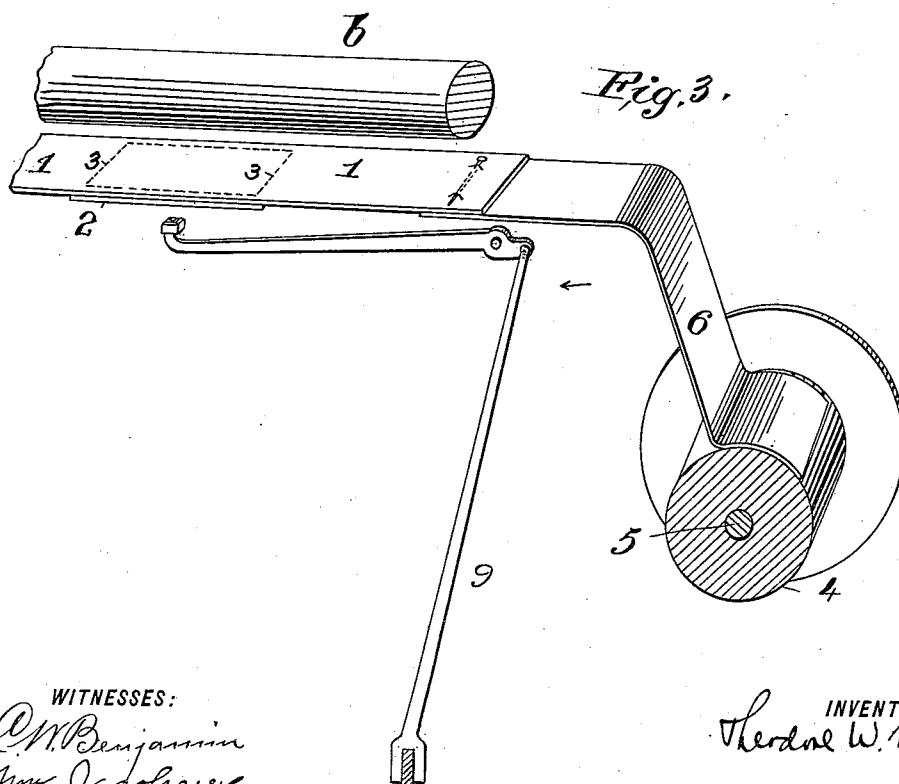
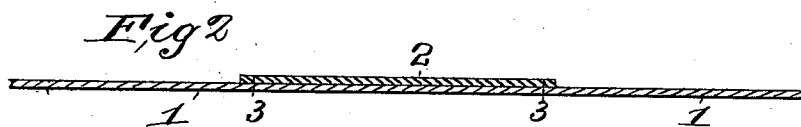
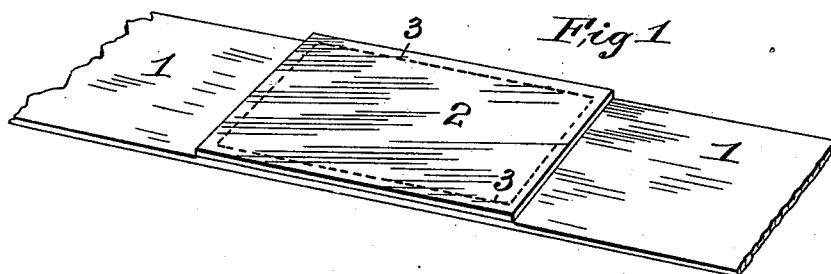


(No Model.)

T. W. MANVELL.
RIBBON FOR TYPE WRITING MACHINES.

No. 554,706.

Patented Feb. 18, 1896.



WITNESSES:

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THEODORE W. MANVELL, OF BROOKLYN, NEW YORK.

RIBBON FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 554,706, dated February 18, 1896.

Application filed August 31, 1895. Serial No. 561,091. (No model.)

To all whom it may concern:

Be it known that I, THEODORE W. MANVELL, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Type-Writer Ribbons, of which the following is a specification.

My invention relates to type-writer ribbons, and has for its object to provide the ribbon with an elastic and non-continuous pad or covering, which when struck by the type will, by reason of its density as compared with the ribbon, produce a sound which will notify the operator that the end of the ribbon has been reached, and thus prevent the ribbon from being worn out at that point by the continued striking of the type on one place.

My invention therefore consists in the construction and combination of parts hereinafter described, and further pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a perspective view of a portion of type-writer ribbon provided with my invention, with the pad reversed. Fig. 2 is a longitudinal sectional elevation of the same, and Fig. 3 is a diagrammatic view representing the application of a ribbon provided with my invention to a type-writer.

Similar numerals of reference indicate like parts throughout the several views.

In the drawings, 1 indicates a type-writer of the usual or desired kind, and 2 a thin sheet or pad of soft rubber or other resilient or pliant material secured to the ribbon by a line of stitches 3 and encompassing in its transverse surface the entire plane of contact of the type with the ribbon.

Instead of sewing or otherwise securing the pad to the ribbon it may be formed thereon by coating the ribbon with liquid rubber, its compounds, or other equivalent material.

As shown in the drawings, both the ribbon and pad are of considerable thickness, but they are actually much thinner than shown, while it is preferred that the pad be thicker than the ribbon; and it is preferred that the pad be located on the bottom of the ribbon, so as not only to prevent the ribbon being worn out, owing to repeated blows of type, but that the pad shall travel a greater distance before impinging against the ribbon.

The application of my invention as an alarm to notify the operator that the end of the ribbon has been reached will now be described.

At 4 is the usual ribbon-spool rotatively mounted on a spindle 5. The spool carries a short piece of uninked ribbon 6, one end of which is secured fast to the spool, the other end being free, to which the inked ribbon 1 is secured by a pin 7 or other means. At 8 is the platen and at 9 a type-bar carrying a type-block. The ribbon, which has been moved in the direction of the arrow, Fig. 3, has reached its end, and under the present method the rapid operation of the machine would cause the type to be impacted on the ribbon in the same transverse plane, unduly wearing the ribbon and causing other annoyances.

To carry out my invention I secure the alarm-pad to the ribbon, preferably on the under side, or on top, if desired, near the end of the same, so that when the end of the ribbon is about to be reached the type-block will impinge against it, and by the flapping sound given off the operator will be notified that the end of the ribbon has been reached, and can then reverse the feed.

Having described my invention, I claim—

1. As a new article, a type-writer ribbon having an alarm-pad attached thereto at a distance from its end, whereby, when the ribbon is entirely unwound from the spool the pad will be at the printing-point, substantially as and for the purposes set forth.

2. As a new article, a type-writer ribbon having an alarm-pad comprising a sheet or pad of pliant material attached to its face at a distance from its end, whereby, when the ribbon is entirely unwound from the spool the pad will be at the printing-point, substantially as described.

3. As a new article, a type-writer ribbon having an alarm-pad comprising an elastic surface added to one side thereof at a distance from its end, whereby, when the ribbon is entirely unwound from the spool the pad will be at the printing-point, substantially as described.

4. As a new article, a type-writer ribbon having an alarm-pad comprising a sheet of rubber attached to the ribbon, at a distance from its end, whereby, when the ribbon is entirely unwound from the spool the pad will

be at the printing-point, substantially as described.

5 The combination in a writing mechanism, of a type-block, a platen, and a ribbon-spool, and means for operating them, of a ribbon secured to the spool, said ribbon having an alarm-pad attached thereto at a distance from its end, whereby, when the ribbon is entirely unwound from the spool, the pad

will be at the printing-point, and adapted to be impinged against the platen by the type-block, substantially as described. 10

Signed at the city, county, and State of New York this 29th day of August, 1895.

THEODORE W. MANVELL.

Witnesses:

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