

No. 856,254.

PATENTED JUNE 11, 1907.

W. F. HELMOND.
TYPE WRITING MACHINE.
APPLICATION FILED APR. 12, 1907.

Fig. 1.

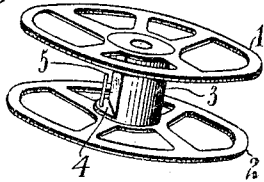


Fig. 2.

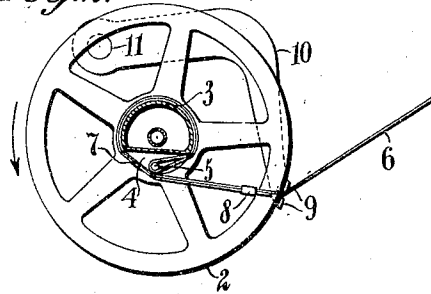


Fig. 3.

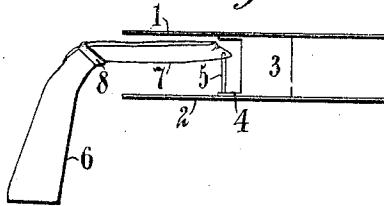


Fig. 4.

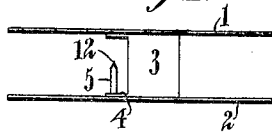
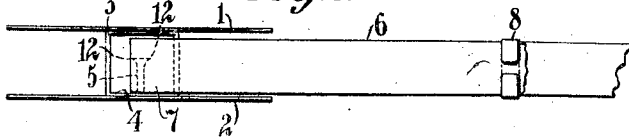


Fig. 5.



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UNITED STATES PATENT OFFICE.

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TO UNDERWOOD TYPEWRITER COMPANY, OF NEW YORK, N. Y., A COR-
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TYPE-WRITING MACHINE.

No. 856,254.

Specification of Letters Patent.

Patented June 11, 1907.

Application filed April 12, 1907. Serial No. 387,778.

To all whom it may concern:

Be it known that I, WILLIAM FERDINAND HELMOND, a citizen of the United States, residing in Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

This invention relates to the ribbons and ribbon spools of typewriting machines, as for instance those illustrated in Patent No. 828,548.

In machines, such as the Underwood, in which a narrow ribbon is employed, it is found difficult to attach the ribbon to the spool, owing to the closeness of the spool flanges to each other, which usually precludes the operator from inserting his thumb and finger between said flanges.

The principal object of my invention is to facilitate the attachment of a narrow ribbon to such a spool. I fix in one flange of the ribbon a pin or bitt which extends toward the other flange, leaving sufficient space between the tip of the pin and said other flange, to admit of the catching over the pin of a loop formed upon the ribbon by folding back the end thereof and attaching said end to the body of the ribbon. Such attachment is preferably effected in such a way as to form an obstruction upon the ribbon, for the purpose of engaging and operating a part of a ribbon reversing mechanism, such for instance as shown in said patent.

In the accompanying drawings, Figure 1 is a perspective view of a ribbon spool provided with my improvements. Fig. 2 is a sectional plan of the same, and illustrates a ribbon-reversing lever to be operated by a projection on the ribbon, the latter being threaded through a notch in said lever. Fig. 3 illustrates the manner of attaching the ribbon to the spool. Fig. 4 is a side elevation, and Fig. 5 a front elevation of a spool provided with another form of pin or bitt; Fig. 5 showing the ribbon caught over the pin.

In the form of spool illustrated, top and bottom flanges 1, 2, are united by a core 3 of cylindrical form having on one side a recess 4 to receive a pin 5, over which the ribbon 6 is caught. The pin is fixed in the bottom flange and extends up about two thirds of the way to the top flange, but leaves sufficient

space, to permit a loop 7 of ribbon to be introduced and caught over the pin as seen at Fig. 3. This operation may easily be performed by the operator, and the ribbon brought to the position seen at Fig. 5, whereupon it may begin winding around the core. The pin 5 holds the ribbon very securely, and it is practically impossible for it to become detached accidentally from the pin, owing largely to the proximity of the top of the pin to the top flange 1.

As seen at Fig. 2, the pin 5 is placed at the outer part of the recess 4, so that it may co-operate nicely with the core to receive the windings of ribbon. The loop of ribbon 7 is formed by folding back the end of the ribbon and securing said end to the body of the ribbon by any suitable means, as a metal clip 8.

At Fig. 2, it will be seen that the clip 8 forms an obstruction to engage the prongs 9 of a lever 10 pivoted at 11. The ribbon is threaded between said prongs 9, and unwinds in the direction shown by the arrow, so that when the obstruction 8 reaches the prongs it will swing the lever outwardly and thereby reverse the direction of winding of the ribbon; all as explained in said patent.

At Figs. 4 and 5, the pin 5 is shown as shorter than at the remaining figures, for greater convenience in casting the ribbon loop thereover, as more room is left between the top of said pin and the upper spool flange 1. The pin is formed however at its top with barbs 12, either of which may catch in the loop of the ribbon and hold the same against slipping off.

Having thus described my invention, I claim:

1. In a typewriting machine, the combination of a ribbon spool comprising two flanges, a core uniting said flanges, and a ribbon-holding pin or bitt fixed in one flange and extending toward the other flange but sufficiently short to permit to be caught thereover a loop of ribbon introduced between the flanges.

2. In a typewriting machine, the combination of a ribbon spool comprising two flanges, a core uniting said flanges, and a ribbon-holding pin or bitt fixed in one flange and extending toward the other flange but sufficiently short to permit to be caught thereover a loop of ribbon introduced between the flanges, an

ink ribbon having its end folded back to form a loop, and caught upon said pin, and means securing said folded end to the body of the ribbon and forming an obstruction upon the ribbon for operating a ribbon-reversing mechanism.

3. In a typewriting machine, the combination of a ribbon spool comprising two flanges, a core uniting said flanges, and a ribbon-holding pin or bitt fixed in one flange and extending toward the other flange but sufficiently short to permit to be caught thereover a loop of ribbon introduced between the flanges, an ink ribbon having its end folded back to form a loop caught upon said pin, and means securing said loop end to the body of the ribbon and forming an obstruction upon the ribbon for operating a ribbon-reversing mechanism; said securing means being in the form of a sheet metal clip, each end of which is folded over the ribbon plies.

4. The combination with a ribbon spool comprising a pair of flanges united by a core, of a ribbon of such width as to nearly fill the space between said flanges, the end of said ribbon folded back to form a loop, and a pin extending from one of said flanges toward the other and sufficiently short to permit the

loop to be readily disconnected from or caught upon the pin.

5. The combination with a ribbon spool comprising a pair of flanges united by a core, of a ribbon of such width as to nearly fill the space between said flanges, the end of said ribbon folded back to form a loop, and a pin extending from one of said flanges toward the other and sufficiently short to permit the loop to be readily disconnected from or caught upon the pin, the end of the folded back part of the ribbon being connected to the body of the ribbon in a manner to form an obstruction for operating a ribbon-reversing mechanism.

6. In a typewriting machine, the combination of a ribbon spool comprising two flanges, a core uniting said flanges, and a ribbon-holding pin or bitt fixed in one flange and extending toward the other flange but sufficiently short to permit to be caught thereover a loop of ribbon introduced between the flanges; said pin formed with a barb to catch the ribbon.

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