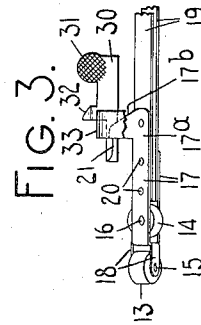
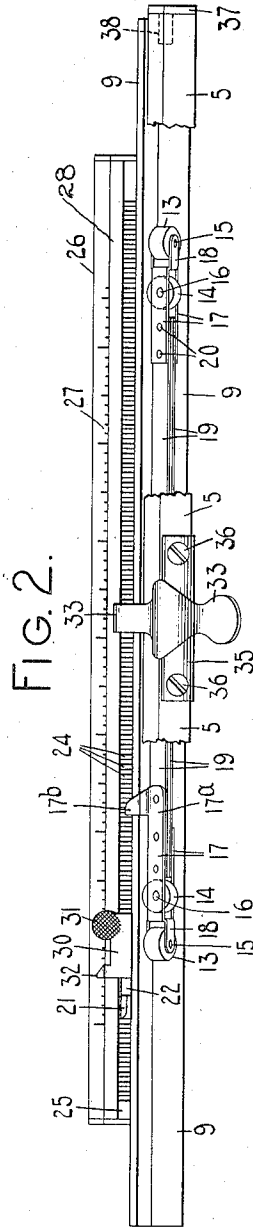
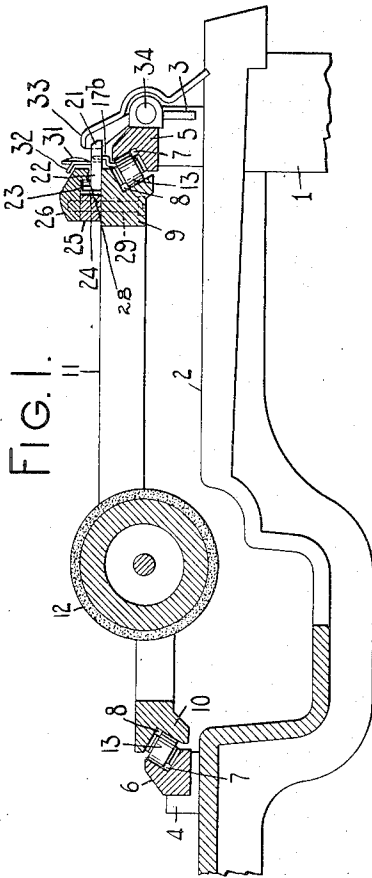


W. J. BARRON.  
TYPE WRITING MACHINE.  
APPLICATION FILED AUG. 10, 1910.

1,003,580.

Patented Sept. 19, 1911.



WITNESSES:

*E. M. Wells*  
*M. W. Pool*

INVENTOR:

*Walter J. Barron*  
*By Jacob Felbel*  
HIS ATTORNEY

# UNITED STATES PATENT OFFICE.

WALTER J. BARRON, OF NEW YORK, N. Y., ASSIGNOR TO REMINGTON TYPEWRITER COMPANY, OF ILION, NEW YORK, A CORPORATION OF NEW YORK.

## TYPE-WRITING MACHINE.

1,003,580.

Specification of Letters Patent. Patented Sept. 19, 1911.

Application filed August 10, 1910. Serial No. 576,521.

*To all whom it may concern:*

Be it known that I, WALTER J. BARRON, a citizen of the United States, and resident of the borough of Brooklyn, city of New York, in the county of Kings and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates especially to bearings for the carriages of typewriting machines and its object is to provide improved governing or controlling devices for the anti-friction rollers of carriage bearings.

More specifically the object of my invention is to provide for controlling the roller carrier or separator from the margin regulating devices so as to prevent objectionable "creeping" or disarrangement between the carriage and its bearings due to jarring, inertia of the roller carrier, or other causes.

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

One form of my invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a fragmentary vertical front-to-rear sectional view of the upper part of a No. 10 Remington typewriting machine embodying my invention, only so much of the machine being shown as is necessary to a clear understanding of said invention. Fig. 2 is a fragmentary front elevation of the carriage and the front stationary bearing rail. Fig. 3 is a fragmentary front view showing the roller carrier, the left-hand margin stop and the co-acting frame stop.

My invention is shown as applied to a No. 10 Remington typewriter but the nature of the invention is such that it may readily be adapted to other styles of writing machines.

The main frame of the machine comprises posts 1 which support a top plate 2 from which rise lugs or projections 3 and 4 supporting respectively front and rear fixed tracks or rails 5 and 6. Said rails are provided at their inner faces with oppositely disposed V-grooves 7 which face corresponding V-grooves 8 formed in the front

and rear rails 9 and 10 of a traveling carriage, which carriage further comprises end bars 11 and provides a support for a roller platen 12. Each pair of grooves 7 and 8 form an opening which is substantially rectangular in cross section and said opening receives two pairs of anti-friction rollers 13 and 14, said rollers being in the present instance pivoted rolls or wheels, although of course other forms of rollers may be employed. The pivots 15 and 16 of each pair of rollers are substantially at right angles to each other and take bearings in a support formed preferably of sheet metal and comprising pairs of parallel oppositely bent arms 17 and 18, the planes of said pairs of arms being substantially at right angles to each other. The longer arms 11 of each support embrace one end of a pair of parallel strips or bars 19 and are secured thereto by rivets 20. From Fig. 2 it will be seen that a pair of crossed anti-friction rollers 13 and 14 are secured at each end of the front pair of bars 19, the pair of bars 19 and the two roller supports at each end thereof constituting a roller holder or separator for maintaining the set of four rollers in fixed relationship to each other.

The separator and roller bearings above described are those at the front of the carriage, but it will be understood that the roller bearings at the rear may be similarly arranged and supported.

The forward arm 17 of the front left-hand roller support is extended rightward as indicated at 17<sup>a</sup> and terminates in an upstanding projection or finger 17<sup>b</sup> which, as shown clearly in Fig. 1, projects upward between the rails 5 and 9 and is slightly offset forward, so that the upper end portion, which is the working portion, is separated from the face of the front carriage rail 9 above the groove 8 therein. The extension 17<sup>b</sup> projects also above the top face of said rail 9. As shown in Figs. 2 and 3 the left-hand face of the extension 17<sup>b</sup> is vertical while the opposite face is inclined. The vertical face constitutes a stop face for cooperation with the forwardly projecting portion 21 of the left-hand margin stop. This margin stop is or may be of the construction

shown in the patent to Berry No. 956,672 granted May 3, 1910. It comprises a plate-like body 22 from which the stop proper 21 projects forward at right angles. The plate 22 has at its rear an upward extension or lip 23 and is formed on its rear face with a tooth which is maintained in spring-pressed engagement with rack teeth 24 cut a letter space distance apart in the front face of a rack bar 25 which is arranged on top of the carriage rail 9 and extends longitudinally thereof. Overlying the rack bar is a cover plate 26 which has a forwardly inclined face provided with a scale 27 and is provided with a downwardly extending lip 28 which coöperates with the lip 23 to prevent accidental displacement of the margin stop. The rack bar 25 and the cover plate 26 are secured to the rail 9 by upwardly extending screws 29.

Fixed to the plate-like body 22 of the margin stop in front of the cover bar or plate is a plate 30 which is provided with a finger piece 31 and a pointer 32, said pointer coöperating with the scale 27. The construction is such that when the finger piece 31 is pressed in, the margin stop is released from the rack teeth 24 and may be slipped along lengthwise of the carriage and adjusted in any desired position, the scale 27 and coöperating pointer facilitating such adjustment. It will be seen from Fig. 1 that the path of movement of the projection 17<sup>b</sup> on the front roller-separator and the path of movement of the margin stop proper 21 intersect. The stop 21 is adapted to limit the return or right-hand movements of the carriage by coöperation with a frame stop 33 pivoted at 34 to a bracket 35 secured by screws 36 to the fixed rail 5.

Secured at the right-hand end of the fixed rail 5 is a plate 37 which closes the groove 7. Integral with said plate is a stop pin 38 which projects leftward into the groove 7 and is adapted to co-act with the right-hand roller 13.

As is well understood, the carriage during its excursions to the left and right across the top plate travels twice as fast as the rollers in the roller carrier. Unless the roller carrier is positively connected with the carriage by a rack and pinion connection or in some other way, the roller carrier is likely to become displaced with respect to the carriage, or "creep" as it is called, and though the displacement during a single excursion of the carriage is insignificant, yet the cumulative effect of a number of excursions may be considerable so that in the end after a series of back and forth movements or excursions of the carriage it may be necessary to apply considerable power thereto in order to drag the roller carrier bodily back to the proper position with respect to the carriage. My present invention provides for prevent-

ing this objectionable displacement, and this without the use of elaborate connections between the roller carrier and the carriage, such connections being dispensed with and the margin stop or the traveling stop on the carriage coöperating with the roller carrier to maintain it in proper relationship with said carriage.

Let it be assumed that the left-hand margin stop is adjusted lengthwise of the carriage to the position shown in Fig. 2 and that when the carriage is in position for beginning a new line with the margin stop 21 in contact with the frame stop 33, then the vertical face or projection 17<sup>b</sup> is in the fore and aft plane containing the line of contact between 21 and 33. Further, let it be assumed that the carriage has been fed or advanced leftward to the position shown in Fig. 2. The roller carrier travels at half the rate of the carriage and should be in the position shown in said Fig. 2. If, now, the carriage be returned toward the right, it will be apparent that if the roller carrier or separator has become displaced toward the left with respect to the carriage during the leftward movement thereof, the stop 21 which travels twice as fast as the roller carrier will overtake the projection 17<sup>b</sup> before said stop reaches the stop 33 and is arrested thereby; and that said stop 21 will pick up the roller carrier and move it rightward a distance corresponding to the amount of the leftward "creeping" or displacement. The result will be that when the carriage is arrested by the engagement of the stop 21 with the frame stop 33 the roller carrier will be in proper position with respect to the carriage before beginning the new line of writing, as shown in Fig. 3. Since the amount of displacement of the roller carrier with respect to the carriage during any single leftward movement of said carrier can be but comparatively slight, it will be apparent that the corrective action of the margin stop 21, acting through the projection 17<sup>b</sup>, will also be slight and will scarcely be felt by the operator, not requiring any appreciable excess of power to be applied in returning the carriage over the usual amount of power so applied.

The pin 38 constitutes a stop which is adapted to coöperate with the right-hand roller 13 to prevent "creeping" or displacement of the roller carrier toward the right-hand.

I am aware that it is not new, broadly stated, to provide a device or pin on the traveling carriage to coöperate with the roller bearing. Such devices, however, as heretofore constructed, have not been adjustable and have not borne any special relationship to the adjustable means, such as the margin stop herein, for limiting the travel of the carriage. In the present con-

struction no matter how the point of arrest of the carriage may be varied, the roller carrier or roller if displaced improperly is adapted to be picked up or connected to the carriage just prior to the arrest of the latter.

Various changes may be made without departing from my invention.

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

1. In a typewriting machine, the combination of a traveling carriage, devices providing bearings for said carriage including a roller, said roller being disconnected from said carriage during movements of the same in one direction, and means adapted to cause engagement of said roller with said carriage during movement of said carriage in the opposite direction, said means also assisting independently of said roller to positively limit the extent of movement of the carriage.

2. In a typewriting machine, the combination of a traveling carriage, devices for variably arresting said carriage on its return to begin a new line of writing, devices providing bearings for said carriage including a roller, a roller carrier, and means adapted to cause engagement of said carrier with said carriage during the movement of said carriage and just prior to the arrest of said carriage, said carrier at other times during the movement of said carriage being disconnected from said carriage, said means being variable to correspond in the variation of the setting of said devices.

3. In a typewriting machine, the combination of a carriage, devices for variably arresting the same during its travel in one direction, a roller carrier, and a device on said carriage for causing engagement of the same with said roller carrier at a point immediately in advance of that point at which the arrest of said carriage takes place during its movement in one direction, the relationship between said points being always the same whatever be the point at which the arrest of the carriage takes place, said device being separated from said carrier during movements of the carriage in the opposite direction.

4. In a typewriting machine, the combination of a traveling carriage, margin stops, a roller carrier, and means connected to one of said margin stops to pick up said roller carrier during the travel of the carriage.

5. In a typewriting machine, the combination of a traveling carriage, margin stops, a roller carrier, and means connected to one of said margin stops to pick up said roller carrier during the travel of the carriage, the point at which the roller carrier is picked up being unvarying with respect to the point at which the carriage is positively arrested by the engagement of said margin stops.

6. In a typewriting machine, the combination of a traveling carriage, a carriage stop thereon, a roller carrier, and a device connected to said carriage stop for controlling said carrier.

7. In a typewriting machine, the combination of a traveling carriage, a stop carried thereby and adjustable lengthwise of said carriage, and a roller carrier controllable by said adjustable stop.

8. In a typewriting machine, the combination of a traveling carriage, a margin stop thereon, a frame stop co-active with said margin stop, and a roller carried controllable by said margin stop.

9. In a typewriting machine, the combination of a traveling carriage, a margin stop mounted on said carriage and adjustable lengthwise thereof, a frame stop co-active with said margin stop, and a roller carrier having a projection in the path of movement of said margin stop.

10. In a typewriting machine, the combination of a traveling carriage, rollers, a roller carrier, a device on said carriage engageable with and assisting to control said carrier, and a fixed device also assisting to control said carrier, said devices being adapted to co-act independently of said roller carrier to control said carriage.

11. In a typewriting machine, the combination of a traveling carriage, a plurality of roller bearings, a separator for controlling said roller bearings, and a margin stop on the carriage co-active with said separator during movements of the carriage.

12. In a typewriting machine, the combination of a traveling carriage, a plurality of roller bearings, a separator on which said roller bearings are mounted, a projection on said separator, and a margin stop on the carriage adapted to co-act with said projection during movements of the carriage.

13. In a typewriting machine, the combination of a traveling carriage comprising oppositely grooved rails, fixed grooved rails on the machine frame, rollers coöperating with the grooves in the carriage rails and in the fixed rails, a separator or carrier supporting certain of said rollers, a traveling stop, a frame stop coöperative therewith to arrest the carriage, and a device on said carrier or separator in the path of said traveling stop.

14. In a typewriting machine, the combination of a traveling carriage comprising oppositely grooved rails, fixed grooved rails on the machine frame, rollers coöperating with the grooves in the carriage rails and in the fixed rails, a separator or carrier supporting certain of said rollers, a margin stop adjustable on said carriage, a frame stop co-active therewith, and a projection on said separator in the path of said margin stop.

15. In a typewriting machine, the com-

70

75

80

85

90

95

100

105

110

115

120

125

130

5 bination of a traveling carriage comprising oppositely grooved rails, fixed grooved rails on the machine frame, rollers cooperating with the grooves in the carriage rails and in the fixed rails, a separator or carrier supporting certain of said rollers, a traveling stop, a frame stop cooperative therewith, a device on said carrier or separator in the path of said traveling stop,  
10 and a fixed stop operative to limit the move-

ment of said separator and the rollers mounted thereon in one direction.

Signed at Hingham in the county of Plymouth and State of Massachusetts, this 8th day of August, A. D. 1910.

WALTER J. BARRON.

Witnesses:

CARRIE V. WHITE,  
HOWARD P. HERSEY.