Feb. 27, 1962 W. A. HEIDT ET AL 3,022,879

ATTACHMENT FOR TYPEWRITER RIBBON

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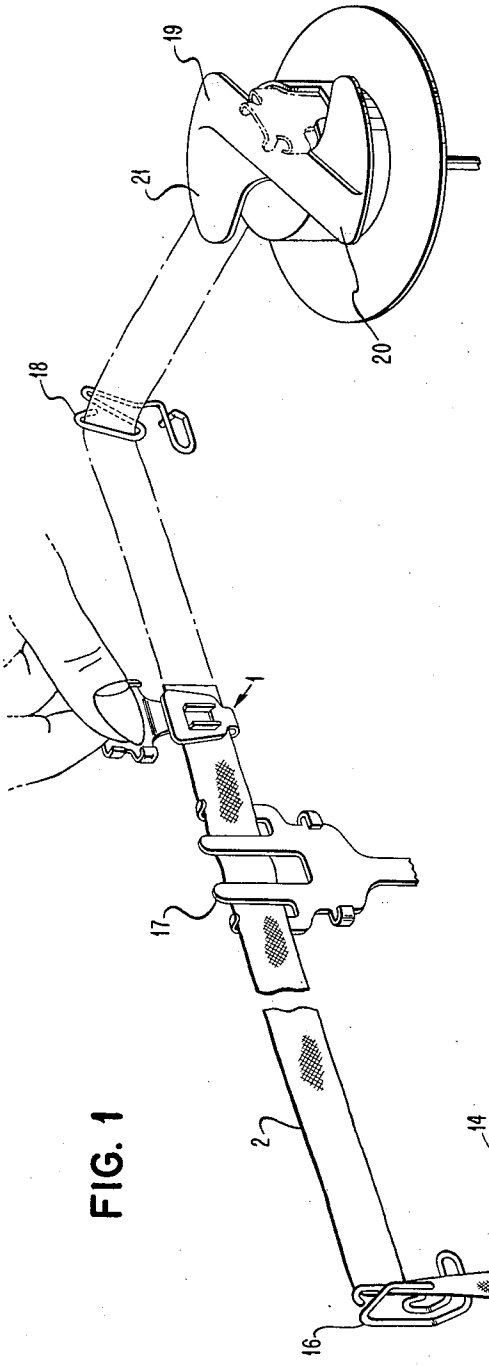


FIG. 1

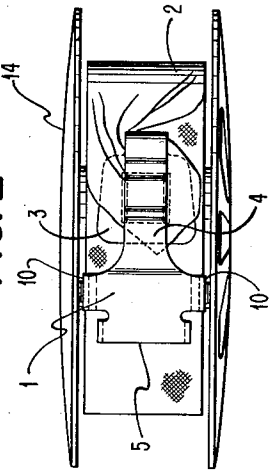


FIG. 2

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FIG. 3

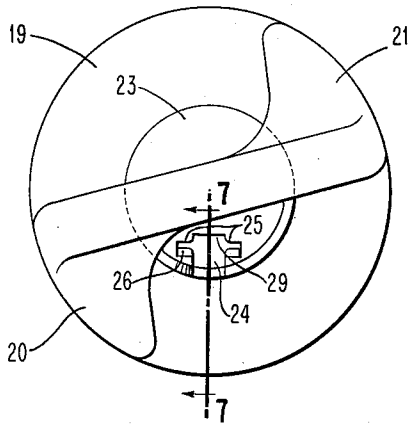


FIG. 7

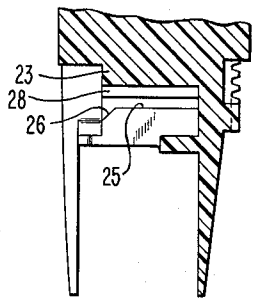


FIG. 4

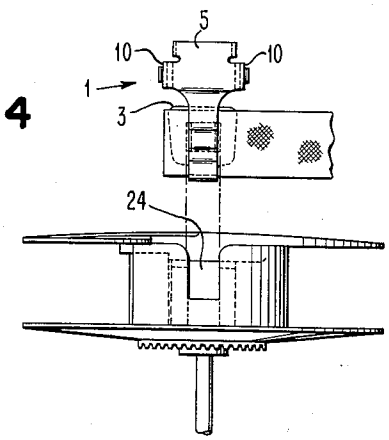


FIG. 5

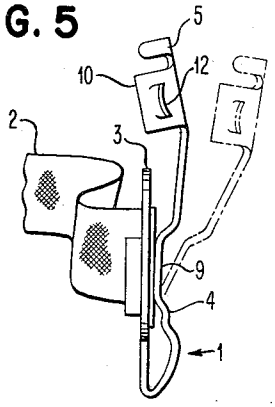
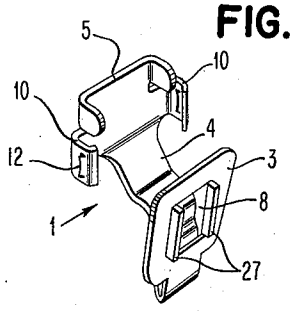


FIG. 6



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ATTACHMENT FOR TYPEWRITER RIBBON

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4 Claims. (Cl. 197—172)

This invention is directed to an attachment for handling a typewriter ribbon while threading the latter through guides, and to the co-operation of the attachment with both a supply spool and a take-up spool for securing one end of the ribbon thereto under different conditions.

When a new ribbon is being installed in a typewriter, it is desirable that there be attached to its outer end some means which may be grasped by the operator to permit a threading of the ribbon through guides without touching the inked portion. By designing the attachment so it fits snugly between flanges of the supply spool, the outer end of the ribbon is held against unwinding from the spool before it is used. The operator may grasp the attachment and remove it easily from between the flanges to withdraw the ribbon from the spool and thread it through the guides. A connection of the ribbon to the take-up spool may be effected by simply inserting the attachment while the ribbon remains affixed thereto, into a socket formed in the hub of the takeup spool.

An object of this invention is to provide an improved attachment for a typewriter ribbon.

Another object of this invention is to provide for a typewriter ribbon an improved attachment which permits a threading of the ribbon through guides without touching the inked portion, the attachment being designed to cooperate with the supply and take-up spools of a typewriter for holding the ribbon releasably attached thereto.

Yet another object is to provide for a typewriter ribbon an attachment having a portion which grips one end of the ribbon, and another portion which acts as a handle for use in threading the ribbon through guides, the gripping portion being receivable in a socket formed in the hub of a take-up spool for holding the end of the ribbon in winding relation with the spool, and the handle portion being movable outwardly from the spool hub while supported in the socket to effect a release of the gripping portion from the ribbon.

Other objects of the invention will be pointed out in the following description and claims and illustrated in the accompanying drawings, which disclose, by way of example, the principle of the invention and the best mode, which has been contemplated, of applying that principle.

In the drawings:

FIG. 1 is a schematic view showing a typewriter ribbon being threaded by means of the improved attachment from a supply spool to a take-up spool.

FIG. 2 is a side elevational view of the supply spool with the attachment engaging the flanges of the spool for holding the ribbon against unwinding therefrom.

FIG. 3 is a plan view of the take-up spool.

FIG. 4 is a side elevational view of the take-up spool with a ribbon having its attachment in position to be inserted into a socket in the hub of the spool.

FIG. 5 is a side elevational view of an attachment in position for clamping to an end of the ribbon.

FIG. 6 is a perspective view of the ribbon attachment.

FIG. 7 is a vertical sectional view of the take-up spool taken on the line 7—7 of FIG. 3.

Referring to the drawings, it will be noted that there is shown an improved attachment 1 adapted to be clamped to a typewriter ribbon 2. As shown more clearly in FIGS. 5 and 6, the attachment comprises a clamping portion 3 connected by a shank portion 4 to a

handle portion 5. The complete attachment may be stamped from a thin sheet of metal and bent into the shape shown. Formed in the portion 3 is an opening 8 into which the ribbon may be forced by an offset portion 9 on the shank 4 when the latter is bent upwardly to a clamping position. At each side of the handle portion 5 is a flange 10 bent to a position perpendicular to the shank. A cut 12 is made in each flange, and the metal at one side of the cut is forced out slightly to present an edge which is engageable with a flange of a supply spool 14. As shown in FIG. 2, the flanges 10 on the attachment 1 fit snugly between the flanges of the supply spool, and the edges of the cuts 12 act on the spool flanges to hold the attachment against release by normal handling. With the ribbon clamped between the attachment portion 3 and the shank 4, no unwinding of the ribbon can take place.

To install a new ribbon in a typewriter, the supply spool of FIG. 2 is mounted on a spindle at one side of the typewriter, as shown in FIG. 1. The operator then grasps the handle portion of the attachment 1 and removes it from between the spool flanges. While holding the handle portion so that it extends above the upper edge of the ribbon, the operator directs the ribbon from the supply spool through guide members 16, 17 and 18 to a take-up spool 19.

As shown in FIGS. 1 and 3, the take-up spool has diametrically opposite flange portions 20 and 21 at its upper side extending angularly about only a small portion of the spool circumference. A hub 23 on this spool has exposed upper surfaces between the flange portions, and formed in one of these surfaces is a socket 24 into which the lower part of the attachment 1 may be inserted when held in the position shown in FIG. 4. The socket 24 is T-shaped with the upper horizontal part 25 being formed to receive the clamping portion 3 of the attachment. To assist in the insertion of the attachment into the socket, the upper front edge of the portion 25 is beveled at 26, as shown. The middle portion of the socket opens through the side of the hub 23, and the shank portion 4 of the attachment is received within the middle socket portion with clearance at its edges. The handle portion 5 and the flanges 10 on the attachment extend above the upper end of the hub when inserted into the socket. For holding the attachment firmly in an upright position in the socket, there is provided at each side of the opening 8 in the clamping portion, a flange 27 which engages a side 28 of a recess 29 at the inner end of the socket. When the attachment is inserted into the socket, it lies completely inside the surface of the hub and the ribbon may be wound about the latter without interference.

As soon as the ribbon becomes worn out and needs to be replaced, the supply spool is driven until all of the ribbon except that extending through the guides to the take-up spool, has been wound onto it. The handle portion 5 of the attachment is then forced by the operator outwardly to move the shank portion 4 through the open side of the socket. During this time, the clamping portion 3 is retained by the socket portion 25. Movement of the shank portion relative to the clamping portion results in a releasing of the ribbon. The spool 14 may then be lifted from its spindle and moved in a direction to withdraw the ribbon from the guides. This spool and the ribbon wound thereon is then discarded and another spool with a new ribbon is mounted on the spindle. The attachment used with the discarded ribbon is then removed from the socket 24 and thrown away. The attachment on the new ribbon is used to thread the latter through the guides and to attach it to the take-up spool.

While there have been shown and described and pointed out the fundamental novel features of the in-

vention as applied to a preferred embodiment, it will be understood that various omissions and substitutions and changes in the form and details of the device illustrated may be made by those skilled in the art, without departing from the spirit of the invention. It is the intention, therefore, to be limited only as indicated by the scope of the following claims.

What is claimed is:

1. An attachment for handling the free end of an inked ribbon while threading the latter through guides and adapted to co-operate with a supply spool on which the ribbon is wound for holding the outer end of the latter against unwinding, said attachment comprising a member made of thin metal stock and having a portion bent about said ribbon for clamping the latter thereto, a handle portion on said member adapted to be grasped manually for moving and directing said ribbon through said guides, and projecting portions on said member frictionally engaging said spool for releasably holding said member in place thereon.

2. The attachment of claim 1 in which said projecting portions are formed on said handle portion for frictional engagement with the inner surfaces on the flanges of said spool.

3. An attachment for handling an inked ribbon while threading the latter through guides and adapted to be received in a socket opening through an end surface and the side surface on the hub of a take-up spool for connecting the ribbon thereto, said attachment comprising a member made of thin metal stock and having a portion bent about said ribbon for clamping the latter thereto, and a handle portion on said member extending transversely from said ribbon and adapted to be grasped for threading said ribbon manually through said guides, said

clamping portion of said member being receivable in said socket in a direction extending axially of said spool while said ribbon extends through the side of said socket, said handle portion projecting at this time beyond the end of said hub.

4. An attachment for handling an inked ribbon while threading the latter through guides and adapted to be received in a socket in the hub of a take-up reel for connecting the ribbon thereto, said socket being T-shaped in cross section and opening at one end through an end of said hub, and the central portion of said socket opening along one side through the outer surface of said hub, said attachment comprising a member made of thin metal stock and having a clamping portion, a handle portion, and a shank portion extending between said handle and clamping portions, said clamping portion being wider than said shank portion and bent toward the latter for clamping the ribbon therebetween, said clamping portion being receivable in the cross portion of said T-shaped socket, and said shank portion fitting loosely within the central portion of said socket to permit a releasing of said ribbon from said attachment by applying pressure to said handle portion for forcing said shank portion outwardly relative to said clamping portion through the open side of said socket.

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