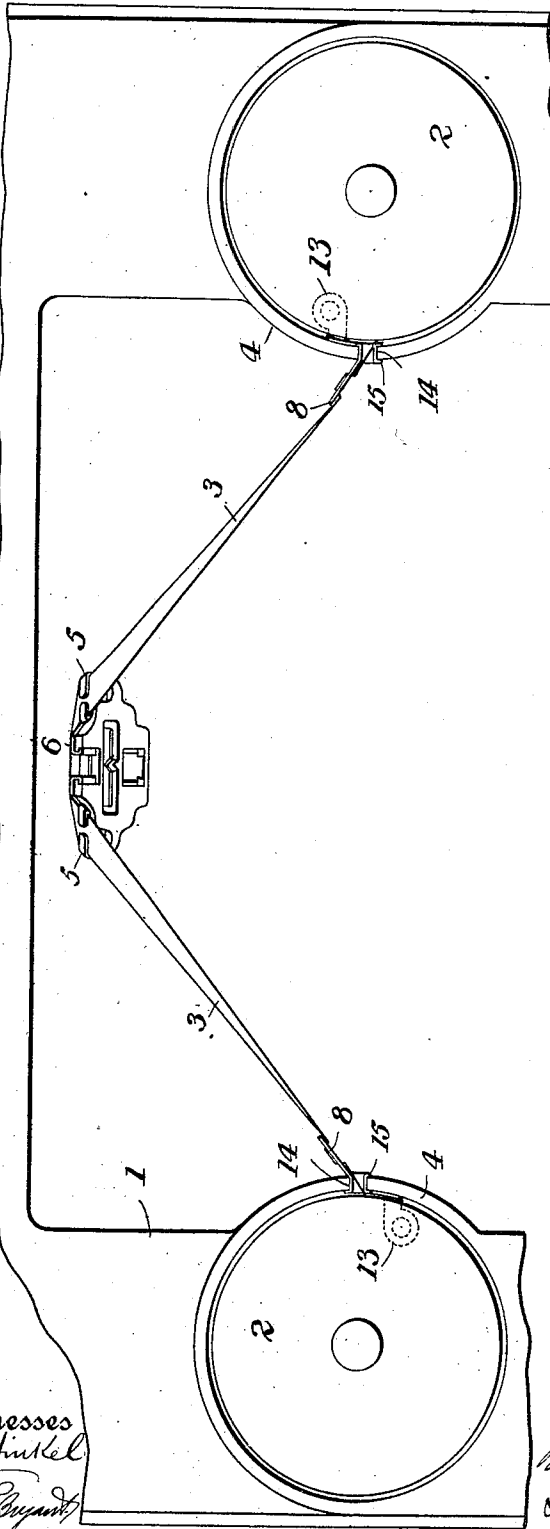


S. B. POST.
 RIBBON MECHANISM FOR TYPE WRITING MACHINES.
 APPLICATION FILED JULY 8, 1905.

936,033.

Patented Oct. 5, 1909.

Fig. 1.



Witnesses
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Fig. 2.

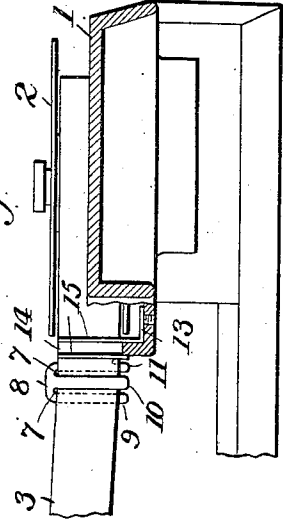


Fig. 3.

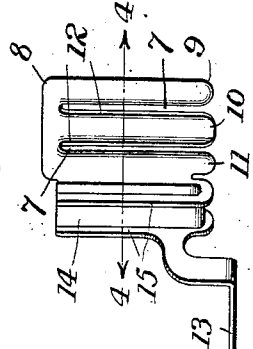
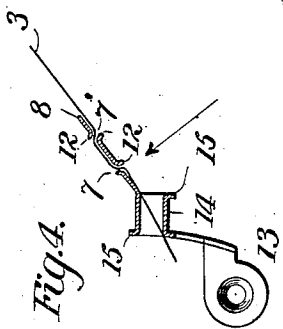


Fig. 4.



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UNITED STATES PATENT OFFICE.

SCHUYLER B. POST, OF SYRACUSE, NEW YORK, ASSIGNOR TO L. C. SMITH & BROS. TYPE-WRITER COMPANY, OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

RIBBON MECHANISM FOR TYPE-WRITING MACHINES.

936,033.

Specification of Letters Patent.

Patented Oct. 5, 1909.

Application filed July 8, 1905. Serial No. 268,793.

To all whom it may concern:

Be it known that I, SCHUYLER B. POST, a citizen of the United States, residing at Syracuse, Onondaga county, State of New York, have invented certain new and useful Improvements in Ribbon Mechanism for Type-Writing Machines, of which the following is a specification.

In typewriting machines, the narrow ribbons used upon visible writing machines have a tendency to curl as they run from spool to spool, which tendency increases as the ribbon is used, especially if the middle portion of the ribbon is subjected to more wear than the edges.

The object of the present invention is to prevent a curling or folding of the ribbon, to cause the ribbon to be evenly and smoothly wound upon the spools, and to impart a proper tension to the ribbon in its passage over the printing point.

The invention will be fully described in the following specification, reference being had to the accompanying drawing, in which,—

Figure 1 is a plan view of a portion of the top plate of a typewriting machine, showing the ribbon spools and ribbon vibrator or carrier in their proper relative positions; Fig. 2 is a front elevation of a portion of Fig. 1; Fig. 3 is a side elevation of one of the ribbon guides; and Fig. 4 is a section on the line 4—4 of Fig. 3.

Referring to the drawing, 1 indicates the top plate, 2 the ribbon spools, and 3 the ribbon. The ribbon spools may be mounted for rotation in any suitable way. As shown, they are partially seated in depressions cast in the top plate, which depressions are partially surrounded by walls 4.

The ribbon passes through suitable guides 5 on each side of the printing point, which guides, in the present instance, are upon the ribbon vibrator 6, which is adapted to be reciprocated to cover and uncover the printing point. The particular construction of the guides 5 and the vibrator forms no part of the present invention and need not be described in detail herein.

The device for keeping the ribbon smooth and imparting a proper tension thereto is shown detached in Figs. 3 and 4. Referring to these figures, it will be seen that the ribbon 3 passes through two vertical slots 7, 7, in a bracket 8. These slots are preferably

open at the end to facilitate threading the ribbon through them, which may be done by simply slipping the ribbon edge-wise into the slots. The slots may be said to divide the ribbon guide proper into three fingers 9, 10, 11, the last mentioned finger being integral at one edge with the body of the bracket. The edges of the fingers adjoining the slots are preferably bent or curved reversely as shown at 12 in Fig. 4, to facilitate the passage of the ribbon and avoid the wear which would be produced by sharp or square corners.

The three fingers are preferably arranged substantially in the same plane, as shown in Fig. 4, so that the ribbon is made to travel a sinuous course in passing through them. The path of the ribbon may be varied and made more or less indirect by bending the middle finger 10 and the tension on the ribbon is thereby varied. The guiding fingers serve to produce a tension upon the ribbon when the latter is running off the adjacent spool and they serve to keep the ribbon flat and smooth while it is being wound upon the adjacent spool. The bracket 8 is suitably connected to the main frame adjacent to the spool. It is preferably provided with a perforated shank 13, which is connected to the main frame by a screw. As illustrated the shank is horizontal and fastened to the frame beneath the spool, as clearly shown in Figs. 1 and 2.

The bracket is preferably formed with a U-shaped part 14, having flanges 15 which part is seated in a slot in the wall 4. This U-shaped part assists in supporting the bracket and maintaining it in proper relation to the frame, and it also forms a suitable lining to the opening in the wall 4 through which the ribbon passes to the spool. As shown the U-shaped portion of the bracket is open at the top while the slots 7 are open at the bottom. There is therefore no tendency of the ribbon to escape from the guide in either direction. In some instances the guide may be arranged so that the ribbon will pass through it in substantially a straight line in which case it would serve the purpose of keeping the ribbon flat and laying it properly upon the spool without producing any material tension.

It will be evident that the details of shape and construction of the guide and tension

device herein described may be varied considerably without departing from the spirit and scope of my invention.

Having described my invention what I claim and desire to secure by Letters Patent is,—

10 1. In a typewriting machine, the combination with the ribbon, the ribbon spools and the ribbon vibrator arranged intermediate said spools, of guides arranged between said vibrator and said spools and independent thereof, said guides each having a plurality of openings through which the ribbon passes in an indirect or sinuous path 15 whereby the ribbon is prevented from curling as it winds and a suitable tension upon the ribbon is produced as it unwinds.

2. In a typewriting machine, the combination with the main frame and with the ribbon spools mounted thereon, of the walls 20 4 adjacent to the ribbon spools, and the vertically arranged ribbon guide brackets seated in said walls and each having a plurality of vertical slots through which the ribbon passes in an indirect or sinuous path, 25 for the purpose set forth.

3. In a typewriting machine, the combination with the main frame and with the ribbon spools mounted thereon, of the walls

4 adjacent to the ribbon spools and provided 30 with openings for the passage of the ribbon, and brackets each having a U-shaped portion fitting the opening in the corresponding wall 4 and slots through which the ribbon passes in an indirect or sinuous path, 35 the said brackets forming suitable linings for the openings in the walls 4 and tension devices for the ribbon.

4. In a typewriting machine, the combination with the main frame and with the ribbon spools mounted thereon, of the walls 40 4 adjacent to the ribbon spools and provided with openings for the passage of the ribbon, and brackets each having a flanged U-shaped portion fitting the opening in the corresponding wall 4 and slots through 45 which the ribbon passes in an indirect or sinuous path, the said brackets forming suitable linings for the openings in the walls 4 and tension devices for the ribbon. 50

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SCHUYLER B. POST.

Witnesses:

CARL GABRIELSON,
C. M. STEVENS.