

[54] TYPEWRITER CORRECTION RIBBON AND
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1969, abandoned.

[52] U.S. Cl. 197/172, 197/181

[51] Int. Cl. B41j 31/02

[58] Field of Search 197/172, 181

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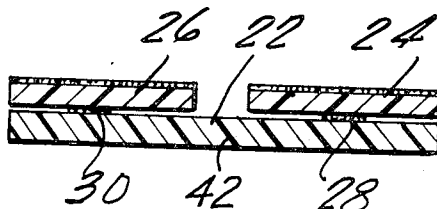
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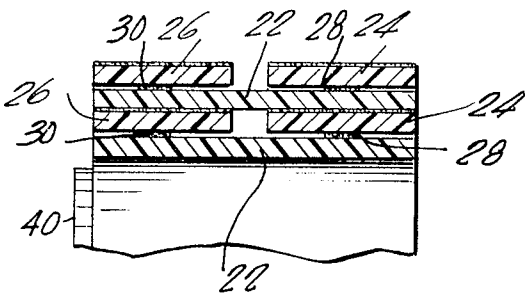
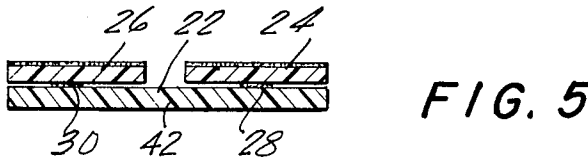
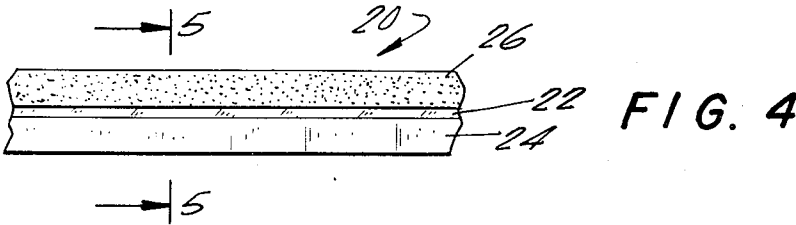
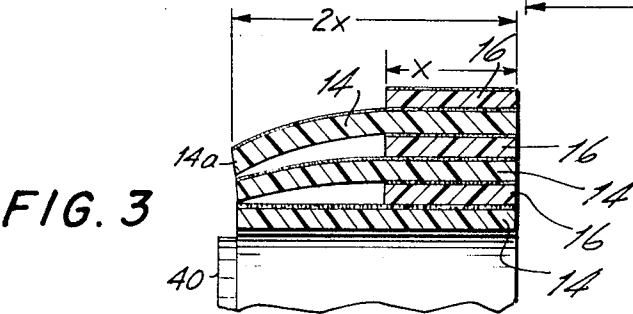
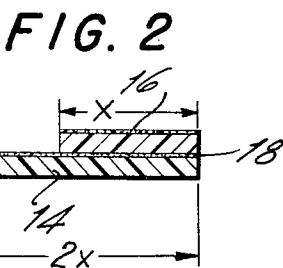
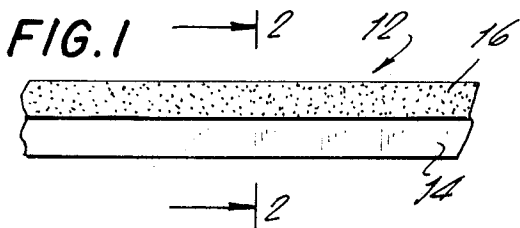
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ABSTRACT

A typewriter ribbon comprising a base strip of a fluid impervious thin plastic 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, 6 Drawing Figures





TYPEWRITER CORRECTION RIBBON AND PROCESS OF MANUFACTURE

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. 875,939 filed Nov. 12, 1969, for Method of Manufacturing a Typewriter Ribbon now abandoned.

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. The combined typewriter 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 heretofore unbalanced 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 utilized 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.

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 typewriter 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 invention, the above objects are accomplished by providing a typewriter ribbon having transfer and correction strips bonded to a transparent 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 and base strips comprise coated fluid impervious materials, such as natural or synthetic plastics. The correction strip likewise can be made of these materials or of paper. 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 typewriter ribbon, a preferred embodiment of which is shown in the accompanying drawing, by way of example only, wherein:

FIG. 1 is a perspective view illustrating one form of typewriter ribbon;

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

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

FIG. 4 is a perspective view showing a preferred embodiment of the typewriter ribbon according to the present invention;

FIG. 5 is a transverse sectional view taken generally along line 5—5 of FIG. 4; and,

FIG. 6 is a sectional detail view of a portion of the typewriter ribbon of FIG. 4, wound on a spool.

The typewriter ribbon 12 shown in FIGS. 1-3 and in accordance with applicants' previous application Ser. No. 875,939, comprises two sections each of which may be formed of a natural or synthetic plastic film coated with an appropriate material. The layered assembly may be formed by first winding each strip on a separate reel or core and simultaneously unwinding each. As another embodiment, the plastic material may be extruded and with each strip separately extruded simultaneously, the layered assembly may be formed.

A solvent carbon coated film 14 and a correction material coated film 16 are provided. The carbon coated image transfer film 14 is preferably of a first width 2x which may be, for instance, one inch plus a slight trim while the correction strip 16 is of a second width, X, which may be ½ inch. Correction strip 16 is placed on top of transfer strip 14. Preferably, the correction strip 16 is centered with respect to the transfer strip 14 and then the two strips 14 and 16 are cut or slit longitudinally by a heated knife type object preferably along the centers of the transfer and correction strips 14 and 16. While the layered assembly is being cut the transfer strip 14 may be trimmed along its opposite edges. Since the two strips 14 and 16 are made of the same plastic type materials, they will be cohesively bonded at 18 to each other. As may be well understood, such an adherence is relatively secure and fixes the relative positions of the transfer and correction strips 14 and 16. Preferably the correction strip 16 forms the lower half of the ribbon 12, and when a correction is required, the ribbon position is changed.

As shown in FIG. 3, when the typewriter ribbon 12 is wound the difference in cross-sectional thickness of the ribbon 12 will cause portion 14a to wind at an angle causing the ribbon 12 to become askew as it is wound or unwound from its spool 40. Thus, there is increased stoppage due to binding, creasing and the like during use and reuse of the typewriter ribbon 12.

In FIGS. 4 through 6 there is shown a preferred form of the present invention. Herein the typewriter ribbon 20 consists of a base strip 22 of natural or synthetic plastic thin film material such as nylon, polyethylene, mylar cellulose acetate, or the like. The base strip 22 is preferably in the order of 0.001 inch in thickness and is transparent.

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 of 28 and 30 are much narrower than the width of the strips 24 and 26 respectively and are centered with respect thereto. When typewriter keys strike the back of the base strip 22, the very thin narrow adhesive coatings 28 and 30 will provide a cushion so that unexpectedly accurate impressions are achieved, with both the upper and lower portions of the impressions being uncushioned 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. 6, the ribbon 20 may be wound on a spool 40 in a flat and even manner for convenient unwinding and rewinding without any creasing, jamming, or breakage as in prior types 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 ribbon 20. 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 fluid impervious thin plastic transparent material, spaced parallel 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 parallel relationship with said transfer strip and said correction strip each being arranged along a respective edge of said base strip with a central transparent 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 coatings 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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