Nov. 7, 1933. C. GABRIELSON 1,933,550

TYPEWRITING MACHINE

Filed Nov. 14, 1929 3 Sheets-Sheet 1

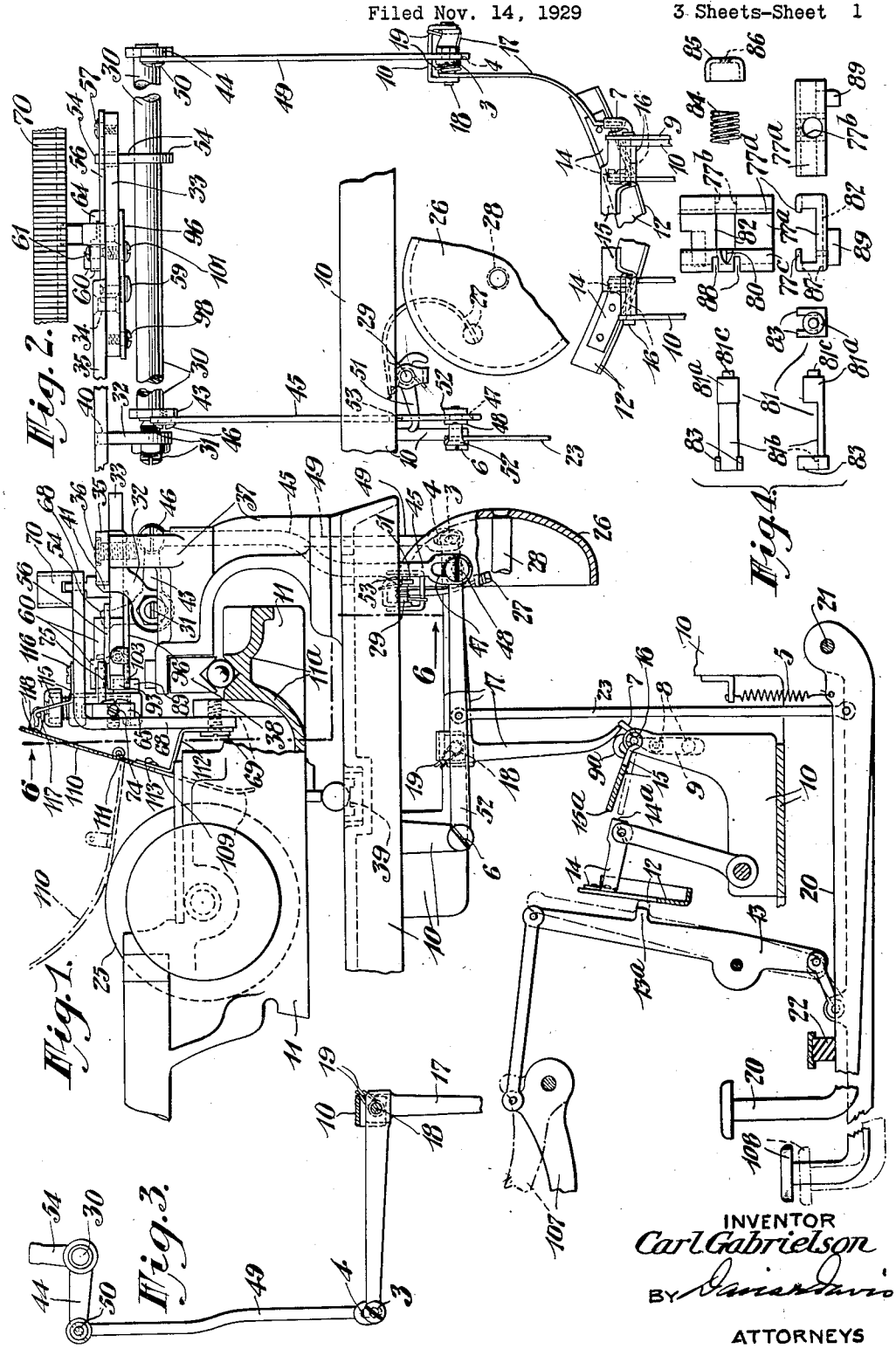


Fig. 2.

Fig. 4.

Fig. 1.

Fig. 3.

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TYPEWRITING MACHINE

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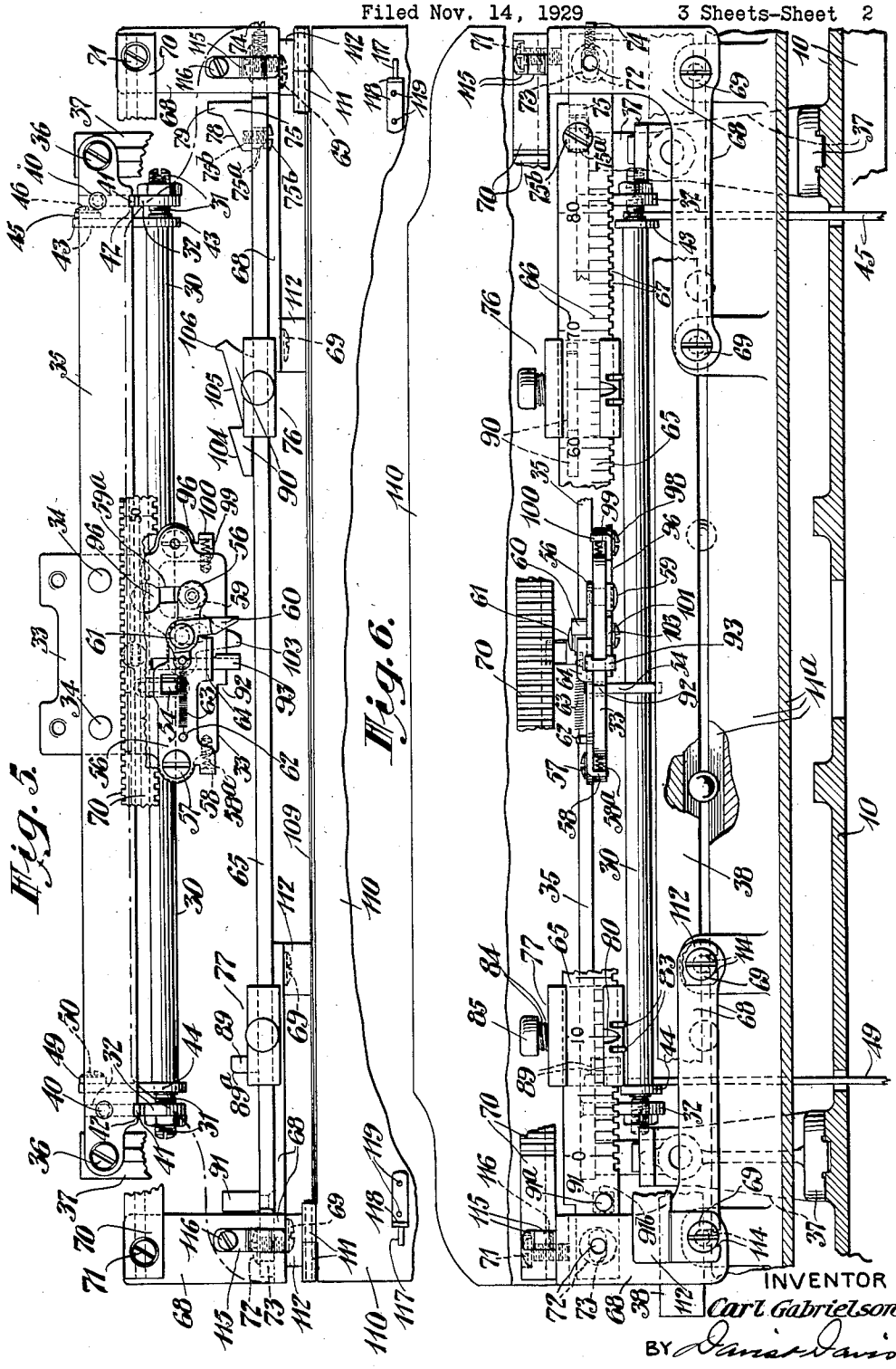


Fig. 5.

Fig. 6.

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TYPEWRITING MACHINE

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Fig. 9.

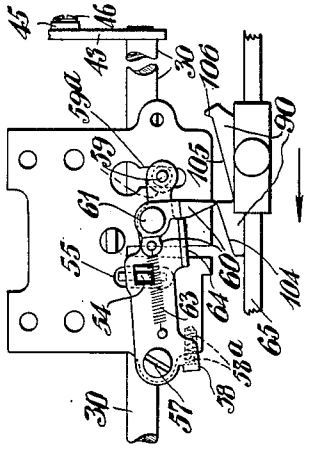


Fig. 12.

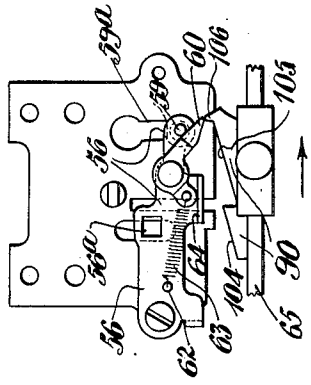


Fig. 8.

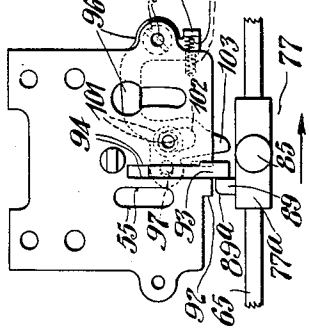


Fig. 14.

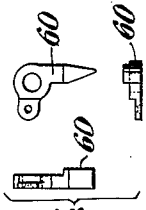


Fig. 11.

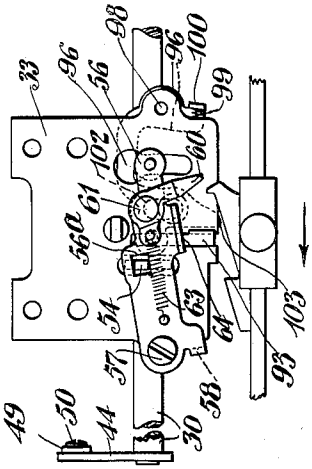


Fig. 13.

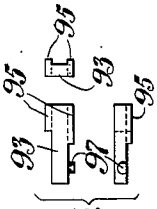


Fig. 7.

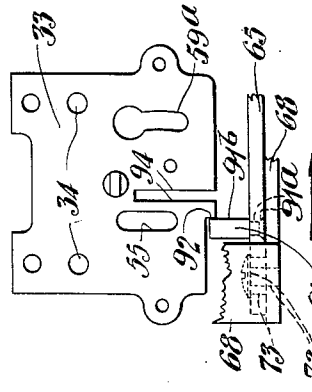
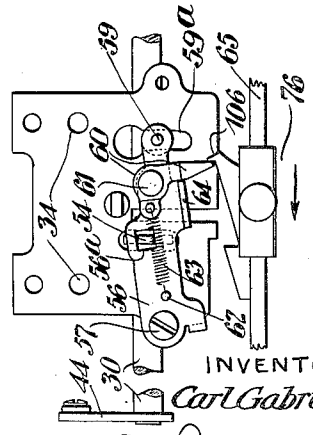


Fig. 10.



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Patented Nov. 7, 1933 1,933,550

UNITED STATES PATENT OFFICE

1,933,550

TYPEWRITING MACHINE

Carl Gabrielson, Syracuse, N. Y., assignor to L C Smith & Corona Typewriters Inc., Syracuse, N. Y., a corporation of New York

Application November 14, 1929
Serial No. 407,096

14 Claims. (Cl. 197—63)

This invention relates to improvements in typewriting machines, and has for its principal objects to provide improved means for determining the maximum limits of travel of the carriage, improved means for variably determining the extent of travel of the carriage in both directions within the maximum limits of travel improved means for releasing the carriage for travel beyond the limits determined by adjustable right and left hand margin controlling devices, and improved line-locking and releasing means. Another object of the invention is to provide improved means for the purposes set forth especially adapted for use in the well known L C Smith typewriting machine. A further object of the invention is to provide line-locking and margin controlling devices of the kind including adjustable stops located to the rear of the platen and paper table, wherein the margin stops are easily adjustable and readily accessible when desired and the work sheets are normally shielded by the table from contact with the stops and stop supporting means. Another object is to provide more efficient and more easily settable adjustable margin stops.

Other objects and advantages of the invention will appear from the following description of the preferred embodiment of the invention illustrated in the accompanying drawings in which an L C Smith typewriting machine, as modified in accordance with the present invention, is shown.

In the drawings:

Fig. 1 is a fragmentary view of the machine partly in section and looking thereat from the right hand side of the machine;

Fig. 2 a fragmentary rear view of part of the line-locking and line-end alarm means, showing the position of the parts when the right hand margin stops and its counter stop are engaged as in Fig. 9;

Fig. 3 a detail side elevation of part of the alarm means as viewed from the left hand side of the machine;

Fig. 4 a view showing the various parts of the adjustable left hand margin stop detached;

Fig. 5 a fragmentary plan view of the machine, showing the hinged section of the paper table folded forwardly;

Fig. 6 a vertical transverse sectional view on the line 6—6 of Fig. 1;

Fig. 7 a detail view showing the left hand maximum limit stop on the carriage in action;

Fig. 8 a detail view showing the adjustable left hand margin stop on the carriage in action;

Fig. 9 a detail view showing the bell ringing means being tripped;

Fig. 10 a detail view showing the adjustable right hand margin stop on the carriage in its position for locking the machine against operation;

Fig. 11 a view similar to Fig. 10 showing the position of the parts when the margin release key is depressed after a line-locking operation;

Fig. 12 a view similar to Fig. 10 showing how the right hand margin stop passes the coacting devices on the machine frame in returning the carriage after writing within the right hand margin; and

Figs. 13 and 14 detail views showing respectively the sliding and the pivoted devices on the main frame with which the margin stops directly contact as more fully hereinafter explained.

The type action, one train of which is shown, is constructed and mounted as usual in the main frame 10 upon which the platen carriage 11 is mounted to travel under control of the usual escapement (not shown), which escapement is operated by the usual fore-and-aft vibrating universal bar 12. The universal bar is mounted in the usual way in the main frame for actuation by lugs 13a on the type action sub-levers 13 and has fixed thereto the usual side arms 14 with up-and-down extending abutment faces 14a on the rear ends normally movable under the free forward abutment edge 15a of the usual sheet metal line-locking latch bar 15 pivotally mounted as usual at 16 in the main frame to rock about an axis extending transversely of the machine. Latch 15 is normally held in inoperative position in the usual manner by the pendent forward arm of a sheet metal bellcrank 17 pivoted at 18 in the main frame and having its two arms laterally offset as shown to afford a double bearing on pivot 18. A spring 19 coiled about the pivot and bearing at its ends as shown on framework 10 and the bellcrank normally urges the pendent arm of the bellcrank rearward to the position shown in Fig. 1 to yieldingly hold the latch 15 in inactive position, the parts being arrested in the position shown by the engagement of latch 15 under the down-turned upper end 9a of the usual stop plate 9 fixed at 8 to the main framework. The lower end portion of the pendent arm of bellcrank 17 is always engaged with the front face of the usual upstanding lugs 7 on the left hand end of latch bar 15. When the bellcrank is rocked against the resistance of spring 19, by the novel means hereinafter described, the rockable latch 15 drops by gravity to the dot-and-dash line position thereof

shown in Fig. 1 in which its forward stop edge 15a is immediately behind abutment faces 14a on the side arms 14 of the universal bar, thereby preventing a rearward escapement actuating movement of the universal bar by a type action sublever and blocking operation of any type action before the associated type bar can reach the platen 25.

The usual line end alarm bell 26 and pivoted bell clapper 27 are mounted in the usual manner on the main frame at 28 and 29, respectively, for action by the novel means hereinafter described.

In the present construction, a transverse rock shaft 30 is journalled on bearing screws 31 tapped through the forward ends of a pair of sheet bracket arms 32. Arms 32 support the rock shaft to extend under a centrally located steel plate 33 riveted at 34 adjacent its rear ends to a transverse frame bar 35 held by screws 36 on the upper ends of the pair of main frame standards 37 which support the usual rear stationary ball bearing race bar 38. Race bar 38 and the usual forward main frame race 39 constitute the usual carriage supporting and guiding means. Plate 33 extends forwardly over race bar 38. Arms 32 extending downwardly and forwardly from bar 35 adjacent opposite sides of the machine frame, each arm having an integral upstanding stud 40 on its upper edge extending up through a hole in the bar and headed over and also having an upstanding finger 41 engaged in a notch 42 in the forward edge of the bar and being thereby rigidly held to the bar.

Rock shaft 30 is provided at its ends with two short arms 43 and 44 extending rearwardly under bar 35. A vertical link 45, pivotally held at 46 to arm 43, has a relatively long vertical slot 47 at its lower end, and the shank of a screw 48 carried by the rear end of a rearwardly extending lever 52 is normally engaged in the closed lower end of the slot 47. Link 45 has a forwardly extending projection or finger 53 engaged over arm 51 of bell clapper 27 for lifting the hammer of the clapper from the bell when shaft 30 is rocked clockwise as viewed in Fig. 1. Lever 52 is pivotally held to the main frame at 6, and the usual margin release key lever 20 is connected therewith by the vertical link 23. Key lever 20 is pivoted on the main frame at 21 and normally held up against a stop 22 by a return spring 5 to normally yieldably hold lever 52 up in the position shown in Fig. 1. A link 49 is pivotally held at 50 to rock arm 44 and has a relatively short vertical slot 4 in its lower end in the lower end of which slot is normally engaged the shank of a screw 3 carried by the rear end of the rearwardly extending arm of bellcrank 17.

Shaft 30 has an upstanding arm 54 about midway its ends extending up through a clearance slot 55 in plate 33 and engaged at its upper end in an aperture 56a in a fore-and-aft swinging stop carrier 56. The carrier 56 extends transversely of the machine, lies upon the upper face of plate 33, and is pivotally held at its left hand end to said plate by a vertical pivot screw 57. It comprises a sheet metal bar having a pendent lug 58 forward of its pivot with which is engaged one end of a compression spring 58a the other end of which is housed in a bore in the left hand edge of plate 33, said spring normally rocking the carrier to the position shown in Figs. 1, 5, and 6, in which position a combined headed stop and retaining stud 59, passing up through an arcuate slot 59a in plate 33 and headed over at the upper end of a hole in carrier 56 at the right hand end of the carrier, is engaged with the forward end of said slot 59a.

A pivoted frame stop 60 is mounted on the carrier 56 for coaction with a right hand margin controlling and bell-ringing stop and a right hand terminal stop on the carriage to effect rocking of shaft 30. Stop 60 is held on the upper face of the carrier by a vertical pivot stud 61 and has a forwardly extending abutment arm extending into the path of travel of coactive parts of said carriage stops, and an arm extending toward the left hand side of the machine connected with a pin 62 on plate 33 by a coiled spring 63 in such manner as to hold the abutment arm of the pivoted stop normally swung slightly to the right of an upstanding stop lug 64 on the forward edge of the stop carrier, as shown more clearly in Figs. 5 and 11.

A margin stop bar 65 is mounted on the carriage to travel therewith, and comprises a flat metal bar disposed flatwise or edgewise in a vertical plane extending transversely of the machine. This bar is provided on its front face with the graduations and numerals of a letter space scale 66 (Fig. 6) and with notches 67 extending across its lower edge spaced one letter space distance apart. Two angular sheet metal brackets 68 are located to the rear of the platen adjacent opposite ends of the carriage, and each bracket has an upright vertical front portion, detachably held by two screws 69 to the front face of the rear cross-bar 11a of the platen carriage 11, and an upper rearwardly extending portion lying flatwise in a horizontal plane a little above the level of the top of the platen, bar 35 and plate 33 so as to travel above bar 35, plate 33 and parts mounted on said plate. The tabulator stop bar 70 of a tabulating mechanism of the kind disclosed in my co-pending application Serial No. 402,082, filed October 24, 1929, upon which Patent No. 1,826,763 has been granted, is held by screws 71 upon the rear ends of the horizontally extending arms of brackets 68. The margin stop bar 65 is rigidly but adjustably held at its ends to brackets 68, clamping screws 72 passing forwardly through short longitudinal slots 73 in bar 65 adjacent opposite ends of said bar and being threaded into screw holes in the upper parts of the vertical portions of brackets 68. A fine pitch adjusting set screw 74, tapped through a longitudinal bore from the right hand end edge of bar 65 to the right hand end of the adjacent slot 73 and bearing at its inner end against the shank of the adjacent clamping screw 72, affords a convenient means for accurately adjusting the bar 65 endwise for clamping in proper relation to the carriage. The margin stop bar 65 is thus supported in such a position that its front scale bearing face is readily visible to an operator over the platen, and stops thereon, as well as stops on the tabulator stop bar, are readily accessible, when desired, as more fully hereinafter explained.

A traveling right hand terminal or final stop 75 is rigidly held to stop bar 65 adjacent the right hand end of said bar, and a traveling adjustable right hand margin stop 76 is mounted on said bar to the left of said terminal stop for adjustment along the bar and locking to the bar at any desired letter space scale position.

As shown, stop 75 is a flat piece of metal lying in a horizontal plane having a forward stem 75a of rectangular cross section extending into a similarly shaped aperture in bar 65 and held by a clamping screw 75b the head of which bears

against the front face of bar 65 and the shank of which is threaded into the end of said stem. The nose of the pivoted frame stop 60 normally lies in the path of travel of the rearwardly and rightly extending cam edge 78 of terminal stop 75, and said stop 75 is formed with a rearward extension or finger 79 at the rear end of its cam edge 78.

An adjustable left hand margin stop 77 is also mounted on bar 65. Except for the frame stop contact element the two margin stops are of the same construction.

The left hand margin stop 77 comprises a main body part 77^a having a flat rear wall and top and bottom walls slidably engaged respectively with the rear face and the top and bottom edges of stop bar 65. The top and bottom walls of part 77^a are formed with longitudinal flanges 77^d and 77^c slidably engaged with the front face of the stop bar 65, the scale 66 being exposed between the adjacent edges of said flanges, and the flange on the bottom wall having a graduation or index mark 80 on its front face about midlength thereof coactive with the graduations of said scale 66. A stop locking and adjusting plunger 81 is carried by body part 77^a, said plunger having a cylindrical guide portion 81^a working in a cylindrical aperture 77^b in the top wall of part 77^a, a flatted portion 81^b lying in a vertical channel 82 in the rear wall of part 77^a and provided at its lower end with a pair of forwardly extending locking lugs 83 normally urged upwardly edgewise into two of the notches 67 in the stop bar 65. Lugs 83 are preferably spaced as shown to engage in two notches spaced two letter spaces apart for greater security in the holding of the margin stop against displacement in operation of the machine. The front lower end of portion 81^a of the plunger 81 overhangs the upper edge of the stop bar 65 and is adapted to abut the same when the plunger is depressed far enough to disengage lugs 83 from the stop bar notches. An expansion spring 84 coiled around portion 81^a of the locking plunger bears at its lower end on the top wall of body part 77^a of the stop and bears at its upper end against an inverted cup-shaped finger piece 85 into which part 81^a extends, said part having a reduced extension 81^c extending into and headed over in a countersunk hole 86 in the top wall of said finger piece to rigidly hold the finger piece to the plunger. The lower end of portion 81^b of the plunger extends and works through an aperture 87 in the bottom wall of stop portion 77^a, while lugs 83 on portion 81^b are guided in vertical slots 88 extending up through said bottom wall and part way up through the adjacent bottom wall flange 77^c.

Body part 77^a of the left hand margin stop has at its rear face a contact element 89 while the body part of the right hand margin stop has at its rear face a contact element 90, said contact elements being formed integrally with the rear walls of the body parts of the respective stops. Contact element 90 is located at such a level as to pass freely above the stop 93 hereinafter described, while contact element 89 is located at such a level as to pass freely below stop 60.

A left hand terminal stop 91 is rigidly affixed to stop bar 65 at the rear face of said bar adjacent the left hand end of the bar to the left of the left hand margin stop. Stop 91, as shown, comprises a metal block having a front stem 91^a engaged in, and headed over in, a countersunk hole in bar 65, said block extending farther to the rear than contact element 89 and having a flat right hand abutment side face 91^b lying in a vertical fore-and-aft plane. Plate 33 has an abutment shoulder or face portion 92 lying in a vertical fore-and-aft plane in the path of travel of face 91^b of stop 91.

To the right of stop face 92 of plate 33 and to the left of the nose of pivoted frame stop 60, a fore-and-aft sliding frame stop 93 is slidably guided in a fore-and-aft extending slot 94 in plate 33. The stop 93 comprises a metal bar, the right and left hand edges of which slidably engage the edges of slot 94, said bar being normally projected forwardly in slot 94 and having upper and lower guide flanges 95 slidably engaging the top and bottom faces of plate 33. Stop 93 is pivotally mounted at its rear end on the left hand end of a horizontally swinging stop carrier or controller 96 by means of a pivot stud 97 on said bar engaged in a pivot hole in said carrier. Carrier 96 is located at the bottom face of plate 33 to which plate it is pivotally held by a pivot screw 98 extending up through the right hand end of the carrier and threaded into the plate. A spring 99, engaged at one end in a bore in the right hand edge of plate 33 and at its other end against an upstanding lug 100 on carrier 96 forward of the carrier pivot, normally holds the forward end of stop 93 projected beyond the forward edge of plate 33 into the path of travel of contact element 89 of the left hand margin stop. Swinging movement of carrier 96 is limited by a pendant stop screw 101 held to plate 33 and extending through a slot 102 in the carrier, the screw shank being normally engaged with the rear end of the slot. As shown in dotted lines in Fig. 8, the pivot hole in which stud 97 is engaged is slightly elongated transversely of stop 93 to permit the stop to slide in its guide slot 94 when the controller 96 swings on the pivot 98, said stud 97 being flattened at one side as shown in Figs. 8 and 13.

Carrier 96 is formed with a cam nose 103 extending forwardly adjacent its left hand end and normally projecting forward beyond the front edge of plate 33 at a point between the contact ends of the two frame stops 93 and 60 closely adjacent and to the right of stop 93 in the path of contact element 89 of the left hand margin stop. The front ends of stop 93 and cam nose 103 are located in the same vertical transverse plane. Controller 96 extends across slot 59^a in plate 33 in the path of travel of the head of stud 59 on controller 56, so that when controller 56 is rocked rearward, by the depression of the margin release key on release key lever 20, to the position shown in Fig. 11, said stud will engage and rock rearward the controller 96 also to the position of the latter controller shown in said view, both frame stops being in their inactive or margin releasing positions in Fig. 11.

Contact element 90 of adjustable right hand margin stop 76 as shown in Fig. 6 is located entirely above the level of sliding frame stop 93 and cam nose 103 of the carrier 96 for said frame stop 93 so as to be adapted to travel past parts 93 and 103 without contacting the same. Contact element 90 has two cam edges 104 and 105 extending to the right and rear adapted to successively engage the nose of the pivoted frame stop 60 and cam said stop and its carrier 56 rearward, said element having a short rearward extension or finger 106 at the rear end of its

cam edge 105 adapted to squarely abut the right hand side face of stop 60.

The adjustable stops are settable in desired positions by first pressing down on the finger piece thereof to unlock the same and then exerting a sidewise drag on the depressed finger piece with the finger until the stop body graduation registers with the desired stop bar scale graduation, whereupon the finger pressure is released and the locking plunger snaps up into locking position.

As the carriage, in advancing toward the left under control of the usual escapement, approaches the end of the writing line, cam edge 104 of the adjustable margin stop coacts with the nose of pivoted frame stop 60 to first swing the stop 60 slightly to the left of its normal position until such swinging is arrested by stop lug 64 on carrier 56, and thereafter cams stop 60 and its carrier 56 partly rearward to the position shown in Fig. 9. This rocks arm 54 and shaft 30 sufficiently to cause link 45 to lift bell clapper 27 away from bell 26 without taking up all the lost motion in pin-and-slot connection 47—48 and to also cause link 49 to move down only so far as to take up the lost-motion in pin-and-slot connection 3—4, as shown in Fig. 2. As soon as cam edge 104 passes stop 60 the actuated parts quickly return to normal position permitting clapper 27 to strike bell 26, thus warning the operator that the carriage has advanced nearly to the predetermined right hand margin point.

Cam edge 105 extends farther to the rear than cam edge 104, and if writing is continued, acts on stop 60 to again cam stop 60 and carrier 56 rearward, but farther than before, to the position shown in Fig. 10, within the next few letter spaces of carriage advance. This rocks arm 54 and shaft 30 farther than before, thereby causing link 49 to rock bellcrank 17 against the resistance of spring 19 and permitting the rockable latch bar 15 to swing forward and downward under the action of gravity thereon until locking edge 15^a of the latch bar is positioned immediately behind abutment faces 14^a on the side arms of the universal bar 12. The link 49 during this extra rocking of shaft 30 is not moved down far enough to cause the same to exert a down thrust on lever 52, so that the margin release key is not disturbed. Finger 106 on the margin stop prevents the engaged stops 76 and 60 from releasing contact and the latch bar 15 blocks movement of universal bar 12 by sublevers 13 to prevent the type bars 107 reaching the platen 25 if the operator continues to strike type keys 108, the blocked position of one of the type actions being indicated in dotted lines in Fig. 1.

If it is desired to write within the right hand margin, the line lock may be released by depressing the key on the margin release key lever 20, thus pulling down link 23, lever 52 and link 45 to rock the shaft 30 still farther than it has been moved by the action of the margin stop, thereby rocking carrier 56 farther to the rear into the position shown in Fig. 11 and carrying the nose of stop 60 rearward of finger 106, whereupon stop 60 is snapped slightly to the right into its normal relation to carrier 56 by spring 63, thus carrying the nose of stop 60 to the right of finger 106. When the margin release key lever is released, all the actuated parts return to normal position and the carriage may continue to advance until cam edge 78 of the right hand terminal or final stop cams stop 60 and carrier 56 back into their line-locking position shown in Fig. 10 with finger 79 abutted against the right hand edge of stop 60 in a manner similar to the engagement of finger 106 with stop 60 in Fig. 10. It will be noted that cam edge 78 extends rearward as far as cam edge 105, while finger 79 extends farther rearward than finger 106. The rearward movement of carrier 56 is limited by the rear end of sliding stop 93 striking the rear end of slot 94 in plate 33, as shown in Fig. 11, and finger 79 is sufficiently long to prevent the nose of stop 60 being carried rearward of said finger 79 when the margin release key is fully depressed, so that it is impossible to free the carriage for travel beyond the final limit determined by the right hand terminal stop 75.

When the carriage is returned to the right, the contact element 90 rocks frame stop 60 about its pivot 61, as shown in Fig. 12, to permit stop 76 to pass the frame stop 60. The return of the carriage is stopped at the left hand marginal point by contact element 89 of left hand marginal stop 77 abutting the left hand face of sliding frame stop 93, as shown in Fig. 8.

If it be desired to write in the left hand margin, stops 77 and 93 may be disengaged by pressing down the key of the margin release key lever 20 to again rock carrier 56 to its full rearward position shown in Fig. 11. In moving to this full rearward position, carrier 56 picks up and rocks rearward carrier 96 through the medium of stud 59 retracting stop 93, until stop 93 strikes the rear end of slot 94 in plate 33, as heretofore explained and as shown in Fig. 11, thus retracting stop 93 and cam nose 103 of carrier 96 beyond the rear end of contact element 89. The rear end of contact element 89 is sufficiently broad to engage the front end of nose 103 before passing off the front end of stop 93.

Final return movement of the carriage to the right is arrested by engagement of terminal stop 91 with stop shoulder 92 on plate 33. After having passed to the right of stop 93 and cam nose 103, stop 77 may pass to the left of stop 93, upon a leftward movement of the carriage, by the cam action of the rounded rear left hand corner 89^a of the contact element 89 on the cam nose 103, which cam action rocks carrier 96 rearward and holds stop 93 rearward until element 89 passes in front of stop 93.

The margin and tabulator stop bars 65 and 70 on the carriage end stops thereon are located to the rear of the platen where they are out of the way, and are so supported with relation to the platen and paper table that they are normally out of sight but readily accessible when desired. A paper table of improved construction and mounting is provided which normally covers both said stop bars and stops thereon to conceal the same and guide work sheets to the platen and support the work sheets out of contact with the stop bars and stops, said table having a hinged section so constructed and arranged as to expose the stops and afford convenient access thereto when desired.

The paper table comprises a lower fixed section 109 and an upper foldable or hinged section 110 hinge connected with section 109 at 111 to fold forward and downward upon the top of the platen 25 about a transverse axis approximately at the level of the top of the platen and rest on the platen under the action of gravity. The upper edge of section 109 is approximately at the level of the lower flanges 77^c of the margin stops so that scale 66 is readily visible when section

110 is folded forward into its substantially horizontal position for stop setting purposes.

Section 109 is located between the platen and the vertical portions of brackets 68 and is detachably held to the carriage in an upwardly and rearwardly inclined plane by means of the screws 69, said section having at its rear a pair of attachment brackets 112 riveted thereto at 113 at their upper ends, each bracket 112 having a pair of pendent legs each with a vertical slot 114 open at the lower end of the leg, the shanks of the screws 69 extending through said slots. By slightly loosening screws 69, the table may be detached as a unit without detaching the stop bar supporting brackets 68. Section 110 extends upward and rearward from section 109 in the operative condition of the table to cover both stop bars 65 and 70. It is releasably held in operative position by a pair of upstanding spring steel latch hooks 115 fastened at their lower ends by screws 116 on the tops of the rearwardly extending arms of brackets 68. Hooks 115 have forwardly and downward facing throats at their upper ends into which are adapted to spring the laterally projecting keeper pins 117 on the rearwardly extending arms of angular keeper brackets 118, said brackets 118 being riveted at 119 to the rear face of section 110 of the paper table. The forwardly extending noses of hooks 115 curved slightly upward at their forward ends and are so located that pins 117 will automatically cam under said noses and snap into the hook throats when the hinged table section 110 is swung rearward by the operator.

What I claim is:

1. In a typewriting machine, the combination of a main frame, a platen carriage mounted on the main frame, a left hand margin stop on the carriage, a counter stop carrier pivotally mounted on the main frame to swing fore-and-aft of the machine about a vertical axis, a counter stop for said margin stop pivotally held to said carrier, means slidably guiding said counter stop to move fore-and-aft of the machine, and a spring connected with said carrier to normally project and yieldably hold said counter stop in the path of travel of said margin stop, said carrier having a portion to the right of the counter stop engageable by the margin stop as it approaches the counter stop from the right to rock the carrier in opposition to said spring to a position retracting the counter stop from the path of travel of the margin stop.

2. In a typewriting machine, the combination of a main frame, a platen carriage mounted on said frame, a right hand margin stop mounted on the carriage, a counter stop carrier pivotally held to the main frame to swing fore-and-aft of the machine about a vertical axis, a counter stop of bell-crank form pivotally mounted on said carrier to swing about a vertical axis, said counter stop having a forwardly extending abutment arm and a laterally extending arm, a spring connected with said carrier and laterally extending stop arm to yieldably hold the abutment arm in forwardly extending position, the carrier having an abutment at the left of and engageable by the abutment arm of the counter stop and from which said arm is normally held slightly spaced by said spring, said margin stop having a rearwardly and rightwardly extending cam edge and a rearwardly extending finger at the rear end of said cam edge, a carrier spring connected with the carrier and normally yieldably holding the carrier in a position presenting the abutment arm of the counter stop in the path of travel of the cam edge and finger of the margin stop, and line-locking means connected with said carrier and operable by rearward movement thereof by action of said margin stop cam edge on the forward end of said counter stop abutment arm to lock the machine as said margin stop finger reaches said abutment arm.

3. A typewriting machine as claimed in claim 2, characterized by the fact that margin release key means are provided on the main frame connected with a part of said line-locking means for imparting additional rearward swinging movement to the carrier after locking of the machine to retract the counter stop to the rear of said finger to release the engaged stops and the line-locking means.

4. In a typewriting machine, the combination of a main frame, a platen carriage mounted on said frame, a right hand margin stop mounted on the carriage, a counter-stop carrier pivotally held to the main frame to swing fore-and-aft of the machine about a vertical axis, a counter stop of bell-crank form pivotally mounted on said carrier to swing about a vertical axis, said counter stop having a forwardly extending abutment arm and a laterally extending arm, a spring connected with said carrier and laterally extending stop arm to yieldably hold the abutment arm in forwardly extending position, the carrier having an abutment at the left of and engageable by the abutment arm of the counter stop and from which said arm is normally held slightly spaced by said spring, said margin stop having a rearwardly and rightwardly extending cam edge and a rearwardly extending finger at the rear end of said cam edge, a carrier spring connected with the carrier and normally yieldably holding the carrier in a position presenting the abutment arm of the counter stop in the path of travel of the cam edge and finger of the margin stop, a transverse rock shaft journalled on the main frame, an upwardly extending rock arm on said shaft, engaged in an aperture in said carrier, a rearwardly extending rock arm on said shaft, an upstanding link connected at its upper end to said rearwardly extending rock arm, a bellcrank on the frame having a rearwardly extending arm connected with the lower end of said link and also having a pendent arm, a rearwardly movable universal bar for the carriage escapement mounted on the main frame, and a gravity latch pivotally mounted on the main frame normally held up by said pendent bellcrank arm out of the path of movement of the universal bar and adapted to rock downward into position to block actuation of said universal bar upon rocking of the bell-crank by said counter stop carrier.

5. In a typewriting machine, the combination of a main frame, a platen carriage mounted on said frame, a right hand margin stop mounted on the carriage, a counter stop carrier pivotally held to the main frame to swing fore-and-aft of the machine about a vertical axis, a counter stop of bell-crank form pivotally mounted on said carrier to swing about a vertical axis, said counter stop having a forwardly extending abutment arm and a laterally extending arm, a spring connected with said carrier and laterally extending stop arm to yieldably hold the abutment arm in forwardly extending position, the carrier having an abutment at the left of and engageable by the abutment arm of the counter stop and from which said arm is normally held slightly spaced by said spring, said margin stop

having a rearwardly and rightwardly extending cam edge and a rearwardly extending finger at the rear end of said cam edge, a carrier spring connected with the carrier and normally yieldably holding the carrier in a position presenting the abutment arm of the counter stop in the path of travel of the cam edge and finger of the margin stop, a transverse rock shaft journalled on the main frame, an upwardly extending rock arm on said shaft engaged in an aperture in said carrier, a pair of rearwardly extending rock arms on said shaft, a pair of vertical links pivoted at their upper ends to said rearwardly extending rock arms, a bellcrank on the frame having a fore-and-aft extending arm connected with the lower end of one of said links and also having a pendent arm, a rearwardly movable universal bar for the carriage escapement mounted on the main frame, a gravity latch pivotally mounted on the main frame and normally held up by said pendent bellcrank arm out of the path of movement of the universal bar and adapted to rock downward into position to block actuation of said universal bar upon rocking of the bellcrank by said counter stop carrier, a fore-and-aft extending lever pivoted on the main frame at one end and connected at its other end to the remaining one of said pair of links, a margin release key lever on the main frame, and a vertical link connection between said key lever and fore-and-aft extending lever for rocking the latter downward to overthrow the counter stop carrier to the rear to a position freeing the counter stop from the margin stop finger.

6. In a typewriting machine, the combination of a main frame, a platen carriage mounted on the main frame, a platen on the carriage, a pair of brackets adjacent opposite sides of the carriage to the rear of the platen having upstanding portions detachably held at their lower ends to the carriage and rearwardly extending arms at the upper ends of said upstanding portions, a margin stop bar held to said upstanding portions approximately at the level of the top of the platen and provided on its front face with a letter space scale, a tabulator stop bar held to said rearwardly extending bracket arms, a two-part paper table having a fixed lower section between the platen and upstanding bracket portions detachably held to the carriage and also having a foldable upper section hinged to the upper edge of the lower section at approximately the level of the top of the platen to fold forwardly and downwardly and rest by gravity upon the top of the platen from an operative position in which it extends upwardly and rearwardly over both said stop bars, and means for releasably holding the hinged section of the paper table in operative position comprising a pair of upstanding spring hooks held to the rearwardly extending bracket arms, and a pair of keepers held to the rear face of said hinged section in position to spring into the throats of said hooks when said section is swung upwardly from the platen.

7. In a typewriting machine, the combination of a platen carriage, a platen on the carriage, said carriage having a cross-bar behind the platen, a pair of brackets held to said cross-bar and extending upwardly behind the platen, a margin stop bar extending across said brackets having a pair of longitudinal slots therein, clamping screws extending horizontally through said slots and threaded into said brackets to clamp the bar to the brackets, and a fine pitch adjusting screw threaded in said bar from one end of the bar with its inner end extending into the adjacent end of the adjacent one of said bar slots for abutment with the shank of the clamping screw passing through said slot.

8. In a typewriting machine, the combination of a platen carriage, a platen on the carriage, a pair of brackets detachably held at their lower ends to the carriage and extending upwardly behind the platen adjacent opposite ends of the carriage, and margin and tabulator stop carrying bars held to the upper portion of said brackets adjacent the level of the top of the platen.

9. In a typewriting machine, the combination of a platen carriage, a platen on the carriage, a pair of brackets detachably held at their lower ends to the carriage and extending upwardly behind the platen adjacent opposite ends of the carriage, margin and tabulator stop carrying bars held to the upper portion of said brackets adjacent the level of the top of the platen, and a paper table detachably held to the carriage by the bracket fastening means and having a hinged upper portion foldable forwardly and downwardly about an axis approximately at the level of the top of the platen from a position covering said stop carrying bars to a position in which it rests upon the top of the platen to expose and afford access to stops on the bars.

10. In a typewriting machine, the combination of a main frame, a traveling platen carriage mounted on said frame, right and left hand margin stops on the carriage, a pair of counter stops independent of the carriage, a pair of counter stop controllers each connected with a different one of said counter stops and shiftably mounted on the frame to move its connected stop between effective and margin releasing positions, means yieldingly holding the controllers in position to present the counter stops in effective position, a margin release key lever on the frame, means connecting said controllers for shifting of both controllers to place both counter stops in margin releasing position when one of said controllers is actuated by said key lever, means connecting said key lever with the last-mentioned controller for actuating the latter to place the counter stops in margin releasing position, line-end alarm and line-locking devices on the main frame, and means carried by the right hand margin stop coactive with its associated counter stop as the carriage approaches the end of a line to first give the controller for said counter stop a partial margin releasing movement and release it and then give it a greater but partial margin releasing movement before stopping the carriage, the said means connecting the key lever and one of the controllers including a part operable by said successive partial margin releasing movements of the controller for the counter stop for the right hand margin stop to actuate first the alarm device and then the line locking device.

11. In a typewriting machine, the combination of a main frame, a platen carriage mounted to travel on the frame, right and left hand margin stops on the carriage, a pair of counter stop controllers shiftably mounted on the main frame, a pair of counter stops for the margin stops independent of the carriage and normally held in the paths of movement of their respective margin stops by said controllers, the counter stop for the right hand margin stop being pivotally held to its controller for swinging of the counter stop by said margin stop in a direction

permitting the margin stop to freely pass from the left to the right of its counter stop, the controller to which said last-mentioned counter stop is pivoted having an abutment engageable by said pivoted stop to prevent free passage of the right hand margin stop from right to left of said pivoted counter stop therefor, a spring connecting said pivoted stop and its controller to hold the pivoted stop spaced slightly to the right of said abutment, a margin release key lever on the frame, means connecting said key lever and one of said controllers for shifting said controller to a position in which its associated counter stop is withdrawn from the path of travel of the coactive margin stop, said last-mentioned controller having a part engaged with the other controller to shift the latter, upon actuation of the key lever, to a position in which the counter stop controlled thereby is withdrawn from the path of travel of its associated margin stop.

12. In a typewriting machine, the combination of a main frame, a traveling platen carriage mounted on said frame, a margin stop bar fixedly held to the carriage, right and left hand terminal stops fixedly held to said bar, adjustable right and left hand margin stops on said bar between said terminal stops, a counter stop for the right hand margin and terminal stops, a counter stop for the left hand margin and terminal stops, a pair of counter stop controllers shiftably mounted on the frame and each connected with a different one of said counter stops for shifting its connected counter stop from active to margin releasing position, a margin release key lever on the frame connected with one of the controllers to withdraw the connected counter stop to margin releasing position, said last mentioned controller having a part coactive with the other controller to cause the same to withdraw the other counter stop into margin releasing position when said key lever is actuated, the frame having an abutment to the left of the counter stop for the left hand margin and terminal stops, and the right hand margin and terminal stops having cam edges coactive with the counter stop therefor to shift said counter stop toward margin releasing position and also having fingers engageable with the right hand edge of said counter stop to limit said camming before the stop reaches releasing position, the finger on the right hand terminal stop being sufficiently long to retain engagement with said counter stop when said counter stop is moved to margin releasing position by the key lever, the finger on the right hand margin stop being sufficiently short to permit said counter stop to clear said margin stop when said key lever is actuated, and line locking means movable to locking position by said cammings of the counter stop for the right hand margin and terminal stops.

13. In a typewriting machine having a main frame, and a traveling platen carriage mounted on said frame and carrying adjustable right and left hand margin determining stops, the combination with said frame, carriage and stops, of a pair of counter stop controllers pivotally mounted on the main frame, a counter stop for the right hand margin determining stop pivotally held on one of said controllers for swinging by said margin stop, said last-mentioned controller being provided with an abutment engageable by the counter stop pivoted thereon to prevent the latter stop from being swung far enough on its pivot to be cleared by said margin stop during leftward travel of the carriage; a spring connecting said pivoted counter stop with its controller to normally urge said stop toward said abutment, a counter stop for the left hand margin determining stop slidably guided on the frame to move transversely of the path of travel of the carriage and having a pivotal connection with the remaining controller, spring means normally yieldingly holding said controllers in positions presenting said counter stops for engagement of each of the counter stops by a different one of said margin stops, a margin release key, means connecting said key with one of said controllers for shifting the controller to a position in which the counter stop connected therewith is withdrawn from the path of travel of its associated margin stop, said last-mentioned controller being connected with the other controller to shift the latter upon actuation of said key to withdraw the counter stop connected with said other controller out of the path of travel of its associated margin stop.

14. A typewriting machine as claimed in claim 13, wherein said right hand margin stop is provided with means coactive with its counter stop to vibrate said stop part way toward and from margin releasing position and again move said counter stop a greater distance toward margin releasing position and arrest the carriage before said counter stop reaches margin releasing position, and wherein line end alarm and line locking devices are provided operable respectively by the vibrating movement of said counter stop and said final movement of said counter stop toward margin releasing position.

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