

Title (en)

Printer ribbon supply mechanism with end-of-ribbon detection.

Title (de)

Farbbandzufuhrvorrichtung für einen Drucker mit frühzeitiger Erkennung des Bandendes.

Title (fr)

Dispositif d'alimentation de ruban pour imprimante, assurant la détection de l'épuisement de la bobine débitrice.

Publication

EP 0013293 A2 19800723 (FR)

Application

EP 79103705 A 19790928

Priority

US 95821278 A 19781106

Abstract (en)

[origin: US4213575A] In a conventional ribbon supply spool structure which comprises a supply of ribbon wound on a hub rotatable about and axially movable with respect to a hub receiving member on which the hub is seated and which is coaxial with respect to the hub, an improved end of ribbon detection device is provided by the combination of deflectable spring means within the spool hub which exert a force when deflected having a first force component acting against but restrained by wound ribbon on the hub and a second component acting along the hub axis. A spring tensioned member exerts a force along the hub axis which opposes the component of force of the deflectable spring along the hub axis. In this manner, the deflectable spring and the spring tensioned member are maintained in static equilibrium at a selected point along said axis so long as the deflectable spring is restrained by a predetermined minimum of ribbon remaining wound on the hub. This predetermined minimum of ribbon remaining wound is indicative of the end of ribbon. In the preferred embodiment this is in effect the point where the ribbon becomes substantially unwound.

Abstract (fr)

Alimentation du ruban dans les imprimantes à impact, avec détection de l'épuisement du ruban sur la bobine débitrice. Un élément élastiquement déformable (4) est logé à l'intérieur du moyeu (12) de la bobine débitrice (34) et est maintenu dans son état incurvé par les spires du ruban (102) enroulé sur la bobine. Lorsque le ruban est presque complètement déroulé, le ressort (4) reprend son état non déformé et actionne un commutateur (13) par l'intermédiaire d'un élément de commande (7). Ce commutateur émet alors un signal électrique, sur ses lignes (30), qui indique l'épuisement du ruban. Dispositif utilisable notamment avec des bobines de ruban montées dans des cartouches.

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