United States Patent [19]

Barouh et al.

[11] **3,896,920**

[45] ***July 29, 1975**

[54] **TYPEWRITER RIBBON FOR TYPING AND CORRECTING**

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[*] Notice: The portion of the term of this patent subsequent to Aug. 14, 1990, has been disclaimed.

[22] Filed: **Apr. 2, 1973**

[21] Appl. No.: **347,359**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 187,947, Oct. 12, 1971, Pat. No. 3,752,291.

[52] **U.S. Cl.** **197/172;** 197/181

[51] **Int. Cl.** **B41j 31/02**

[58] **Field of Search** 197/172, 181

[56] **References Cited**

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[57] **ABSTRACT**

A typewriter ribbon comprising a base strip of a thin woven plastic light transmitting material having spaced parallel coatings of adhesive thereon. A correction strip having a coating of a correction material and a transfer strip having a coating of solvent carbon formula thereon are bonded to the base strip in spaced parallel relationship.

1 Claim, 3 Drawing Figures

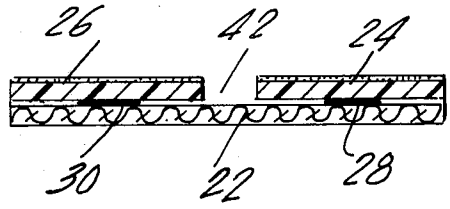


FIG. 1

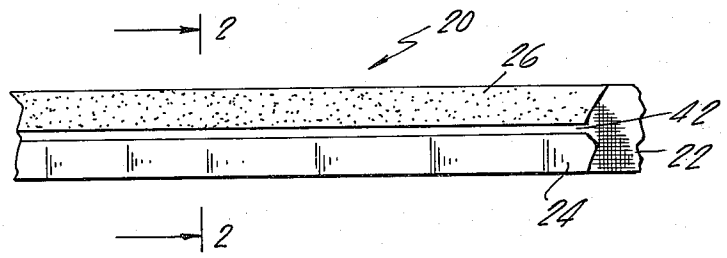


FIG. 2

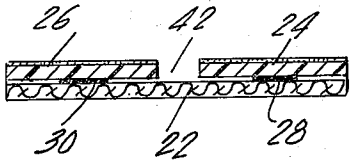
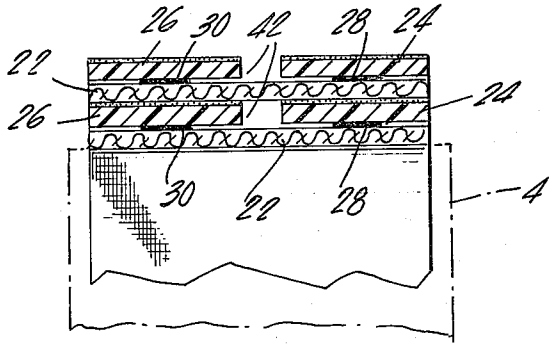


FIG. 3



TYPEWRITER RIBBON FOR TYPING AND CORRECTING

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to a typewriter ribbon which includes transfer and correction strips bonded to a base strip, and is a continuation-in-part of the application of Victor Barouh and Robert Glenn, Ser. No. 187,947, filed Oct. 12, 1971, for TYPEWRITER CORRECTION RIBBON AND PROCESS OF MANUFACTURE, now U.S. Pat. No. 3,752,291.

2. Description of the Prior Art

Prior art typewriter ribbons which include transfer and correction portions are generally made with a conventional cloth or fabric inked ribbon as the transfer portion and a paper inked correction material as the correction portion as shown in U.S. Pat. No. 3,141,539. The combined typewritter ribbon is utilized by striking over an incorrectly typed character and obliterating the character when the type face strikes the correction portion.

While the performance of these prior art devices is relatively satisfactory, they are expensive to manufacture when the two sections are combined into a single assembly. Further, because the arrangement of parts was hertofore unbalanced as can be seen in U.S. Pat. No. 3,273,686 and because different materials were used for the transfer portion and correction portion, these prior art ribbons were difficult to wind and rewind and often creased or broke causing stoppages during reuse. The materials for the two portions and the manufacturing equipment required caused the finished typewriter ribbon to be too expensive to enjoy wide use. Further, due to the inked ribbon type construction, "bleeding" frequently occurs from one portion to another marring the typed copy.

SUMMARY OF THE INVENTION

In accordance with the principles of the present invention, the above objects accomplished by providing a typewriter ribbon having transfer and correction strips bonded to a base strip by their adhesive coatings. The transfer and correction strips are arranged in spaced parallel relationship leaving a window therebetween.

An object of the present invention is to provide an improved typewriter ribbon which will not bleed and which can be wound and rewound in a flat and even manner.

Another object of the present invention is to provide an improved typwriter ribbon which uses thin coatings of adhesive to bind the transfer and correction strips to a base strip in spaced parallel relationship leaving a see-through window therebetween.

Still another object of the present invention is to provide an improved typewriter ribbon having means to enhance the impressions achieved.

Another object of the present invention is to provide relatively inexpensive materials to form the transfer and correction strips.

Still another object of the present invention is to provide materials for the correction and transfer strips which may be easily secured together.

Another object of the present invention is to provide such a typewriter ribbon where "bleeding" between the portions is substantially eliminated.

In accordance with the principles of the present invenion, the above objects are accomplished by providing a typewriter ribbon having transfer and correction strips bonded to a base strip by their adhesive coatings. The transfer and correction strips are arranged in spaced parallel relationship leaving a window therebetween.

In accordance with the principles of the present invention, the transfer strip comprises coated fluid impervious materials, such as natural or synthetic plastics. The correction strip likewise can be made of these materials or of paper. The base strip is woven of suitable plastic light transmitting fibers of uninked nylon, silk, cotton or other woven fabric. As a feature of the present invention, it has been found that a typewriter ribbon fabricated of plastic type materials substantially eliminates the "bleeding" problem and facilitates winding and rewinding thereof because the correction strips and transfer strips are of the same thickness.

These, together with the various ancillary objects and features of the invention which will become apparent as the following description proceeds are attained by this typwriter ribbon, a preferred embodiment of which is shown in the accompanying drawings, by way of example, only, wherein:

BRIEF DESCRIPTION OF THE DRAWING

FIG. **1** is a plan view showing a preferred embodiment of the typewriter ribbon according to the present invention;

FIG. **2** is a transverse sectional view taken generally along line **2—2** of FIG. **1**; and,

FIG. **3** is a sectional detail view of a portion of the typewriter ribbon of FIG. **1**, wound on a spool.

With continuing reference to the accompanying drawing, wherein like reference numerals designate similar parts throughout FIGS. **1—3**, there is shown a preferred form of the present invention wherein the typewriter ribbon **20** includes a base strip **22** of natural or synthetic plastic thin woven material from fibers of nylon, silk, cotton or of any other suitable preferably non-absorbent, non-inked fabric which is light transmitting. The base strip **22** is preferably in the order of **0.001** inch in thickness and is transparent. Preferably nylon is used because of the sponginess of nylon which acts as a cushion to the striking typewriter keys. This cushion effect results in an unexpected even transfer of correction material which eliminates the holes which would be punched in to the base material if thin film material is used.

The transfer strip **24** is formed of any suitable thin film plastic material such as nylon, polyethylene, mylar or the like, and has a coating thereon of a carbon type formula.

The correction strip **26** is formed of paper or any suitable thin film plastic material such as nylon, mylar, polyethylene, or the like. The thin film plastic material is fluid impervious. The transfer strip **24** and the correction strip **26** are secured to the base strip **22** in spaced parallel relationship by means of very thin coatings **28** and **30** of a suitable adhesive. The coatings **28** and **30** of adhesive are much narrower than the width of the strips **24** and **26** respectively and are centered with respect thereto. When typwriter keys strike the back of the base strip **22**, the very thin narrow adhesive coatings **28** and **30** will provide an additional cushion so that unexpectedly accurate impressions are

achieved, with both the upper and lower portions of the impressions being uncushioned by the adhesive and therefore of very sharp configuration. Because the very thin and narrow coatings **28** and **30** are used and because the strips **24** and **26** are of exactly the same thickness ranging selectively between 0.002 and 0.003 inches in thickness, very accurate corrections will be achieved and as shown in FIG. **3**, the ribbon **20** may be wound on a spool H in a flat and even manner for convenient unwinding and rewinding without any creasing, jamming, or breakage as in prior type of typewriter ribbon having correction materials thereon.

It is further noted that the opposite edges of the ribbon **20** may be trimmed so that the transfer strip **24** and the correction strip **26** have opposite edges aligned with the edges of the base strip. The transfer strip **24** and the correction strip **26** are arranged in spaced parallel relationship leaving a window **42** through which proper alignment for correction of typewritten impressions may be facilitated.

A latitude of modification, change and substitution is intended in the foregoing disclosure, and in some instances some features of the invention will be employed without a corresponding use of other features.

We claim:

1. A typewriter ribbon comprising a base strip of thin woven plastic light transmitting non-inked material, spaced paralled coatings of adhesive on said base strip, a correction strip comprising an elongated strip of material coated with a correction material and a transfer strip of fluid impervious thin plastic material coated with a transfer material, said correction strip and said transfer strip being bonded to said base strip by said adhesive coatings, said transfer strip and said correction strip being arranged in spaced paralled relationship with said tranfer strip and said correction strip each being arranged along a respective edge of said base strip with a central light transmitting window therebetween for facilitating proper alignment for correction of typewritten impressions, said transfer strip and said correction strip being of the same thickness so that said typewriter ribbon can be wound and rewound flatly and evenly, said transfer strip and said correction strip being substantially wider than said adhesive coatings with said adhesive coating medially disposed between the edges of said correction strip and said transfer strip forming cushions for the central portions of said correction strip and said transfer strip so that the impressions therefrom are enhanced.

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