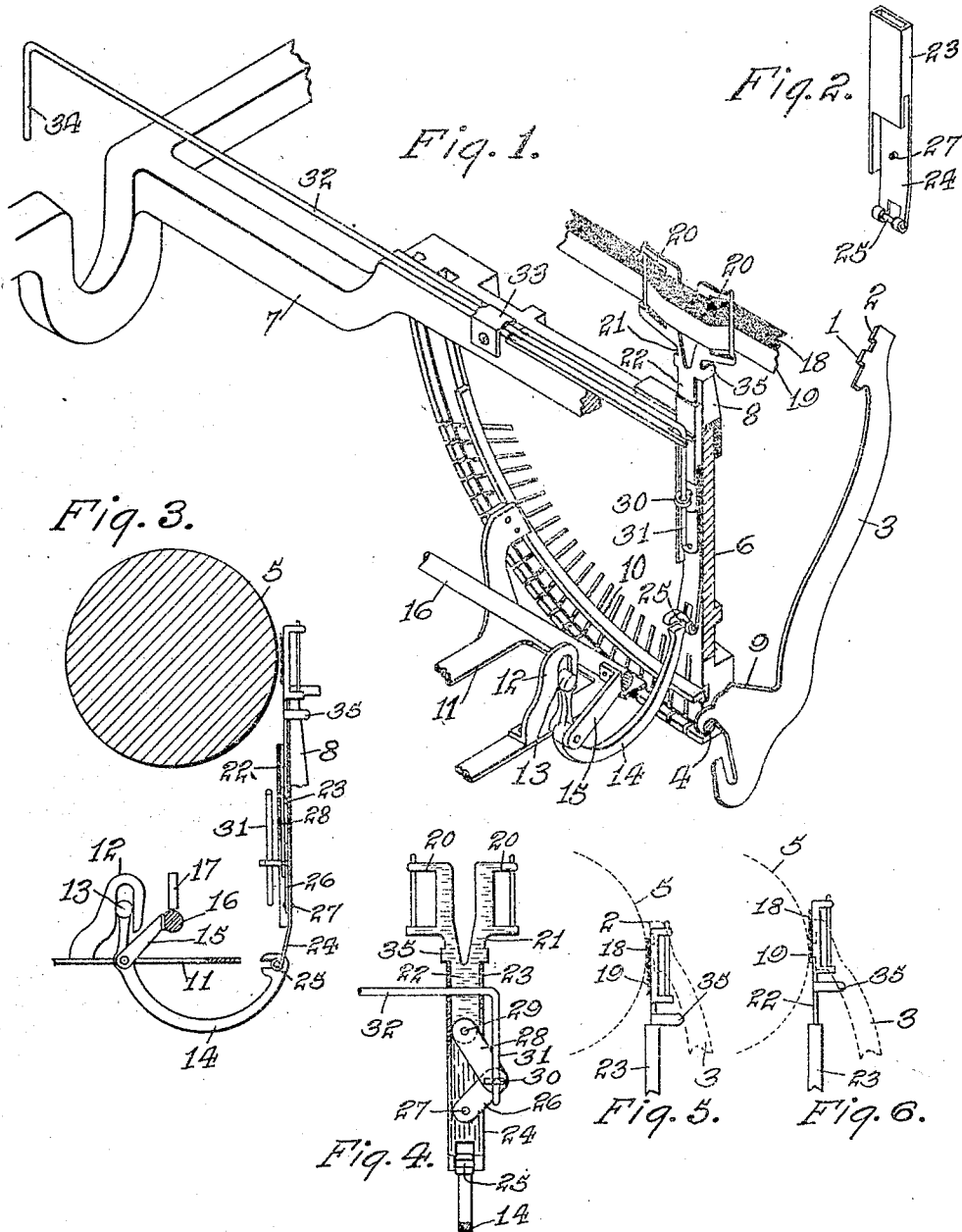


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PATENTED FEB. 5, 1907.

J. A. WHERRY.
TYPE WRITING MACHINE.
APPLICATION FILED JULY 27, 1906.



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JOHN A. WHERRY, OF NEW ORLEANS, LOUISIANA, ASSIGNOR TO UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

TYPE-WRITING MACHINE.

No. 843,247.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN A. WHERRY, a citizen of the United States, residing in New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to the ribbon-vibrating devices of type-writing machines.

The object of the invention is to provide simple, inexpensive, and easily-applied and otherwise improved means for shifting the ribbon relatively to the printing-point, so as to cause the type impressions to be made along either edge of the ribbon, especially where the edges are differently colored.

According to my invention I substitute for the single-piece ribbon-carrier which is usual in the Underwood and other writing-machines a ribbon-carrying member comprising two parts, the lower of which engages the usual vibrating lever and the upper of which carries the ribbon and slides up and down upon the roller to bring different edges of the ribbon over the printing-point, the extent of throw of the ribbon at the type-strokes being the same in all cases. Upon said ribbon-carrying member I provide a third part, which is adjustable to effect the shifting of the upper or ribbon-carrying part, and this third member is controlled by means of a finger-piece mounted upon the framework, so that by moving the finger-piece in either one direction or the other the ribbon is shifted to bring one color or the other into use.

Other features and advantages will hereinafter appear.

In the accompanying drawings, Figure 1 is a rear perspective view of a part of the "Underwood" front-strike type-writing machine provided with my improvements, the parts being adjusted to bring the lower color-band of the ribbon over the printing-point. Fig. 2 is a view of the lower of the two parts, which together form the ribbon-carrying member. Fig. 3 is a side sectional elevation illustrating the ribbon as brought up to cover the printing-point. Fig. 4 is a rear elevation, partly in section, of the ribbon-carrying member, showing the same adjusted in such a manner as to cause the upper portion of the ribbon to cover the printing-point. Fig. 5 is a fragmentary side elevation illustrating the upper

portion of the ribbon covering the printing-point according to the adjustment seen at Fig. 4. Fig. 6 is a view similar to Fig. 5, but showing the lower edge of the ribbon covering the printing-point according to the adjustment seen at Fig. 1.

Lower-case and upper-case types 1 and 2 are mounted upon bars 3, pivoted upon a rod 4, to strike against the front side of a platen 5. The bars are mounted in a segment 6, connected to a framework 7 and having a type-guide 8, the type-bars having heels 9 to push rearwardly a curved universal bar 10, fixed upon a horizontal moving frame 11, the latter having an arm 12 slotted to engage a wrist 13, provided upon a forwardly-extending lever 14, which vibrates up and down at every type-stroke. Said lever is mounted upon a bracket 15, secured upon a rail 16. Upon said rail runs a roll 17, belonging to a traveling frame, (not shown,) which carries the platen 5. Said rail and platen-frame are shiftable up and down with the platen to enable the different types 1 and 2 to print. As so far described the parts are in common use upon the Underwood type-writing machine.

The usual bichrome ribbon having an upper color-band 18 and a lower color-band 19 is threaded through eyes 20 in a ribbon-carrier (designated generally as 21) and provided with a vertical shank 22, which is inserted in a socket 23, formed upon the upper end of a stem 24, so that said ribbon-carrier can slide up and down upon said stem. At its lower end the latter is detachably pivoted at 25 to the forward end of the vibrating lever 14.

One link 26 of a toggle is pivoted at 27 to the stem 24, and the other link 28 is pivoted at 29 to the shank 22. The links are pivoted together by means of a pin which is formed with a projecting eye 30, whereby the toggle may be opened, as at Fig. 4, or closed, as at Fig. 1. Through said eye loosely extends a vertical finger or bar 31, bent down from a horizontal rod 32, sliding in a guide-piece 33 upon the framework, provided at its outer end with a finger-piece 34, whereby the rod may be slidden endwise or in a direction at right angles to the direction of movement of the ribbon-carrier for opening and closing the toggle. When said finger-piece is pulled out, Fig. 1, the toggle is straightened and the ribbon-carrier 21 shifted to its highest position, whereby the lower color-band 19 of the rib-

bon is caused to cover the printing-point at the type-strokes, Fig. 6. When, however, said finger-piece is thrust in, the toggle is opened, Fig. 4, and the ribbon-carrier 21 is brought down until guide-ears 35, formed thereon to impress the type-guide 8, are arrested by contact with the top of the socket 23, whereby the ribbon-carrier is brought to its lowermost position and the upper color-band 18 is caused to overlie the printing-point at the type-strokes, Fig. 5.

It will be seen that the device 26 28 communicates movement during the type-strokes from the reciprocating part 14 to the ribbon-carrier 21 and is adjustable relatively to both said carrier and said reciprocating part, so as to shift said carrier either toward or away from said reciprocating part to cause different portions of the ribbon to overlie the printing-point, that the device 26 28 is adjustable relatively to both the ribbon-carrier 21 and the stem 24 for shifting the carrier upon the stem, that either the stem 24 or the lever 14 may be regarded as a support for the ribbon-carrier 21 as well as for the toggle 26 28, that the finger-piece 34 is stationary or inactive during the type-strokes, but is connected to means for effecting relative shifting movements of the parts 21 and 24. It will be seen that at Fig. 1 the point of connection of the carrier 21 to the reciprocating part 24 is higher than at Fig. 4.

Variations may be resorted to within the scope of my invention, and portions of my improvements may be used without others.

Having thus described my invention, I claim—

1. The combination of a ribbon-carrier, a part which reciprocates at the type-strokes, and a device communicating movement from said reciprocating part to said carrier, and adjustable relatively to both said carrier and said reciprocating part, so as to shift said carrier either toward or away from said reciprocating part to change the point of connection of the carrier to the reciprocating part, and cause different portions of the ribbon to overlie the printing-point.

2. The combination of a ribbon-carrier, a stem upon which said carrier may slide, a reciprocating part actuating said stem, and a device between said stem and carrier, and adjustable relatively to both for shifting said carrier upon said stem, so as to cause different portions of the ribbon to overlie the printing-point.

3. The combination of a ribbon-carrier, a reciprocating support upon which said carrier is mounted, and a part also mounted upon said support and adjustable relatively to said carrier and to said support for shifting the carrier upon the support to cause different portions of the ribbon to cover the printing-point.

4. The combination of a ribbon-carrier, a

reciprocating support upon which the carrier is mounted, and a toggle connecting said support to said carrier for shifting the latter upon the support, so as to cause different portions of the ribbon to overlie the printing-point, and a finger-piece upon the framework and connected to said toggle.

5. The combination of a ribbon-carrier having a shank, a reciprocating stem having a socket to receive said shank, links forming a toggle connected to said shank and stem for sliding the shank within the stem, and a stop for limiting the shifting of the shank at the opening of the toggle, and a finger-piece upon the framework and connected to said toggle.

6. In combination, a reciprocating member upon which the ribbon is carried, and comprising two parts which are relatively shiftable to cause different portions of the ribbon to cover the printing-point, and a finger-piece mounted upon the framing and stationary during the reciprocations of said member, but connected to means for effecting relative shifting movements of said shiftable parts.

7. In combination, a reciprocating member upon which the ribbon is carried, and comprising two parts which are relatively shiftable to cause different portions of the ribbon to cover the printing-point, and a device normally inactive during the operation of said reciprocating member, but movable transversely to the direction of movement of said reciprocating member, and having means called into action at such transverse movement for effecting relative shifting movements of said shiftable parts.

8. In combination, a reciprocating member upon which the ribbon is carried, and comprising two parts which are relatively shiftable to cause different portions of the ribbon to cover the printing-point, a finger-piece, two loosely-connected members controlled by said finger-piece, one of said loosely-connected members extending in the direction of movement of said reciprocating member, and means for enabling said loosely-connected members to effect relative shifting movement of said shiftable parts.

9. In combination, a reciprocating member upon which the ribbon is carried, and comprising two parts, one of which may slide upon the other in the direction of the reciprocation of said member, to cause different portions of the ribbon to cover the printing-point, an adjustable part upon said reciprocating member for effecting such sliding movement, said adjustable part having a projection, and a bar mounted upon the framework and controlled by a finger-piece, and extending in the direction of such reciprocation, and loosely connected to said projection.

10. The combination of a ribbon-carrier, a

part which reciprocates at the type-strokes, a device communicating movement from said reciprocating part to said carrier, and adjustable relatively to both said carrier and said reciprocating part, so as to shift said carrier either toward or away from said reciprocating part, to cause different portions of the ribbon to overlie the printing-point, and a part mounted upon the framework and having a finger-piece, and inactive during the reciprocation of the ribbon-carrier, but connected loosely to said adjustable device for adjusting the latter.

11. The combination of a ribbon-carrier, a reciprocating support upon which the carrier is mounted, a toggle connecting said support to said carrier for shifting the latter upon the support, so as to cause different portions of the ribbon to overlie the printing-point, and a part mounted upon the framework and having a finger-piece, and loosely connected to said toggle for opening and closing the latter.

12. The combination of a ribbon-carrier having a shank, a reciprocating stem having a socket to receive said shank, links forming a toggle connected to said shank and stem for sliding the shank within the stem, a stop for limiting the shifting of the shank at the opening of the toggle, a slide mounted upon

the framework and having a finger-piece and movable across the line of reciprocation of said stem, and having a finger or part extending parallel with the direction of movement of said stem, and an eye mounted upon said toggle at the joint thereof, and engaging said finger.

13. The combination of a ribbon-carrier having a shank, a reciprocating stem having a socket to receive said shank, links forming a toggle connected to said shank and stem for sliding the shank within the stem, a stop for limiting the shifting of the shank at the opening of the toggle, a slide mounted upon the framework and having a finger-piece and movable across the line of reciprocation of said stem, and having a finger or part extending parallel with the direction of movement of said stem, and an eye mounted upon said toggle at the joint thereof, and engaging said finger; said ribbon-carrier, stem and toggle being shiftable up and down to accommodate the case-shifting movements of the platen, and said finger being of sufficient length to accommodate such shifting movements.

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