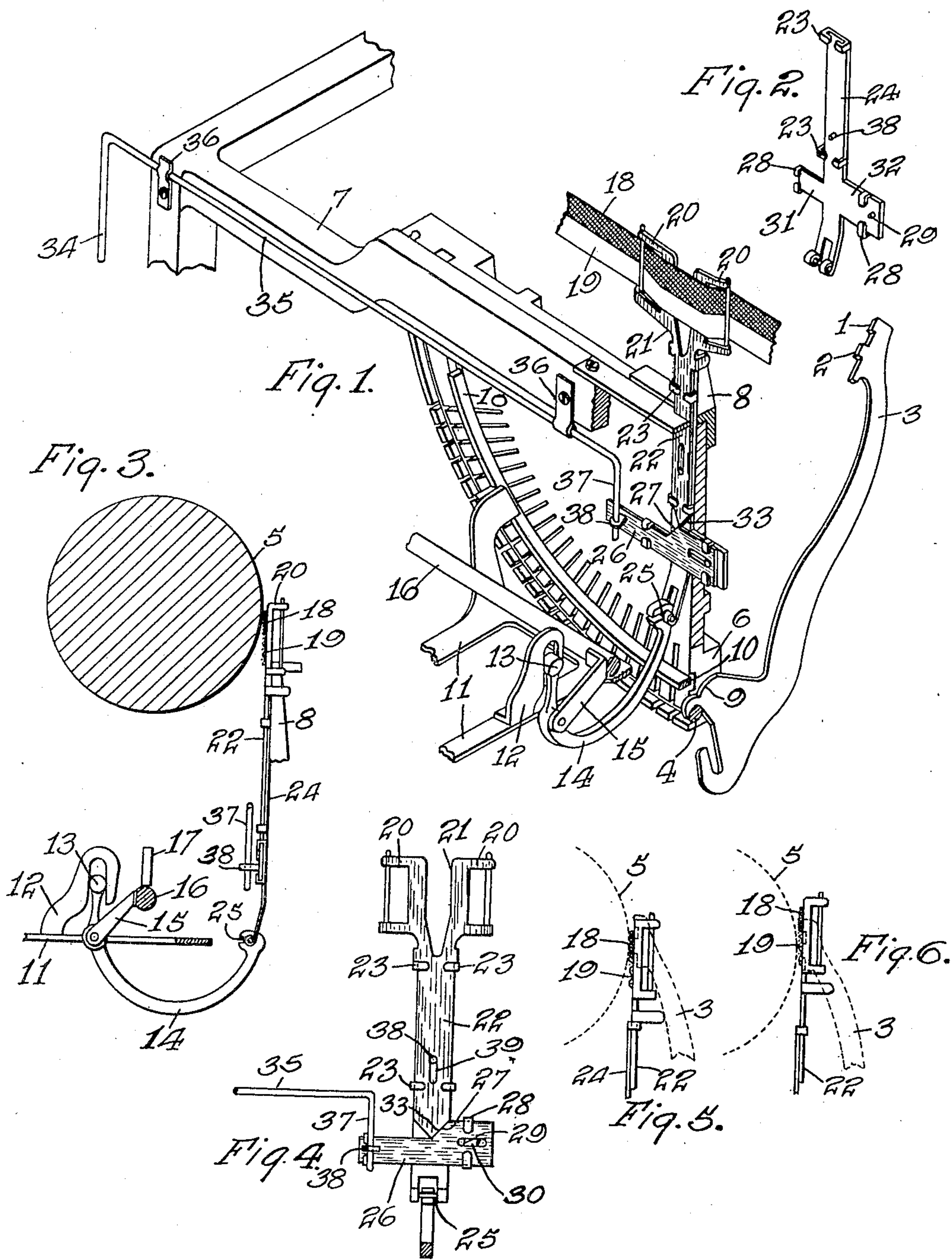


No. 843,248.

PATENTED FEB. 5, 1907.

J. A. WHERRY.  
TYPE WRITING MACHINE.  
APPLICATION FILED SEPT. 28, 1906.



Witnesses  
J. K. Frankfort.  
M. Michener.

Inventor  
John A. Wherry.  
By his Attorney *W. B. Stickney*



# UNITED STATES PATENT OFFICE.

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. 843,248.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed September 28, 1906. Serial No. 336,631.

*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 snuffing 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 formed by bending ears 23 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, so that the stem is caused to reciprocate by the vibrations of the lever.

A plate 26, having a cam edge 27, is mounted to slide horizontally across the reciprocating stem 24, being for this purpose held in suitable ears or socket-pieces 28, whereby the member 26 is caused to reciprocate up and down at the type-strokes with the stem 24. The sliding movements of the member 26 are limited by a pin 29, projecting through a slot 30 in said part 26. The ears 28, as well as said pin, are provided upon cross-arms 31 32, formed upon the lower portion of the stem 24.

At Fig. 4 the shank 22 of the carrier 21 is seen resting upon the slide 26, so that the latter serves to transmit upward movement from the stem 24 to the carrier 21, the latter returning with the stem 24 to normal position



during the movements of the type-bars away from the platen. Although the stem 24 is preferably not positively connected to the carrier to return the latter, still it will be understood that the ribbon when elevated by the carrier exerts a downward reaction upon the latter, and this downward tendency is aided by the weight of the carrier, so that it always returns properly to normal position.

When the slide 26 is moved to the left at Fig. 4, the cam edge 27 acts upon a cam 33, formed upon the lower end of the shank 22, to lift the shank relatively to the stem 24, as at Fig. 1, in which position the lower color-band 19 is brought into use at the type-strokes. This movement of the slide 26 is effected by a finger-piece 34, provided upon the end of a slide or rod 35, supported by brackets 36 and having at its inner end a downward-extending finger or part 37 to engage an eye or projection 38, provided upon the slide 26. When the finger-piece 34 is pulled out, Fig. 1, the point or cam 33 of the ribbon-carrier shank 22 rests upon the top edge of the slide 26 and maintains this position during the actuation of the types. Accidental displacement of the stem 22 is prevented by a pin 38 in the stem 24 engaging a slot 39 in the shank 22. When the finger-piece 34 is pressed in, the slide 26 is moved to the Fig. 4 position and the ribbon-carrier 21 drops by its own weight, aided by the downward tension on the ribbon, to the Fig. 4 position, thereby bringing the color-band 18 of the ribbon into use at the type-strokes. It will be seen that the device 26 communicates movement during the type-strokes from the reciprocating part 24 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, and 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.

Variations may be resorted to within the scope of the 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, said device being adjustable relatively to both said carrier and said reciprocating part and having the form of a cam to shift said carrier relatively to said reciprocating part to cause a different portion of the width of the ribbon to overlie the printing-point.

2. The combination of a ribbon-carrier, a

reciprocating support upon which the carrier is mounted, and a cam engaging said support and said carrier for shifting the latter upon the support to cause a different portion of the ribbon to overlie the printing-point.

3. The combination of a ribbon-carrier having a shank, a reciprocating stem having a socket to receive said shank, a cam mounted to slide transversely upon said shank to adjust said ribbon-carrier, and a stop for limiting the movement of the cam.

4. The combination of a ribbon-carrier having a shank, a reciprocating stem having a socket to receive said shank, a cam mounted to slide transversely upon said shank to adjust said ribbon-carrier, a stop for limiting the movement of the cam, and a finger-piece mounted upon the framing, and stationary during the reciprocations of said member, but connected to said cam for shifting the same.

5. 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 cam upon said reciprocating member for effecting such sliding movement, said adjustable cam 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.

6. The combination of a ribbon-carrier, a reciprocating support upon which the carrier is mounted, a cam interposed between said support and said carrier to shift the latter upon the support to cause different portions of the ribbon to overlie the printing-point, said cam reciprocating with said support and said carrier, and a finger-piece mounted upon the framework and loosely connected to said cam for shifting the latter.

7. The combination of a ribbon-carrier having a shank, a reciprocating stem having a socket to receive said shank, a cam engaging said shank and said carrier for sliding the shank upon the carrier, a stop for limiting the shifting movement of the cam, said cam mounted to reciprocate with said stem and carrier, 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 upon said cam to engage said finger.

J. A. WHERRY.

Witnesses:

L. A. DUROS,  
PETER STIFFT.