

PATENT SPECIFICATION

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(54) TYPEWRITER RIBBON CARTRIDGE GUIDE SUPPORT

(71) We, SCM CORPORATION, a Corporation of the State of New York, United States of America, of 299, Park Avenue, New York, State of New York, United States of America, do hereby declare the invention for which we pray that a patent may be granted to us, and the method by which it is to be performed to be particularly described in and by the following statement:—

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

15 The typewriter art, through necessity, is becoming even 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 provided 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.

20 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. Such a cartridge forms the subject matter of co-pending application No. 57548/71 (Serial No. 1348059).

25 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

30 into the machine and whereby the cartridge

may be partially ejected from the machine by pressing down on a detent button.

The invention will now be described by way of example with reference to the accompanying drawings, wherein:—

Figure 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;

Figure 2 is a top plan view of Figure 1, and

Figure 3 is a front elevational view of the cartridge.

Referring to Figures 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 24 (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 slidably mounted within a frame bracket 32. Button 28 is normally biased upwards by a spring 34 so the upper most end 36 of the link 30 extends through an appropriate slot 37 in the lower support flange 20. The link end 36 is substantially bevelled 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 in-

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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 5 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 10 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 15 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 20 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 25 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 30 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 35 which 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 40 opposite to its installation direction.

WHAT WE CLAIM IS:—

1. A ribbon cartridge support adapted to be mounted on a typewriter for permitting a ribbon cartridge to be laterally inserted into said typewriter and laterally removed therefrom, said support comprising: a guide means adapted to be rigidly mounted on said typewriter and having when mounted on said typewriter an opening adjacent the 50 side of said typewriter, at least one wall extending from said side of said typewriter

toward a print point in said typewriter but not to said print point and an opening within said typewriter prior to said print point; 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 60 locking means in said path of movement enabling said cartridge to be inserted into said guide means.

2. A ribbon cartridge support as claimed 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. 65

3. A ribbon cartridge support as claimed 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. 75

4. A ribbon cartridge support as claimed 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. 80

5. A ribbon cartridge support as claimed 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. 85

6. A ribbon cartridge support for a typewriter substantially as herein described with reference to the accompanying drawings. 90

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dictated 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 5 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 10 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 15 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 20 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 25 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 30 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 35 which 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 40 opposite to its installation direction.

WHAT WE CLAIM IS:—

1. A ribbon cartridge support adapted to be mounted on a typewriter for permitting a ribbon cartridge to be laterally inserted into said typewriter and laterally removed therefrom, said support comprising: 45 a guide means adapted to be rigidly mounted on said typewriter and having when mounted on said typewriter an opening adjacent the 50 side of said typewriter, at least one wall extending from said side of said typewriter

toward a print point in said typewriter but not to said print point and an opening within said typewriter prior to said print point; means normally in the path of movement of 55 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 60 locking means in said path of movement enabling said cartridge to be inserted into said guide means.

2. A ribbon cartridge support as claimed in claim 1, further including means connected to said support for yieldingly engaging 65 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 70 release of said cartridge by said locking means.

3. A ribbon cartridge support as claimed in claim 2, wherein said guide means includes a lower flange for guiding the under- 75 side 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 claimed in claim 3 wherein said guide means includes an upper flange so that said lower 80 flange, said upper flange and said back wall form an approximately horizontally exposed U-shaped opening for receiving the cartridge. 85

5. A ribbon cartridge support as claimed in claim 4, wherein said means for yieldingly engaging said cartridge comprises a member projecting through a slot in said lower flange 90 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.

6. A ribbon cartridge support for a typewriter substantially as herein described with 95 reference to the accompanying drawings.

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