H. N. JOSLEYN.

TYPE WRITING MACHINE.

APPLICATION FILED OCT. 28, 1907.

976,882.

Patented Nov. 29, 1910.

3 SHEETS—SHEET 1.

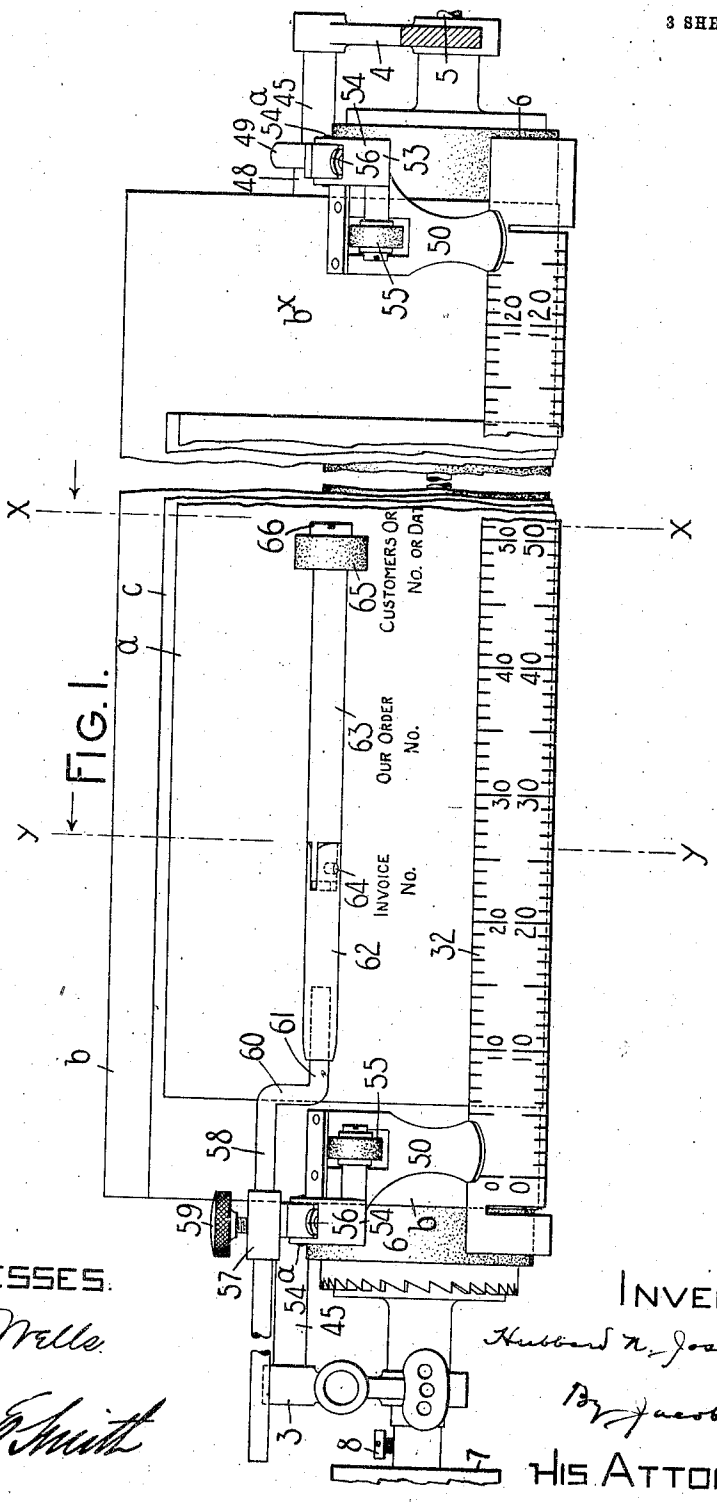


FIG. 1.

WITNESSES.

E. M. Wells.

Miles B. Smith

INVENTOR:

Hubert N. Josleyn

By Jacob Tellel

HIS ATTORNEY

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3 SHEETS—SHEET 2.

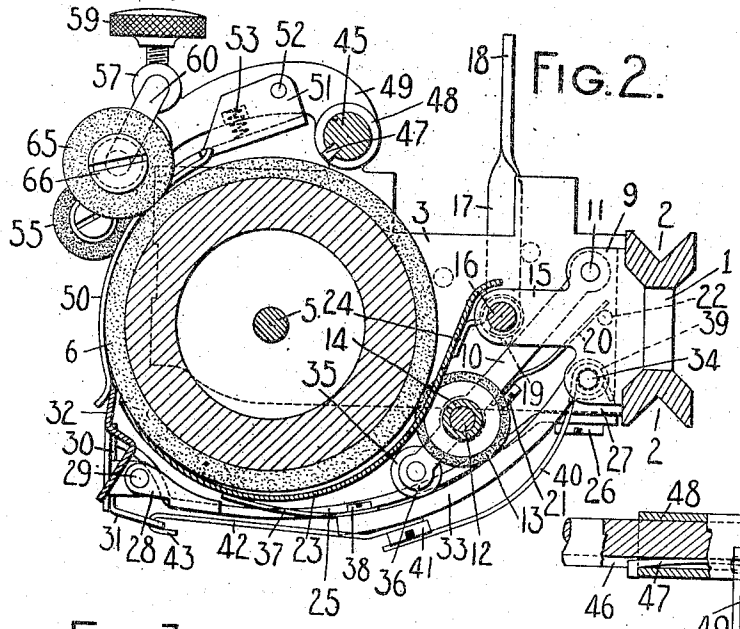


FIG. 2.

FIG. 4.

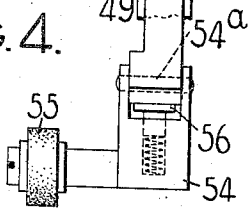
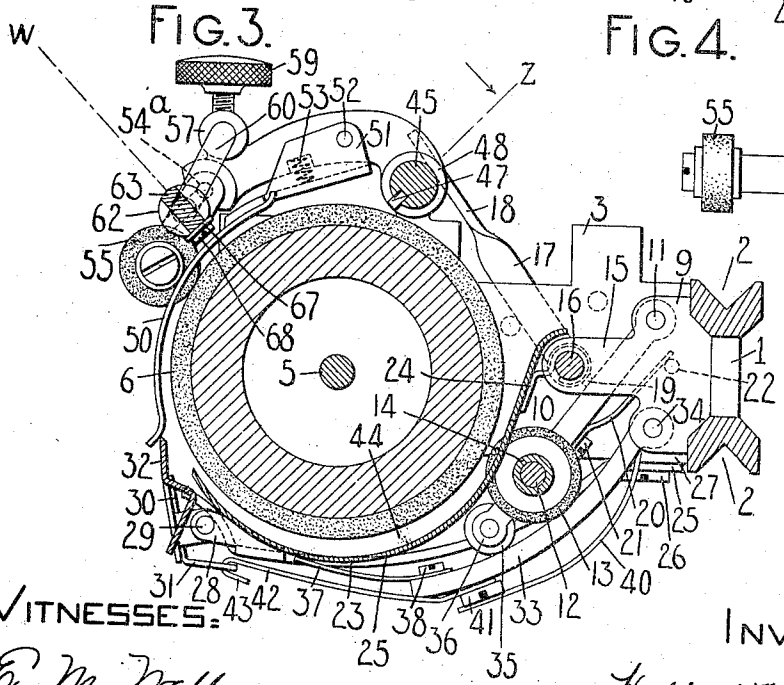


FIG. 3.



WITNESSES:

E. M. Wells.

Charles E. Smith

INVENTOR:

Hubbard N. Josleyn

By Jacob Felbel

HIS ATTORNEY

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3 SHEETS—SHEET 3.

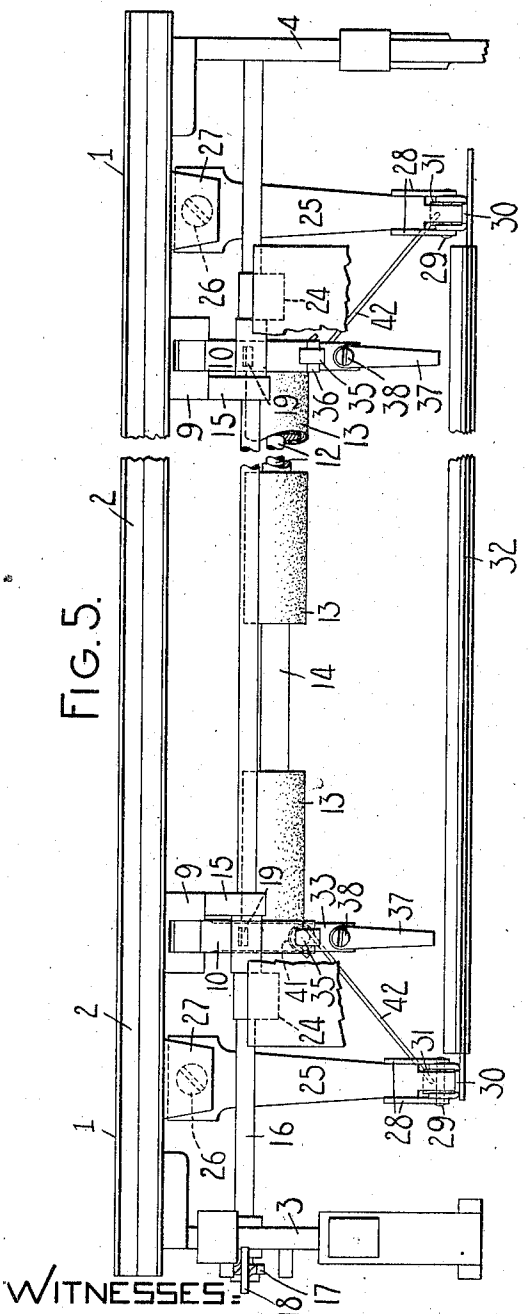


FIG. 5.

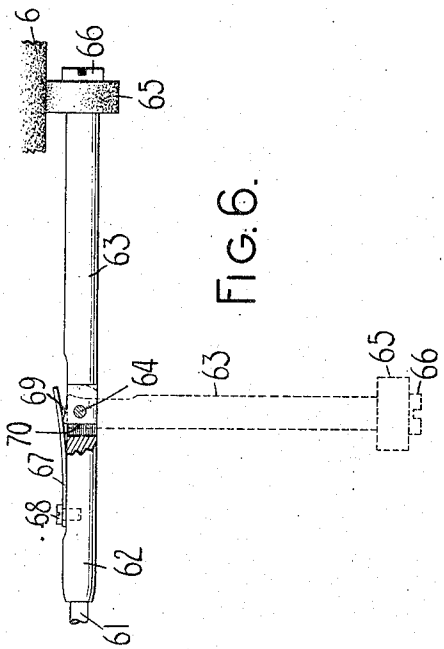


FIG. 6.

WITNESSES:

E. M. Wells

Wade O. Smith

INVENTOR:

Hubbard N. Josleyn

By Jacob Fehr

HIS ATTORNEY

UNITED STATES PATENT OFFICE.

HUBBARD N. JOSLEYN, OF SYRACUSE, NEW YORK, ASSIGNOR TO THE MONARCH TYPE-WRITER COMPANY, OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

TYPE-WRITING MACHINE.

976,882. Specification of Letters Patent. Patented Nov. 29, 1910.

Application filed October 28, 1907. Serial No. 399,436.

To all whom it may concern:

Be it known that I, HUBBARD N. JOSLEYN, citizen of the United States, and resident of Syracuse, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates to typewriting machines and more particularly to means for controlling the paper or work sheets more especially for use in condensed record work, though said means are employed to control the paper in the ordinary use of the machine.

The main object of said invention is to provide simple and efficient means of the character specified which may be readily handled to effect the control of the work sheets for condensed record work.

To the above and other ends which will hereinafter appear, my invention consists of the features of construction, arrangements of parts and combinations of devices to be hereinafter set forth 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 fragmentary front elevation of the paper carriage and platen of a Monarch machine equipped with devices of my invention. Fig. 2 is an enlarged detail transverse sectional view of the same taken on the line x—x of Fig. 1 and looking in the direction of the arrow at said line. Fig. 3 is a like view of the same taken on the line y—y of Fig. 1 and looking in the direction of the arrow at said line; the parts being shown in the released positions. Fig. 4 is a fragmentary detail view partly in section showing one of the adjustable supports of the parts carried thereby, parts being sectioned on the line z (Fig. 3) and looking in the direction of the arrow at said line. Fig. 5 is a plan view of the carriage and some of the parts carried thereby, the platen being omitted. Fig. 6 is a detail elevation of the center paper feed roller and its support.

I have shown the devices of my invention attached to the carriage of a Monarch machine though it should be understood that the invention may be employed in other styles of machines.

The platen frame or carriage comprises a rear cross bar 1 grooved on opposite sides thereof at 2 for coöperation with anti-friction balls or rollers by which the carriage is guided and supported in its movements from side to side of the machine. End bars 3 and 4 project forwardly from the cross bar 1 and have bearing openings therein for the reception of a platen shaft 5 which supports a cylindrical platen 6. The outer ends of the platen shaft have finger wheels 7 secured thereto by set screws 8. Lugs 9 project forwardly from the cross bar 1 and are apertured for the reception of feed roll hangers 10 pivoted in said lugs at 11 and extending downwardly and forwardly therefrom and connected with a shaft 12 for main feed rollers 13, said feed rollers being maintained spaced apart on the shaft 12 by spacing the sleeves 14. Extensions 15 project forwardly from the lugs 9 and are provided with bearing openings for the reception of a rock shaft 16 which is likewise received in bearing openings in the end plates 3 and 4 and extends beyond the end plate 3 where it is provided with a rigidly connected arm 17 terminating in a finger piece 18. The rock shaft is provided with studs 19 for coöperation with the feed roll hangers 10. These studs are adapted to force the feed roll hangers down from the position shown in Fig. 2 to that illustrated in Fig. 3 and the finger piece 18 receives a corresponding movement and the studs 19 are flattened on their ends so that the feed roll hangers will bear endwise against the studs and against the axis of the rock shaft when the parts are in the positions shown in Fig. 3 so as to retain or lock the feed rollers in the disengaged position where they are out of contact with the platen. Each of the feed roll hangers 10 has a leaf spring 20 secured thereto by a screw 21, the free end of each leaf spring bearing against a pin 22 which extends from side to side of the aperture in the associated lug 9. A paper apron 23 has bearing clips 24 secured thereto at the rear side of the paper apron and near the top edge thereof. These bearing clips 24 are bent to surround the rock shaft 16 and to provide a pivotal connection between the paper apron and said rock shaft by which the paper apron may move toward and away from the platen as shown by comparison to Figs. 2 and 3. The paper apron is apertured to afford a passage of the main

feed rollers 13 therethrough in order that they may contact with the platen as shown in Fig. 2.

Bracket arms 25 are secured by screws 26 to lugs 27 which project forwardly from the cross bar 1. The bracket arms 25 extend forwardly and downwardly beneath the platen to the front side thereof where they are bent up at each side as at 28 and are apertured to receive pivots 29, each coöperative with a yoke-like piece 30 apertured in its sides for coöperation with a pivot 29 and having a rearwardly extending arm 31 for purposes which will hereinafter more clearly appear. Each of these yoke-shape pieces 30 is secured in any suitable manner to a combined platen and carriage scale 32 which is preferably bent in cross section as shown in Figs. 2 and 3 throughout most of the length thereof, although it is flat at the end portions where connection is made with the yoke-shape pieces 30. From an inspection of Fig. 5 it will be understood that the bracket arms 25 are arranged fore and aft of the machine and constitute fixed supports on which the platen scale is pivoted at or near each end thereof and near the ends of the platen.

Arms 33 are pivoted at 34 in the apertures in the lugs 9. These arms extend beneath the feed roll hangers and are acted upon by anti-friction rollers 35 carried by prolonged extensions 36 of the feed roll hangers. The forward end of each arm 33 has a spring finger 37 secured thereto by a screw 38. The spring fingers 37 support the paper apron near the forward portion thereof and in the normal positions of the parts holds it against the platen as shown in Fig. 2 with a light spring pressure. A wire spring 39 is coiled about the pivot 34 of each arm 33 and is extended forwardly and downwardly at 40 and bears at its forward end against an associate arm 33 or against a screw 41 carried thereby. Each screw 41 constitutes a means for connecting a wire link 42 to the associate arm 33, the forward hooked end 43 of each link engaging in an aperture in an arm or finger 31. From an inspection of Fig. 5 it will be seen that the links 42 extend rearwardly and inwardly from the platen scale or arms 31 secured thereto, to the arms 33 with which they are connected.

From the foregoing description it will be understood that when the parts are in the normal positions the springs 20 and 40 force the feed rollers, paper apron and platen scale toward and into contact with the platen as shown in Fig. 2. When, however, the finger piece 18 is moved to the position shown in Fig. 3 the feed roll hangers 10 will be moved downwardly and rearwardly, thus bringing the feed rollers out of contact with the platen. This same movement is operative to effect a downward movement of the arms 33 around their pivots 34 through the contact of the anti-friction rollers 35 with said arms. The effect of this movement is to enable the paper apron to move downwardly away from the platen from the position shown in Fig. 2 to that illustrated in Fig. 3. These same movements of the parts effect the rearward movements of the links 42, the effect of which is to turn the platen scale on its pivots 29 from the position shown in Fig. 2 to that illustrated in Fig. 3, thereby moving the platen scale away from the platen so that at this time an unobstructed opening or channel 44 is formed between the paper apron and the platen and the platen scale is moved away from the face of the platen so as to provide an opening or space between it and the platen through which work sheets may if desired be introduced from the front of the platen with the bottom edges extending downwardly and rearwardly and moving backwardly around the platen while the platen remains at rest, or sheets may be introduced from the rear of the platen in the ordinary manner and moved through said space to proper position relatively to the platen as will hereinafter more clearly appear.

A supporting rod 45 extends from side to side of the platen frame or carriage and is detachably secured at its ends in the end plates 3 and 4. This cross bar 45 constitutes a rigid connection between the end plates and forms a supporting rod arranged above the printing line and platen and extending longitudinally thereof and parallel therewith. The position of the supporting bar 45 is such that the work sheets as they leave the printing point are fed upwardly and rearwardly over the rod so that it does not extend in the path of the writing and obstruct the operator's view thereof. This supporting rod is formed with a spline groove 46 therein for the reception of spring splines 47 each operatively connected with a sleeve 48 which surrounds the rod 45 and constitutes the hub for the so-called support 49. Each support 49 extends fore and aft of the machine above the platen and has a paper finger 50 provided with ears 51 pivoted to the associated support at 52, an expansion spring 53 being interposed between the connecting piece of each finger and its support 49 in order to force the spring finger with a light pressure against the platen. A margin feed roll carrier 54 is pivoted at 54ª to the associate support 49 and carries a margin feed roller 55 that is under the influence of a spring pressed plunger 56, as shown in Fig. 4 in order to maintain the associated margin feed roller either in the operative position where it bears against the platen or in an inoperative position where it is swung away from the face of the platen around its pivot 54. The construction and arrange-

ment thus far described of the paper fingers, margin feed rollers and the supporting means therefor are essentially the same as those embodied in the Monarch machine and these parts are fully described and claimed in the application of G. A. Seib, Serial No. 277,209.

From an inspection of Figs. 1 and 2 it will be observed that the paper fingers 50 extend downwardly and overlap the platen scale at the lower ends thereof and are coöperative with said platen scale so that when the latter is moved from the position shown in Fig. 2 to that illustrated in Fig. 3 the paper fingers will be moved away from the platen as shown in the last mentioned figure although the margin feed rollers 55 remain against the platen. One of the supports 49, the left hand support in the present instance, is provided with a bearing 57 for the reception of a second supporting rod 58 and may be adjusted longitudinally in the bearing and held in its adjusted position by a thumb screw 59 received in a tapped opening in the support and engaging at its inner end against the rod 58. The rod 58, generally speaking, extends longitudinally of and parallel with the platen but it has a bent portion 60 which provides an off-set portion 61 received in an opening in an enlarged member 62 of the rod to which a section or supporting rod 63 is hinged or pivoted at 64. The joint which unites the sections 62 and 63 is preferably in the form of a knuckle joint that affords a movement of the section 63 in the direction of a dotted line *w* in Fig. 3. The free end of the member 63 carries a center paper feed roller 65 which is received on a shouldered headed screw 66 that engages in a tapped opening in the end of the member 63. From an inspection of Fig. 6 it will be seen that a leaf spring 67 is secured at 68 to the member 62 and bears at its free end against either the toe 69 or the face 70, depending on the position of the member 63. Thus, if the member 63 is in the operative position shown in full lines in Fig. 6 where it bears against the platen or the paper thereon, it will be retained in this position by the spring 67 bearing against the toe 69. If, on the other hand, it is moved to the inoperative position shown in dotted lines then the spring 67 will bear against the face 70 on the member 63 and retain said member in the inoperative position. From the foregoing description it will be understood that the center feed roller 65 as well as the left-hand margin feed roller and its associated paper finger 50, are adjusted along the supporting rod 45 together with the left hand support 49, or the supporting rod 58, together with the center feed roller 65 may be adjusted on the support 49 independently of the associated margin feed roller and paper finger.

In employing the devices of my invention for condensed record billing work a condensed record sheet *b* is employed and this sheet is wider than the invoice or bill sheet *a* and is wider than the interposed carbon sheet *c*, the latter being slightly wider than the invoice sheet. According to one method of operation the condensed record sheet is considerably wider than the invoice and carbon sheets in order that that portion b^x of the condensed record sheet to the right of the invoice sheet in Fig. 1 may be employed for special entries which may be written thereon but which are not intended to be written on the invoice sheet.

In adjusting the devices above described, a blank record or loose sheet *b*, which is usually ruled to receive specific entries in certain columns thereon, is first inserted around the platen in the usual manner, the sheet being centered on the platen and usually occupying substantially the entire length thereof. Where a tabulator is employed in connection with the work the column stops are next set in accordance with the ruling on the record sheet and the left-hand support 49 is adjusted to the right or left along the supporting rod 45 to a position where the margin feed roller and paper finger thereon will coöperate with the record sheet. The right-hand carrier is adjusted in a like manner so that the paper finger 50 and margin feed roller 55 coöperate with the right-hand side of the record sheet as shown in Fig. 1. The invoice sheets are usually of such a character that they bear a specific relation to the record sheet. Thus, for instance, it will be observed that the "Invoice No.", "Our Order No.", "Customer's Order No. or Date", etc., appear on the invoice sheet *a* and it will be understood that the record sheet may be ruled to receive these entries in the proper columns or spaces and in this event it is necessary that the invoice sheet bear a fixed width-wise relation to the record sheet. This may be readily determined in the first instance when the carbon sheet is not in place by inserting the invoice sheet in the machine and placing it in proper position with reference to the record sheet and so that it will not be beneath the left-hand paper finger; but when the carbon sheet is in place this widthwise positioning of the invoice sheet with reference to the record sheet cannot be readily effected as the carbon sheet covers the face of the record sheet. When the invoice sheet has been adjusted to the proper position with reference to the record sheet and brought around to the front of the platen, the thumb screw 59 is loosened and the supporting rod 58 is adjusted longitudinally on its support 49 so as to bring the center paper feed roller 65 about centrally of the width of the invoice sheet and the screw 59 is then

tightened to hold the rod in its adjusted position on its carrier 49. The operator observes the widthwise position of the invoice sheet with reference to the platen scale or the inner edge of the left-hand paper finger or some other suitable portion of the machine and subsequently introduced invoice sheets should have the same widthwise relation. This completes the setting of the parts and a further setting is unnecessary unless the character of the invoice sheet or the record sheet or both be changed.

After the parts are set in the manner described above and it is desired to use the machine for condensed record work, the condensed record sheet *b* and carbon sheet *c* are introduced into the machine from the rear of the platen in the ordinary manner with their leading edges together and with the left-hand edge of the carbon sheet alining substantially with the left-hand edge of the record sheet, the record sheet being next to the platen. I prefer to use a carbon sheet of a width which will reach approximately from the right-hand edge of the invoice sheet to the left-hand edge of the record sheet and of a length which corresponds substantially to the length of the long record sheet, as this enables the operator to allow the carbon sheet to remain in the machine until a new record sheet is introduced, and repeated handling of the carbon sheet at the introduction and withdrawal of the various invoice sheets is unnecessary. The leading edges of the record and carbon sheets are brought a short distance above the printing line and in a position where the record sheet may receive a copy of the first line of writing near the top of the sheet. The finger piece 18 is now moved from the position shown in Fig. 2 to that shown in Fig. 3, thereby moving the main paper feed rollers, paper apron and platen scale away from the platen to provide a free and unobstructed passage around the platen, and the center feed roller 65 is then turned with the member 63 on the pivot 64 to the inoperative position. At this time, however, the left-hand margin feed roller 55 remains in operative position pressing against the carbon and the record sheets and the right-hand margin feed roller remains in contact with the right-hand end of the record sheet so as to clamp said sheets in position while the invoice sheet is being introduced independently thereof. A bill or invoice sheet is then introduced from the rear of the platen cornerwise outside of the carbon sheet and is moved around the platen until the sheet is squared and positioned to receive the first line of writing as indicated in Fig. 1. If desired the invoice sheet may be introduced rearwardly around the platen and from the front thereof, the invoice sheet in either instance being maintained out of cooperation with the paper finger 50 and the margin rollers 55. The center paper feed roller 65 is then moved to operative position to clamp the invoice sheet in place and the finger piece 18 is then moved back to the position shown in Fig. 2, thereby restoring the main feed rollers, paper apron and platen scale, etc., to normal position when the parts are effective to feed all three sheets together. The operator then proceeds to fill in the bill and to make the special entries on the record sheet at $b^{\times}$ to the right of the invoice sheet. A copy of the matter written on the bill will be reproduced through the interposed carbon in the appropriate spaces on the record sheet. After the bill is completed the operator may divide the copy of the bill on the record sheet from the one which is to follow, by drawing a stylus along the upper edge of the platen scale, thereby imprinting a dividing line of the record sheet through the carbon or the operator may give the platen a double line space movement after completing each bill to effect a sufficient space between succeeding copies of bills on the record sheet. After the bill is completed the paper feed roller 65, the main feed rollers, paper apron, etc., are moved to the inoperative positions in the manner hereinbefore explained and the completed invoice sheet is removed without disturbing the record and carbon sheets, they being held by the margin feed rollers. A new invoice sheet is inserted from the rear of the platen in the manner hereinbefore explained and brought to proper position to receive the first line of writing; or, if desired, the invoice sheet may be introduced from the front of the platen, the bottom edge thereof being moved rearwardly around the platen. The feed rollers 65 and 13, etc., are again moved to operative position and the bill written as before. The operations described may continue indefinitely or until the record sheet has been filled, when a new record sheet may be inserted and the operation continued as before.

From the foregoing description it will be understood that I have provided simple and efficient means for controlling the sheets in the machine so that condensed record work may be quickly and efficiently produced and that the devices employed in carrying out the condensed record work may constitute the ordinary equipment of the machine and do not add to the equipment employed in ordinary writing.

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

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

1. In a typewriting machine, the combination of a platen; a paper apron; a platen frame; bracket arms rigidly secured to said platen frame; a platen scale mounted inde-

pendently of said paper apron and pivoted to said bracket arms; and hand actuated means for turning said platen scale on its pivots and for moving the paper apron away from the platen.

2. In a typewriting machine, the combination of a platen; a platen frame; bracket arms rigidly secured to said platen frame; a platen scale pivoted to said bracket arms; paper feed rollers; independent connecting devices between said pivoted platen scale and said feed rollers; and hand actuated means for moving said feed rollers away from the platen and, through said connections, for simultaneously turning said platen scale on its pivots away from the platen.

3. In a front strike typewriting machine, the combination of a platen; a paper apron; a platen frame; bracket arms extending forwardly beneath the platen and rigidly secured to said platen frame; a platen scale mounted independently of said paper apron and pivoted to said bracket arms; paper feed rollers; and hand-actuated means for simultaneously moving said paper apron, paper feed rollers and paper scale away from the platen.

4. In a typewriting machine, the combination of a platen; a paper apron; a platen frame; bracket arms rigidly secured to said platen frame; a platen scale mounted independently of said paper apron and pivoted to said bracket arms; paper fingers coöperative with said platen scale; and hand actuated means for moving said platen scale on its pivots, thereby moving the paper fingers away from the platen.

5. In a typewriting machine, the combination of a platen; a platen frame; bracket arms rigidly secured to said platen frame; a platen scale pivoted to said bracket arms; paper fingers coöperative with said platen scale; a paper apron mounted independently of said platen scale; paper feed rollers; and hand actuated means for concurrently moving said paper feed rollers, paper apron and platen scale away from the platen.

6. In a typewriting machine, the combination of a platen; main paper feed rollers; a movable platen scale; a paper apron; paper fingers which are moved away from the platen by said paper scale; margin feed rollers; a center paper feed roller movable into and out of coöperative relation with the platen independently of said main paper feed rollers; and hand actuated means for concurrently moving said main paper feed rollers, platen scale, paper fingers and paper apron away from the platen.

7. In a typewriting machine, the combination of a platen; a spring pressed platen scale; spring pressed paper fingers which are movable by the platen scale away from the platen; margin feed rollers; spring pressed main paper feed rollers; a spring pressed paper apron; a center paper feed roller adjustable longitudinally of the platen and movable into and out of coöperative relation therewith independently of the main paper feed rollers; and hand actuated means for moving said main feed rollers, platen scale, paper apron and paper fingers away from the platen against the pressure of their springs.

8. In a typewriting machine, the combination of a platen, a two-part hinged rod which extends longitudinally of the platen, and a center paper feed roller carried by the hinged swinging member of said rod.

9. In a typewriting machine, the combination of a platen, a two-part hinged rod which extends longitudinally of the platen and is adjustable in the direction of its length, and a center paper feed roller carried by the hinged swinging member of said rod.

10. In a typewriting machine, the combination of a platen, a two-part hinged rod which extends longitudinally of the platen, means for retaining the hinged section of said rod in either the operative or inoperative position, and a center paper feed roller carried by the hinged swinging member of said rod.

11. In a typewriting machine, the combination of a platen, a two-part hinged rod which extends longitudinally of the platen and is adjustable in the direction of its length, means for retaining the hinged section of said rod in either the operative or inoperative position, and a center paper feed roller carried by the hinged swinging member of said rod.

12. In a typewriting machine, the combination of a platen, a supporting rod extending longitudinally of the platen, a support adjustable along said rod, a two-part hinged rod extending longitudinally of the platen, said hinged rod being carried by said adjustable support, and a center paper feed roller carried by said hinged rod.

13. In a typewriting machine, the combination of a platen, a supporting rod extending longitudinally of the platen, a support adjustable along said supporting rod, a paper finger and a margin paper feed roller carried by said support, a two-part hinged rod which is also carried by said support, and a paper feed roller carried by said hinged rod.

14. In a typewriting machine, the combination of a platen; main paper feed rollers; a paper apron; a platen scale; a supporting rod extending longitudinally of the platen; supports adjustable along said supporting rod; paper fingers and margin feed rollers carried by said supports, said paper fingers being coöperative with the platen scale; a two-part hinged rod carried by one of said supports and extending longitudinally of the platen; a center paper feed roller carried by

said hinged rod; and hand controlled means for moving said main paper feed rollers, paper apron, platen scale and paper fingers away from the platen.

15. In a typewriting machine, the combination of a platen, a platen frame, bracket arms secured to said platen frame, a platen scale pivoted to the free ends of said bracket arms, a paper apron pivoted to the carriage frame, springs for holding the paper apron against the platen, pivoted arms on which said springs act, connections between said pivoted arms and said pivoted platen scale, pressure rollers, and means acting to throw off said pressure rollers, the construction and arrangement being such that when the feed rollers are thrown off the pressure on the paper apron is removed, and through said pivoted arms and connections the paper scale is turned on its pivots away from the platen.

16. In a typewriting machine, the combination of a platen, a platen frame, bracket arms extending from the rear of the carriage to the front and underneath the platen, a paper scale pivotally mounted at the free ends of said bracket arms, pressure rollers, means for throwing off said pressure rollers, pivoted arms arranged in the path of said pressure rollers when thrown off, and connections between said pivoted arms and said pivoted platen scale.

Signed at Syracuse in the county of Onondaga, and State of New York, this 24th day of October A. D. 1907.

HUBBARD N. JOSLEYN.

Witnesses:
JOHN H. DANIEL,
W. C. HAY.