No. 702,447. Patented June 17, 1902.

E. J. MANNING.

RIBBON GUIDE FOR TYPE WRITING MACHINES.

(Application filed Dec. 27, 1900.)

(No Model.)

Fig. 1.

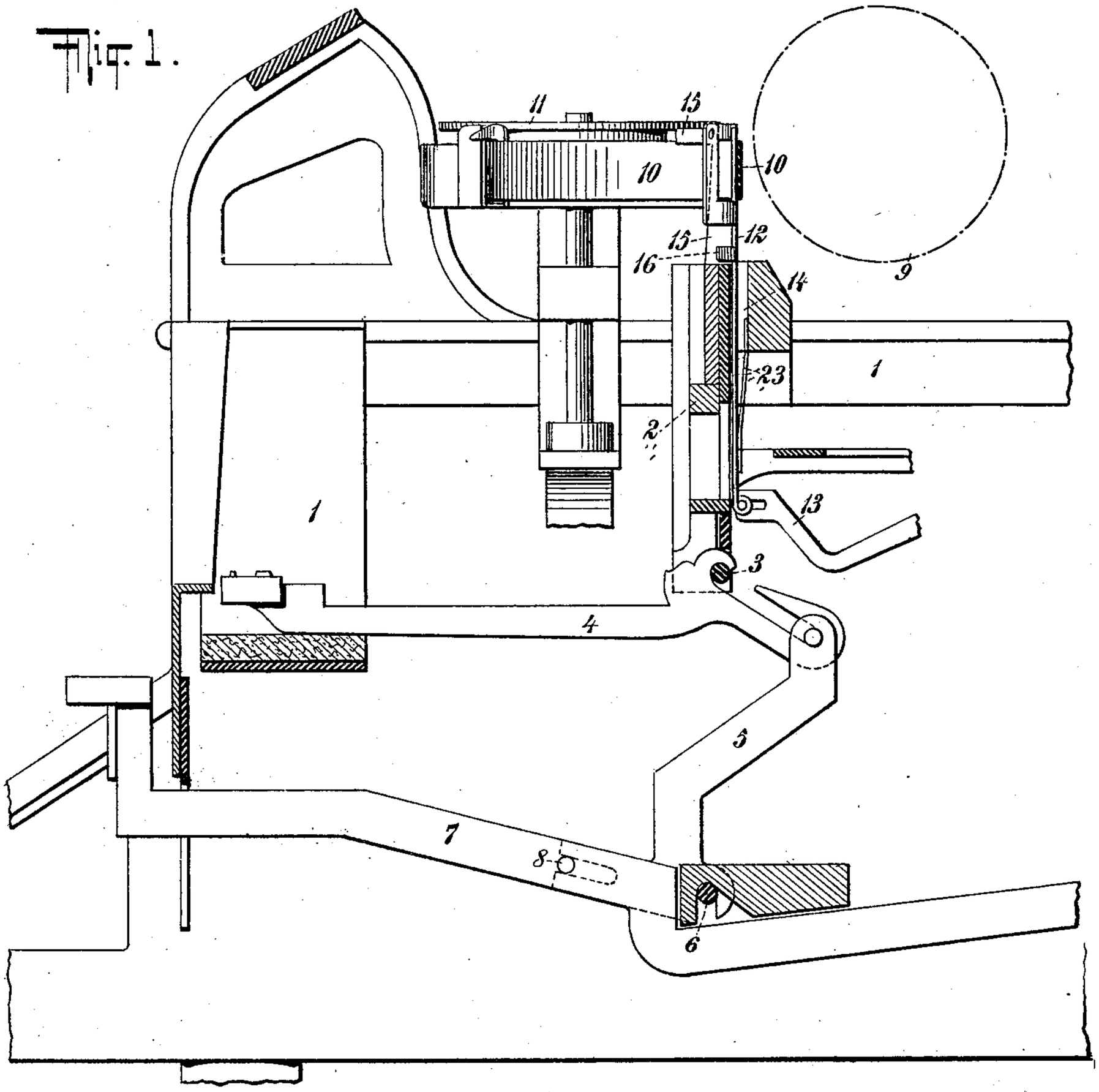


Fig. 2.

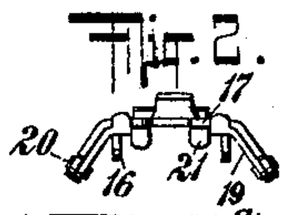


Fig. 2.

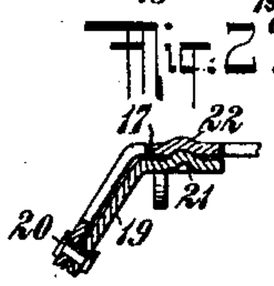


Fig. 3.

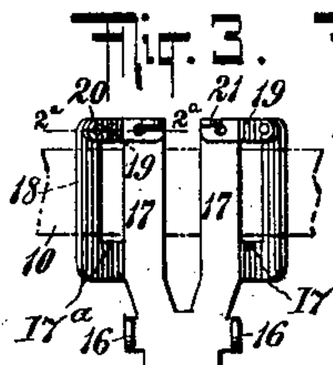


Fig. 4.

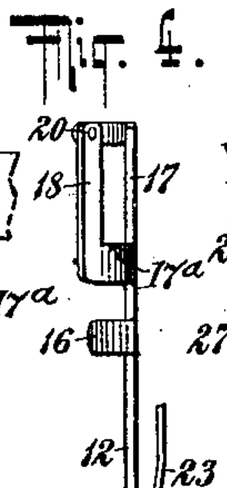


Fig. 5.

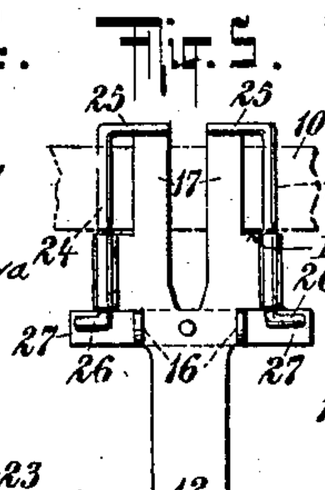


Fig. 6.

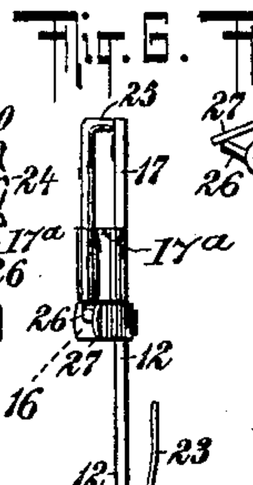
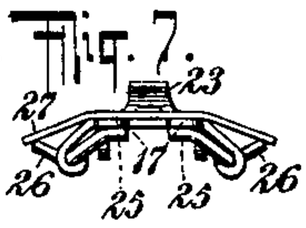


Fig. 7.



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EDWARD J. MANNING, OF BAYONNE, NEW JERSEY, ASSIGNOR TO THE WAGNER TYPEWRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

RIBBON-GUIDE FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 702,447, dated June 17, 1902.

Application filed December 27, 1900. Serial No. 41,243. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. MANNING, a citizen of the United States, residing at Bayonne, Hudson county, State of New Jersey, have invented certain new and useful Improvements in Ribbon-Guides for Type-Writing Machines, of which the following is a specification.

My invention relates to ribbon-guides for type-writing machines; and the object of said invention is to provide a ribbon-guide wherein the ribbon can be readily inserted and withdrawn when desired and from which the ribbon cannot be accidentally displaced.

To these ends my invention consists of the novel arrangement and combination of parts to be hereinafter described and claimed.

In the accompanying drawings, wherein like characters indicate corresponding parts in the various views, Figure 1 is a vertical sectional view of a sufficient number of parts of a type-writing machine to illustrate my invention. Fig. 2 is a top view of one form of ribbon-guide embodying my invention. Fig. 2^a is a fragmentary horizontal sectional view of the same, taken on line 2^a 2^a of Fig. 3. Fig. 3 is a detail face view of the ribbon-guide represented in Fig. 2. Fig. 4 is a side view of the same. Fig. 5 is a face view of another form of ribbon-guide embodying my invention. Fig. 6 is a side view of the same. Fig. 7 is a top view of the guide represented in Figs. 5 and 6.

Referring to Fig. 1 of the drawings, 1 indicates the framing of the machine, in which a segment 2 is supported. This segment in turn supports a bar 3, which constitutes the pivot for the type-bars 4. The type-bars are each connected to a link 5, which is pivoted to the framing of the machine, as indicated at 6, and is likewise pivoted to a key-lever 7, as indicated at 8. Only one of such type-bars and type-bar movements is shown. The platen 9 is indicated in dotted lines. The ribbon 10 is supported by suitable spools 11 and in its passage from spool to spool is threaded through a ribbon-guide 12. This ribbon-guide 12 is connected to a lever 13 or other suitable means for automatically moving it in a direction transverse to the length of the ribbon at each operation of the type-bar. The ribbon-guide 12 moves in a suitable recess 14 in the segment or in the framing of the machine. A type-bar guide 15 extends in front of the ribbon-guide, so as to guide the type-bar in its movement to the printing-point. This type-guide 15 is in alinement with the bifurcated portion of the ribbon-guide and is secured to the segment 2 and constitutes a means with which the arms 16 of the ribbon-guide coöperate to prevent a lateral movement or displacement of the ribbon-guide. So much of the machine as has been described constitutes a part of the well-known "Underwood" type-writing machine, to which I have shown my invention applied, though it should be understood that the ribbon-guide forming the subject-matter of my invention may be applied to any type-writing machine wherein it may be found available.

Referring particularly to Figs. 2, 2^a, 3, and 4 of the drawings, it will be observed that the ribbon-guide 12 is provided with a bifurcated portion which forms arms 17, between which the type on the bar 4 is adapted to strike. The ribbon-guide is likewise provided with guiding-arms 16, which coöperate with suitable means to prevent a lateral movement of the ribbon-guide. Extending from the ribbon-guide is a plurality of ribbon-guiding arms 18, which arms are preferably out of alinement with the arms 17, forming the bifurcated portion, as indicated in Fig. 4 of the drawings. The ribbon passes in front of the guiding-arms 18, as indicated in Fig. 3 of the drawings, and to the rear of the arms 17, formed by the bifurcated portion. The arms 18 are each provided with a latch 19, pivoted as indicated at 20. The free end of each of these latches has a locking engagement 21, which coöperates with a depression 22 in the coöperating arm 17, as indicated in Fig. 2^a of the drawings. Each of the latches 19 may likewise be provided with a finger-piece 21 (see Fig. 2) to facilitate the engagement and disengagement of the latch from the arm 17, with which it coöperates. It will be understood that the resiliency of the arms 17 and the latches 19 and arms 18, on which they are

carried, maintains the parts in locked position and that a movement of the latches around their pivots will be sufficient to release the latches from this so-called "locking engagement." The ribbon-guide may likewise be provided with a spring or abutment 23, (see Fig. 4,) which is adapted to abut against a wall of the opening 14 and provide against a free lateral movement of the guide in the recess 14.

The guide represented in Figs. 5, 6, and 7 of the drawings is provided with pivoted or hinged arms 24, which are bent at right angles at the upper and lower ends thereof, as indicated at 25 and 26, respectively. The ends 25 in the normal position represented in the drawings are adapted to bear upon the arms 17 and to be maintained in this position by the springs 27, which bear upon the bent ends 26. The ribbon 10 passes in front of the hinged arms 24 and to the rear of the arms 17, formed by the bifurcated portion of the guide, as indicated in Fig. 5 of the drawings. This guide may likewise be provided with the guide-arms 16, as in the construction previously described.

The spaces between the arms 17 and 18 in Figs. 3 and 4 or between the arms 17 and the hinged arms 24 in Figs. 5 and 6 constitute ribbon-receiving portions or openings, and at the lower portions of these openings are formed shoulders or guides 17^a for the lower edge of the ribbon 10.

In order to insert the ribbon in the guide shown in Figs. 2, 2^a, 3, and 4 of the drawings, it is merely necessary to turn the latches 19 on their pivots and insert the ribbon laterally in the rear of the bifurcated portion and pass it through the spaces between the arms 17 and 18, which spaces constitute what I term a "ribbon-receiving portion." The latches 19 may be then moved to the position indicated in the drawings, when they will be maintained in locked position and will prevent the ribbon from being accidentally displaced or withdrawn laterally or edgewise from the guide during the vertical movement of the guide.

In the construction illustrated in Figs. 5, 6, and 7 of the drawings it will be seen that the arms 24, with their bent arms, constitute latches which prevent the accidental lateral displacement of the ribbon from the guide. In order to insert the ribbon in this guide, it is merely necessary to turn the arms 24 on their hinges or pivots, when the bent ends 25 will be moved to a position where the ribbon may be readily inserted laterally or edgewise between the arms 24 and the arms 17, formed by the bifurcated portion of the guide, as indicated in Fig. 5 of the drawings, the ribbon extending to the rear of the bifurcated portion. The arms 24 may be then turned on their pivots and secured therein by the tension of the springs 27, thus maintaining the ribbon against accidental withdrawal from the guide. In both structures it will be seen that the spring-latches or portions which prevent the ribbon from being withdrawn from the guide are spring-pressed. It is obvious that this spring-pressed feature may be attained either by the inherent resiliency of the features themselves or by separate springs, and it is in this sense in which I employ the term "spring-pressed" in the claims.

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

1. A ribbon-guide carried by the framing of the machine, and comprising spaced arms, one at each side of the printing-point, and additional arms located exteriorly of the first-named arms and forming therewith ribbon-receiving portions, connections extending from one end of each additional or outer arm to the adjacent inner arm, and movable latches arranged to bridge or leave open the spaces between the other ends of the inner and outer arms.

2. A ribbon-guide carried by the framing of the machine, and comprising spaced arms, one at each side of the printing-point, and additional arms located exteriorly of the first-named arms and forming therewith ribbon-receiving portions, shoulders or guides formed adjacent to the attached ends of the outer arms, and latches arranged at the free ends of the arms, to close the ribbon-receiving portions.

3. A ribbon-guide having spaced arms arranged to engage the faces of the ribbon, said arms being connected at one end, the connection forming a guide for one edge of the ribbon, and a movable latch located at the other ends of the arms, to form, in one position, a guide for the other ribbon edge, and to allow, in the other position, the ribbon to be inserted or removed edgewise.

4. In a type-writing machine, the combination of ribbon-spools carried by the framing of the machine, a ribbon-guide having a ribbon-receiving portion, through which the ribbon extends in its movement from one spool to another, hinged hand-operated means for closing the opening through which the ribbon is introduced and for preventing the accidental withdrawal of the ribbon from the guide and means for maintaining the hinged means in a closed position.

5. In a ribbon-guide for type-writing machines, the combination of a bifurcated portion across which the ribbon is adapted to pass and betweeen the arms of which the type-carrier is adapted to strike, and means which are movable relatively to said bifurcated portion for preventing the accidental withdrawal of the ribbon from said bifurcated portion when the parts are in one position but to permit the lateral withdrawal of the ribbon when the parts are in another position.

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