

J. WALDHEIM.
TYPE WRITING MACHINE.
APPLICATION FILED MAY 31, 1912.

1,043,485.

Patented Nov. 5, 1912.

3 SHEETS—SHEET 1.

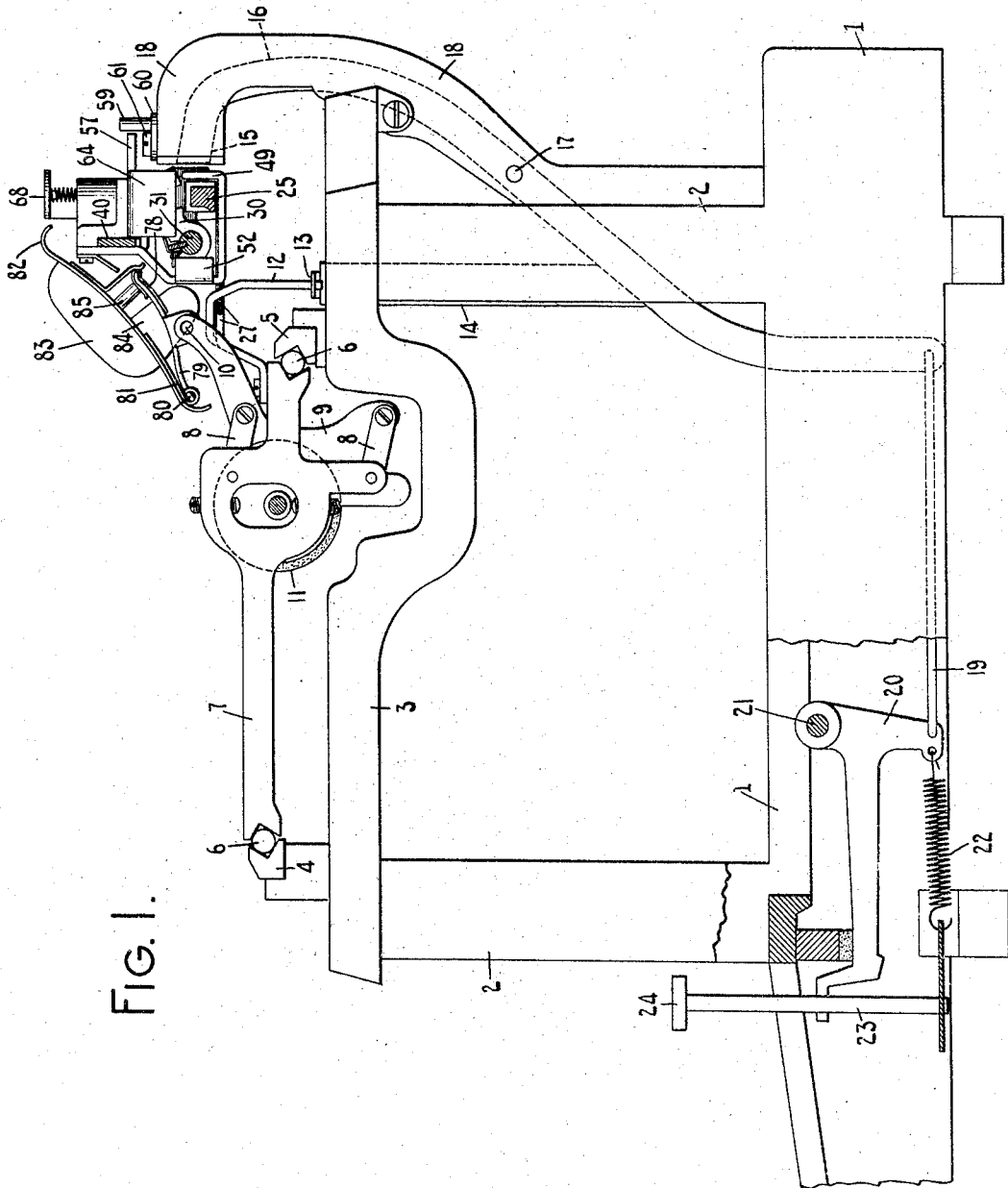


FIG. 1.

WITNESSES:

E. M. Wells

m. w. Pool

INVENTOR:

John Waldheim

By Jacob Felbel

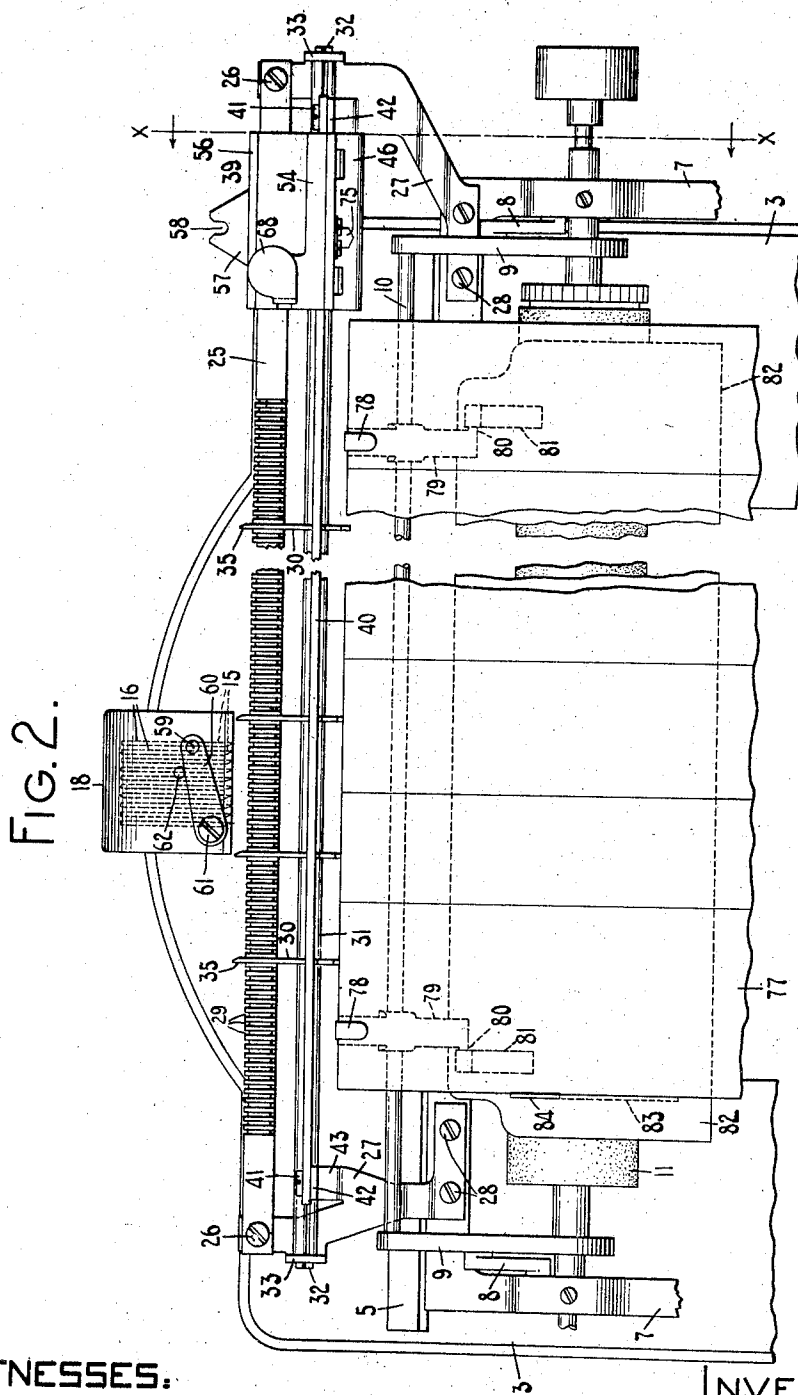
HIS ATTORNEY.

J. WALDHEIM.
TYPE WRITING MACHINE.
APPLICATION FILED MAY 31, 1912.

1,043,485.

Patented Nov. 5, 1912.

3 SHEETS—SHEET 2.



WITNESSES:

E. M. Wells
m. w. Pool

INVENTOR:

John Waldheim
M. Jacob Felbel
HIS ATTORNEY

1,043,485.

Patented Nov. 5, 1912.

3 SHEETS—SHEET 3.

FIG. 3.

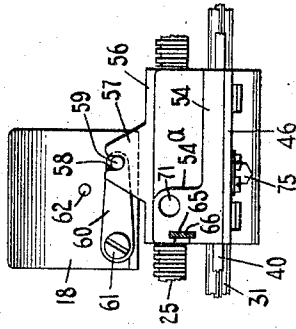


FIG. 5.

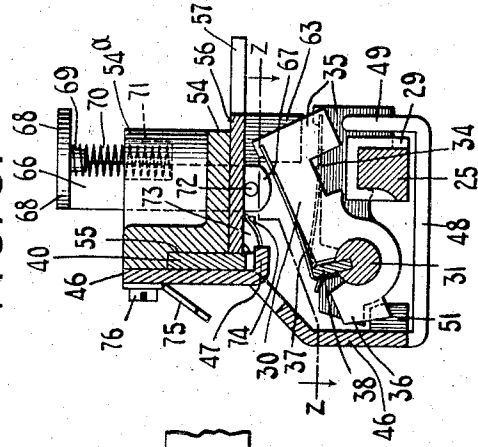


FIG. 6.

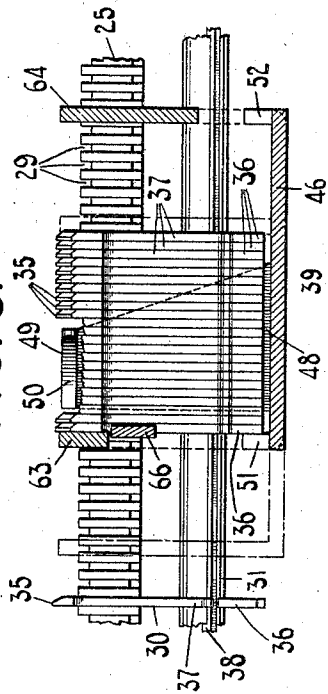
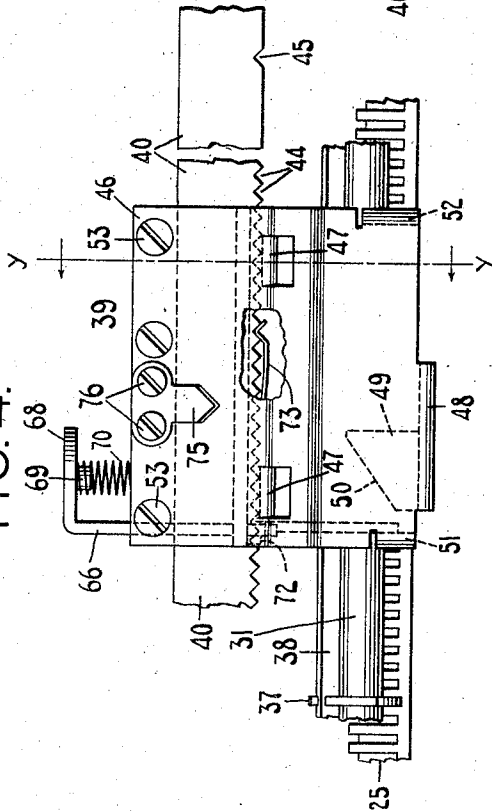


FIG. 4.



WITNESSES:

E. M. Wells
maw.love

INVENTOR:

John Waldheim
By Jacob Felber

HIS ATTORNEY

UNITED STATES PATENT OFFICE.

JOHN WALDHEIM, OF NEWARK, NEW JERSEY, ASSIGNOR TO UNION TYPEWRITER COMPANY, OF JERSEY CITY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

TYPE-WRITING MACHINE.

1,043,485.

Specification of Letters Patent.

Patented Nov. 5, 1912.

Application filed May 31, 1912. Serial No. 700,745.

To all whom it may concern:

Be it known that I, JOHN WALDHEIM, citizen of the United States, and resident of Newark, in the county of Essex 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 especially to tabulating mechanism for typewriting machines and its general object is to provide new and improved means for enabling column stops to be moved from a non-operative place or position and set in an operative position on a stop receiving member and for enabling the stop receiving member to be readily cleared of the set column stops preparatory to resetting the column stops for a new variety of work.

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

In carrying out my invention in the present instance I have applied it to a No. 11 Remington typewriting machine but the nature of the invention is such that it may readily be adapted to other styles of writing machines.

In the accompanying drawings, Figure 1 is a sectional view of a No. 11 Remington typewriting machine embodying my invention, taken on a plane indicated by the dotted line $x-x$ in Fig. 2 and looking in the direction of the arrows at said line. Fig. 2 is a fragmentary plan view showing the upper part of said machine. Fig. 3 is a fragmentary plan view showing some of the stop controlling devices in different relationship from that shown in Fig. 2. Fig. 4 is a front elevation of a novel stop controlling member and associate parts. Fig. 5 is a vertical sectional view taken on the plane represented by the dotted line $y-y$ in Fig. 4 and looking in the direction of the arrows at said line. Fig. 6 is a horizontal sectional view taken on planes indicated by the broken dotted line $z-z$ in Fig. 5 and looking in the direction of the arrows at said line.

As appears from Fig. 1, the main frame of the machine comprises a base 1, posts 2 and a top plate 3 above which are fixed grooved guide rails 4 and 5, said guide rails cooperating through anti-friction balls 6

with the grooved front and rear bars of a carriage truck 7 which through links 8 is connected with and supports a shiftable platen frame or carrier comprising end bars 9 and a cross rod 10. Journaled on the platen carrier is a paper supporting element or platen 11 with the front face whereof cooperate printing instrumentalities (not shown) of the usual style. Fixed to the truck 7 is an arm 12 connected by a strap 13 with a motor or spring drum 14 which constantly urges leftward the carriage comprising the truck and the platen frame, step by step movements of the carriage being however controlled by the usual or other suitable escapement devices which are omitted from the drawings. Coöperative with the column stops to be hereinafter described are denominational stops 15 which are at the forward upper ends of stop levers 16, the stops 15 and the levers 16 being preferably integral. The levers 16 are fulcrumed at 17 in a frame 18 detachably secured to the main frame of the machine, and the lower ends of said levers 16 are connected by links 19 with bell cranks 20 having fixed fulcrums 21 and being provided with restoring springs 22. Said bell cranks are operative by vertically movable key stems 23 each provided at the top with a tabulator key or button 24. The bell cranks 20 preferably operate carriage releasing devices, not shown, but which act in the usual way to free the carriage from the control of the escapement devices and permit it to be moved rapidly leftward across the top plate for a continuous or tabulating run.

A stop receiving element or stop bar 25 is provided for the column stops, said stop bar being arranged behind the platen and secured at its ends by screws 26 to angular brackets 27 which are fastened by screws 28 to the rear bar of the platen frame 7 (Fig. 2). The stop bar 25 is formed with grooves, notches or locking or engaging devices or means 29, said notches being cut at letter space intervals at the front and rear sides of the bar and also in the top of the bar and being adapted to receive tabulator or column stops 30 to lock the column stops in adjusted or set positions. The column stops 30 are slidably mounted on a support or rod 31, said rod being arranged forward of the stop bar 25 and being secured by screws 32 to ears 33 bent upward from the bracket 27.

The stops 30 are adapted not only to slide along the rod 31 but also to have a limited rotary movement on said rod in order to enable the stops to engage with and be disengaged from the notches 29 in the stop bar 25, but the stops are constantly connected to their support 31 whether they are in set position, that is engaged with the stop bar 25, or not. As best shown in Fig. 5, each stop 30 is provided with a notch 34 and which enables the stop to be swung down into any of the grooves 29 and to fit over the stop bar 25, being thereby set on the stop bar. To the rear of the notch 34 each stop 30 is provided with a stopping portion proper 35, which when the stop is swung down in operative engagement with the stop bar 25 or set is in position to cooperate with the denominational stops 15 when any of said stops 15 are moved or projected forward into operative position by the actuation of the associate key 24. Forward of the supporting rod 31 each stop 30 is provided with an engaging portion 36, the function of which will be hereinafter described. In order to hold the stops 30 up in non-operative position, a detent spring 37 is secured to the top of each stop 30, the free end of said detent spring being bent into a V for cooperation with a rib 38 projecting upward from the rod 31. The V end of the spring 37 cooperates with the rib 38 at the forward side thereof to hold the associate stop 30 in the non-operative position, but when the stop is swung downward into engagement with the stop bar 25, as hereinafter described, the V end will snap over the top of the rib 38 and will cooperate with it at the rear side thereof to maintain the stop 30 in operative position. In other words, the spring 37 is double acting and acts to hold the stop either free or set, that is, either up or down, as it may be adjusted.

In order to assemble, bunch or group the tabulator or column stops 30 and also to distribute or adjust them at desired intervals along the stop bar 25, a stop controlling contrivance is provided, the details of which are best shown in Figs. 4 to 6. Said contrivance or stop controller, which for convenience of reference is designated as a whole by the numeral 39, is in the nature of a housing and is slidably mounted on a support or supporting bar 40, which bar is arranged above the rod 31 and is secured at its ends by screws 41 to upstanding ears or terminal portions 42 of branch portions 43 extending rearward from the brackets 27. The under side of the bar 40 is provided with V notches 44 formed at letter space intervals, an additional V notch 45 (Fig. 4) being provided near the right-hand end of said bar. The stop controlling means or contrivance 39 comprises a plate-like front portion 46 which may be of sheet metal bent

or curved forward and downward, as shown in Fig. 5, and provided with hooks or lugs 47 which engage with the pointed ends of the teeth formed by and between the notches 44. Projecting horizontally rearward from the bottom of the plate 46 beneath the rod 31 and the stop bar 25 is an extension 48 which terminates in an upwardly bent end 49 at the rear of the stop bar 25, the end portion 49 being provided with an inclined or cam edge 50 or disengaging device or wiper which is adapted to cooperate with the stops 30 to wipe or cam them upward automatically out of engagement with the stop bar 25. At its sides the lower portion of the plate 46 is provided with rearwardly bent ears or lugs 51 and 52 for cooperation with the portions 36 of the column stops when the latter are in non-operative positions. As clearly appears from Fig. 5 the plate 46 is arranged at the forward side of the bar 40. Screws 53 secure to said plate above the bar 40 a roof portion 54, which may be of cast metal, undercut as indicated at 55 to fit over the top and rear sides of the bar 40. From Fig. 5 it will be observed that the supporting bar 40 is engaged at its forward and under sides by the plate 46 and lugs 47 while the top and rear sides of said bar are engaged by the part 54. The construction is such that while the contrivance 39 may be readily slid along the supporting bar, it cannot become accidentally detached from said bar or displaced. Suitably secured to the under side of the top or roof 54 is a plate or roof portion 56, having a rearward extension 57 which is notched, as indicated at 58, for cooperation with other latching or locking devices comprising a pin 59 secured to and upstanding from a latch member 60 which is pivoted at 61 to the top of the tabulator frame 18.

When the latch is in operation, as shown in Fig. 3, the contrivance 39 will be held in fixed position on the machine. A pin 62 limits the rearward movement of the latch 60 (Fig. 2). At its ends the roof portion 56 is provided with downwardly bent ears or extensions 63 and 64 for cooperation with the rear portions of the column stops when the latter are in non-operative positions. The roof portion 54 is formed with an enlargement 54^a which is slotted, as indicated at 65 (Fig. 3) to provide a bearing for a stop-setting device which is in the form of a vertically reciprocatory blade 66 rounded at its lower end, as indicated at 67, and terminating at its upper end in a horizontally bent portion or key 68. A stud 69 at the under side of the key engages the upper end of a coiled spring 70 which is seated in a depression 71 in the enlargement 54^a and operates to restore or return the setting device to normal position after operation. The upward or return movement of said device

is limited by a pin 72 which coöperates with the under side of the plate 56, said plate being also notched or slotted in register with the slot 65 to provide for the passage of the blade 66. The setting device or blade 66 is adapted when depressed to coact with the tops of the stops 30 and swing them downward from inoperative position to operative engagement with the column stop bar 25. The contrivance 39 is, as has been stated, slidable along the bar 40 and is held in desired positions along said bar by a detent spring 73 (Figs. 4 and 5), said spring being secured by a screw 74 to the under side of the plate 56 and having a V end which engages with the notches 44 in the bar 40. A pointer 75 is secured by screws 76 to the front of the plate 46 and projects downward and forward in position to coöperate directly with a sheet of paper ruled off in columns as is usual.

A ruled work sheet 77 is illustrated in Fig. 2 in position for coöperation with the pointer 75. The work sheet is held in this position by clips 78 which fit over the rear end portions of arms or brackets 79 secured to the platen frame rod 10. These arms 79 are the usual supports for the paper table. At their forward ends said arms are provided with laterally extending bearing portions 80 which are pivotally engaged by the curled ends of strips 81 suitably secured at the under side of the paper table 82. A side guide, comprising oppositely extending portions 83 and 84, is suitably secured at the left side of the paper table 82. When the paper table is in normal position as shown in Fig. 1 the usual limiting pins 85 at the under side thereof engage with the clips 78, said clips being at the time covered by the paper table and the side guide 83 being in position to coöperate with the left edge of the paper that is introduced over the paper table and around the platen in the usual way. Preparatory to stop setting operation, however, the paper table is swung forward and downward about the extensions or bearing portions 80 as centers, exposing the clips, as shown in Fig. 2, and enabling the upper edge of the ruled sheet 77 to be introduced under said clips, the left edge of said sheet being guided by the side guide portion 84, and said sheet resting on the forwardly swung paper table and against the surface which is normally the under side of said table.

With the ruled sheet adjusted as shown, and assuming that it is desired to adjust or arrange on the stop bar 25 column stops in correspondence with the ruled columns on said sheet, the operator moves the contrivance 39 to the extreme left as a preliminary operation. It will be understood from what follows that at this time all of the column stops, of which as shown there are some

twenty-four or twenty-five, although the number may of course vary, will be within the contrivance 39 and confined in inoperative position between the downward extensions or lugs 63 and 64 at the rear, and between the lugs 51 and 52 at the front. In other words, if the contrivance is pushed bodily leftward at this time the rear portion 35 of the right-hand stop 30 will be engaged by the lug or extension 64 and the forward portion 36 of said stop will be engaged by the lug 52 so that any leftward movement of said contrivance will result in forcing the entire set of stops leftward along the rod 31 with said contrivance. On the other hand, a bodily right-hand movement of the contrivance will cause the lugs 63 and 51 to act on the group of stops to force them rightward, the traveling carriage remaining quiescent or motionless during such bodily movement of the contrivance 39, leftward or rightward. If it be assumed that this rightward movement of the contrivance 39 is continued until the pointer 75 is brought to the desired position in the first column of the sheet 77. When this position has been attained the operator depresses the key 68, causing the rounded end of the setter 67, which overlies the left-hand stop of the group (as will be clearly understood from Fig. 6) to engage with the top of said stop and force it downward on to the stop bar 25, thus locking or setting the stop for operation, this movement of the stop being transverse of the platen or paper support. The key 68 is thereupon released and the contrivance 39 is pushed rightward until the pointer 75 is brought to the next columnar position. This rightward movement of the contrivance will carry with it the entire set of stops 30 except the left-hand stop of the group, which left-hand stop has been set on the stop bar 25. As a result of such setting the portion 35 of said left-hand stop will have been lowered out of the path of the extension 63 while the portion 36 will have been raised above the path of the extension 51. The result is that the set stop is freed from the control of the contrivance 39 and will remain behind, locked on the bar 25 as the rightward movement of the contrivance 39 continues. The stop setting operation above outlined is repeated for each columnar position on the paper 77, and the result will be that a plurality of column stops 30 will be held or set at any and all desired points on the stop receiving or stop holding element or stop bar 25, one for each columnar position on the work sheet, while the remaining column stops will remain within the contrivance 39. Consequently, when the latter is moved to the extreme right, as shown in Fig. 2, the non-operative column stops will be carried with it and will, together with the contrivance, be maintained

in non-working position by the engagement of the detent springs 73 with the notch 45. The column stops having been at any desired points lengthwise of the printing line on the platen as described, the trial work sheet 77 is withdrawn and the paper table 82 is swung back to normal position. The work sheet may then be adjusted in position over the paper table and around the platen in the usual way and the writing and tabulating operations performed in a manner well understood.

If at any time it be desired to change the setting of the column stops for a new form of tabular work the stop bar 25 must be cleared of the set column stops as a preliminary operation to a new setting operation. In order to clear the stop bar it is only necessary to move the contrivance 39 from the right-hand position shown in Fig. 2 to a position at the extreme left. During this movement the contrivance will automatically disengage the column stops from the stop bar 25 and bunch or group them within itself, as will now be explained. In the first place it may be said that as the contrivance is moved to the left, the extensions 64 and 52 will cooperate with the right-hand stop 30 of the bunched column stops and will force leftward such of the column stops as may be bunched within the contrivance 39 at the time. When the left-hand movement of the contrivance has continued far enough to bring the wiper or cam edge 50 into engagement with the first or right-hand one of the set column stops, the wiper cam 50 acting against the bottom edge of the part 35 of said right-hand stop, will cam said stop upward, causing it to disengage from the stop bar 25 and forcing it to the non-operative position where it will be caught by the left-hand one of the bunched stops and forced leftward along with the bunched stops as the movement of the contrivance 39 continues. The set column stops are forced off or unlocked from the bar 25 successively one by one, and grouped or bunched with the others inside the contrivance or controller 39 so that when the latter is brought to the extreme left-hand position it will then house within it the entire set of column stops. The tabulator or column stops 30, it will be noted, are supplied from a number which need not be in excess of the greatest number of columns for which the machine is intended.

In the use of the invention as heretofore described, the relative movement lengthwise of the printing line on the platen between the traveling element or carriage and the stops, necessary to provide for the appropriate setting of the stops, is caused by moving the controller 39 and the stops along the carriage lengthwise of the printing line while the carriage remains motionless, in-

stead of moving the carriage. However, I have provided means for enabling the operator to effect the relative movement by a movement of the carriage, instead of by a movement of the controller and stops, if such mode of operation is desirable or is preferred. In such case the operator simply slides the controller or contrivance 39 leftward to the middle of the machine and latches or secures it by swinging the pin 59 into the notch 58, as shown in Fig. 3, thus anchoring the contrivance and the plurality bunch of column stops within it to the stationary element or machine frame. The operator then moves the carriage along until the first column on the work sheet is brought opposite the pointer 75, whereupon the setting key 68 is depressed to set the first column stop in position on the stop bar. Next the carriage is moved leftward until the next columnar position is attained, whereupon the key 68 is again depressed, and so on. When the desired number of stops have been set, the contrivance 39 is unlatched and set in non-working position at the right of its supporting bar, as shown in Fig. 2. When the set stops are to be unlatched and the stop bar is to be cleared, the stop controller may be slid leftward from non-working position to the middle of the machine and there latched. This movement will unlock and clear the stop bar automatically of all of the stops set along its right-hand portion in the path traversed by the controller. After the controller has been latched in the middle position, the carriage may be moved from left to right preparatory to a new setting operation, with the result that the left-hand portion of the stop bar will be cleared of all of the column stops set on it, said stops being automatically unlocked and bunched within the controller during the rightward movement of the carriage. Thus it will be seen that the controller is provided with a device or cam which operates automatically without any attention on the part of the operator to clear the stop bar of the set stops, the stops being unlocked and bunched either by a sliding movement of the controller along the carriage; or, vice versa, by a movement of the carriage while the controller itself is held or locked against movement.

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 and in tabulating mechanism, the combination of a traveling carriage, a stop receiving element, a stop support, a stop constantly connected to said support, and means operating while the traveling carriage remains quiescent to set said stop at any desired point on said stop receiving element.

2. In a typewriting machine and in tabulating mechanism, the combination of a traveling carriage, a stop receiving element, a stop support, a stop constantly connected to said support, means operative independently of traveling movements of the carriage for adjusting said stop on said support, and means operative to connect said stop to said stop receiving element.

3. In a typewriting machine and in tabulating mechanism, the combination of a paper supporting element, a tabulator stop, a stop support to which said stop is constantly connected, a stop controller, a stop receiving element, said controller and said element being relatively movable in the direction of the printing line on the platen to vary the location of said stop, and means on said controller for moving said stop transversely of the paper supporting element and to set said stop on said stop receiving element.

4. In a typewriting machine and in tabulating mechanism, the combination of a platen, a tabulator stop, a stop controller, a support to which said stop is constantly connected, means for affording movement of said controller lengthwise of the printing line, and means connected to said controller for setting said stop on said stop receiving element.

5. In a typewriting machine and in tabulating mechanism, the combination of a platen, a tabulator stop, a stop controller, a support to which said stop is constantly connected, means for affording movement of said controller lengthwise of the printing line, and key operated means on said controller for setting said stop on said stop receiving element.

6. In a typewriting machine and in tabulating mechanism, the combination of a traveling carriage, a stop receiving element, a tabulator stop, a stop controller, key controlled means operative while the controller is quiescent to set said stop on said stop receiving element, and means operative during the bodily movements of said controller to disconnect said stop from said stop receiving element.

7. In a typewriting machine and in tabulating mechanism, the combination of a platen carriage, tabulator stop, a stop receiving element and a stop controller provided with a key for setting said stop on said element, and a device on said controller operative during relative movement between said controller and said carriage for disconnecting said stop from said stop receiving element.

8. In a typewriting machine and in tabulating mechanism, the combination of a platen carriage, a tabulator stop, a stop receiving element and a stop controller provided with a key for setting said stop on said element, and a cam on said controller

operative automatically during bodily movements of said controller to disconnect said stop from said stop receiving element.

9. In a typewriting machine and in tabulating mechanism, the combination of a traveling carriage, a stop receiving element, a tabulator stop, and a device between which and the carriage there is afforded relative movement in the direction of the printing line, said device operating automatically during such relative movement to disconnect said stop and said stop receiving element.

10. In a typewriting machine and in tabulating mechanism, the combination of a traveling carriage, a stop receiving element, a tabulator stop, and a device between which and the carriage there is afforded relative movement in the direction of the printing line, said device operating automatically during such relative movement to disconnect said stop and said stop receiving element and to cause said stop to participate in such relative movement.

11. In a typewriting machine and in tabulating mechanism, the combination of a carriage, a stop support thereon, a tabulator stop constantly connected to said support, a stop receiving element, a stop controller slidably mounted on said carriage and operative to move said stop lengthwise of said stop receiving element, and key operated means connected to said controller for setting said stop on said stop receiving element.

12. In a typewriting machine and in tabulating mechanism, the combination of a carriage, a stop support thereon, a tabulator stop constantly connected to said support, a stop receiving element, a stop controller slidably mounted on said carriage and operative to move said stop lengthwise of said stop receiving element, key operated means connected to said controller for setting said stop on said stop receiving element, and detent means for holding said controller against sliding movement.

13. In a typewriting machine and in tabulating mechanism, the combination of a carriage, a stop support thereon, a tabulator stop constantly connected to said support, a stop receiving element, a stop controller slidably mounted on said carriage and operative to move said stop lengthwise of said stop receiving element, key operated means connected to said controller for setting said stop on said stop receiving element, and means for retaining said controller near one end of said carriage out of working position.

14. In a typewriting machine and in tabulating mechanism, the combination of a platen, a stop controller, a tabulator stop movable therewith, a stop receiving element, means for affording a movement of said controller lengthwise of the printing line, means operative to secure said stop on said stop receiving element, and means auto-

matically operative during bodily movement on said controller lengthwise of the printing line to disconnect said stop from said stop receiving element.

15 15. In a typewriting machine and in tabulating mechanism, the combination of a carriage, a stop bar, a tabulator stop, means carried by the carriage for moving said tabulator stop lengthwise of said stop bar, and a setting device for setting said tabulator stop on said stop bar at any letter space position, said means being operative to disconnect said stop from said stop bar automatically and to further move it lengthwise of said stop bar.

16. In a typewriting machine and in tabulating mechanism, the combination of a tabulator stop, a stop controller, a stop receiving element, a key for setting said stop on said stop receiving element, and a cam on said stop controller operating automatically to disconnect said stop from said stop receiving element and bring it within the control of said controller.

17. In a typewriting machine and in tabulating mechanism, the combination of a carriage, a column stop bar, a plurality of column stops adapted to receive a relative adjustment lengthwise of said bar, locking means for locking said stops in adjusted positions, and means operative while said carriage remains quiescent for successively releasing the stops.

18. In a typewriting machine and in tabulating mechanism, the combination of a carriage, a column stop bar, a plurality of column stops adapted to receive a relative adjustment lengthwise of said bar, locking means for locking said stops in adjusted positions, and means mounted on the carriage and movable independently thereof to successively release said stops from their locking means.

19. In a typewriting machine and in tabulating mechanism, the combination of a carriage, a column stop bar, a plurality of column stops adapted to receive a relative adjustment lengthwise of said bar, locking means for locking said stops in adjusted positions, and means movable independently of the carriage for successively releasing the stops and for bunching the released stops together.

20. In a typewriting machine and in tabulating mechanism, the combination of a carriage, a column stop bar, a plurality of column stops adapted to receive a relative adjustment lengthwise of said bar, locking means for locking said stops in adjusted positions, and automatically operating means mounted on the carriage for successively unlocking said stops.

21. In a typewriting machine and in tabulating mechanism, the combination of a traveling carriage, a stop receiving element,

a stop support, a set of tabulator stops constantly connected to said support, and means operative independently of movement of the traveling carriage to set certain of said plurality of stops at desired intervals along said stop receiving element.

22. In a typewriting machine and in tabulating mechanism, the combination of a platen, a set of tabulator stops, a stop controller for controlling said stops, means for affording movement of said controller and of said stops therewith lengthwise of the printing line on the platen, and means connected to said controller for setting any number of said stops along said stop receiving element at desired intervals.

23. In a typewriting machine and in tabulating mechanism, the combination of a traveling carriage, a stop receiving element, a stop controller, a plurality of tabulator stops, means connected with said controller for setting said stops at desired points along said stop receiving element, and a device connected to said controller and operating automatically during bodily movements of said controller to successively disconnect the set stops and the stop receiving element.

24. In a typewriting machine and in tabulating mechanism, the combination of a traveling carriage, a stop receiving element, a stop controller, a plurality of tabulator stops, means connected with said controller for setting said stops at desired points along said stop receiving element, and a device connected to said controller and operating automatically during bodily movements of said controller to successively move the set stops out of connection with said stop receiving element and to bunch said stops.

25. In a typewriting machine and in tabulating mechanism, the combination of a stationary element, a traveling element or carriage, a plurality of tabulator stops, means for moving said stops one at a time to operative position, and means for moving said stops back to inoperative position while relative movement is taking place between said stationary and traveling elements, both of said means being carried by one only of said elements.

26. In a typewriting machine and in tabulating mechanism, the combination of a traveling carriage, a tabulator stop, a stop support to which the stop is constantly connected, means for setting said stop after it has been moved lengthwise of said carriage to a selected position, and a device for controlling said stop, said device being independent of said stop support and said stop being normally within said device.

27. In a typewriting machine and in tabulating mechanism, the combination of a carriage, a tabulator stop, a stop support to which said stop is constantly connected, and a controller for said stop independent of

said support, said controller being at will either movable relatively to the carriage or maintained stationary when the carriage itself is moved.

5 28. In a typewriting machine and in tabulating mechanism, the combination of a carriage, a settable tabulator stop, and a wiper cam carried by the carriage, said cam and said tabulator stop being relatively movable
10 in the direction of the carriage travel and said cam being normally inoperative but being adapted during relative movement of the character specified to move said stop from set position to inoperative position.

15 29. In a typewriting machine and in tabulating mechanism, the combination of a carriage, a plurality of settable tabulator stops, and a wiper cam constantly in a plane common to the stopping portions of said stops
20 when they are in set position, said cam and said stops being relatively movable in the direction of the carriage travel and said cam being normally inoperative but adapted to operate on said stops during relative move-
25 ment of the character specified.

30. In a typewriting machine and in tabulating mechanism, the combination of a stop controller, a plurality of stops supported independently of said controller but contained
30 within said controller when they are in inoperative position, and means for moving said stops to operative position.

31. In a typewriting machine and in tabulating mechanism, the combination of a stop
35 controller, an independent stop support, a plurality of tabulator stops mounted on said support, said stops being supported independently of said controller but being within said controller when they are in inopera-
40 tive position, and means for moving said stops on said stop support to bring them to operative position.

32. In a typewriting machine and in tabulating mechanism, the combination of a stop
45 support, a plurality of tabulator stops mounted on said support, a stop controller, said support being independent of said controller and said stops being supported independently of said controller but being with-
50 in said controller when they are in inoperative position, and means for moving said stops on said stop support to bring them to operative position, said means compris-
55 ing a key on said controller.

33. In a typewriting machine and in tabulating mechanism, the combination of a stop
60 holding element, a stop support, a series of tabulator stops, means for adjusting said stops lengthwise of said stop holding element, a stop controller independent of said stop support within which the stops are normally held, and means for moving the stops from their operative position to a non-
65 operative or normal position within said stop controller.

34. In a typewriting machine and in tabulating mechanism, the combination of a stop controller, a stop receiving element, a tabulator stop normally within said controller,
70 means for moving said stop to abnormal position on said stop receiving element, and a single device for holding said stop in both normal and abnormal positions.

35. In a typewriting machine, the combination of a platen carrier, a platen, a paper
75 table hinged on said platen carrier and normally adapted to support paper as it is introduced into the machine, a paper clip underneath said paper table, the paper table being adapted to be swung forward and
80 thereafter to support on its under side a work sheet introduced into the control of said paper clip, a stop controller, and an indicating device connected with said controller and coöperative with said work sheet
85 when the latter is in the control of said paper clip.

36. In a typewriting machine, the combination of a platen carrier, a platen, a paper
90 table hinged on said platen carrier and normally adapted to support paper when introduced into the machine, a paper clip underneath said paper table, the paper table being adapted to be swung forward to abnormal position and then to support on its under
95 side a work sheet introduced into control of said paper clip, guiding means comprising devices, one for the work sheet in each position of the paper table, a stop controller, and an indicating device connected
100 with said controller and coöperative with said work sheet when the latter is in the control of said paper clip.

37. In a typewriting machine, the combination of a platen carrier, a platen, a paper
105 table hinged on said platen carrier and normally adapted to support the paper introduced into the machine, a paper clip underneath said paper table, the paper table being adapted to be swung forward and to
110 support on its under side a work sheet to be clipped by said paper clip, oppositely projecting side guides on said paper table, one guide being adapted for use when the paper table is in the normal position and
115 the other when the paper table has been swung forward to abnormal position, a stop controller, and an indicating device connected with said controller and coöperative with the work sheet when introduced over
120 the paper table after the latter has been swung forward to abnormal position.

38. In a typewriting machine, the combination of a platen carrier, a platen, a paper
125 table movable from a normal to an abnormal position and adapted to support paper in both its normal and abnormal positions, side guides one adapted for use when the table is in normal position and the other
130 when the paper table is in abnormal position.

tion, a stop controller, and an indicating device connected with said controller and co-operative with paper when the latter is introduced over the abnormally positioned paper table.

39. In a typewriting machine, the combination of a platen carrier, a platen, a paper table movable from normal to abnormal position and adapted to support paper in both its normal and abnormal positions, side guides adapted to project from opposite faces of said paper table, a stop controller, and an indicating device connected with said controller and coöperative with paper when the latter is introduced over the abnormally positioned paper table.

40. In a typewriting machine, the combi-

nation of a platen, a platen carrier, a paper table mounted to swing on said platen carrier, a side guide adapted for use with the paper table in normal position, a second side guide adapted for use when the paper table has been swung to abnormal position, and an indicating device coöperative with the paper when the latter is positioned by the aid of said second side guide.

Signed at the borough of Manhattan, city of New York, in the county of New York, and State of New York, this 29th day of May A. D. 1912.

JOHN WALDHEIM.

Witnesses:

CHARLES E. SMITH,
M. F. HANNWEBER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."