

July 24, 1934.

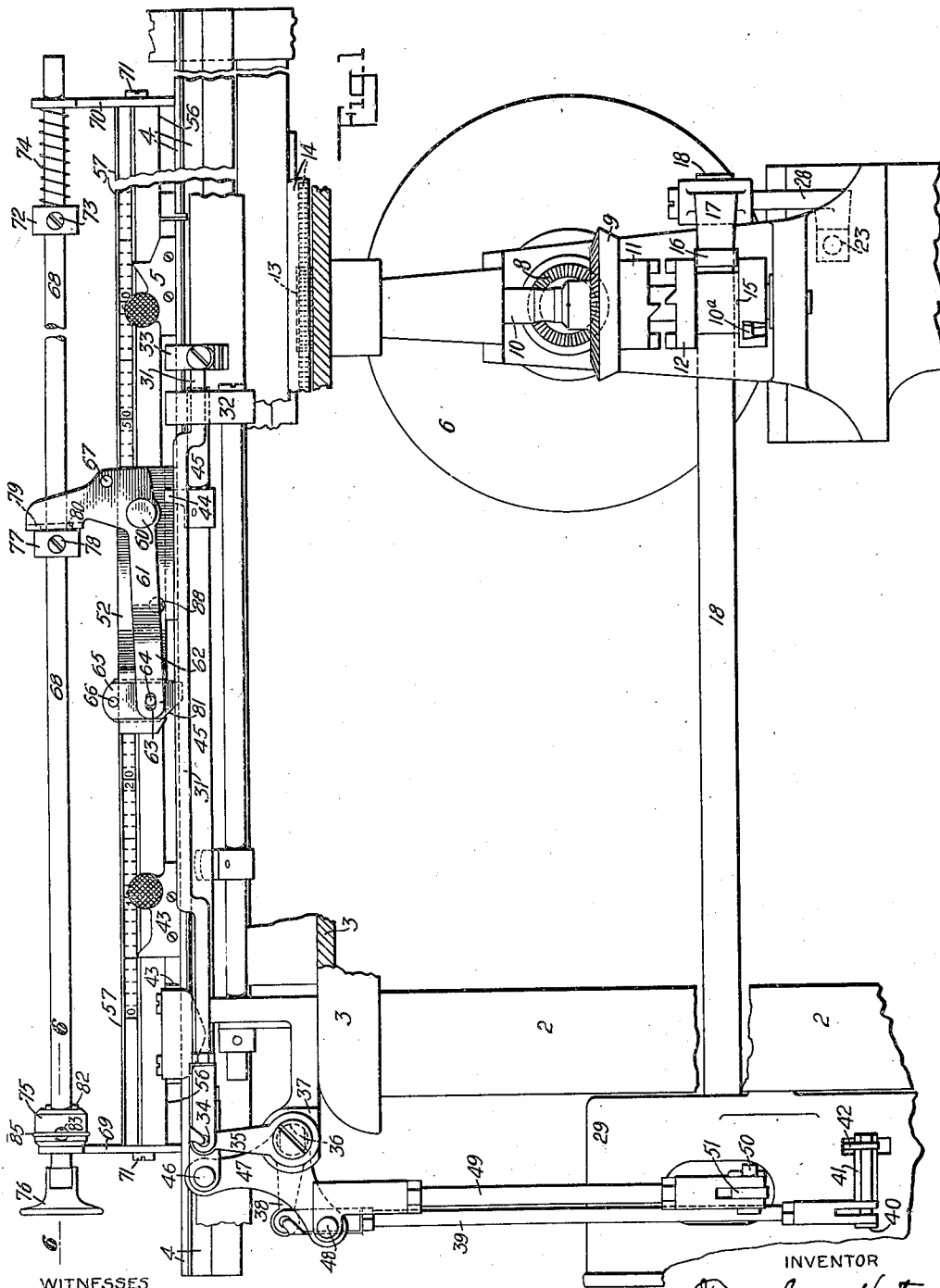
F. A. HART

1,967,437

TYPEWRITING MACHINE

Filed March 24, 1930

2 Sheets-Sheet 1



WITNESSES

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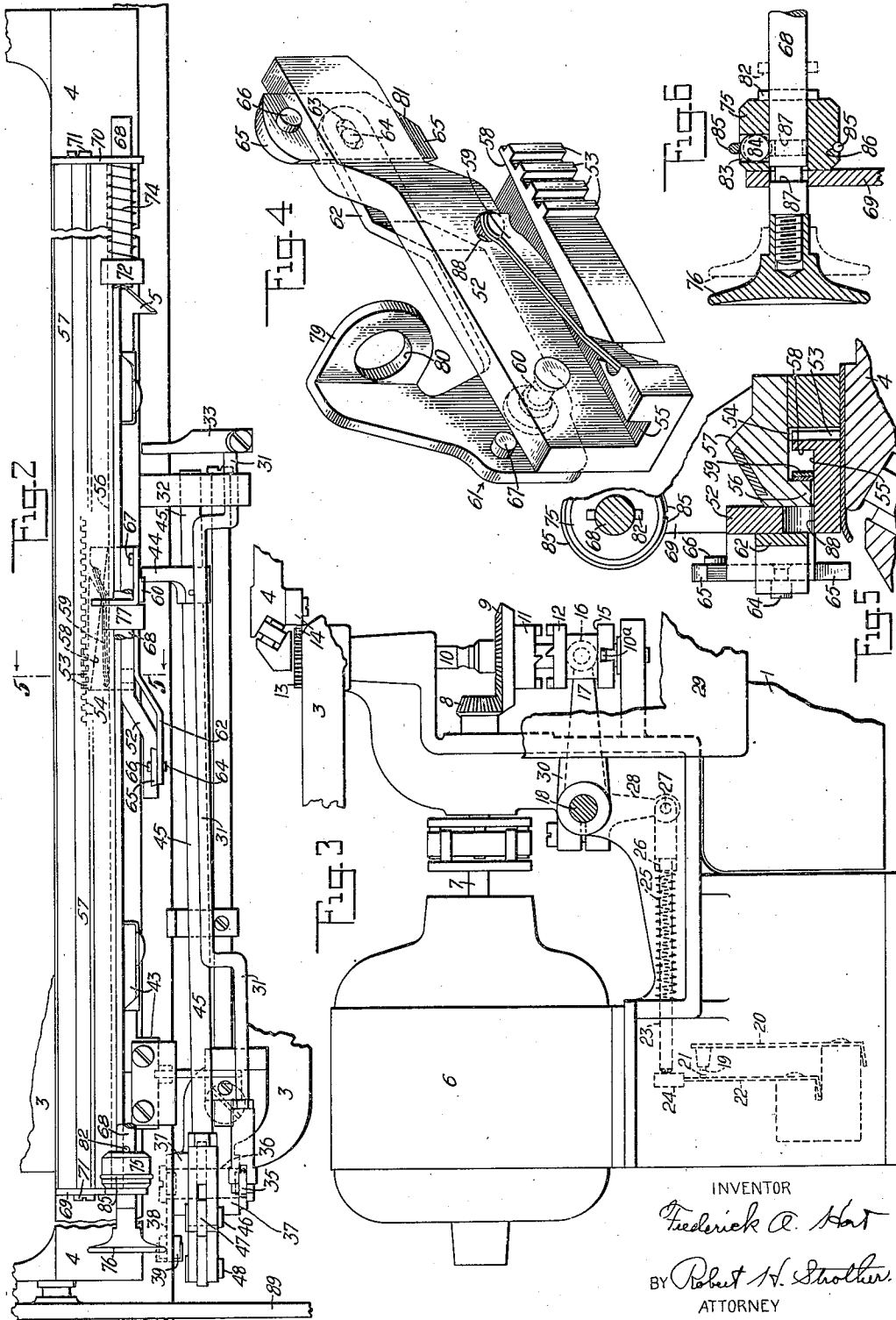
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UNITED STATES PATENT OFFICE

1,967,437

TYPEWRITING MACHINE

Frederick A. Hart, New Britain, Conn., assignor
to Remington Typewriter Company, Ilion,
N. Y., a corporation of New York

Application March 24, 1930, Serial No. 433,588

21 Claims. (Cl. 197-66)

My invention relates to typewriting and like machines and more particularly to margin stop mechanism, and also to the combination of such margin stop mechanism with carriage return mechanism.

The main object of my invention, generally stated is to provide comparatively simple and yet highly efficient means of the character indicated.

A further object of my invention is to provide means of the character specified which may be embodied in the nature of an attachment to existing machines without modifying, or materially modifying the structural features thereof. To the above and other ends which will hereinafter appear my invention consists in the features of construction arrangements of parts and combinations of devices set forth in the following description and particularly pointed out in the appended claims.

In the accompanying drawings wherein like reference characters designate corresponding parts in the different views—

Fig. 1 is a fragmentary front elevation showing a part of a typewriting machine equipped with the devices of my invention.

Fig. 2 is a detail, fragmentary, top plan view of a portion of the same.

Fig. 3 is a detail, fragmentary, side view showing the motor, its connections to the carriage, and a part of the connections for controlling the motor switch and carriage connecting clutch.

Fig. 4 is a detail perspective view of the margin stop of my invention together with its carrier and a part of its actuating or controlling connections.

Fig. 5 is a transverse sectional view of the same with some of the associated parts, the section being taken on the line 5—5 of Fig. 2 and looking in the direction of the arrows at said line.

Fig. 6 is a detail, fragmentary sectional view of a part of the margin stop controlling means, the section being taken on the line 6—6 of Fig. 1.

I have shown my invention embodied, in the present instance, in a Remington "front feed" machine equipped with an electric carriage return mechanism of the character disclosed in my Patent No. 1,567,590 dated Dec. 29, 1925, as the same is modified in details as shown in my Patent No. 1,663,374 dated March 20, 1928. From certain aspects the present invention may be regarded as improvements on said patented constructions. I have shown only so much of the machine referred to as is necessary to ar-

rive at an understanding of my present invention in its embodiment therein.

While the devices of the present invention may readily be incorporated as an attachment in the machine referred to without modifying, or materially modifying, the existing structural features thereof, it should be understood that the invention is not restricted to use in the machine mentioned, but may be employed in typewriting and like machines generally, wherever found available.

Referring to the drawings it will be understood that the frame of the machine comprises a base 1 corner posts 2 and top plate 3. The carriage designated as a whole by the reference numeral 4, supports a cylindrical platen (not shown) and is mounted to travel over the top plate 3 from side-to-side of the machine, being propelled in the direction of its feed by the usual spring drum (not shown) under control of the carriage escapement mechanism. This affords a letter-space advance of the carriage at each actuation of a printing key or the space key.

When the carriage reaches the end of a line determined by the adjustment on the carriage of the usual so-called line stop 5 the carriage return mechanism will be automatically actuated to return the carriage to the right in position to begin a new line of writing. When the carriage reaches and is arrested in such position, the carriage return mechanism is automatically thrown out of operation and the operator may proceed with the writing.

One of the purposes of my present invention is to provide simple manually controlled means that will enable the operator, when desired, to shift the carriage to the right of the position where ordinarily it is arrested by the operation of the automatically operating carriage return mechanism, in order that the operator may, at will, write beyond such ordinary or usual position of arrest, or within the left-hand margin on the work sheet.

I will first describe the usual features of construction with which the devices of my invention are combined and will then describe such devices.

Referring more particularly to Fig. 3 it will be seen that an electric motor 6 is supported on the frame of the typewriting machine, the driving shaft 7 of said motor being connected to a bevel pinion 8. Said pinion meshes with a bevel gear 9 free to turn on its shaft 10 and having one member or section 11 of a two-part clutch fixed thereto. The other member 12 of

said clutch has a splined connection at 10^a with the shaft 10, and is free to be shifted axially thereon into and out of clutching engagement with its companion clutch member 11. When the clutch sections are engaged the gear 9 will be connected to drive the shaft 10 and the parts actuated thereby. The upper end of the shaft 10 has a pinion 13 fixed thereon and said pinion meshes with a rack 14 secured to the carriage 4 and extending longitudinally thereof.

From the foregoing it will be understood that when the gear 9 is clutched to turn with the shaft 10 and the motor is running, power will be transmitted through the gearing described to return the carriage.

In order to control the opening and closing of the clutch 11—12 there is provided in the member 12 a peripheral groove 15 in which an anti-friction roller 16 is received. Said roller is carried on a crank arm 17 secured to a rock shaft 18 that extends from side-to-side of the machine in the rear thereof. It will be understood that a rocking movement of this shaft in one direction will open the clutch 11—12, whereas a rocking of the shaft in the opposite direction will close the clutch.

In addition to controlling the clutch from the shaft 18, there is also provided a switch or circuit closer for the motor that is controlled by said shaft. Thus, power is supplied to the motor through a circuit which includes a contact 19 on an arm 20 and a cooperative contact 21 on a spring arm 22. The power of the spring of the arm 22 tends to bring the contact 21 into contactive engagement with the contact 19, and when thus engaged to complete the circuit and drive the motor. However, normally the circuit closer is broken, as indicated in Fig. 3, by a sliding pin 23 engaging a block 24 of insulating material carried at the free end of the spring arm 22 and holding said arm in the disengaging position shown. A coiled spring 25 surrounds the rod 23 bearing at one end against the motor supporting frame and at the other end against an abutment 26 on the rod 23. The forward end of the rod 23 is pivoted at 27 to a crank arm 28 secured to the rock shaft 18. The power of the spring 25 is therefore exerted to move the rod 25 forward and to rock the shaft 18 in an anti-clockwise direction, as the parts appear in Fig. 3. The result of this is to close the circuit thereby energizing the motor and also to close the clutch thus effecting a return of the carriage to the right. However, such movement of the parts under the action of the spring 25 is resisted by the usual latching means (not shown) contained within a control box 29 secured to the frame of the machine, such latching means being of the character shown in my above mentioned Patent No. 1,663,374 and which for the purposes of the present invention it is unnecessary to show. However, brief reference will be made to the purpose and effect of such latching means. On the end portion of the rock shaft opposite that which carries the crank arm 17 is fixedly connected a crank arm 30 which extends through an opening in the rear side of the control box 29, and in the inside thereof coacts with the latching means above referred to to hold the shaft against movement by the spring 25 etc.

The means controlled by the travel of the carriage for controlling the devices in the control box 29 will now be described.

A rod 31 is mounted for longitudinal move-

ment in a bearing opening in a bracket 32 secured to the frame of the machine. To the right of this bracket and fixed on the rod 31 is a contact 33 that extends into the path of the line stop 5 on the carriage to be shifted thereby and cause a corresponding shifting of the rod 31 to the left. The parts are limited in this shifting movement by the contact 33 abutting the bracket 32. The left-hand end of the rod 31 is pivoted at 34 to an upstanding crank arm 35 fixed to turn with a short shaft 36 mounted to turn in a bearing 37 on the frame of the machine. The rear end of the shaft 36 has a horizontally disposed crank arm 38 connected to turn therewith. A depending rod or link 39 is connected at its upper end to the arm 38 and at its lower end is pivoted at 40 to a pin 41 that projects from the free end of a controlling lever 42 that projects out through an opening in the control box.

Operating the contact 33 by the line stop 5 results in lowering the lever arm 42 which in turn results in releasing a latch in the control box and permitting the spring 25 to close the circuit through the contacts 19 and 21 and also to close the clutch 11—12 thus returning the carriage. In the said prior constructions the return motion of the carriage to the right continued until an adjustable margin stop 43 engaged and shifted a contact 44. Said contact is carried by a rod 45 mounted at one end to slide in a bearing opening in the bracket 32. The other, or left-hand end of this rod is pivoted at 46 to the upright arm of an angular lever 47 pivoted to turn freely on the shaft 36. The other arm of this lever is pivoted at 48 to a depending rod or link 49 that has its lower end pivoted at 50 to a lever arm 51 that extends out from the inside of the control box 29 through an opening in the front thereof. This lever arm 51 is connected to the devices in the control box for resetting them and again placing them under control of their latch. This results in lowering the arm 30 which in turn rocks the shaft 18 clockwise (as seen in Fig. 3) thereby opening the circuit closer and clutch 11—12. The effect therefore is to deenergize the motor and disconnect the carriage therefrom and by this time the contact 44 has been moved into engagement with the bracket 32 and arrested the return movement of the carriage.

The mechanism thus far described is of the usual construction. By my present invention I provide auxiliary means in the nature of attachments to function in combination with the features referred to and which auxiliary means will now be pointed out.

A carrier designated as a whole by the reference numeral 52, and shown detached in Fig. 4, is constructed and mounted somewhat like the ordinary margin and line stops 43 and 5 respectively. Thus, the carrier 52 is provided with locking teeth 53 adapted to engage with the teeth of a rack bar 54 carried by the front rail of the carriage. The carrier has a cut-out or channeled portion 55 in which a depending flange 56 on the detachable top section 57 of the front carriage bar is received. The rear wall 58 of the channeled portion of the carrier is inclined or sloping to provide a narrow or contracted opening at one end of the channel in the carrier that is substantially equal to the thickness of the flange 56, whereas the width of the channel gradually increases to the other end thereof. This provides for effecting a fore

and aft rocking movement of the carrier around one end thereof on the flange 56 in order to move the teeth 53 on the carrier out of and into engagement with the rack bar 54. When the

5 carrier is engaged with the rack bar, said carrier is locked in position on the carriage. When however, the teeth 53 are disengaged from the rack bar 54 the carrier may receive a sliding
10 adjustment along the flange 56 to any desired position and then is reengaged with the rack bar to hold the carrier in its adjusted position. A double leaf spring 59 is secured at one end
15 to the carrier and bear at its free end against the rear face of the flange 56, as shown in Fig. 5. The force of this spring is therefore exerted to swing the carrier 52 rearward with a pivotal
20 movement and maintain the teeth 53 thereon in engagement with the rack bar 54. To release the carrier from the rack it is merely necessary to swing the left-hand end thereof forward. The carrier may then be adjusted to any desired position along the carriage.

Pivoted at 60 on the carrier 52, is an actuating or controlling member, designated as a whole
25 by the reference numeral 61. This member, in the present instance, is in the nature of an angular lever having its substantially horizontally disposed arm 62 slotted at 63 for the reception of a pin 64 carried by a margin stop 65.
30 Said margin stop is of dove-tail formation in cross-section and fits in a corresponding way in the carrier 52 for vertical movement thereon into and out of effective position. Such motion of the margin stop is limited in one direction by a
35 stop pin 66 on the margin stop and in the other direction by a stop pin 67 on the member 61, both of said stop pins coacting with the carrier 52.

Manually controlled means are provided on
40 the carriage which coact with the member 61 and control its shifting movement, whatever may be the position to which said member and its carrier 52 are adjusted along the carriage. Such means
45 comprise a push rod 68 that extends longitudinally in the direction of the travel of the carriage and is carried thereby. Said rod is mounted in bearing openings in bracket plates 69 and 70 secured to the ends of the carriage by
50 screws 71, the rod being located above the front cross bar of the carriage. A collar 72 is fixed on the rod 68 by a screw 73. An expansion spring 74 surrounds the rod 68 and bears at one end against the collar 72 and at its other end against the bracket plate 70. The force of the
55 spring 74 is thus exerted to shift the rod to the left to the limit of its movement where it is arrested by a member 75 on the rod abutting the bracket plate 69. The left-hand end portion of the rod 68 extends beyond the bracket plate 69 and is provided with a finger piece or key
60 76 by which the push rod may be shifted to the right against the force of the spring 74.

An actuating member, abutment or collar 77
65 is mounted on the rod 68 and is adjustable along said rod, being secured in its adjusted position by a set screw 78. This collar 77 is located to the left of and in contact with a rearwardly extending flange 79 on the upright arm of the lever 61.
70 Said flange is pierced with a hole 80 through which the rod 68 passes. It will be understood that the collar 77 will be adjusted along the rod 68 to accord with the adjustment of the carrier 52, so that said collar will be in cooperative relation with the actuating member 61 whatever

may be the position of adjustment of said carrier together with the parts carried thereby.

The parts are normally positioned as represented in Fig. 1, with the margin stop 65 lowered
80 and having a path of movement with the carriage which will cause it to coact with the contact 44 during the return of the carriage by its motor. When the margin stop 65 coacts with
85 and shifts the contact 44 to the right, the circuit closer will be opened and the clutch members 11-12 released, thus bringing about an arrest of the carriage when the contact 44 reaches the bracket 32, as previously described. If at this time the operator desires to write within the left-hand margin on the paper (which margin
90 is determined by the adjustment of the margin stop 65 along the carriage) it is merely necessary to push the rod 68 to the left with the aid of the finger piece 76. This results in rocking the lever 61 and lifting the margin stop 65 out
95 of cooperative relation with the contact 44, and to a position where in its further movement to the right with the carriage it will clear said stop 44, the bracket 32 and the contact 33. The rightward movement of the carriage is then finally
100 arrested by the usual margin stop 43 being brought into engagement with the previously shifted and arrested contact 44. The margin stop 43 thus becomes a final margin stop and its adjustment determines where writing may begin
105 within the left-hand margin on the paper.

It will be observed that the left-hand side of the margin stop 65 has a bevel or cam 81. When the said margin stop has passed to the right of the parts 44, 32 and 33, or any of them,
110 and the push rod 68 has been released to lower the stop 65 to normal position, a movement of the carriage to the left will merely result in bringing said bevel 81 in contact with said parts 44, 32 and 33 and camming the stop 65 up to a
115 position where it will clear and ride over said parts without moving any of them or interfering with the movement of the carriage. It will be seen that when the margin stop 65 is thus cammed up to ineffective position it does not
120 operate against the spring 74, but merely has the gravity of the stop and its controlling member 61 to overcome.

It is desirable to lock the push rod 68 against the force of its spring 74 in order that the margin stop 65 may be retained indefinitely in its elevated, ineffective position. I have provided simple means for attaining this result which will now be described.

The member 75 hereinbefore referred to is in the nature of a collar mounted on the rod 68 and displaceable thereon as will be understood from a consideration of Fig. 6. A pin or stop 82 on the rod limits the movement of the member 75 to the right on said rod. A transversely
130 bored opening 83 in the member 75 receives a ball 84 that constitutes a spring-pressed detent which coacts with the rod 68 to hold the member 75 in either one of two positions on the rod, as indicated in Fig. 6. A split spring ring 85 surrounds the member 75 and is seated in a circumferential groove 86 therein, thus exerting a pressure on the ball 84 which tends to force it towards the axis of the rod 68. This rod has a circumferential groove 87 therein in which the detent ball is forced by its spring when the rod 68 is shifted to the dotted-line, Fig. 6 position while the member 75 is held against such movement with the rod in the full-line Fig. 6 position by the operator. This results in locking or hold-

ing the push rod in its actuated, dotted-line position, and in holding indefinitely the margin stop 65 in its elevated ineffective position, thus rendering the auxiliary margin stop inoperative.

At this time the usual margin stop 43 will function to actuate the circuit breaker and clutch member 12. In the full-line, Fig. 6, position of the parts the detent ball 84 bears on the circumference of the rod 68 with sufficient force to hold the member 75 against the pin 82 and cause said member to be shifted right and left with the rod 68 without interfering with such movements thereof.

From an inspection of Fig. 4 it will be seen that a hole 88 is provided in the carrier 52. The purpose of this hole is to admit a screw driver or other suitable tool, so as to force the free end of the spring 59 rearward while the carrier 52 is being mounted in place with a sliding movement past an end of the flange 56.

A return of the carriage beyond its position of arrest by the auxiliary margin stop 65 may be conveniently brought about with the left hand of the operator alone, since the finger piece 76 is conveniently located near the left-hand of the carriage where it may be readily actuated with a finger of the left hand of the operator at the time when the same hand of the operator bears to the right on the usual adjacent bracket arm 89 by which the bar for the vertical totalizers is supported at one end.

From the foregoing description it will be understood that I have provided simple and effective auxiliary margin stop mechanism which may be applied in the nature of an attachment to existing machines without modifying, or materially modifying the structural features thereof; that such auxiliary margin stop mechanism may be maintained inoperative when desired; that in its operation it enables the operator at will to write within the left-hand margin on the work sheet, and that said auxiliary margin stop mechanism acts in conjunction with the carriage return mechanism to cause it to properly function when such mechanism is brought into use.

While the auxiliary margin stop mechanism coacts, as hereinbefore pointed out, with the automatically operating carriage return mechanism, it should be understood that from certain aspects of my invention this is not essential. Thus, the so-called bracket 32 may be regarded as a fixed stop with which the auxiliary stop 65 would function in the event that no automatically operating carriage return mechanism, including the part 44, is employed. In such circumstances the auxiliary margin stop mechanism would function in the manner described, except that there would be no control of the automatically operating carriage return mechanism thereby, and none would be required.

Various changes may be made in the construction, and certain features may be employed without others, without departing from my invention as it is defined in the accompanying claims.

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

1. The combination of a carriage, a margin stop adjustable in the direction of the travel of the carriage to different set positions, and means for controlling the movement of said stop into and out of effective position from any of its adjusted positions comprising a manually controlled rod that extends longitudinally in the direction of travel of the carriage, and inter-

mediate actuating connections between said rod and margin stop including a member adjustable along said rod to accord with the adjustment of said margin stop.

2. The combination of a carriage, a margin stop adjustable in the direction of the travel of the carriage to different set positions, and means for controlling the movement of said stop into and out of effective position from any of its adjusted positions comprising a spring returned rod that extends longitudinally in the direction of travel of the carriage and is shiftable manually in said direction against the force of its spring, and intermediate actuating connections between said rod and margin stop including a member adjustable along said rod to accord with the adjustment of said margin stop.

3. The combination of a carriage, a margin stop adjustable in the direction of the travel of the carriage to different set positions, and means for controlling the movement of said stop into and out of effective position from any of its adjusted positions comprising a manually controlled rod that extends longitudinally in the direction of travel of the carriage, intermediate actuating connections between said rod and margin stop including a member adjustable along said rod to accord with the adjustment of said margin stop, and means operable at will for locking said rod and maintaining indefinitely the margin stop in ineffective position.

4. The combination of a carriage, a margin stop adjustable in the direction of the travel of the carriage to different set positions, and means for controlling the movement of said stop into and out of effective position from any of its adjusted positions comprising a spring returned rod that extends longitudinally in the direction of travel of the carriage and is shiftable manually in said direction against the force of its spring, intermediate actuating connections between said rod and margin stop including a member adjustable along said rod to accord with the adjustment of said margin stop, and a detent rendered effective at will for holding said rod against the force of its spring and thereby maintaining the margin stop in ineffective position until the rod is released from control of its detent.

5. The combination of a carriage, a carrier adjustable along the carriage to different set positions, a margin stop carried by said carrier and movable thereon into and out of effective position, a controlling rod carried by the carriage, and intermediate actuating connections between said rod and margin stop for controlling the movement of the latter into and out of effective position, said connections including a member adjustable on said rod to accord with the adjustment of said carrier.

6. The combination of a carriage, a carrier adjustable along the carriage to different set positions, a margin stop carried by said carrier and movable thereon into and out of effective position, a longitudinally shiftable manually controlled controlling rod carried by the carriage, a spring which tends to force said controlling rod to the limit of its longitudinal movement in one direction, intermediate actuating connections between said rod and margin stop for controlling the movement of the latter into and out of effective position, said connections including a member adjustable on said rod to accord with the adjustment of said carrier, and a detent for holding said rod against the force

of its spring and for maintaining the said margin stop in ineffective position.

7. The combination of a carriage, a margin stop carrier adjustable to different set positions in the direction of the travel of the carriage, a margin stop carried thereby and shiftable thereon into and out of effective position, an angular lever pivoted on said carrier and cooperating with said margin stop to control its movements to and from effective position, a controlling rod shiftable longitudinally in the direction of the travel of the carriage, and a contact on said rod coacting with an arm of said angular lever to actuate it, said contact being adjustable along said rod to bring it into cooperation with said angular lever whatever may be the position of adjustment of said lever with the margin stop carrier.

8. The combination of a carriage, a margin stop carrier carried by and adjustable to different set positions along the carriage, a margin stop carried by said carrier and shiftable thereon into and out of effective position, an angular lever pivoted to said carrier and adjustable therewith, said lever coacting with the margin stop to control its shifting movement into and out of effective position, a controlling rod carried by the carriage and shiftable longitudinally thereon and having a finger piece located near one end of the carriage for shifting said rod, a spring which tends to shift said rod to the limit of its movement in one direction, and a contact on said rod coacting with said angular lever for turning it and moving the margin stop to ineffective position, said contact being adjustable along said rod to coact with the angular lever whatever may be its position of adjustment along the carriage with said carrier.

9. The combination of a carriage, a margin stop carrier carried by and adjustable to different set positions along the carriage, a margin stop carried by said carrier and shiftable thereon into and out of effective position, an angular lever pivoted to said carrier and adjustable therewith, said lever coacting with the margin stop to control its shifting movement into and out of effective position, a controlling rod carried by the carriage and shiftable longitudinally thereon and having a finger piece located near one end of the carriage for shifting said rod, a spring which tends to shift said rod to the limit of its movement in one direction, a contact on said rod coacting with said angular lever for turning it and moving the margin stop to ineffective position, said contact being adjustable along said rod to coact with the angular lever whatever may be its position of adjustment along the carriage with said carrier, and a detent that coacts with said rod to hold it shifted against the force of its spring and maintain the margin stop in effective position.

10. The combination of a carriage, a margin stop shiftable into and out of effective position and adjustable in the direction of the travel of the carriage to different set positions, and means for controlling said shifting movement of said margin stop whatever its position of adjustment including a longitudinally shiftable rod, and means for locking said shiftable rod against movement at one end of its longitudinal throw, thereby locking the margin stop in ineffective position.

11. The combination of a carriage, a margin stop shiftable into and out of effective position, and means for controlling said shifting move-

ment of said margin stop including a shiftable rod, a contact on said rod shiftable along it to and from a position where the contact is effective to hold the rod against shifting movement, and a detent carried by said contact and engageable with the rod at different points.

12. The combination of a carriage, automatically operating power actuated mechanism for returning the carriage when the end of a line is reached including a contact that is actuated to bring about a freeing of the carriage from control of said return mechanism when the carriage has been returned, a primary margin stop carried by and adjustable along the carriage and which coacts with said contact to actuate it and arrest the carriage and which is shiftable into and wholly out of cooperative relation with said contact so as to be wholly inoperative thereon, an independently adjustable final margin stop, and hand controlled means operable at will for shifting said primary margin stop wholly out of cooperative relation with said contact and enable the carriage to be moved to the right beyond any position where it is arrested by the cooperation of the primary margin stop with said contact and enable the carriage to be arrested by said final independently adjustable margin stop.

13. The combination of a carriage, automatically operating power actuated mechanism for returning the carriage when the end of a line is reached including a contact that is actuated to bring about a freeing of the carriage from control of said return mechanism when the carriage has been returned, a margin stop that coacts with said contact to actuate it and arrest the carriage and which is shiftable into and out of cooperative relation with said contact, and hand controlled means on the carriage operable at will for shifting said margin stop wholly out of cooperative relation with said contact so as to be wholly in operative thereon and enable the carriage to be moved to the right beyond any position where it is arrested by the cooperation of the margin stop with said contact, said hand controlled means including a rod mounted and shiftable longitudinally on the carriage, and means controlled by said rod for moving the margin stop wholly out of cooperative relation with said contact.

14. The combination of a carriage, automatically operating power actuated mechanism for returning the carriage when the end of a line is reached including a contact that is actuated to bring about a freeing of the carriage from control of said return mechanism when the carriage has been returned, a margin stop that coacts with said contact to actuate it and arrest the carriage and which is shiftable into and out of cooperative relation with said contact, means for adjusting said margin stop to different set positions along the carriage, hand controlled means on the carriage operable at will whatever may be the position to which said margin stop is adjusted along the carriage for shifting the margin stop wholly out of cooperative relation with said contact so as to be wholly inoperative thereon and enable the carriage to be moved to the right beyond any position where it is arrested by the cooperation of the margin stop with said contact, and a second independently adjustable final margin stop by which the carriage is arrested after the carriage passes to the right beyond the position where it is nor-

mally arrested with the aid of said first mentioned margin stop.

15. The combination of a carriage, automatically operating power actuated mechanism for
 5 returning the carriage when the end of a line is reached including a contact that is actuated to bring about a freeing of the carriage from control of said return mechanism when the carriage has been returned, a margin stop that co-acts with said contact to actuate it and arrest
 10 the carriage and which is shiftable into and out of cooperative relation with said contact, means for adjusting said margin stop to different set positions along the carriage, and hand controlled means on the carriage operable at will what-
 15 ever may be the position to which said margin stop is adjusted along the carriage for shifting the margin stop out of cooperative relation with said contact and enable the carriage to be moved
 20 to the right beyond the position where it is arrested by the cooperation of the margin stop with said contact, said hand controlled means comprising a hand actuated spring returned push rod mounted for movement on the carriage, an
 25 actuating member coacting with the margin stop to shift it and adjustable therewith, and an abutment carried by and adjustable along said push rod and coacting with said actuating member, the adjustment of said abutment being
 30 effected to accord with the adjustment of said actuating member with the margin stop.

16. The combination of a carriage, automatically operating power actuated mechanism for
 35 returning the carriage when the end of a line is reached including a contact that is actuated to bring about a freeing of the carriage from control of said return mechanism when the carriage has been returned, a margin stop that co-acts with said contact to actuate it and arrest
 40 the carriage and which is shiftable into and wholly out of cooperative relation with said contact so as to be wholly inoperative thereon, means for adjusting said margin stop to different
 45 set positions along the carriage, hand controlled means on the carriage operable at will whatever may be the position to which said margin stop is adjusted along the carriage for shifting the margin stop out of cooperative relation
 50 with said contact and enable the carriage to be moved to the right beyond any position where it is arrested by the cooperation of the margin stop with said contact, and means for holding indefinitely said hand controlled means in actuated position and thus maintain indefinitely the margin stop out of cooperative relation
 55 with said contact.

17. The combination of a carriage, automatically operating power actuated mechanism for
 60 returning the carriage when the end of a line is reached including a contact that is actuated to bring about a freeing of the carriage from control of said return mechanism when the carriage has been returned, a margin stop that co-acts with said contact to actuate it and arrest
 65 the carriage and which is shiftable into and out of cooperative relation with said contact, means for adjusting said margin stop to different set positions along the carriage, hand controlled means on the carriage operable at will whatever may be the position to which said
 70 margin stop is adjusted along the carriage for shifting the margin stop out of cooperative relation with said contact and enable the carriage to be moved to the right beyond the position
 75 where it is arrested by the cooperation of the

margin stop with said contact, said hand controlled means comprising a hand actuated spring returned push rod mounted for movement on the carriage, an actuating member coacting with the margin stop to shift it and adjustable therewith, and an abutment carried by and adjustable along said push rod and coacting with said
 80 actuating member, the adjustment of said abutment being effected to accord with the adjustment of said actuating member with the margin stop, and a detent device on said push rod and shiftable to different positions along it for holding at will the push rod in actuated position and thereby maintaining the margin stop out of cooperative relation with said contact.
 85

18. The combination of a carriage, mechanism for returning the carriage including an electric motor, a switch for controlling the power that drives said motor, a clutch that connects the motor to the carriage, and margin stop mechanism for automatically actuating said switch and clutch to silence the motor and release the clutch when the carriage has been returned, said margin stop mechanism including a shiftable contact for controlling said switch and clutch and for arresting the carriage, a cooperative margin stop shiftable into and out of cooperative relation with said contact and mounted for adjustment in the direction of the travel of the carriage, and means for shifting
 90 said margin stop into and out of cooperative relation with said trip whatever may be the position of adjustment of said margin stop comprising a manually controlled longitudinally shiftable rod extending in the direction of the length of the carriage, an actuating member cooperative and adjustable with the margin stop, and an abutment adjustable along said rod and cooperative with said actuating member.
 95

19. The combination of a carriage, mechanism
 115 for returning the carriage including an electric motor, a switch for controlling the power that drives said motor, a clutch that connects the motor to the carriage, and margin stop mechanism for automatically actuating said switch and clutch to silence the motor and release the clutch when the carriage has been returned, said margin stop mechanism including a shiftable contact for controlling said switch and clutch and for arresting the carriage, a cooperative margin stop shiftable into and out of cooperative relation with said contact and mounted for adjustment in the direction of the travel of the carriage, and means for shifting
 120 said margin stop into and out of cooperative relation with said trip whatever may be the position of adjustment of said margin stop comprising a manually controlled longitudinally shiftable rod extending in the direction of the length of the carriage, an actuating member cooperative and adjustable with the margin stop, and an abutment adjustable along said rod and cooperative with said actuating member, and manually controlled means operable at will to hold said rod in its shifted position and thereby
 125 maintain said margin stop out of cooperative relation with said contact.
 130

20. The combination of a carriage, automatically operating power actuated mechanism for
 145 returning the carriage when the end of a line is reached, said automatically operating carriage returning mechanism including a contact which is shiftable with the carriage in the direction of its travel to bring about a freeing of the carriage from control of said returning mechanism
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when the carriage has been returned, a margin stopping means that coacts with said contact to shift it as above indicated and to arrest the carriage at the termination of such shifting movement, said margin stopping means being shift-
5 able as a whole into and out of cooperative relation with said contact, hand controlled means operable at will for shifting said margin stopping means as a whole out of cooperative
10 relation with said contact, so as to be wholly inoperative thereon and enable the carriage to be moved to the right beyond any position where it is arrested by the cooperation of the margin
15 stopping means with said contact, and means operable at will for locking and holding indefinitely said hand controlled means in the actuated position and thereby maintaining indefinitely the margin stopping means as a whole out
20 of cooperative relation with said contact. 21. The combination of a carriage, automatically operating power actuated mechanism for returning the carriage when the end of a line is reached, said automatically operating carriage
25 returning mechanism including a contact which is shiftable with the carriage in the direction of its travel to bring about a freeing of the carriage from control of said returning mechanism when the carriage has been returned, a margin
30 stopping means that coacts with said contact to shift it as above indicated and to arrest the carriage at the termination of such shifting movement, said margin stopping means being
35 shiftable as a whole into and out of cooperative relation with said contact and being adjustable to different set positions in the direction of the travel of the carriage to determine the point
40 in such travel where the contact shall be operated and the normal position of arrest of the carriage, and hand controlled means operable at will for shifting said margin stopping means as
45 a whole out of cooperative relation with said contact so as to be wholly inoperative thereon and enable the carriage to be moved to the right beyond any position where it is arrested
50 by the cooperation of the margin stopping means with said contact. 100
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