April 28, 1959 E. C. LUNDEBERG 2,884,112

TYPEWRITER RIBBON SHIELD

Filed Dec. 6, 1957

FIG. 1.

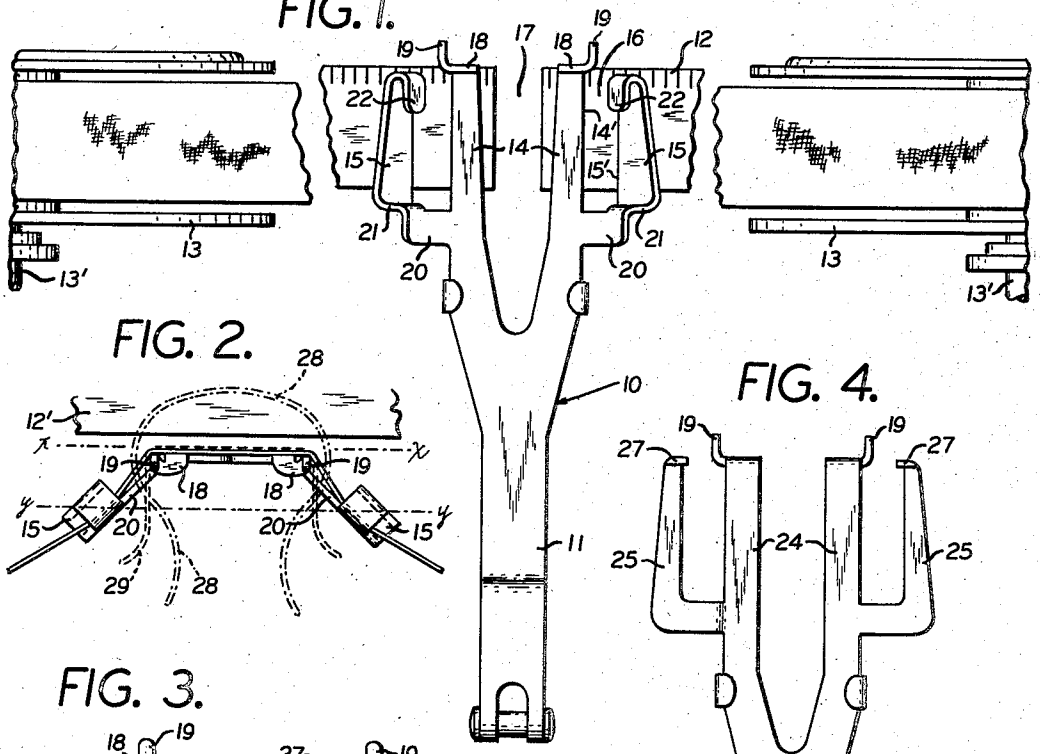


FIG. 2.

FIG. 4.

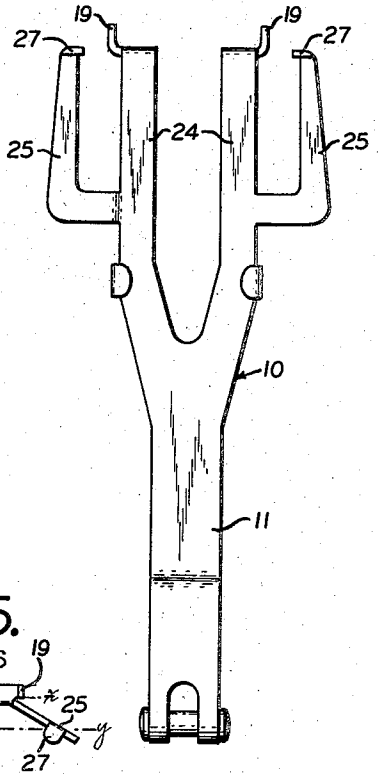
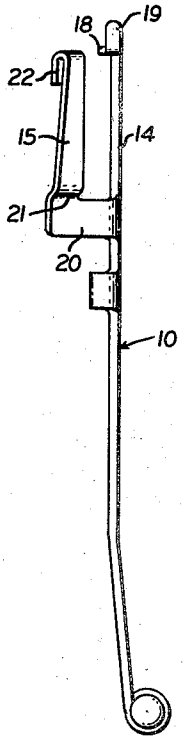


FIG. 3.



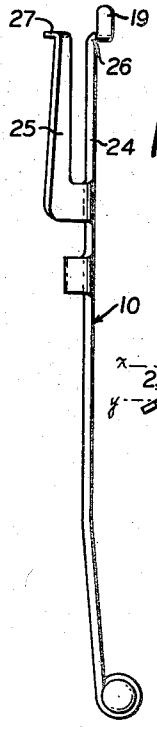
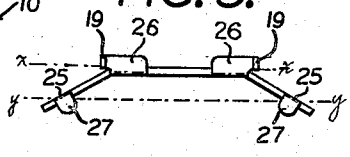


FIG. 6.

FIG. 5.



INVENTOR
EDGAR C. LUNDEBERG
BY
Pyerly, Townsend, Watson & Churchill
ATTORNEYS.

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TYPEWRITER RIBBON SHIELD

Edgar C. Lundeberg, Hartford, Conn.

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8 Claims. (Cl. 197—170)

The present invention relates to ribbon guides for typewriters and analogous machines and aims to provide certain improvements therein.

The insertion of an inked ribbon into a ribbon guide on a typewriter and its removal therefrom with ease and without soiling the fingers of an operator has long posed a problem which is still awaiting a satisfactory solution. Numerous modifications of conventional ribbon guides and also of auxiliary means have been proposed for solving the problem but without substantial success and acceptance.

A primary object of the present invention is to provide a ribbon guide which solves the problem in an exceedingly simple and unique manner.

A further object of the invention is to provide a ribbon guide which will enable an operator to position, guide and prepare a ribbon for facile entrance into the guide without soiling the fingers.

A still further object of the invention is to provide a ribbon guide which will accomplish the foregoing objects without recourse to special ribbon spools, manually operable attachments and the like.

The foregoing and other objects of the invention, not specifically recited, are accomplished by providing a ribbon guide having two pairs of upstanding spaced fingers, the adjacent sides of each pair providing an intervening ribbon guide slot open at its top, the fingers of the two pairs which are adjacent, each having a part thereof extending upwardly adjacent the open end of the guide slot above the top of the other finger of the pair.

The invention will be better understood from the detailed description which follows when considered in connection with the accompanying drawings showing two embodiments of the invention and wherein:

Figure 1 is a front elevation of a ribbon guide embodying the invention mounted in relation to the guide scale and ribbon spools of a typewriter;

Fig. 2 is a top plan view of the ribbon guide shown in Fig. 1, the broken lines and the dot and dash lines showing preliminary positions of the ribbon preparatory to inserting it within the guide;

Fig. 3 is a side elevation of the ribbon guide shown in Fig. 1;

Fig. 4 is a front elevation of a ribbon guide embodying a modification of that shown in Fig. 1;

Fig. 5 is a top plan view of the ribbon guide shown in Fig. 4; and

Fig. 6 is a side elevation of the ribbon guide shown in Fig. 4.

Referring first to Figs. 1 to 3 of the drawings, a ribbon guide **10** is shown as embodied in a ribbon vibrator **11** of a form which with slight variation is almost universally used on standard makes of typewriters such as Underwood, Royal and the like, but it will be understood that the guide means of the present invention may be embodied in typewriter or analogous machine parts of different constructions than herein shown. The ribbon guide is mounted for vertical reciprocation in front of a

guide scale **12** and a conventional printing cylinder or platen **12'** and is disposed between a pair of ribbon spools **13—13** mounted respectively on shafts **13'—13'** to intermittently feed the ribbon through the guide as the type bars (not shown) are activated.

The ribbon guide as herein shown is preferably formed of sheet metal and consists of two pairs or sets of spaced upstanding fingers **14, 15** the adjacent sides **14'** and **15'** respectively of each pair providing an intervening ribbon guide slot **16** which is open and unobstructed at its top, the fingers **14—14** being laterally spaced apart to provide a type bar striking space **17** whereat the type bars strike the ribbon to make imprints of the type upon the paper held onto the platen. The fingers **14** lie in substantially a common plane *x—x* and at their tops are bent horizontally forwardly to provide flanges **18** the edges of which adjacent the guide slots **16** being bent upwardly to provide ears **19** which extend above the tops of the fingers **15**. Preferably the ears **19** are bent back to lie in the rear face plane of the fingers **14** as best seen in Figs. 2 and 3. The fingers **15** are disposed angularly to the plane of the fingers **14** and lie in a common plane *y—y* substantially parallel to and forwardly of the plane *x—x* within which the fingers **14** lie. The fingers **15** are preferably integrally formed with the vibrator and guide and are each carried by a lateral arm **20** extending from the fingers **14**, the said arm being first bent angularly rearwardly as shown at **21** and then upwardly. The angular bend **21** provides a shoulder upon which the lower edge of the ribbon in use will ride. The top of each finger **15** is preferably bent forwardly and downwardly to provide a flange **22** which is spaced from the body of the finger and provides a guide for the top edge of the ribbon.

In Figs. 4, 5 and 6 the upstanding fingers of the ribbon guide are slightly differently formed from that shown in Figs. 1 to 3. Primarily these differences reside in a wider spacing between the fingers **24** and **25** than between the fingers **14** and **15** and in the tops of said fingers **24** being bent rearwardly from said fingers as shown at **26**. Also in that the tops of said fingers **25** are bent forwardly but not downwardly.

In both embodiments the tops of the fingers **14, 15** and **24, 25** terminate in a substantially common horizontal plane. The ears **19** which project upwardly above the top surface of the fingers enable the typewriter ribbon to be looped therearound as shown at **28** in dot and dash lines in Fig. 2 and to then be drawn forwardly so as to cause the naturally rounded loop to be formed into a substantially square cornered U loop as shown in broken lines **29**, thereby allowing the ribbon to drop freely down into the guide slots **16** of the shield. As the ribbon is straightened out horizontally (the ribbon being in a normal vertical plane) the ribbon locks under the flanges **22** (Figs. 1 to 3) and flanges **26** and **27** (Figs. 4 to 6) and is retained by said flanges. In the embodiment shown in Figs. 1 to 3 the ribbon will not immediately engage under the flanges **22** but upon operation of the machine the vertical reciprocation of the ribbon vibrator will cause the ribbon to position itself under said flanges.

If the open tops of the guide slots **16** (Fig. 1) are made sufficiently wide as shown in Fig. 4, the ears **19** may be dispensed with although it is preferable to have the ears **19** disposed in the manner described as said ears greatly facilitate the preparation of a looped ribbon for positioning into the guide slots.

It will be appreciated that in preparing the ribbon for entrance into the guide slots and to avoid soiling the fingers of an operator, the looping of the ribbon as shown at **28** may be accomplished by holding the two spools containing the ribbon in the hands of an operator which thereby would eliminate the actual contact of the ribbon

by the fingers of the operator. In removing the ribbon substantially the reverse procedure may be employed.

Although I have shown and described two preferred embodiments of my invention, it is to be understood that variations in the details of construction of the ribbon guide with particular regard to the spacing of the fingers and the arrangement of the flanges at the tops of said fingers and the ears on certain of the fingers, may be resorted to within the range of mechanical or engineering skill without departing from the spirit of the invention as hereinafter claimed.

What I claim is:

1. In a ribbon guide for a typewriter machine and the like, a guide proper having two pairs of spaced fingers, the adjacent sides of each pair providing an intervening ribbon guide slot open at its top, the fingers of the two pairs which are adjacent, each having at its top a flange and an ear extending upwardly from said flange adjacent the open end of the guide slot above the top of the other finger of the pair.

2. A ribbon guide according to claim 1, wherein the tops of said other fingers lie in substantially a common plane with the flanges on the adjacent fingers of the two pairs of fingers.

3. A ribbon guide according to claim 1, wherein the tops of said other fingers are each formed with a flange and said flanges lie in substantially a common plane with the flanges on the adjacent fingers of the two pairs of fingers.

4. A ribbon guide according to claim 3 wherein the flanges on said other fingers are bent forwardly and downwardly into substantial parallel spaced relation to the fingers.

5. In a ribbon guide for a typewriter machine and the like, a ribbon guide proper having two pairs of spaced fingers, the adjacent sides of each pair providing an intervening ribbon guide slot open at its top, the fingers of the two pairs which are adjacent, each having a flange at its top directed rearwardly and each of the other fingers having a flange at its top directed forwardly.

6. A ribbon guide according to claim 5, wherein the fingers of the two pairs which are adjacent lie in a common plane and the other two fingers lie in a common plane substantially parallel to and forwardly of the first plane.

7. In a ribbon guide for a typewriter machine and the like, a ribbon guide proper having two pairs of spaced fingers, the adjacent sides of each pair providing an intervening ribbon guide slot open at its top, the fingers of the two pairs which are adjacent, each having a flange at its top directed rearwardly, an ear extending upwardly from said flange adjacent the open end of the slot and each of the other fingers having a flange at its top directed forwardly.

8. In a ribbon guide for a typewriter machine and the like, a ribbon guide proper having two pairs of upstanding spaced fingers, the adjacent sides of each pair providing an intervening relatively wide ribbon guide slot which is open and unobstructed at its top, the fingers of the two pairs which are adjacent each having a flange at its top directed rearwardly, each of the other fingers having a flange at its top directed forwardly, the fingers of the two pairs which are adjacent lying in a common plane, the other two fingers lying in a common plane substantially parallel to and forwardly of the first plane and said other two fingers being spaced apart farther than the fingers of the two pairs which are adjacent.

References Cited in the file of this patent

UNITED STATES PATENTS

872,113	Enders	Nov. 26, 1907
2,442,245	Myers	May 25, 1948