

Z. G. SHOLES.  
 RIBBON SHIFTING MEANS FOR TYPE WRITERS.  
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1,185,138.

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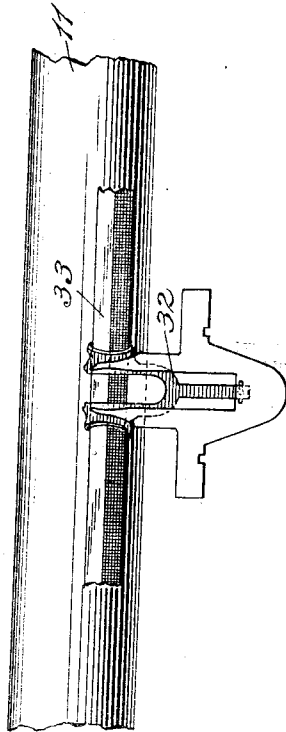


Fig. 2.

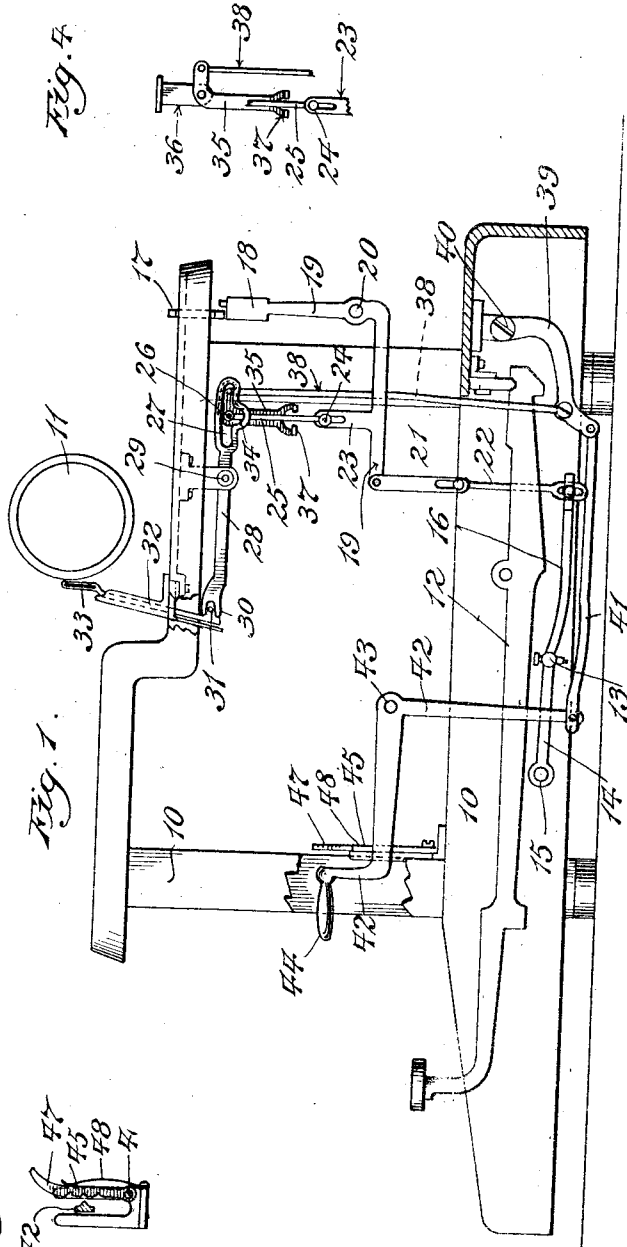
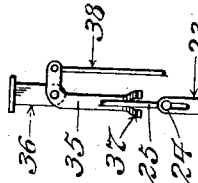


Fig. 1.

Fig. 3.



Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## RIBBON-SHIFTING MEANS FOR TYPE-WRITERS.

1,185,138.

Specification of Letters Patent.

Patented May 30, 1916.

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*To all whom it may concern:*

Be it known that I, ZALMON G. SHOLES, a citizen of the United States, residing at Wilmington, in the State of Delaware, have invented certain new and useful Improvements in Ribbon-Shifting Means for Type-Writers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to an improved mechanism for shifting a two-colored ribbon as used on visible typewriters, and the principal object of the invention is the provision of a simple and thoroughly strong and reliable mechanism adapted to producing at will any one of three positions of the ribbon when any key lever is operated. These positions include one for each of two colors (usually red and blue or black) and one position of rest, which is assumed when the machine is used for making stencils for multigraph work.

The invention is illustrated in a preferred form in the accompanying drawings, wherein—

Figure 1 is a side elevation of the essential features in their relation to the frame and platen. Fig. 2 is a front elevation of the ribbon fork and a part of the platen and ribbon. Fig. 3 is a detail view of the means for steadying the shifting handle in its various positions, and Fig. 4 is an enlarged elevation of certain details hereinafter described.

The framework is shown at 10 and the position of the platen is indicated at 11.

At 12 is shown one of the usual key levers, and the universal bar is shown at 13. This bar is supported upon arms 14 which connect it with a revoluble shaft 15, and an extension arm 16 transmits motion to the ribbon shift and spacing mechanism.

At 17 is indicated the usual escapement wheel controlled by the escapement 18 in a well known manner. This escapement is carried upon a bell crank lever 19 pivotally supported at 20, and connected by bars 21 and 22 to the extension arm 16. The lever 19 carries an extension 23 having a slot in which there plays a pin 24 connecting said extension with an upright connecting rod 25. At the upper end of the rod 25 is a pin

26 which enters a properly curved slot 27 in the rear end of a lever 28, pivotally supported at 29. This lever has a fork 30 at its forward end engaging a pin 31 on the ribbon shifting fork 32, through which the ribbon 33 passes in the usual manner. This fork is mounted so as to be capable of sliding up and down in the usual way for shifting the ribbon.

As clearly shown in Fig. 1 the slot in the lever 28 has a downward recess 34 midway between its ends, and so placed that, when the rod 25 and pin 26 are situated as shown, they may move downward without producing any motion in the lever 28 and the attached shifting fork.

It is clear that, if the rod 25 be shifted to bring the pin 26 near the rearward end of the slot 27 the upper portion of the ribbon will be brought to the printing level; while, if the rod be shifted to its opposite extreme position, the lower portion of the ribbon will become operative. If, however, the rod 25 is left in the middle position shown in the drawing, it will not affect the ribbon, and the types will strike over the ribbon, as is desirable where stencils are being struck. The preferred means which I employ for controlling the position of the rod 25 for these different purposes comprises a bell crank lever 35 pivotally suspended from a lug 36 on the frame of the machine and having a forked end 37 which engages the rod 25 in the manner shown in Figs. 1 and 4. To the short horizontal arm of the lever 35 is pivotally connected a rod 38 whose lower end is similarly connected with the swinging arm 39, pivotally supported at 40. A rod 41 affords a suitable connection between the arm 39 and the lower end of a bell crank lever 42, pivoted at 43, and provided on its horizontal arm with a finger piece or handle 44, projecting forward from the machine.

As shown in Fig. 3, the lever 42 is provided with a projection or beak adapted to engage one of the notches in the face of the securing plate 45, which plate is pivoted at 46, is provided with a curved finger piece 47, and is normally pressed against the lever 42 by the spring 48, to secure it in that one of the three positions desired.

It is clear from the above description that the desired position of the ribbon can be determined at any time by simply placing

the handle 44 so that the beak on the lever 42 engages one or the other of the notches in the securing plate.

Various changes can be made in this construction without departing from the scope of this invention, and I do not limit myself to the details herein shown and described.

What I claim is—

1. In a ribbon shifting means for typewriters, a ribbon fork, a pivoted lever engaging said fork at one end and having a slot near its opposite end, a connecting rod operatively connected with the escapement control and having a pin entering said slot, a bell crank lever having a forked arm straddling said rod, a handle and operative connections between said handle and forked bell-crank lever adapted to move the latter to swing the shifting rod so as to move its

pin into different positions in said slot, substantially as described. 20

2. In a ribbon shifting means for typewriters, a ribbon fork, a pivoted lever engaging said fork at one end and having a slot near its opposite end, a connecting rod operatively connected with the escapement control and having a pin entering said slot, a bell-crank lever having a forked arm straddling said rod, a swinging arm at the base of the machine, a rod connecting said bell-crank lever with said swinging arm, a second bell-crank lever having a handle, and a mechanical connection between said second bell-crank lever and said swinging arm, substantially as described. 30

In testimony whereof, I affix my signature. 35

ZALMON G. SHOLES.