by devices arranged at the rear of the paper table, said devices being clearly shown in Figs. 3, 4, 6 to 8. The rear clamping devices also comprise a pair of clamping bars 51 and 52, the clamping bar 51 connecting the endless bands 35 and being secured thereto by screw bolts 53 and cooperating nuts 54. Near one end, the bar 51 is formed with a slot 55 which receives an angle tongue-like piece 52^a projecting from one end of the clamping bar 52, the construction being such that the tongue-and-slot connection provides a hinge between the two clamping bars like the hinge 43^a at

the front. The other end of the clamping bar 52 is formed with a hole through which the shank of the associated screw bolt 53 passes, said shank projecting a considerable distance beyond the bar 52 and receiving a clamping nut 54, which is a thumb nut. As shown clearly in Fig. 8 the clamping bar 51 is provided with a set of suitably fixed pointed pins or rivets 56 arranged longitudinally of the bar as shown in Fig. 6. The pointed ends of said rivets are received in holes 57 formed in the bar 52. The construction is such that when the clamping nut 54 is removed the bars 51 and 52 may be swung apart so that the carbon paper may be passed or drawn between them, after which said bars may be clamped together, the pointed members or rivets 56 passing through the carbon paper and assisting to hold it securely between the two clamping bars.

That portion or section of the carbon paper which is held or clamped between the clamping devices described in the preceding paragraph may be termed the working portion. It will be understood that when this working portion is exhausted and it is desired to replace it with fresh carbon, it is necessary only to loosen the clamping devices and draw or unwind a portion of the carbon paper from the roll, enabling a fresh or unused section of said paper to be led through or between the clamping devices, and then to reclamp said devices and tear off the exhausted section of the carbon paper.

As has been stated, a folded work sheet is preferably used with the carbon roll device. Said work sheet is designated by the reference numerals 57 and is adapted to be arranged to embrace between its folds the working section of the carbon paper. In order to properly align and hold the work sheet 57 I make use of devices which will now be described in detail. A clamping bar or plate 58 for the work sheet is arranged between the two clamping devices for the carbon paper, and may be secured to the endless bands 35 in any preferred manner, and may be provided with a scale corresponding with the usual carriage scale. As shown, the clamping plate is provided with slots through which the endless bands 35 pass and the portions of said bands which lie against the front and back of the plate 58 may be soldered or otherwise secured to it. The clamping plate 58 is adapted to cooperate with the lower edge portion of the folded work sheet and is brought into position to cooperate initially with said folded work sheet by turning the platen until the clamping plate is positioned at the front of the platen, shown in Figs. 4 and 5. The plate is arrested in this position by the upper edge thereof contacting with stop lugs 59 fixed to the brackets 15 and extending

downwardly therefrom at the front of the platen. It will be understood that when the plate 58 is in contactive engagement with the steps 59 further movement of the endless bands in one direction is prevented and the roll holder receives no further turning movement should further turning movement in the same direction be communicated to the platen. At this time the plate 68 is in position to receive the folded work sheet 57 and said work sheet may be passed over the paper table 22, the rear fold of the work sheet passing between the paper table and the working portion of the carbon paper and the front fold passing over and covering the working portion of the carbon paper so that said working portion is embraced between the two folds of the work or bill sheet.

I prefer to employ a side guide to cooperate with the left-hand edge of the rear fold of the bill sheet; which rear fold, as will be seen in Fig. 1, is somewhat wider than the front fold. The side guide is preferably formed of sheet metal and comprises a body portion 60 having a lip 61 turned up at right angles to it, said lip being the guide proper. The body portion is provided with ears 62 formed with slots 63 through which pass headed thumb screws 64. The upper thumb screw 64 at each side is supported in an angled bracket 65 secured by headed screws 66 to the angled piece 20 (Fig. 2). The lower thumb screw 64 at each side is received in an ear 67 extending laterally from the neighboring bracket 15. The construction is such that by loosening the thumb screws 64 the side guide may then be adjusted by being moved toward or away from the middle of the machine and when said thumb screws are tightened said side guide will be maintained in fixed relation with the combined paper table and supporting frame. Preferably the side guide is adjusted to contact with the left-hand edge of the rear fold of the bill sheet 57 before the creases at the right-hand side of the latter can engage with the right-hand edge of the working portion of the carbon paper, as this has been found in practice to be an arrangement which causes less smutting of the work sheet than would be the case if the creases were allowed to engage with the edge of the carbon paper. The preferred arrangement is shown in Fig. 1. The work sheet having been brought to the proper position laterally, may then be moved downwardly until its lower edge portion passes between the plate 58 and the platen. It will be understood, of course, that the front fold of the work sheet at its lower edge will at this time be between the carbon paper and the plate 58 while the rear fold of said work sheet will be between said carbon paper and the face of the platen.

As will be understood from an inspection of Fig. 4, the space between the platen and the plate 58, which plate is curved in cross-section to conform to the curvature of the platen, widens gradually from the lower edge portion of the plate 58 toward its upper edge portion, forming a sort of slot which gradually narrows from the top toward the bottom. The lower edge portion of the work sheet passes downwardly through this slot and will be arrested when the lower edge of the front fold of the work sheet reaches the end of the opening between the carbon paper and the plate 58, which opening, as shown in Fig. 4, also narrows from the top or mouth to the bottom. It will be understood that the plate 58 serves as a sort of clamping plate for the lower edge portion of the bill sheet and also as an aligning device, since said plate is arranged longitudinally of the platen and the closed end of the slot between the plate and the carbon paper is parallel with the longitudinal axis of said platen.

It will be apparent that by the arrangement thus far described the upper left-hand corner of the front fold of the bill sheet would be left free, which would be undesirable, and I prefer to provide means for holding this corner against the carbon paper. This holding means preferably comprises a combined indicating device and holding finger which is in the form of a sheet metal member designated as a whole by the numeral 68 and shown clearly in Fig. 1. The member comprises a holding finger 69 and a lateral extension 70 having a side indicating edge 71 and an end indicating edge 72, the functions of which will be explained later. The member 68 is adjustably mounted on a supporting bar 73, the latter being provided with an elongated slot 74 through which passes a screw bolt 75, the Shank of the latter passing through a hole 76 at the top of the member 68 and receiving a thumb nut 76. The head of the screw bolt 75 contacts with the under side of the supporting bar 73 and the cooperating thumb nut 76 contacts with the front face of the member 68. The construction is such that when the thumb nut is tightened the member 68 is held in fixed relation with its supporting bar 73, but by loosening the thumb nut 76, the member 68 may be adjusted longitudinally of its supporting bar. The supporting bar is carried by the endless bands 35 and is adjustable lengthwise of said bands, said bar being slit at its ends to provide tongues or clips 77 which are bent to engage with the rear faces of the bands 35 while the end portions of the bar 73 at either side of the tongues 77 engage with the front faces of said bands. The supporting bar 73 is thereby held in frictional engagement with the bands and may be readily slipped up and

down lengthwise of said bands, the friction between the latter and the supporting bar serving to maintain said bar in adjusted position.

5 It will be understood that by the construction just described the member 68 is capable of adjustment both widthwise and lengthwise of the work sheet 57. The finger 69, it will be apparent, will hold the upper
10 left-hand corner of the outer fold of the bill sheet against the carbon paper. If desired the side guard 61 may be dispensed with and the edge 71 of the part 70 may be employed as an indicator or guide to cooperate
15 with the left-hand edge of the outer face of the bill sheet, the operator knowing that when this edge of the bill sheet and the edge 71 are in alinement the proper lateral position of the bill sheet has been obtained. In
20 the same way the edge 72 of the part 70 may be used to cooperate with the upper edge of the front fold of the bill sheet to indicate that the bill sheet has been moved downwardly far enough. Of course with the described construction the bill sheet will be
25 arrested by the clamping plate 58 but the end guide 72 forms a convenient visual indicator by using which the operator will be advised that he has pressed the bill sheet far enough downward and that he need make no
30 attempt to force it farther.

As has been explained the carbon paper is drawn downwardly from the roll holder, passing over the front side of the platen, consequently it will be apparent that that
35 face of the carbon paper which contains the carbon will be inward or against the combined paper table and supporting member, while the back or "un-carboned" side of the carbon paper will be outermost. The
40 result will be that as the carbon paper is fed around with the platen to and fro during the writing of the bills, that portion of said carbon paper which lies between the plate
45 58 and the rear clamping device would contact time and again with the face of the platen and soil the latter. Of course, the working portion of the carbon between the plate 58 and the front clamping device will
50 not contact with the platen because the rear fold of the bill sheet will lie between the latter and the carbon. It will be understood that the space between the plate 58 and the rear clamping device should be
55 sufficient to enable the plate 58 to contact with the stops 59 without bringing the rear clamp down in the way of the usual paper feeding devices of the machine, since this rear clamp, as I prefer to make it, is too
60 thick to pass between the platen and said paper feeding devices and would therefore block or prevent the movement of the endless bands when the platen is being turned in line space direction. In order to prevent
65 the portion of the carbon paper between the

plate 58 and the rear clamp from smutting or soiling the platen I provide a flexible apron or shield 78 preferably of linen or some other fabric of close texture (Figs. 3, 4, 5, 6 and 7). Two of the corners of this
70 apron 78 are held against the back of the plate 58 by teeth 79 punched out of the metal of which said plate is formed, and at the other two corners said apron is secured to ears 51* on the clamping bar 51 and near
75 the sides thereof by securing screws 80. The distance between the two screws 80 is substantially equal to that between the two teeth 79 and is such that the carbon paper may pass freely between the screws and between the teeth, while at the same time it
80 will be understood that the apron or shield will lie between the carbon paper and the platen and will keep the latter clean.

After what has been said it is not thought
85 necessary to explain the operation of my improvements as a whole at any great length. The operator having drawn the carbon paper through the clamps and clamped it as has been described, may turn the platen by
90 the usual finger wheels until the combined alining and clamping plate 58 is in the position shown in Figs. 4 and 5. Then one of the folded bill sheets 57 may be entered over the inclined paper table and adjusted as has
95 been described, after which the operator may turn the platen by hand until the bill sheet has been fed backwardly in the machine to position for writing the first line. The first line may be written in the usual way, it being
100 understood that the type impressions on the outer fold of the bill sheet will be made through the usual inking ribbon, while the rear fold of the bill sheet will be printed in duplicate from the interposed carbon paper.
105 The first line having been written the platen may be line spaced in the usual manner and the second and subsequent lines may be thereafter written, after which the platen is turned by hand in line spacing direction
110 until the clamping plate 58 contacts with its stops 59, whereupon the written bill sheet may be withdrawn and the next bill sheet adjusted and written as has been described. During the turning movements of the platen
115 it will be understood that corresponding turning movements are communicated to the carbon roll holder, these turning movements being received from the connections 35 and independently of the carbon paper which is
120 between the platen and the roll holder. It will also be apparent that the carbon paper is fed positively during these turning movements because of the clamping devices which are mounted upon the connections or endless
125 bands 35 and which hold a portion or section of the carbon paper between them.

Although I prefer to use my invention in the manner above explained, it is obvious that it may be used in other ways and parts 130

of it may be employed without other parts. For example the roll of carbon paper may be dispensed with and one or more sheets of carbon paper may be arranged between the two-part clamps and held at the top and bottom edges by said clamps. When several sheets of carbon paper are thus employed, work sheets or bill sheets may be used with them, one bill sheet or one portion of a folded bill sheet being arranged between each two carbon sheets.

When a single carbon sheet is employed, the device may be used in the manner above described in connection with a folded bill sheet, and said single carbon sheet when exhausted may be unclamped, removed and replaced by a fresh sheet of carbon paper. Furthermore, the alining and clamping device, comprising the clamping plate or bar 58, may be made use of to aline a work sheet or to aline and hold a work sheet in co-operation with the platen without at the same time employing the carbon paper or the clamps therefor, in which case a rotary device equivalent to one or both of the wheels 31 and 32 might be employed on the band or bands 35, or their equivalents might run over devices which did not rotate if preferred. Such a clamping plate as 58 is in the nature of a so-called leading edge stop device. It might be advantageously employed with stiff work sheets, such as cards or the like, for holding such a work sheet so that it might be written upon close to its top and bottom edges. In this connection it will be noted that the clamping plate is mounted independently of the platen and is connected therewith by connecting means comprising a longitudinally movable band or strap. Preferably, as in the present instance, said band is endless and it enables the clamping plate to be moved automatically away from and toward said platen so that in writing on a work sheet which is of greater length than the circumference of the platen, the types will not strike against the clamping plate through the work sheet at the beginning of or during the second or subsequent revolutions of the platen.

When the work sheet is initially adjusted it coöperates with the clamping plate 58 and platen, but as the latter is rotated the clamping plate is carried away from the platen by the endless bands, leaving the work sheet to be held against the platen and fed to the first writing line by the working portion of the carbon paper which engages the rear fold of the work sheet and holds it against the platen. Of course during the return or line spacing movements of the platen the carbon paper will in the same way control the work sheet and cause it to be properly fed in line spacing direction, although for the greater part of the time said work sheet is not under the control of any paper feed-

ing device other than the carbon paper itself and the platen. This is a valuable feature of my invention and is not limited to the employment of carbon paper for feeding purposes, as, of course, any other flexible material may be employed and a sheet or sheets of carbon paper together with a work sheet or work sheets may be suitably attached to said flexible material and fed by it.

It will furthermore be obvious that various changes in the details of construction may be made, and in the claims where reference is made to a particular part by the special term by which it has been described, I desire to be understood as claiming the equivalents of such part; for example, in certain of the claims where an endless band or strap is recited as one of the elements, these terms are to be understood as comprehending anything in the nature of an endless connection whether a band, belt, strap, chain or the like which will perform the desired function.

Besides the changes more particularly referred to above other changes may be made within my invention.

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 holder carrying a roll of paper, a connection between said platen and said holder, and a paper controlling device connected to said connection and coöperating with the paper carried by said holder.

2. In a typewriting machine the combination of a platen, a holder for a roll of paper, a connection between said platen and said holder, and a clamp fixed to said connection and clamping an unwound portion of the roll of paper carried by said holder.

3. In a typewriting machine, the combination of a rotary platen, a rotary device, a pair of connections between said platen and said device, said connections being spaced apart, and a paper controlling device fixed to said connections.

4. In a typewriting machine, the combination of a rotary platen, a rotary device, a pair of connections between said platen and said device, said connections being spaced apart, and a pair of paper controlling devices spaced apart and carried by said connections.

5. In a typewriting machine, the combination of a rotary platen, a rotary device, a pair of connections between said platen and said device, said connections being spaced apart, a pair of paper clamps spaced apart and carried by said connections, said paper clamps being adapted to hold one or more sheets of paper.

6. In a typewriting machine, the combination of a rotary platen, an endless band

arranged to turn when said platen is turned, a pair of paper holders fixed to said band and spaced apart so as to hold between them one or more sheets of paper or the like.

5 7. In a typewriting machine, the combination of a rotary platen, a pair of endless bands spaced apart and adapted to turn when said platen is turned, and a paper controlling device attached to said bands.

0 8. In a typewriting machine, the combination of a rotary platen, a pair of endless bands spaced apart and adapted to turn when said platen is turned, and a paper holder or clamp carried by said bands.

15 9. In a typewriting machine, the combination of a rotary platen, a pair of endless bands spaced apart and adapted to turn when said platen is turned, a pair of paper holders or clamps carried by said bands and spaced apart, said clamps being adapted to hold between them one or more sheets of paper or the like.

20 10. In a typewriting machine, the combination of a rotary platen, a pair of endless bands partly embracing the platen and adapted to turn with it, and a pair of paper clamps carried by said bands and spaced apart, said clamps being adapted to clamp the bottom and top portions of a sheet of paper of the like.

30 11. In a typewriting machine, the combination of a rotary platen, a wheel separate from the platen, an endless band connecting said wheel with said platen, and a paper clamp fixed to said endless band and adapted to clamp an edge portion of a sheet of paper or the like.

35 12. In a typewriting machine, the combination of a rotary platen, a pair of wheels separate from the platen, a pair of endless bands connecting said wheels with said platen, and a paper clamp fixed to said bands and adapted to be moved toward and away from the platen.

40 13. In a typewriting machine, the combination of a rotary platen, a pair of wheels separate from the platen, a pair of endless bands connecting said wheels with said platen, and a pair of paper clamps fixed to said bands and spaced apart to engage and hold the top and bottom edge portions of a sheet of paper.

50 14. In a typewriting machine, the combination of a rotary platen, a rotary material carrying device, a connection between said platen and said material carrying device enabling the latter to be turned by the platen, and a device positively connecting said connection with the material carried by said material carrying device.

60 15. In a typewriting machine, the combination of a rotary platen, a roll holder for carbon paper or the like, a connection between said platen and roll holder enabling

the roll holder to be turned by the platen 65 when rotary movement is communicated to the latter, and a clamp for the carbon paper or the like, said clamp being carried by said connection.

16. In a typewriting machine, the combination of a rotary platen, a rotary material carrying device, a connection between said platen and said material carrying device enabling the latter to be turned by the platen as the platen is turned, and devices positively connecting the material fed from the material carrying device with said connection at two points and operative to maintain a portion or section of the material in a fixed relation with said connection during 80 the rotary movements of the platen.

17. In a typewriting machine, the combination of a rotary platen, a rotary material carrying device or roll holder, two connections, one at each end of the roll holder connecting the latter with the platen near its ends, and a device between said connections positively connecting them with the material carried by the roll holder.

18. In a typewriting machine, the combination of a rotary platen, a rotary material carrying device or roll holder, two connections one at each end of the roll holder connecting the latter with the platen near its ends, and a pair of devices carried by said 95 connections and spaced apart, said devices holding between them a portion or section of the material carried by the roll holder.

19. In a typewriting machine, the combination of a rotary platen, a rotary material carrying device, an endless band or strap connecting said material carrying device with said platen, and a paper holder or clamping device carried by said band and cooperating with the material carried by the 105 material carrying device.

20. In a typewriting machine, the combination of a rotary platen, a rotary material carrying device, a pair of endless bands spaced apart and connecting said material 110 carrying device with said platen, a paper holder or clamping device carried by and connecting said endless bands, said paper holder cooperating with the material carried by the material carrying device.

21. In a typewriting machine, the combination of a rotary platen, a rotary material carrying device, and a paper holder or clamping device arranged between the platen and said material carrying device, said paper 120 holder being operative to control the feeding movements of the material carried by said material carrying device.

22. In a typewriting machine, the combination of a rotary platen, a roll holder 125 shaft, a tubular roll holder on said shaft, a core piece having a pin and slot connection with said shaft and frictionally connected

with said roll holder, and connections between said roll holder shaft and said platen.

23. In a typewriting machine, the combination of a rotary platen, a roll holder shaft, a tubular roll holder on said shaft, a core piece having a pin and slot connection with said shaft and frictionally connected with said roll holder, wheels fixed to said shaft, and endless bands connecting said wheels with said platen.

24. In a typewriting machine, the combination of a platen carrier, a platen rotatable thereon, a roll holder support mounted on said platen carrier, a roll holder shaft journaled on said support, a tubular roll holder, and a removable core piece frictionally cooperating with said tubular roll holder and having a positive connection with said shaft.

25. In a typewriting machine, the combination of a platen carrier, a platen rotatable thereon, a roll holder support on said platen carrier, a shaft journaled on said support, a tubular roll holder, a core piece frictionally cooperating with one end of said roll holder and having a pin and slot connection with said shaft, and connections between said shaft and said platen.

26. In a typewriting machine, the combination of a platen carrier, a platen mounted thereon, a roll holder shaft, a tubular roll holder, core pieces frictionally connected with said roll holder, one of said core pieces being fixed on the shaft and the other of said core pieces having a pin and slot connection with said shaft, wheels fixed to said shaft, and endless bands or straps connecting said wheels with said platen.

27. In a typewriting machine, the combination of a platen carrier, a platen rotatable thereon, a combined supporting frame and paper table rigid on said carrier and inclining upwardly and rearwardly from the top of the platen, a roll holder for carbon paper or the like rotatably mounted at the top of said supporting frame, said supporting frame serving to guide the carbon paper and the work sheet downwardly at the front of the platen, and a side guide cooperative with the work sheet.

28. In a typewriting machine, the combination of a platen carrier, a platen rotatable thereon, a combined supporting frame and paper table rigid on said carrier and inclining upwardly and rearwardly from the top of the platen, a roll holder for carbon paper or the like rotatably mounted at the top of said supporting frame, said supporting frame serving to guide the carbon paper and the work sheet downwardly at the front of the platen, and a side guide adjustably secured to said supporting frame and cooperative with one side of the work sheet.

29. In a typewriting machine, the combination of a rotary platen, a rotary device, a

connection between said platen and said device, a clamp for carbon paper or the like fixed to said connection, and a paper controlling device fixed to said connection and cooperative with the work sheet which is separate from the carbon paper or other material held by said clamp.

30. In a typewriting machine, the combination of a rotary platen, a rotary device, a connection between said platen and said device, a clamp for carbon paper or the like fixed to said connection, and a device cooperative with the platen to align the work sheet and clamp one of the edges thereof, said work sheet being separate from the carbon paper or the like.

31. In a typewriting machine, the combination of a rotary platen, a rotary device, a pair of connections between said device and said platen, said connections being spaced apart, a clamp for carbon paper or the like carried by said connections, and a device also carried by said connections and cooperative with the platen to align a work sheet, said work sheet being separate from the carbon paper or other material held in said clamp.

32. In a typewriting machine, the combination of a rotary platen, a rotary device, a pair of connections between said device and said platen, said connections being spaced apart, a clamp for carbon paper or the like carried by said connections, and a device also carried by said connections and cooperative with the platen to align a work sheet and clamp one of the edges thereof, said work sheet being separate from the carbon paper or other material held in said clamp.

33. In a typewriting machine, the combination of a rotary platen, a rotary device, a pair of connections between said platen and said device, a pair of clamps for carbon paper or the like carried by said connections, a device cooperative with the platen to align a work sheet, said work sheet being separate from the carbon paper or other material carried by said clamps.

34. In a typewriting machine, the combination of a rotary platen, a rotary device, a pair of connections between said platen and said device, a pair of clamps for carbon paper or the like carried by said connections, a device cooperative with the platen to align a work sheet and hold one of the edges thereof, said work sheet being separate from the carbon paper or other material carried by said clamps.

35. In a typewriting machine, the combination of a rotary platen, an endless band operatively connected with said platen, a clamp for carbon paper or the like fixed to said band, and a paper controlling device fixed to said endless band and cooperative

with a work sheet which is separate from the carbon paper or other material held in said clamp.

36. In a typewriting machine, the combination of a rotary platen, an endless band operatively connected therewith, a clamp for carbon paper or the like fixed to said endless band, and a device coöperative with said platen to aline a work sheet which is separate from the carbon paper or the like.

37. In a typewriting machine, the combination of a rotary platen, an endless band operatively connected therewith, a clamp for carbon paper or the like fixed to said endless band, and a device also fixed to said band and coöperative with said platen to aline a work sheet and hold one of the edges thereof, said work sheet being separate from the carbon paper or other material held in said clamp.

38. In a typewriting machine, the combination of a rotary platen, a pair of endless bands spaced apart and operatively connected with said platen, a paper clamp carried by said bands and operative to hold a sheet of carbon paper or like material, and a device carried by said bands and coöperative with the platen to aline a work sheet separate from said carbon paper.

39. In a typewriting machine, the combination of a rotary platen, a pair of endless bands spaced apart and operatively connected with said platen, a paper clamp carried by said bands and operative to hold a sheet of carbon paper or the like material, and a device carried by said bands and coöperative with said platen to aline a work sheet and clamp one of the edges thereof, said work sheet being separate from said carbon paper.

40. In a typewriting machine, the combination of a rotary platen, a pair of endless bands spaced apart and operatively connected therewith, a pair of clamps carried by said bands and spaced apart to coöperate with the top and bottom edge portions of a sheet of carbon paper or the like, and a device carried by said bands and coöperative with the platen to aline a work sheet and clamp one of the edges thereof, said work sheet being separate from the carbon paper or the like.

41. In a typewriting machine, the combination of a rotary platen, a pair of wheels spaced apart and adapted to turn together, a pair of endless bands each connecting one of said wheels with said platen, a pair of paper clamps carried by said bands and spaced apart to coöperate with a sheet of carbon paper or the like, and a clamping bar carried by said bands and coöperative with the platen to aline and hold a work sheet separate from said carbon paper.

42. In a typewriting machine, the combination of a rotary platen, a rotary material

carrying device, a connection between said platen and said material carrying device enabling the latter to be turned by the platen, a device positively connecting said connection with the material carried by said material carrying device, and a paper controlling device carried by said connection and coöperative with a work sheet which is separate from the material carried by said material carrying device.

43. In a typewriting machine, the combination of a rotary platen, a roll holder for carbon paper or the like, a connection between said platen and roll holder enabling the roll holder to be turned by the platen when rotary movement is communicated to the latter, and a paper controlling device also carried by said connection and coöperative with a work sheet separate from the carbon paper.

44. In a typewriting machine, the combination of a rotary platen, a rotary roll holder, an endless band or strap connecting said roll holder with said platen, a controlling device for the carbon paper connected to said strap, and a paper controlling device also connected to said strap and coöperative with a work sheet separate from the carbon paper.

45. In a typewriting machine, the combination of a rotary platen, a rotary roll holder, an endless band or strap connecting said roll holder with said platen, a controlling device for the carbon paper connected to said strap, and a clamping plate or bar connected to said strap and operative to aline and hold the work sheet.

46. In a typewriting machine, the combination of a rotary platen, an alining device mounted independently of the platen, and connections between said device and platen whereby the device is movable toward and away from the platen during the rotation of the latter.

47. In a typewriting machine, the combination of a rotary platen, an alining device comprising a plate or bar mounted independently of the platen, and connections including a longitudinally movable band or strap between said device and platen whereby the device is movable toward and away from the platen during rotary movements of the latter.

48. In a typewriting machine, the combination of a rotary platen, an alining device comprising a plate or bar mounted independently of the platen, and connections between said device and platen, said connections including a strap or band to which the plate or bar is secured, said connections enabling said device to be moved toward and away from the platen independently during rotary movements of said platen.

49. In a typewriting machine, the combination of a rotary platen, means for aligning and clamping the work sheet, and connections between said means and said platen, whereby said means is movable toward and away from the platen during rotary movements of the latter.
50. In a typewriting machine, the combination of a rotary platen, a plate or bar cooperative with the platen to align the work sheet and clamp one of the edges thereof, and connections between said plate or bar and said platen, said connections including a longitudinally movable band or strap and enabling said bar to be moved automatically toward and away from the platen during the rotary movements of the latter.
51. In a typewriting machine, the combination of a rotary platen, a rotary device, a connection between said platen and said rotary device, and means connected to said connection for aligning the work sheet.
52. In a typewriting machine, the combination of a rotary platen, a rotary device, a connection between said platen and said rotary device, and a device connected to said connection and cooperating with the platen to align the work sheet.
53. In a typewriting machine, the combination of a rotary platen, a rotary device, a connection between said platen and said rotary device, and a device connected to said connection and cooperating with the platen to align the work sheet and to clamp one of the edges thereof.
54. In a typewriting machine, the combination of a rotary platen, a rotary device, a pair of connections spaced apart and connecting said rotary device with said platen, and means carried by said connections for aligning the work sheet.
55. In a typewriting machine, the combination of a rotary platen, a rotary device, a pair of connections spaced apart and connecting said rotary device with said platen, and means carried by said connections and cooperative with the platen to align the work sheet and clamp one of the edges thereof.
56. In a typewriting machine, the combination of a rotary platen, a rotary device, a pair of connections spaced apart and connecting said rotary device with said platen, and a clamping plate or bar fixed to and carried by said connections and cooperative with the platen to align the work sheet and clamp one of the edges thereof.
57. In a typewriting machine, the combination of a rotary platen, an endless band cooperatively connected with said platen, and means connected to said band for aligning the work sheet.
58. In a typewriting machine, the combination of a rotary platen, an endless band cooperatively connected with said platen, and means connected to said band and cooperative with the platen to align a work sheet and clamp one of the edges of said work sheet.
59. In a typewriting machine, the combination of a rotary platen, a pair of endless bands spaced apart and operatively connected with said platen, and a device carried by said band and cooperative with the platen to align and hold a work sheet.
60. In a typewriting machine, the combination of a rotary platen, a pair of endless bands partly surrounding the platen and adapted to turn therewith, and a clamping plate or bar carried by said bands and cooperative with the platen to align and hold a work sheet.
61. In a typewriting machine, the combination of a rotary platen, a pair of wheels spaced apart and adapted to turn together, a pair of endless bands each operatively connecting one of said wheels with said platen, a clamping plate or bar secured at its end portions to said endless bands and cooperative with the platen to align a work sheet.
62. In a typewriting machine, the combination of a rotary platen, a pair of wheels spaced apart and adapted to turn together, a pair of endless bands each operatively connecting one of said wheels with said platen, a clamping plate or bar secured at its end portions to said endless bands and cooperative with the platen to align a work sheet and clamp one of the edges thereof.
63. In a typewriting machine, the combination of a rotary platen, a rotary device, a connection between said device and said platen, a paper controlling device operatively connected with said connection, and a stop cooperative with said paper controlling device to arrest it in position to align the work sheet.
64. In a typewriting machine, the combination of a rotary platen, a rotary device, a pair of endless bands connecting said device with said platen, a clamping plate or bar carried by said bands, and a stop cooperative with said clamping plate to arrest it in operative position.
65. In a typewriting machine, the combination of a rotary platen, a roll holder, connections between said roll holder and said platen, and means carried by said connections for aligning the work sheet.
66. In a typewriting machine, the combination of a rotary platen, a roll holder, connections between said roll holder and said platen, and means carried by said connections for aligning and holding the work sheet.
67. In a typewriting machine, the combination of a rotary platen, a roll holder for

carbon paper or the like, connections between said roll holder and said platen and means cooperating with the platen to aline and hold the work sheet which is separate
5 from the carbon paper or the like.

68. In a typewriting machine, the combination of a rotary platen, a roll holder for carbon paper or the like, an endless band or strap connecting said roll holder with the
10 platen, and a clamping and alining plate or bar for the work sheet, said plate or bar being connected with said endless band.

69. In a typewriting machine, the combination of a rotary platen, a roll holder for
15 carbon paper or the like, a pair of endless bands or straps connecting said roll holder with said platen, and a clamping and alining plate or bar carried by and connecting said endless bands, said plate or bar operating
20 ating to aline and hold the work sheet.

70. In a typewriting machine, the combination of a rotary platen, a roll holder for carbon paper or the like, a pair of endless bands connecting said roll holder with said
25 platen, a clamping plate or bar carried by said endless bands and operative to aline and hold the work sheet, and a stop co-operative with said plate or bar to arrest it in alining position.

71. In a typewriting machine, the combination of a platen carrier, a rotary platen mounted thereon, a combined supporting frame and paper table mounted on said
30 platen carrier, a roll holder rotatably mounted on said supporting frame, a pair of endless bands connecting said roll holder with said platen, a plate or bar carried by said bands and operative to aline and hold the
35 work sheet, and a pair of stops fixed on said supporting frame and operative to arrest said plate or bar in alining position.

72. In a typewriting machine, the combination of a rotary platen, a rotary material carrying device, endless bands connecting
45 said device with said platen, and a two-part clamp coöperative with the material carried by said device, one part of said clamp being fixed to said bands and the other part of said clamp being mounted on the first part.

73. In a typewriting machine, the combination of a rotary platen, a rotary material carrying device, endless bands connecting
50 said device with said platen, and a two-part clamp coöperative with the material carried by said device, one part of said clamp being fixed to said bands and the other part of said clamp being hinged to the first part and maintained in operative relation therewith
55 by a clamping nut.

74. In a typewriting machine, the combination of a rotary platen, a roll holder, a pair of endless bands connecting said roll holder with said platen, and two clamps carried by said bands, said clamps being
60 spaced apart and coöperative with the ma-

terial carried by said roll holder, each of said clamps comprising two parts, one part hinged on the other and maintained in operative relation therewith by a clamping
nut.

75. In a typewriting machine, the combination of a rotary platen, a rotary material carrying device, endless bands connecting
70 said device with said platen, a two-part clamp coöperative with the material carried by said device, one part of said clamp being fixed to said bands and the other part of said clamp being hinged to the first part and maintained in operative relation therewith
75 by, a clamping nut, and a plate or bar fixed to said bands and coöperative with the platen to aline and hold a work sheet, said work sheet being separate from the material carried by said material carrying device.

76. In a typewriting machine, the combination of a rotary platen, a roll holder, connections between said roll holder and said
80 platen, and a member carried by and adjustable on said connections and serving to hold or control in part a work sheet separate from the material carried by said roll holder.

77. In a typewriting machine, the combination of a rotary platen, a roll holder, connections between said roll holder and said
85 platen, and two paper controlling members carried by said connections and relatively adjustable, said members coöperating with opposite edges of a work sheet separate from the material carried by said roll holder.

78. In a typewriting machine, the combination of a rotary platen, a rotary device, a connection between said platen and said rotary device, and two paper controlling members each connected to said connection, said
90 paper controlling members being relatively adjustable to coöperate with the top and bottom edge portions of a work sheet.

79. In a typewriting machine, the combination of a rotary platen, a band or strap
100 operatively connected therewith, and two paper controlling members each connected to said band, said paper controlling members being relatively adjustable to coöperate with the top and bottom portions of a work
105 sheet.

80. In a typewriting machine, the combination of a rotary platen, a pair of bands spaced apart and each operatively connected with the platen near one of its ends, and a
110 pair of paper controlling members carried by said bands, said members being relatively adjustable toward and away from each other to coöperate with the top and bottom edge portions of work sheets of different
115 lengths.

81. In a typewriting machine, the combination of a rotary platen, a rotary device, a connection between said platen and said rotary device, and a member adjustably se-
120

cured to said connection and serving to hold or control in part the work sheet to be written upon.

82. In a typewriting machine, the combination of a rotary platen, a rotary device, a connection between said platen and said rotary device, and two paper controlling members carried by said connections and relatively adjustable, said members cooperating with the top and bottom edge portions of a work sheet.

83. In a typewriting machine, the combination of a rotary platen, a rotary device, a pair of connections spaced apart and connecting said rotary device with said platen, and two paper controlling members carried by said connections, said members being relatively adjustable toward and away from each other to cooperate with work sheets of different lengths.

84. In a typewriting machine, the combination of a rotary platen, an endless band operatively connected with said platen, and two paper controlling members connected to said endless band, said members being relatively adjustable toward and away from each other to cooperate with the top and bottom edge portions of work sheets of different lengths.

85. In a typewriting machine, the combination of a rotary platen, a pair of endless bands, each operatively connected with said platen near one of its ends, and two paper controlling members carried by said endless bands, said members being relatively adjustable to cooperate with the top and bottom edge portions of work sheets of different lengths.

86. In a typewriting machine, the combination of a rotary platen, a roll holder, endless bands connecting said roll holder with said platen, a cross bar connecting said bands, and a paper controlling member mounted on said cross bar.

87. In a typewriting machine, the combination of a rotary platen, a roll holder, endless bands connecting said roll holder with said platen, an adjustable cross bar connecting said bands, and a paper controlling member adjustable on said cross bar.

88. In a typewriting machine, the combination of a rotary platen, a roll holder, connections between said roll holder and said platen, and a member carried by and adjustable on said connections and serving to hold or control in part a work sheet separate from the material carried by said roll holder, said member also being provided with portions which serve as side and end indicators for the work sheet.

89. In a typewriting machine, the combination of a rotary platen, a roll holder, endless bands connecting said roll holder with said platen, a cross bar connecting said bands, and a paper controlling member

mounted on said cross bar, said member being provided with side and end indicators for the work sheet.

90. In a typewriting machine, the combination of a rotary platen, a roll holder, endless bands connecting said roll holder with said platen, an adjustable cross bar connecting said bands, and a paper controlling member adjustable on said cross bar, said member being provided with side and end indicators for the work sheet.

91. In a typewriting machine, the combination of a rotary platen, a band operatively connected therewith, and an indicating member connected to said band.

92. In a typewriting machine, the combination of a rotary platen, a band operatively connected therewith, and an end guide connected to said band.

93. In a typewriting machine, the combination of a rotary platen, a band operatively connected therewith, and a side guide connected to said band.

94. In a typewriting machine, the combination of a rotary platen, a rotary device, a connection between said device and said platen, and an indicating member or guide for the work sheet, said indicating member being connected to said connections and movable therewith.

95. In a typewriting machine, the combination of a rotary platen, a rotary device, an endless band connecting said rotary device with said platen, and an indicating member or guide for the work sheet, said indicating member being connected to said band.

96. In a typewriting machine, the combination of a rotary platen, a rotary device, a pair of endless bands spaced apart and connecting said device with said platen, and an indicating member or guide for the work sheet, said indicating member being carried by and adjustable on said bands.

97. In a typewriting machine, the combination of a rotary platen, a roll holder, connections between said roll holder and said platen, and an indicating member carried by and adjustable on said connections, said indicating member cooperating with the work sheet and serving as a combined side and end indicator therefor, the work sheet being separate from the material carried by the roll holder.

98. In a typewriting machine, the combination of a rotary platen, a roll holder, endless bands connecting said roll holder with said platen, an adjustable cross bar connecting said bands, and an indicating member adjustable on said cross bar, said indicating member serving as a side and end guide for the work sheet.

99. In a typewriting machine, the combination of a platen carrier, a rotatable platen thereon, a combined supporting

frame and paper table extending upwardly and rearwardly on said platen and fixed to said platen frame, a roll holder carried by said supporting frame, a pair of endless bands connecting said roll holder with said platen, a plate or bar fixed to said bands and coöperative with the platen to aline and hold the work sheet, a cross bar carried by and adjustable on said bands, and an indicating member adjustable lengthwise of said cross bar and serving as a guide for the work sheet, the work sheet being separate from the material carried by the roll holder.

100. In a typewriting machine, the combination of a platen carrier, a rotatable platen thereon, a combined supporting frame and paper table extending upwardly and rearwardly on said platen and fixed to said platen frame, a roll holder carried by said supporting frame, a pair of endless bands connecting said roll holder with said platen, a plate or bar fixed to said bands and coöperative with the platen to aline and hold the work sheet, a cross bar carried by and adjustable on said bands, an indicating member adjustable lengthwise of said cross bar and serving as a side and end guide for the work sheet, the work sheet being separate from the material carried by the roll holder, and a pair of clamps for the material carried by said roll holder, said clamps being spaced apart and fixed on the said endless bands.

101. In a typewriting machine, the combination of a rotary platen, a roll holder for carbon paper or the like, operative connections between the platen and roll holder, and a flexible apron or shield carried by said connections and interposed between the carbon paper and the platen.

102. In a typewriting machine, the combination of a rotary platen, a combined paper-table and roll-holder supporting frame arranged at the top of the platen and inclining rearwardly therefrom, a roll holder on said frame, the carbon paper or other material carried by said roll holder passing downwardly at the front side of the platen, connections between said platen and said roll holder, and a flexible shield or apron carried by said connections and adapted to be interposed between the carbon paper and the platen.

103. In a typewriting machine, the combination of a rotary platen, a combined paper-table and roll-holder supporting frame arranged at the top of the platen and inclining rearwardly therefrom, a roll holder on said frame, the carbon paper or other material carried by said roll holder passing downwardly at the front side of the platen, connections between said platen and said roll holder, a clamp for the carbon paper, said

clamp being carried by said connections, a paper controlling device carried by said connections, a fixed stop coöperative with said paper controlling device, and a shield or apron carried by and arranged between said clamp and said paper controlling device, said shield or apron lying between the platen and the carbon paper when the paper controlling device is in engagement with its stop.

104. In a typewriting machine, the combination of a rotary platen, means for feeding a sheet of carbon paper or the like back and forth over said platen during the rotary movements thereof, and an apron or shield attached to said means and interposed between the platen and the carbon paper.

105. In a typewriting machine, the combination of a rotary platen, means for feeding a sheet of carbon paper or the like back and forth over said platen during the rotary movements thereof, and a flexible apron or shield attached to and carried by said means and interposed at times between the carbon paper and the platen during the rotary movements of the latter.

106. In a typewriting machine, the combination of a rotary platen, means for feeding a sheet of carbon paper or the like around with said platen during the rotary movements of the latter, said carbon paper being arranged to be fed over the front side of the platen and with its carboned or working face turned toward the platen, and a flexible apron or shield attached to and carried by said means and adapted to shield the platen from said carbon paper.

107. In a typewriting machine, the combination of a rotary platen, a sheet of flexible material and means operatively connected with the platen and controlling the top and bottom end portions of the sheet of flexible material, said flexible material coöperating with a work sheet to feed it around the platen when said platen is turned and said means are actuated.

108. In a typewriting machine, the combination of a rotary platen, a sheet of flexible duplicating material, and means operatively connected with the platen and clamping the top and bottom end portions of the sheet of flexible material at opposite sides of the platen, whereby the material is fed around with the platen, said flexible material coöperating with the platen to feed a folded work sheet with which said material engages.

Signed at the city of New Orleans, in the parish of Orleans and State of Louisiana, this fourth day of February A. D. 1907.

ALLIN W. HEWITT.

Witnesses:

MICHAEL IRWIN,
W. H. WINGLEY.