Jan. 29, 1929. 1,700,415

S. A. NEIDICH

TRANSFER WEB

Filed May 16, 1927

FIG. I.

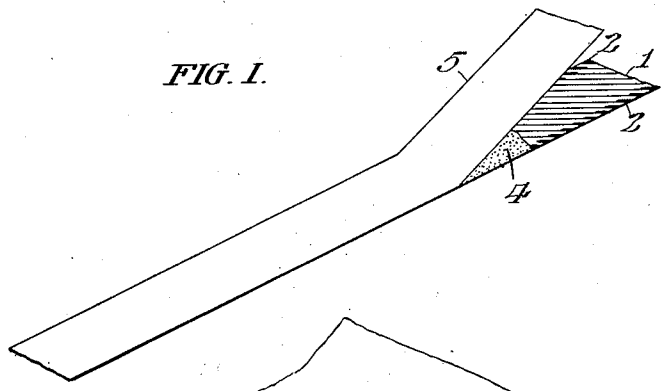


FIG. II.

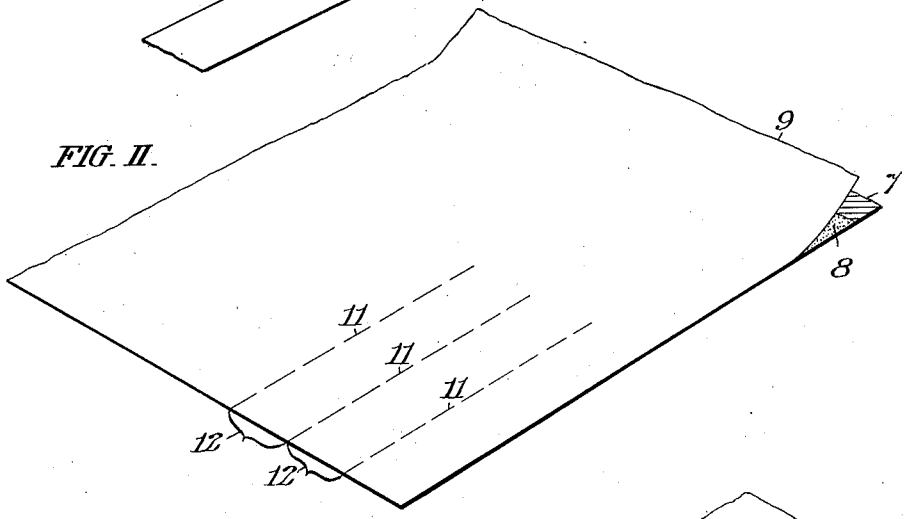
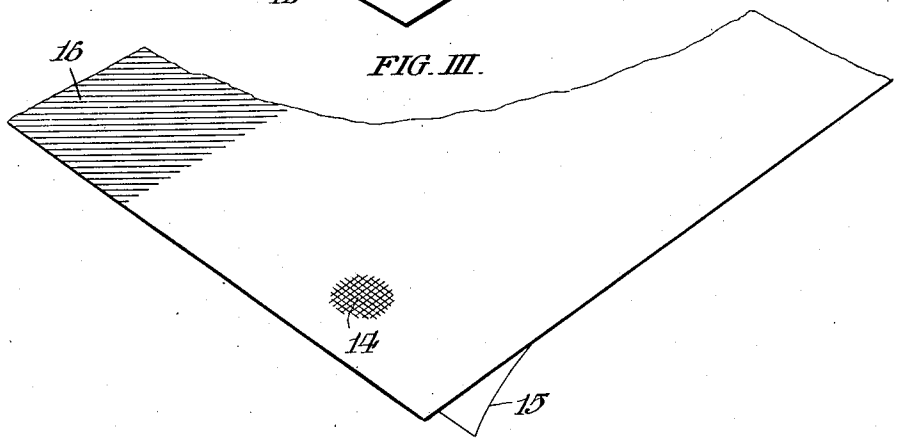


FIG. III.



INVENTOR:
SAMUEL A. NEIDICH,
by Arthur C. Paige
Attorney.

Patented Jan. 29, 1929. 1,700,415

UNITED STATES PATENT OFFICE.

SAMUEL A. NEIDICH, OF EDGEWATER PARK, NEW JERSEY.

TRANSFER WEB.

Application filed May 16, 1927. Serial No. 191,637.

My invention may be advantageously employed in the manufacture of ink ribbons for typewriting machines, but is not restricted to such use. Such webs are formed of thin textile fabric and are rendered useless by rupture of said fabric by type impacts, before the transfer ink is exhausted therefrom.

It is the object and effect of my invention to render such transfer webs more durable than heretofore, so as to lessen the cost thereof for a given number of transfer imprints therefrom. Moreover, the destructive wear upon ordinary ink ribbons detaches particles of the textile fabric, which particles lodge in the interstices of the type, interfering with clarity of impressions therefrom and necessitating cleaning the type at frequent intervals. Therefore, a further advantage of my invention is that the fabric is prevented from thus disintegrating; so that it is unnecessary to clean the type to remove fragments of the fabric therefrom.

The essential feature of my invention is the protection of one face of the fabric, by a shield, which may be a coating, film or sheet of material, applied to the face of the textile fabric opposite to that from which the impression is to be transferred, rendering the fabric more resistant to the stresses incident to the impact of type thereon than if unprotected.

In the form of my invention hereinafter described; the shield web is a primarily plane, coagulated, gelatinous, amorphous, film of artificial cellulose, such as may be produced by coagulating or precipitating viscose, (liquid cellulose sulpho-carbonate or thio-carbonate) or other suitable cellulose solution; for instance, nitro-cellulose; or cellulose dissolved in ammoniacal copper oxide; or in zinc chloride; or acetic anhydride, etc.

My invention includes the various novel features of construction, arrangement and procedure hereinafter more definitely specified.

In said drawings; Fig. I is a fragmentary perspective view of an ink ribbon for a typewriter, provided with a shield member which is cemented upon one face thereof.

Fig. II is fragmentary perspective view of a sheet of inked transfer web provided with a shield web cemented upon one face thereof and adapted to be cut into strips to form ink ribbons.

Fig. III is a fragmentary perspective view of a blank web of fabric adapted to be subsequently inked and having a shield web attached to one face thereof.

Referring to the form of my invention shown in Fig. I; a completely formed ink ribbon is indicated at 1. As ordinarily manufactured, such a ribbon is formed of a strip of fine count cotton muslin of the grade known to the trade as longcloth, with its longitudinal cut edges glued at 2, to prevent unraveling of the otherwise loose threads of the fabric. One surface of said ink ribbon 1 is coated with cement 4 to secure the shield web 5 to said fabric 1. Said shield 5 is preferably a film of artificial cellulose, for instance, what is known to the trade as cellophane, and need not be more than .0005 of an inch thick. A suitable cement 4 to connect such shield web 5 with the inked cotton textile fabric 1 may be composed of the following ingredients: 2 parts gum pontianac, 1 part acetone, 1 part alcohol, 1 part castor oil.

However, the operation of gluing the edges of each ribbon as indicated at 2 in Fig. I may be saved and omitted if the transfer web is manufactured as indicated in Fig. II; wherein the inked textile fabric 7, say nine inches wide, is coated with suitable cement 8 to secure the shield web 9 thereon and, thereafter, the double fabric may be slit as indicated by the dotted lines 11 to form separate ink ribbons 12, the edges of which are prevented from unraveling by said coating of cement 8.

In the form of my invention indicated in Fig. III; an uninked textile fabric 14 is provided with the shield 15 which may be a separately formed film or sheet as in Figs. I and II, or may be formed by depositing a liquid solution of cellulose, as aforesaid, upon said fabric 14. The textile fabric 14, thus reinforced by the shield 15, thereafter may be coated or otherwise impregnated with ink 16, applied upon its face opposite to that covered by the shield.

The effect of any of the procedures above contemplated is to provide a sheet carrying transfer material upon one face thereof with a shield film of artificial cellulose upon the opposite face thereof and in intimate coherent connection therewith; said shield material being impervious to the oily and other ingredients of the transfer material. The fact that my improved shield is of amorphous character, i. e., without crystalline, fibrous, or cellular structure, permits the transfer of impressions through it without modifying the transferred imprints by the texture of

the shield, and distinguishes my invention from any structure in which varnish is used as a protecting medium, for the varnish residue is of crystalline character. It also distinguishes my invention from any paper protecting medium because all paper is of a fibrous character and, accordingly, modifies the impressions made therethrough, because of its texture. Moreover, it is to be particularly noted that any varnish would be softened and rendered sticky by absorption of the oily ingredients of the transfer material and would, consequently, stick to the type faces and consequently interfere with the operation of typing and incidentally clog the type faces. Of course, there is no paper which is impervious to the oily constituents of the transfer material and my improved shield is distinguished from any kind of paper in that respect.

Therefore, I do not desire to limit myself to the precise details of construction, arrangement or procedure herein set forth, as it is obvious that various modifications may be made therein without departing from the essential features of my invention, as defined in the appended claims.

I claim:

1. The combination with a web of textile fabric, of uniform texture from edge to edge thereof; of transfer material upon one face of said fabric; and amorphous artificial cellulose material, upon the opposite face of said fabric, permanently connected therewith throughout the coextensive areas thereof, and forming a shield impervious to any portion of said transfer material.

2. A transfer fabric as in claim 1, wherein the transfer material impregnates the textile fabric from face to face thereof.

3. A transfer fabric as in claim 1, wherein the means holding the shield material in connection with the textile fabric serves to bind the edges of the textile fabric and prevent raveling thereof.

4. A transfer fabric as in claim 1, wherein the shield material is connected with the textile fabric by a cement binding material distinct from said shield material and arranged to prevent raveling of the edges of the textile fabric.

5. A transfer fabric as in claim 1, wherein the means connecting the shield material with the textile fabric is a residue of a solution of gum pontianac in acetone, alcohol, and castor oil, and is arranged to prevent raveling of the edges of the textile fabric.

6. A transfer fabric as in claim 1, wherein the textile fabric is impregnated with typewriter ink including the transfer material and the shield material is impervious to all of the ingredients of said ink and is capable of resisting the wear of type impacts to a greater degree than said textile fabric.

In testimony whereof, I have hereunto signed my name at Burlington, New Jersey, this 4th day of May, 1927.

SAMUEL A. NEIDICH.