United States Patent

Anderson

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[54] TYPEWRITER RIBBON CARTRIDGE GUIDE SUPPORT

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[73] Assignee: **SCM Corporation,** New York, N.Y.

[22] Filed: **Sept. 25, 1970**

[21] Appl. No.: **75,790**

Related U.S. Application Data

[63] Continuation of Ser. No. 710,064, Mar. 4, 1968, abandoned.

[52] **U.S. Cl.** **197/151,** 197/170

[51] **Int. Cl.** **B41j 33/14,** B41j 35/04

[58] **Field of Search** 197/151, 153, 153.5, 168, 170, 197/172, 178; 242/198, 199

[56] **References Cited**

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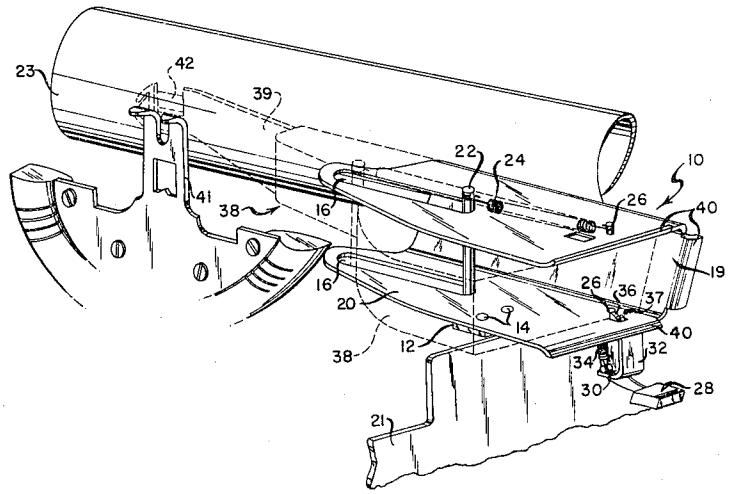
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[57] **ABSTRACT**

A typewriter support for guiding a ribbon cartridge to and retaining the cartridge in a rest position. The support includes a U-shaped member which is positioned near the machine side frame, a spring urged detent for retaining the cartridge after it is inserted to a predetermined depth within the guide support, and a biasing means for ejecting the cartridge from the support upon manual release of the detent means.

5 Claims, 3 Drawing Figures



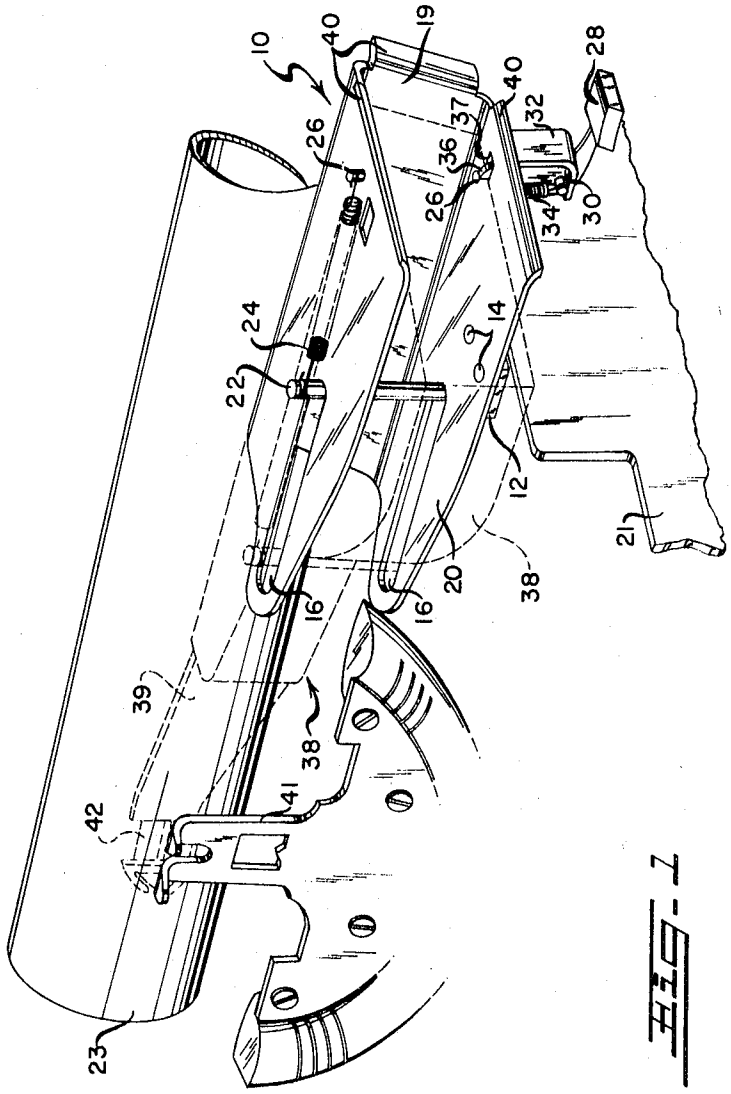


FIG. 1

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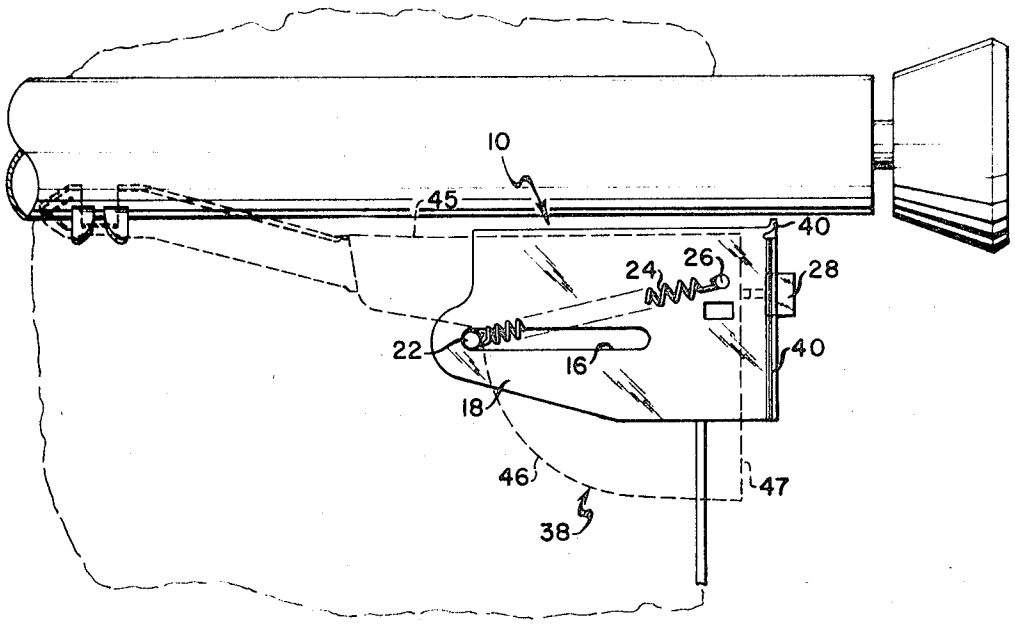


FIG. 2

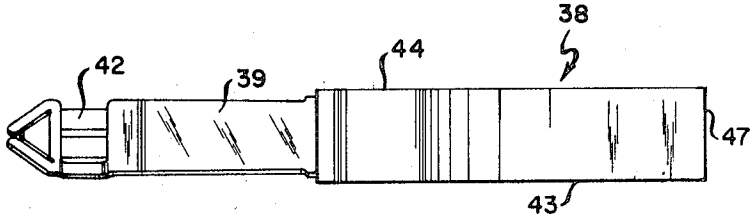


FIG. 3

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TYPEWRITER RIBBON CARTRIDGE GUIDE SUPPORT

This application is a continuation of application Ser. No. 710,064, filed Mar. 4, 1968, now abandoned.

BACKGROUND OF THE INVENTION

This invention relates to typewriter ribbon spool supports and more particularly to the type used for supporting a non separable, single-unit ribbon cartridge.

The typewriter art, through necessity, is becoming ever more heavily laden with the provision of cartridge-type ribbons thus providing the user a method of ribbon installation that is both clean and simple. Most known cartridges are of two spool construction wherein separate housings are provide for the spools but are joined in a side-by-side relationship by an integral plastic member. The joining member is provided with a weakened section for separating the spool housings and placing them in their respective supports after the ribbon is inserted in the machine vibrator.

The next advance within the art and with which the present invention is associated, is the provision of a single-unit ribbon cartridge having a ribbon vibrator carried thereby which needs only to be inserted into the machine thereby eliminating the required manipulations encountered with the separable cartridge type. A single-unit ribbon cartridge of this type is disclosed in U.S. Pat. application Ser. No. 710,085 filed of even date herewith by Carl P. Anderson and assigned to the assignee of the instant application.

SUMMARY OF THE INVENTION

The present invention provides a guide support for a typewriter ribbon cartridge, the support having a locking means and a biasing means whereby a single-element, vibrator equipped ribbon cartridge is guided to and locked in its normal rest position by the support upon insertion of the cartridge into the machine and whereby the cartridge may be selectively partially ejected from the machine automatically.

DESCRIPTION OF THE DRAWING

FIG. 1 is a right front perspective view of the cartridge support illustrating its location within the typewriter and showing by hidden lines a single element type ribbon cartridge supported therein;

FIG. 2 is a top plan view of FIG. 1, and

FIG. 3 is a front elevational view of the cartridge.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIGS. 1 and 2, the guide support is mainly comprised of a U-shaped member 10 which is rigidly mounted to a frame member 12 by a pair of rivets 14. The support has a pair of elongated slots 16 in the member upper and lower flanges 18 and 20 respectively and has a back wall 19 integrally connecting the flanges 18 and 20. The frame member 12 is rigidly assembled to right side frame 21 by any suitable means adjacent the platen 23. A post 22 is vertically disposed within the slots 16 and is biased to the right by a pair of springs 14 (one of which is shown) which are interconnected between the post ends and appropriate anchors 26 on the outward surfaces of the flanges 18 and 20.

A detent button 28 is rigidly fixed to the lower end of a detent slide link 30 which is slideably mounted within a frame bracket 32. Button 28 is normally biased upwards by a spring 34 so the uppermost end 36 of the link 30 extends through an appropriate slot 37 in the lower support flange 20. The link end 36 is substantially beveled on its surface facing away from the typewriter so the link will be cammed and displaced downward when the cartridge 38 is inserted from the right between the guide flanges 18 and 20. When the cartridge 38 reaches its predetermined normal rest position as indicated by the hidden lines, the link 30 is biased upward by spring 34 to the position shown for retaining the cartridge in its rest position. In the rest position, the cartridge 38 has an arm 39 extending therefrom for guiding the ribbon 42 from the cartridge

to the print point defined by the segment supported type guide 41 and back to the cartridge. The cartridge is substantially enclosed having a bottom portion 43, a top portion 44, a back side 45, front side 46, and an end wall 47. As the cartridge is inserted, the body of the cartridge contacts and carries with it the post 22 longitudinally within the slot 16 against the urgency of the post springs 24. This provides a standby means for partially ejecting the cartridge 38 when the detent button 28 is depressed and the link 30 is lowered to release the cartridge from its locked position.

The outward edges 40 of the U-shaped guide support 10 are formed away from the guide U-shape proper so as to provide a more convenient substantially horizontal insertion of the cartridge.

The present guide support for a ribbon cartridge of the single unit type therefore provides a support wherein the operator may install the cartridge in its normal rest position within the machine by simply locating the left end portion of the cartridge within the guide support and thereafter push it to an automatically locked position.

The present invention also provides a support which selectively and automatically partially ejects the ribbon cartridge when desired by providing a manually operable locking detent means and a biasing means which is conditioned by the cartridge to urge the cartridge in a direction opposite to its installation direction.

The invention may be embodied in other specific forms without departing from the spirit or essential characteristics thereof. The present embodiment is therefore to be considered in all respects as illustrative and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and all changes which come within the meaning and range of equivalency of the claims are therefore intended to be embraced therein.

What is claimed and desired to be secured by Letters Patent is:

1. A ribbon cartridge support for a typewriter for permitting a ribbon cartridge to be laterally inserted into said typewriter and laterally removed therefrom, said support comprising:

a guide means rigidly mounted on said typewriter and having an opening adjacent the side of said typewriter;

said guide means having at least a pair of spaced walls extending from said side of said typewriter toward a print point in said typewriter but not to said print point and having an opening within said typewriter prior to said print point; and means normally in the path of movement of said cartridge for locking said cartridge within said guide means when said cartridge extends through said opening within said typewriter to a point adjacent said print point; and means yieldably mounting said locking means in said path of movement enabling said cartridge to be inserted into said guide means.

2. A ribbon cartridge support as defined in claim 1 further including means connected to said support for yieldingly engaging said cartridge during the lateral insertion of said cartridge into said guide means and for biasing said cartridge for partial ejection thereof from said guide means upon the release of said cartridge by said locking means.

3. A ribbon cartridge support as defined in claim 2 wherein said guide means includes a lower flange for guiding the underside of the cartridge and a back wall extending from said lower flange for guiding the back side of the cartridge.

4. A ribbon cartridge support as defined in claim 3 wherein said guide means includes an upper flange so that said lower flange, said upper flange and said back wall form an approximately horizontally exposed U-shaped opening for receiving the cartridge.

5. A ribbon cartridge support as defined in claim 4 wherein said means for yieldingly engaging said cartridge comprises a member projecting through a slot in said lower flange in the path of insertion of said cartridge and a spring connected to said member for biasing said member in a direction opposite to the direction of insertion of said cartridge.