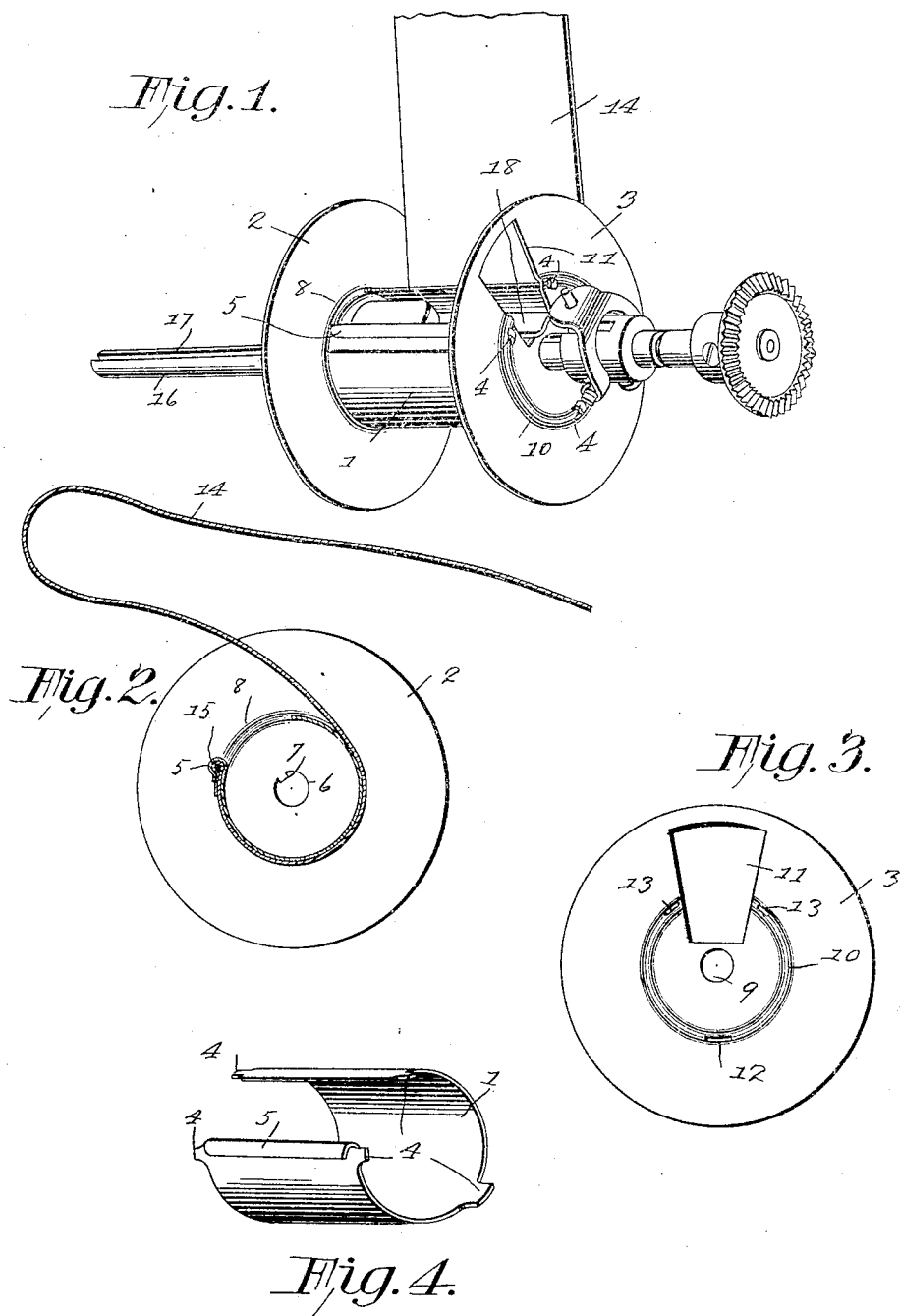


No. 805,634.

PATENTED NOV. 28, 1905.

H. M. COLVIN.
TYPE WRITER RIBBON SPOOL.
APPLICATION FILED APR. 1, 1905.



Witnesses
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UNITED STATES PATENT OFFICE.

HOWARD M. COLVIN, OF ALVA, OKLAHOMA TERRITORY, ASSIGNOR OF ONE-HALF TO LEWIS WESTFALL, OF ALVA, OKLAHOMA TERRITORY.

TYPE-WRITER-RIBBON SPOOL.

No. 805,634.

Specification of Letters Patent.

Patented Nov. 28, 1905.

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To all whom it may concern:

Be it known that I, HOWARD M. COLVIN, a citizen of the United States, residing at Alva, in the county of Woods and Territory of Oklahoma, have invented a certain new and useful Type-Writer-Ribbon Spool, of which the following is a specification.

As ordinarily put upon the market type-writer ribbons are contained upon a temporary spool, from which they must be removed for connection with the permanent spools of type-writing machines. Considerable difficulty is experienced in placing a new ribbon upon a machine, particularly of the Remington type, wherein each spool is provided with a short tab, to which the ribbon must be pinned. In view of this difficulty I propose to put up type-writer ribbons permanently connected to spools, which are constructed to be substituted for the usual removable ribbon-spool at the right-hand side of the machine, in order that a new ribbon may be put on without removing the same from its original spool.

It is furthermore designed to accommodate the spool of the present invention to all of the requirements of the removable spool of the type-writing machine, so that it may be connected with the spool-shaft for rotation therewith and to permit of the usual operation of the ribbon-reversing lever commonly carried by said shaft.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a perspective view of a ribbon-spool of the present invention mounted upon the removable spool-shaft of a Remington type-writing machine. Fig. 2 is a cross-sectional view taken through the hub of the spool of the present invention. Fig. 3 is a detail view of one of the heads of the present spool. Fig. 4 is a detail perspective view of the hub of the spool.

Like characters of reference designate corresponding parts in each and every figure of the drawings.

To render the spool of the present invention strong, durable, and inexpensive, it is proposed to form the same entirely of metal, and therefore the spool includes a hub 1 and opposite heads 2 and 3. The hub 1 is formed of a single blank of sheet metal, which is bent into the form of a cylinder with its ends spaced at a suitable interval to form a longitudinal opening throughout the length of the hub. Each end of the hub is provided with three integral ears or projections 4, one of which is at each end of the blank and the other substantially midway between its ends. One end of the blank has a transversely-disposed lip portion 5, designed to be bent back upon the exterior of the hub for a purpose as will be hereinafter described.

The head 2 is circular in form and is provided with a central circular opening 6, having an integral radial projection 7 extending into the opening, there being an annular groove or channel 8 disposed concentrically with respect to the opening 6 and pressed in the inner face of the head. The other head 3 has a central circular opening 9 corresponding to the opening 6 of the head 2, but without a radial projection. An annular channel or groove 10, corresponding to the channel or groove 8, is pressed in the head 3, and there is a radial opening 11 formed in said head and extending from a point adjacent the opening 9 nearly to the outer peripheral edge of the head. A perforation 12 is formed in the channel 10 of the head 3 diametrically opposite the radial opening 11, and a perforation 13 is also formed in the channel adjacent each edge of the opening 11.

In assembling the hub and the heads the projections 4 of the hub are received through the perforations 12 and 13 of the respective heads, it of course being understood that the head 2 is provided with perforations similar to the head 3. After the projections have been passed through the perforations and the ends of the hub snugly seated in the grooves 8 and 10 of the heads the projections are clenched or upset against the outer sides of the heads, so as to draw and retain the latter in rigid condition upon the ends of the hub. When the three parts of the spool are thus

assembled, the longitudinal space between the opposite ends of the blank of the hub 1 forms a longitudinal opening in communication with the bore of the hub, with one end of the opening in communication with the radial opening 11 of the head 3.

After the spool has been completed the ink-ribbon 14 has one end folded around a rod or pin 15, as clearly indicated in Fig. 2, and then the lip 5 of the hub is bent or rolled over snugly upon the ribbon and the rod, so as to permanently connect one end of the ribbon to the spool, and then the remaining portion of the ribbon is wound upon the hub 1 between the heads 2 and 3, in the usual manner.

As hereinbefore indicated, the present spool, with the ribbon permanently attached thereto, has been expressly provided for taking the place of the permanent removable ribbon-spool at the right-hand side of a Remington type-writing machine, this substitution being carried out in the following manner: The removable ribbon-spool shaft is taken out of the machine, one such shaft being indicated at 16 in Fig. 1 of the drawings, and then the present spool, with the ribbon thereon, is slipped upon the shaft with the head 3 foremost and the projection 7 fitting in the longitudinal groove 17 ordinarily provided in the shaft. After the spool has thus been fitted upon the shaft the latter is replaced in the machine and the free end of the ribbon partially unwound and connected to the opposite non-removable ribbon-spool of the machine. It will of course be understood that the original ribbon is wound upon the right hand spool and the latter removed from the removable shaft before the new spool and its permanently-attached ribbon are substituted therefor. The spool which is removed is of course discarded, as it is not again required for use.

It will now be understood that the present spool is interlocked by the projection 7 with the shaft 16 in the same manner as the ordinary ribbon-spool, while the radial opening 11 in the head 3 and the longitudinal opening in the hub accommodate the weighted reversing-lever 18, commonly mounted upon the shaft 16, as will be readily understood by those skilled in the art to which this invention appertains.

From the foregoing description it is apparent that the spool of the present invention serves all of the purposes of the ordinary spool, while its construction renders the same sufficiently inexpensive, light, and durable to en-

able the marketing of type-writer ribbons permanently attached thereto, the advantage of the invention residing in the facility whereby new ribbons may be placed upon type-writing machines without soiling the hands and without encountering the difficulties ordinarily experienced in the replacing of a worn ribbon.

Having thus described the invention, what is claimed is—

1. A type-writer-ribbon spool including a tubular hub bent from a blank, with the ends of the blank spaced to form a longitudinal slot, and heads connected to the ends of the hub and provided with concentric shaft-receiving openings, one of the heads having a radial opening in communication with the adjacent end of the slot of the hub.

2. A type-writer-ribbon spool comprising a tubular hub bent from a blank with the ends of the blank spaced to form a longitudinal slot in the hub, the ends of the hub having integral bendable projections, one of said projections being disposed at each end of the blank, and heads fitted to the ends of the hub and provided with openings receiving the projections which are bent back against the heads, one of the heads having a radial opening in communication with the adjacent end of the slot in the hub.

3. A type-writer-ribbon spool comprising a tubular hub formed from a blank which has its ends spaced to form a longitudinal slot in the hub, and heads applied to opposite ends of the hub, one of the heads being provided with a radial opening in communication with the slot of the hub, and one edge of the slot in the hub having a bendable ribbon-fastening tongue.

4. As a new article of manufacture, a spool including a hub bent from a blank with the ends of the blank spaced to form a longitudinal opening in the hub, heads connected to the ends of the hub and provided with corresponding concentric shaft-receiving openings, one of the heads having a radial opening in communication with the opening of the hub and a type-writer ribbon wound upon the hub, one end of the hub-blank being folded over upon the inner end of the ribbon to permanently connect the latter to the spool.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HOWARD M. COLVIN.

Witnesses:

W. J. QUINLAN,
FRANK AXTELL.