

W. F. HELMOND.
TYPE WRITING MACHINE.
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928,972.

Patented July 27, 1909.

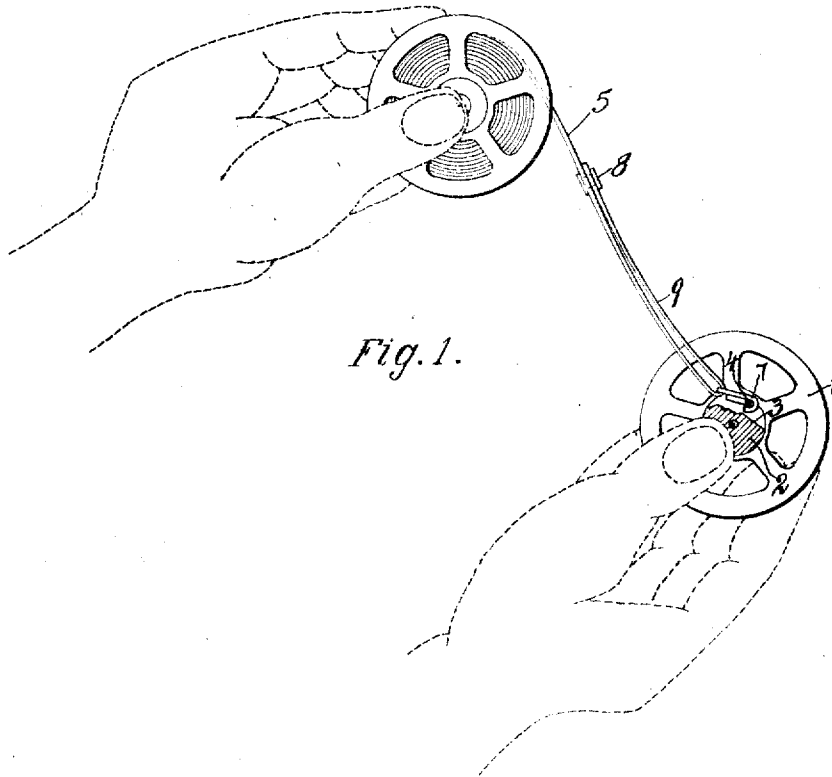


Fig. 1.

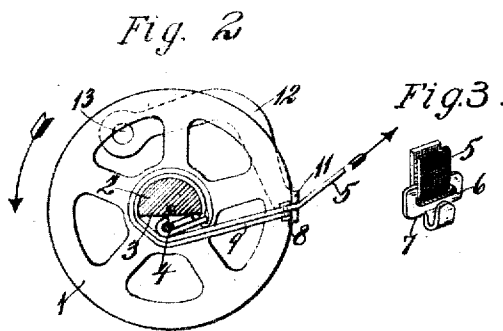


Fig. 2

Fig. 3.

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UNITED STATES PATENT OFFICE.

WILLIAM F. HELMOND, OF HARTFORD, CONNECTICUT, ASSIGNOR TO UNDERWOOD TYPE-WRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

TYPE-WRITING MACHINE.

No. 928,972.

Specification of Letters Patent.

Patented July 27, 1909.

Application filed January 24, 1908. Serial No. 412,433.

To all whom it may concern:

Be it known that I, WILLIAM F. 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 ribbons for typewriting machines, and the object of the invention is to provide an improved, simple and inexpensive means for attaching the ribbons to the ribbon spool, especially in a manner to coöperate with a ribbon-reversing mechanism; so as to overcome the difficulty of attaching the ribbon to the spool due to the narrow space between the spool flanges.

In carrying out the invention, I provide a hook having an eye through which the end of a ribbon is threaded, then fold such end back and secure it to the body of the ribbon to form a very long loop to support the hook. The latter catches over a pin fixed between the flanges of the spool; the means for securing the end to the body of the ribbon forming also an obstruction for operating a ribbon-reversing mechanism, such, for instance, as shown in United States Patent No. 828,548, dated August 14, 1906.

In the accompanying drawings, Figure 1 is a view illustrating the manner of attaching the improved ribbon to the ribbon spool. Fig. 2 is a sectional plan elevation of a ribbon spool, showing the means for securing the end to the body of the ribbon in engagement with the forked end of a lever forming part of a ribbon-reversing mechanism. Fig. 3 is a perspective view of the ribbon-attaching hook.

The ribbon spool comprises a pair of flanges 1, connected by a core 2, flattened or cut away, as at 3. A ribbon-attaching pin 4 is secured between the flanges adjacent to the flattened portion 3.

The ribbon 5 is threaded through an eye 6 in a hook 7, then folded back and secured to the body of the ribbon by a rivet or eyelet 8, forming a loop 9 of great length for support-

ing the hook 7, the latter preferably hanging loosely in the loop.

To attach a ribbon, a spool is taken in either hand, Fig. 1, allowing the looped end and the hook 7 to fall between the flanges of the lower spool, and by a slight upward pull the hook is caught upon the pin 4. The attachment of the ribbon is accomplished without liability of soiling the hands.

At Fig. 2 the eyelet 8 is shown as engaging with the forked end 11 of a lever 12, pivoted at 13, the ribbon being threaded between the prongs of fork 11, and unwinding as indicated by the arrow. When the eyelet 8 reaches the fork 11, the continued unwinding of the ribbon will throw the lever 12 outwardly, and thereby operate mechanism to reverse the winding of the ribbon as set forth in the patent hereinbefore referred to. The loop of the ribbon is of extraordinary length, to enable the obstruction at one end thereof to engage the ribbon-reversing lever, which is mounted exteriorly of the spool, while the hook at the other end thereof is caught on the spool pin, and the body of the loop is wrapped around the core, so that the spool may continue to unwind freely while the ribbon-reversing lever is being operated.

Having thus described my invention, I claim:

1. In a typewriting machine, the combination with a ribbon spool having a ribbon-attaching pin, of a ribbon, the end of which is threaded through an eye in a hook, then folded back and secured to the body of the ribbon, to form a loop, said hook catching over the pin in the spool when attaching the ribbon, and the means for securing the end of the ribbon forming an obstruction to abut against a lever disposed exteriorly of the spool to operate a ribbon-reversing mechanism; said hook of sufficient length to permit said obstruction to operate said lever while a substantial portion of the length of the loop remains wrapped around the core.

2. In a typewriting machine, the combination with a detachable ribbon-spool having a core and flanges and a ribbon-attaching

pin, of a ribbon, the end of which is folded back and secured to the body of the ribbon to form a loop by means which forms an obstruction to abut against the forked arm of a lever disposed exteriorly of the spool to operate a ribbon-reversing mechanism, and a hook caught upon the free end of the loop to catch over the pin in the spool, said loop of

sufficient length to permit said obstruction to operate said lever while a substantial portion of the length of the loop remains wrapped around the core. 10

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