L. G. CASANOVA.

TYPEWRITING MACHINE.

APPLICATION FILED DEC. 30, 1919.

1,362,079.

Patented Dec. 14, 1920.

2 SHEETS—SHEET 1.

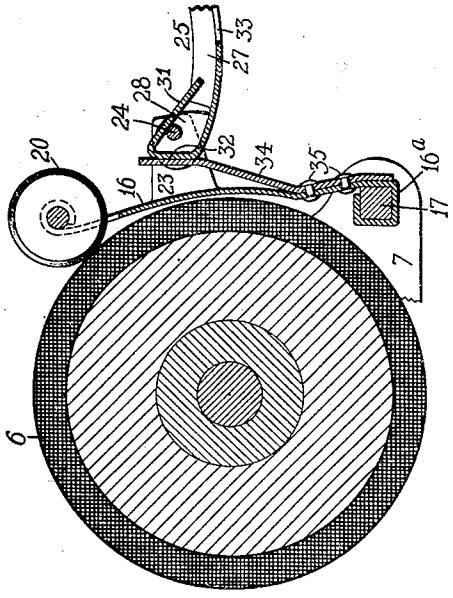


Fig. 2

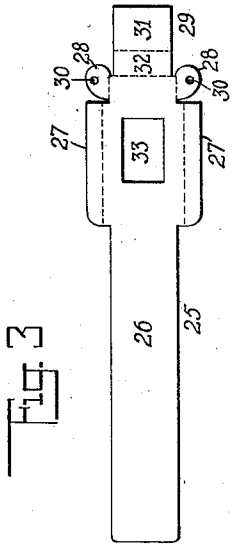


Fig. 3

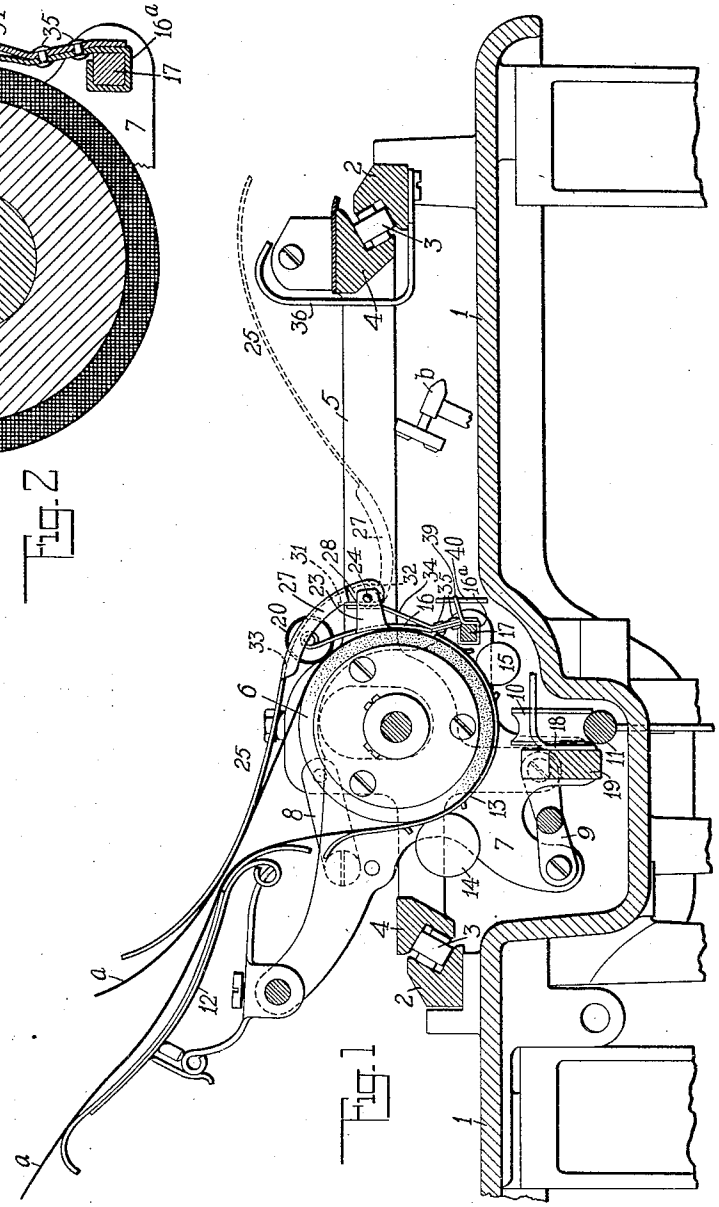


Fig. 1

WITNESSES

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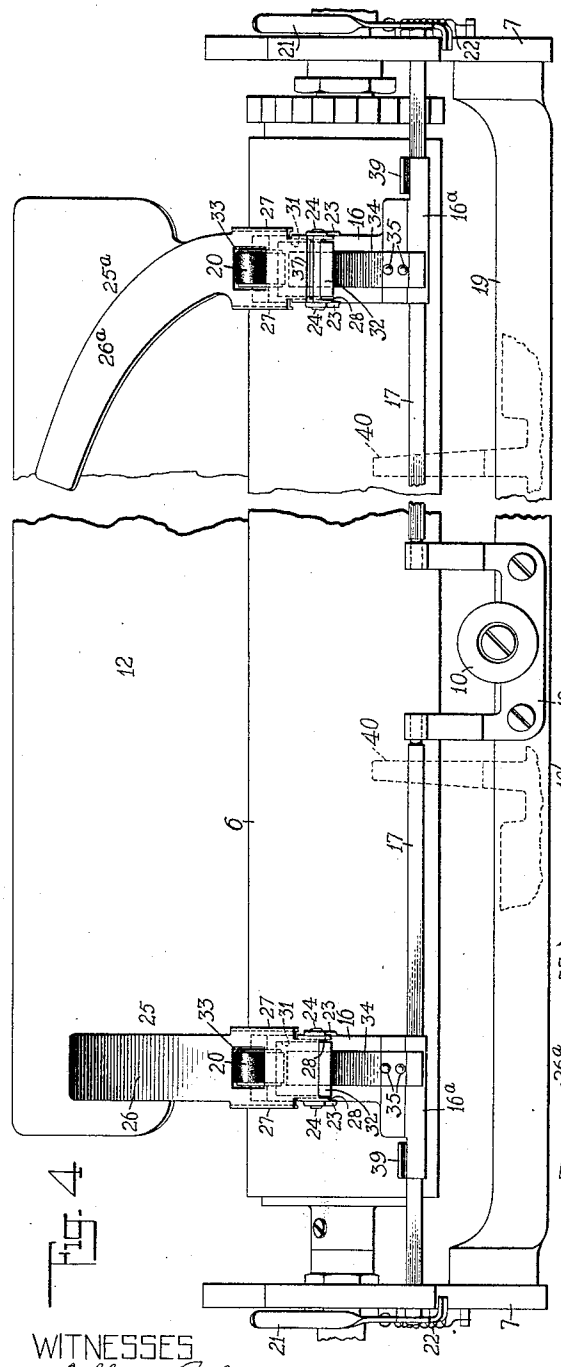


Fig. 4

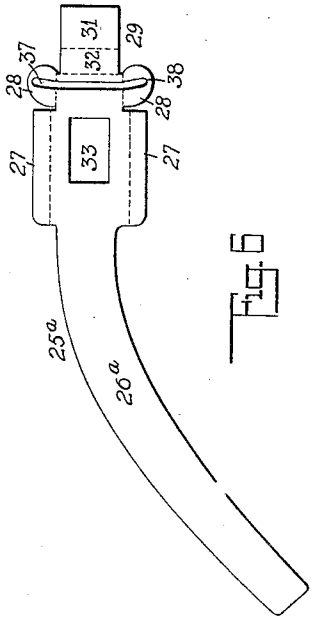


Fig. 6

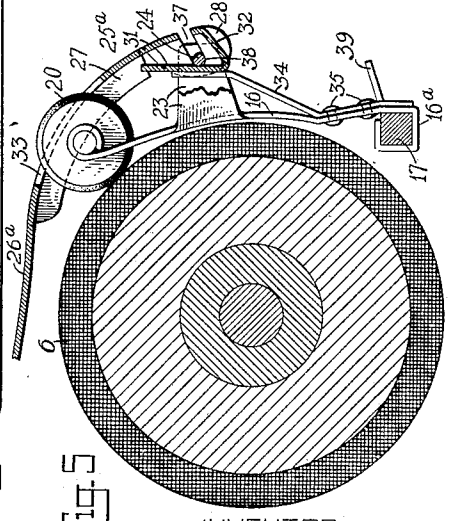


Fig. 5

WITNESSES

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UNITED STATES PATENT OFFICE.

LUIS GARCIA CASANOVA, OF CAGUAS, PORTO RICO, ASSIGNOR TO REMINGTON TYPEWRITER COMPANY, OF ILION, NEW YORK, A CORPORATION OF NEW YORK.

TYPEWRITING-MACHINE.

1,362,079. Specification of Letters Patent. Patented Dec. 14, 1920.

Application filed December 30, 1919. Serial No. 348,440.

To all whom it may concern:

Be it known that I, LUIS GARCIA CASANOVA, citizen of the United States, and resident of Caguas, in the State of Guayama, Porto Rico, United States, have invented certain new and useful Improvements in Typewriting-Machines, of which the following is a specification.

My invention relates to typewriting machines and more particularly to paper controlling devices.

Heretofore operators have experienced trouble at times in maintaining free end portions of work sheets in the machine out of the path of the printing instrumentalities, or from falling forward and obscuring the scales or covering the printing line. This is true when thin paper is employed, and especially when there is a current of air in the room, due to a natural breeze or to the use of a fan. In such cases those portions of the paper above the platen, and out of control of the usual paper guiding devices, frequently drop, or are blown, forward and downward so as to cover the printing line, requiring the operator then to stop and replace the paper before proceeding with the writing.

One of the main objects of my invention, generally stated, is to overcome these difficulties by providing simple and efficient means operative on the free end portions of the work sheet or sheets to guide, control and restrain them and prevent them from falling or being blown about in the machine and interfering with its proper operation.

A further object of my invention is to provide means of the character specified in the nature of attachments that may be applied to existing machines without modifying, or materially modifying, the structural features of said machines as they now exist.

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 indicate corresponding parts in the various views,

Figure 1 is a detail fragmentary fore and aft vertical sectional view of one form of typewriting machine shown equipped with devices of my invention.

Fig. 2 is an enlarged detail fragmentary sectional view showing a portion of one of the paper holding or guiding devices of my invention applied to a paper guide and shown in its inoperative position.

Fig. 3 is a detail plan view of the blank from which a holding device is formed.

Fig. 4 is a front view of the platen frame and parts carried thereby, showing the left-hand paper guide equipped with a holding device such as is shown in Figs. 1, 2 and 3, and showing the right-hand guide equipped with a modified form of holding device.

Fig. 5 is an enlarged detail fragmentary sectional view showing the modified form of holding device in operative position.

Fig. 6 is a plan view of the blank from which a holding device of the modified form of construction is made.

I have shown my invention embodied in the present instance in a No. 10 Remington machine in which the auxiliary paper holding device of my invention may be readily incorporated without modifying, or materially modifying, the structural features of said machine as they now exist.

The top plate 1 of the machine supports guide rails 2 oppositely grooved to receive anti-friction rollers 3 which are likewise received in oppositely grooved guide rails 4 of the carriage or truck 5, to support the latter in its travel over the top plate from side to side of the machine. A platen 6 is carried by a platen frame 7, connected by parallel links 8 and 9 to the truck for case shifting movement thereon, the platen frame being supported by its roller 10 on a shift rail 11 in the usual manner.

The paper table 12 is carried by the platen frame, a work sheet *a* passing from the paper table to a paper apron 13, feed rollers 14 and 15 and paper fingers 16. Each paper finger extends upwardly across the printing line from a rock shaft 17 on which it is supported. Each shaft is mounted at its outer end in a bearing in the platen frame and at its inner end in a bearing in a bracket plate 18 secured to a cross bar 19 of the platen frame. As shown each shaft 17 is angular in cross section to receive a correspondingly shaped sleeve 16^a of a paper finger, so that each finger and the

margin feed roller 20 carried thereby are supported on their shaft to turn therewith and to receive an adjustment along the same. The outer end of each shaft carries a finger piece 21 connected to a spring 22 by which the associate paper finger is normally held in operative position with its margin feed roller bearing against the platen or the paper thereon.

The parts as thus far described constitute a portion of the usual equipment of Nos. 10 and 11 Remington machines and while the attachments of my present invention may be readily combined therewith it should be understood that they may be employed in other combinations and arrangements and are not restricted to embodiment in a structure of the character shown.

In the present instance I provide each of the paper fingers 16 with a pair of supporting ears 23 that are connected together by and support a pivot pin 24. Each so-called auxiliary paper controlling, guiding or holding device, arm or attachment is designated as a whole by the reference numeral 25. From an inspection of Fig. 3, which shows a blank from which one of these devices is formed, it will be seen that the main body portion 26 of the device is in the nature of a paper finger or arm formed on each side with a flange 27 and a supporting ear 28, a tongue 29 extending endwise from the portion 26 and beyond the ears 28. Each blank is preferably struck up as shown with the flanges 27 extending in planes at substantially right-angles to the body portion of the device to form stiffening or strengthening flanges. The ears 28 are bent up in a like manner, and are adapted to be received between the supporting ears 23 on the associate paper finger, and to receive a pivot pin 24 in openings 30 therein. The tongue 29 on each device is bent in between ears 28 thereof to form two flat contact or engaging faces 31 and 32 extending in planes at angles to each other. Each device may be curved as shown in Fig. 1, and is apertured at 33 to receive the associate margin feed roller 20 when the device is in the operative position shown in full lines in this figure. A detent 34, which in the present instance is in the nature of a leaf spring, is riveted at 35 to each paper finger and the free end flat bearing portion thereof is adapted to bear against either of the contact faces 31 or 32 of the companion device 25, depending on whether said device is in the operative position shown in full lines in Fig. 1, or is in the inoperative position shown in dotted lines in said figure. It will be seen that when a device 25 is in the operative position it is held by its detent over and adjacent to but free from contact with the paper table. When the device is in the inoperative position it is held by its detent where it is out of the way and cannot, in its travel with the carriage, engage the usual fixed carriage pointer 36 or be interfered with by any part of the machine which would obstruct the movement of the carriage.

Referring to the modified form of construction shown at the right-hand side of Fig. 4 and in Figs. 5 and 6, it will be seen that the guiding portion 26^a of each device 25^a curves inwardly toward the fore and aft vertical median plane of the carriage to coact with the work sheet throughout a greater breadth thereof than the device 25, and therefore more effectively hold the sheet and prevent it from being blown forward. In this modified form of construction I so construct the parts that each device may be detachably mounted on its paper finger, and may be readily attached thereto or detached therefrom at will. Any suitable means may be employed for this purpose. In the present instance each device 25 is formed with a bearing slot 37 which extends into the ears 28 and through the intervening body portion of the device. In mounting a device in position the detent spring is held to one side out of the way while the device is introduced into position with its pivot pin 24 seated in the slot 37 against the bottom walls 38 thereof. The spring detent may then be released and it will tend to hold the device seated on its pivot, and in either the operative or inoperative position to which it may be turned on its pivot.

It will be understood that by carrying the auxiliary controlling devices on the paper fingers in the manner shown and described said devices are shifted with the platen and platen frame in the case shifting movements thereof, and are maintained in constant fixed relation to the platen during such case shifting movements and during the travel of the carriage, and in no manner interfere with such movements of the platen but may always be in position to properly coact with the work sheet or sheets carried thereby.

It will be seen, moreover, that the auxiliary devices extend from in front of the platen rearwardly over the latter and over the paper table and adjacent thereto, where they act not only on the forward free end portion of the work sheet which extends beyond the printing line and platen but also on the rear free end portion of the work sheet, which has not reached the platen, and prevent both such end portions from being blown forward into the path of the type bars b or to a point where the printing line is covered.

The devices of the present invention as shown are auxiliary or an addition to the ordinary paper controlling devices includ-

ing the paper finger 16, and act on portions of the work sheet which for the time being are out of control of said ordinary controlling devices, and at such times are effective to prevent the portions in question of the sheet from being blown out of or away from the proper course they should take in the machine.

In the Nos. 10 and 11 Remington machines each paper finger sleeve 16^a is provided with a forwardly extending stop finger 39, which is adapted to coact with a stop finger 40 carried by a fixed portion of the machine. The purpose of these stops 39 and 40 is to prevent the paper guide 16 from being brought into the path of the type bars b should the operator forget to set the margin and line lock stops according to the adjustment of the paper guides. It will be seen that these stops not only are effective to perform their usual functions but they also prevent the auxiliary guides from being brought into the path of the type bars b when, for example, such auxiliary guides are maintained in the inoperative position shown in dotted lines in Fig. 1.

By carrying the auxiliary controlling devices in the manner shown and described, they are rendered adjustable longitudinally of the platen with the paper fingers and therefore enabled properly to act on the work sheets irrespective of the width of the sheet employed and the adjustment of the paper fingers. The auxiliary devices may be turned to the inoperative position independently of and without interfering with the paper fingers or guides 16 to perform their usual functions. Furthermore, the auxiliary devices do not obscure the operator's view of the matter written on the sheet, while nevertheless overlapping the sheet to prevent it from being blown forward, this being more especially true of the first described device.

Various changes may be made without departing from my invention and certain features thereof may be employed without others.

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

1. In a typewriting machine, the combination of a paper guide that crosses the printing line, and an auxiliary paper holding device carried by and extending beyond the limits of said guide and operative on the paper after it leaves the guide to prevent the paper from falling or being blown forward toward the operator.

2. In a typewriting machine, the combination of a platen, a paper guide coöperative with and adjustable longitudinally of the platen, and an auxiliary paper holding device carried by and adjustable with said guide and operative on the paper after it leaves the guide to prevent the paper from falling or being blown forward toward the operator.

3. In a typewriting machine, the combination of a paper guide, and an auxiliary paper holding device carried by and pivoted to said guide and movable thereon into and out of operative position and operative on the paper after it leaves said guide to prevent the paper from falling or being blown forward toward the operator.

4. In a typewriting machine, the combination of a paper guide, an auxiliary paper holding device carried by and pivoted to said guide and movable thereon into and out of operative position and operative on the paper after it leaves said guide to prevent the paper from falling or being blown forward toward the operator, and means for retaining the holding device indefinitely in either of the said positions to which it may be moved.

5. In a typewriting machine, the combination of a paper guide that crosses the printing line, an auxiliary paper holding device carried by and extending beyond the limits of said guide and operative on the paper after it leaves the guide to prevent the paper from falling or being blown forward toward the operator, and means which enable said auxiliary paper holding device to be moved into and out of operative position independently of said paper guide.

6. In a typewriting machine, the combination of a platen, a paper table in the rear of the platen, a paper guiding arm which extends from a point in front of the platen rearward over the same to a point adjacent to the paper table and behind or under which the paper is guided after it leaves the platen, thereby preventing the paper from falling or being blown forward toward the operator, means which afford an adjustment of said guiding arm longitudinally of the platen, and means which enable said paper guiding arm to be moved into and out of operative position and to be retained indefinitely in either of said positions.

7. In a typewriting machine, the combination of a platen frame mounted for case shifting movement, a platen carried thereby, a paper table carried by said frame in the rear of the platen, a paper guiding arm carried by said frame and shifting therewith and extending rearward over the platen to a point adjacent to the paper table and behind or under which the paper is guided after it leaves the platen, thereby preventing the paper from falling or being blown forward toward the operator, means which afford an adjustment of said arm longitudinally of the platen, and means which enable said paper guiding arm to be moved into and out of operative position and to be retained indefinitely in either of said positions.

8. In a typewriting machine, the combina-

tion of a paper guide that crosses the printing line, an auxiliary paper holding device carried by and extending beyond the limits of said guide and operative on the paper after it leaves the guide to prevent the paper from falling or being blown forward toward the operator, and means for preventing said paper guide and auxiliary holding device from being brought into the path of the printing instrumentalities.

9. In a typewriting machine, the combination of a platen, a paper table in the rear of the platen, a paper guiding arm which extends from a point in front of the platen rearward over the same to a point adjacent to the paper table and behind or under which the paper is guided after it leaves the platen, thereby preventing the paper from falling or being blown forward toward the operator, means which afford an adjustment of said guiding arm longitudinally of the platen, and means for preventing said guiding arm from being brought into the path of the printing instrumentalities.

10. In a typewriting machine, the combination of a platen frame mounted for case shifting movement, a platen carried thereby, a paper table carried by said frame in the rear of the platen, a paper guiding arm carried by said frame and shifting therewith and extending rearward over the platen to a point adjacent to the paper table and behind or under which the paper is guided after it leaves the platen, thereby preventing the paper from falling or being blown forward toward the operator, means which afford an adjustment of said arm longitudinally of the platen, and means for preventing said guiding arm from being brought into the path of the printing instrumentalities.

11. In a front strike typewriting machine, the combination of a carriage, a platen carried thereby, a paper table in the rear of the platen, a paper guiding arm which is carried by the carriage and extends rearward from a point in front of the platen over the latter and over the paper table and overlies the free end portions of a work sheet in the machine and prevents them from falling or being blown forward, means which enables said guiding arm to be moved into and out of operative position, and a detent for holding said arm indefinitely in either of the said positions to which it may be moved.

Signed at Caguas, State of Guayama, Porto Rico, United States, this 13th day of Dec. A. D. 1919.

LUIS GARCIA CASANOVA.

Witnesses:

QUIBAL SAN ANTONIO,

D. V. COLBY CUEBI.