

July 21, 1964

W. H. WOLOWITZ

3,141,539

TYPEWRITER RIBBON FOR SELECTIVELY TYPING AND OBLITERATING

Filed Feb. 8, 1962

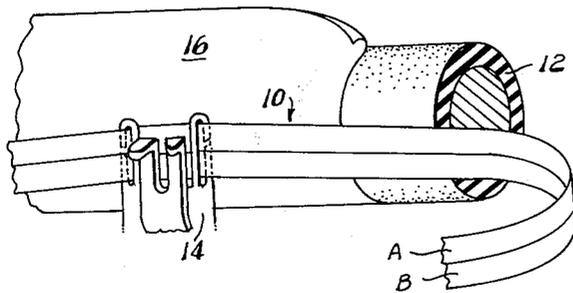


Fig. 1

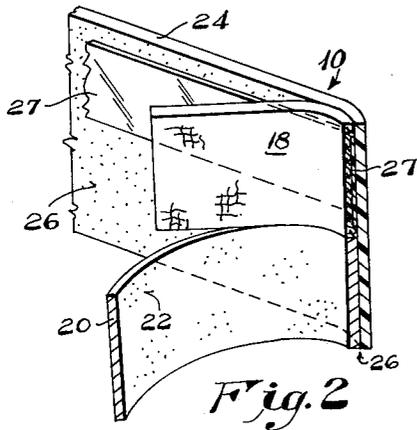


Fig. 2

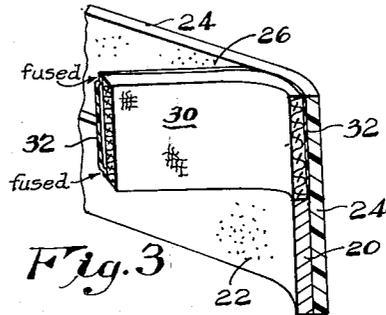


Fig. 3

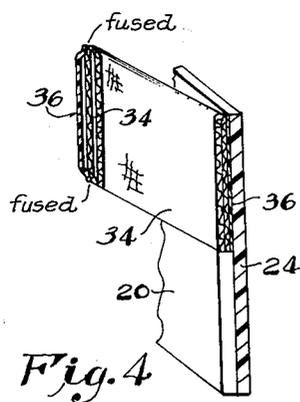


Fig. 4

W. H. WOLOWITZ,  
INVENTOR

BY *Homer R. Montague*  
ATTORNEY

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**TYPEWRITER RIBBON FOR SELECTIVELY  
TYPING AND OBLITERATING**

William Howard Wolowitz, 1742 Holly St. NW.,  
Washington, D.C.

Filed Feb. 8, 1962, Ser. No. 171,963

2 Claims. (Cl. 197-172)

This invention pertains to ribbons for typewriting machines and to methods for fabricating ribbons. The ribbons with which the invention is concerned are of the composite type which include one longitudinal portion or area which is inked or coated to transfer a visible impression to the writing paper, and another longitudinal portion or area which is capable of transferring a blank-out or camouflage material to such paper, whereby to cover up or obliterate an erroneous imprint, and leave a surface suitable to receive a correct imprint, if desired.

Ribbons of this composite type are described in my copending application filed April 4, 1961, Serial No. 100,661, now Patent No. 3,114,447 and it is an object of the present invention to provide ribbons of improved construction for the same general purposes. A further object of the present invention is to provide an improved method of making such composite ribbons.

It is a particular aim of the present invention to devise a "composite effect" ribbon (meaning by this term a typewriter ribbon having separate lengthwise-extending marking and obliterating regions) in which the effectiveness of the inked marking portion will in no way be diminished by the presence of the camouflage or obliteration material, nor will it be diminished by the presence of the means by which the two ribbon portions are secured to one another.

Another aim of the invention is to provide a composite-effect typewriter ribbon in which the marking portion and the obliterating portion are secured to one another by means forming a protective backing for the ribbon; such protective backing serving multiple functions which include the protection of the ink-depositing portion from depletion or contamination, and of protecting the type faces of the typewriter against the build-up of ink or lint residues which normally require periodic removal.

The desirability of keeping the type faces of a typewriter clean and free from deposits of lint or ink is generally recognized, and inked fabric ribbons having a buffer layer on the type-face side have been proposed, the buffer layer being for example an impervious plastic strip or deposit to prevent actual contact between the type face and the inked fabric. In a composite-effect ribbon of the type with which my invention is concerned, there is a special reason for such buffering or isolating layers. While the type faces never directly strike the camouflage substance carried on the opposite face of the composite ribbon, they would ordinarily strike the inked fabric, and any ink thus deposited on the type face might later be re-transferred to the back of the camouflage strip and thence be again transferred to the adjacent camouflage-face of the strip as the ribbon is reeled and re-reeled in the normal mode of ribbon winding in a typewriter. Ultimately, the camouflage substance itself will be darkened or deteriorated by this ink (or lint), and the life of the composite ribbon thus shortened. A protective or buffering layer for isolating the inked ribbon portion from the type faces thus also directly protects the integrity of the camouflage section, during normal use of a typewriter with a composite-effect ribbon.

A further object of the invention is to provide a composite-effect typewriter ribbon in which the useful life of the inked or marking portion is maintained, both in storage and during use, so as to equal or exceed the life of an otherwise comparable marking ribbon alone.

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In general, the present invention accomplishes its aims by a ribbon construction in which separate ribbon entities (one for writing, marking or imprinting, and one for camouflaging or obliterating) are secured together by a common support layer, which support layer additionally serves auxiliary functions including the prevention of adverse interaction of the marking and obliterating materials or substances, and the maintaining of the type faces in a clean condition.

The invention may take a variety of specifically different constructional forms, some of which will now be described in detail in connection with the appended drawings, in which:

FIG. 1 is a fragmentary perspective view of one form of the improved composite-effect ribbon shown installed for use on a conventional typewriter.

FIG. 2 is a perspective view, partly exploded and partly in section, of a portion of the ribbon shown in FIG. 1.

FIG. 3 is a view similar to FIG. 2 showing a modified form of the improved ribbon.

FIG. 4 is a view similar to FIG. 2 of a further modification.

Referring first to FIGS. 1 and 2 of the drawings, the former shows a composite effect (inking and correction) ribbon 10 installed in a usual form of typewriter having the roller platen 12 and ribbon vibrator 14, for use in the manner fully described in my earlier application mentioned above. Ribbon 10 has (at least with reference to the side facing paper 16) separate vertically-spaced marking or inking section A and obliterating or camouflaging section B. Both of these sections extend longitudinally the full length of the ribbon, and either section may be in the "upper" position when the ribbon is installed.

FIG. 2 shows the construction of ribbon 10 in greater detail. As there shown, the inking section 18 is constituted by an inked fabric strip having a width substantially one-half that of the whole ribbon, while the camouflaging section is constituted by a strip 20 of approximately the same width, preferably of paper carrying the camouflage transfer coating 22. These sections are held in edgewise-assembled configuration by being adhered to a common lengthwise strip 24 of very thin material, which may be a plastic such as "Mylar," regenerated cellulose (cellophane) or the like.

The layers or sections 18 and 20 just described are secured to the strip 24 by an intervening adhesive indicated generally at 26. This adhesive may secure layer 24 and paper base layer 20 throughout their mutually confronting areas, but inking ribbon 18 is secured to strip 24 only along its opposite edges, as otherwise the ink carried thereby would be "killed" or contaminated by the adhesive. I therefore protect the ink ribbon section 18 from adhesion to strip 24 for a major portion of the facial width of section 18, by an intervening protective non-absorbent layer 27, which again may be of "Mylar," cellophane or the like.

A convenient method of making the composite ribbon of FIG. 1 is to provide the common support 24 as a strip of so-called pressure-sensitive tape with the adhesive 26 coated on one side, and to laminate the camouflage strip 20 (already bearing its transfer coating 22) to that side during a continuous rewinding operation; and simultaneously feeding the inked fabric ribbon section 18 also into edge-adhered relation with the remaining longitudinal portion of that side of tape 24, while feeding protective strip 27 therebetween to protect the major part of the ribbon against contact with the adhesive 26.

An alternative construction of a composite effect ribbon is illustrated in FIG. 3 of the drawings. Here again the common mounting strip may be a length of tape 24 having adhesive layer 26 on one side, with the camouflage transfer section 20 adhered thereto. The inked fabric ribbon 30 is again of substantially half the vertical width

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of the assembly, but is provided previously with a protective layer 32 of thin "Mylar" or the equivalent, which is fused to ribbon 30 solely along their common lengthwise boundary edges. In this case, the fabric of ribbon 30 will be woven "Nylon" or equivalent fusible material, the edgewise adhesion being attained by a heat sealing process well known to those skilled in the art.

FIG. 4 of the drawings illustrates a modification of the FIG. 3 construction which permits a multiplication of the ink-containing capacity of the inked ribbon; for example, to increase the ink storage writing life of a composite-effect ribbon half of whose area is devoted to correction or camouflage material. In this case, a full-width inked ribbon 34 has been doubled along its longitudinal centerline, and both of the "edges" of this folded strip have been fused along the edges only of the protective layer 36.

What is claimed is:

1. A composite typewriter ribbon for selectively typing and obliterating, comprising:

- (a) an elongated support strip of thin flexible plastic, coated on one surface with a layer of adhesive, 20  
 (b) one half of the width of the coated surface of said support strip having adhered thereto by said adhesive a strip having an exposed surface layer of pressure-transferable ink-obliterating opaque camouflage material; 25  
 (c) the remaining half of the width of said support strip having adhesively secured thereto by said adhesive an ink-saturated, woven fabric marking ribbon,

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(d) said marking ribbon being secured only along its lengthwise edges to said support strip; and

(e) an ink-impervious non-absorbent protective strip positioned between the central lengthwise body of said marking ribbon and said coated surface of said support strip.

2. A composite typewriter ribbon in accordance with claim 1, in which the lateral edges of said marking ribbon are fused to the lateral edges of said protective strip.

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