Jan. 25, 1938. E. HYMAN 2,106,457

WOVEN FABRIC

Filed Sept. 26, 1934

Fig. 1

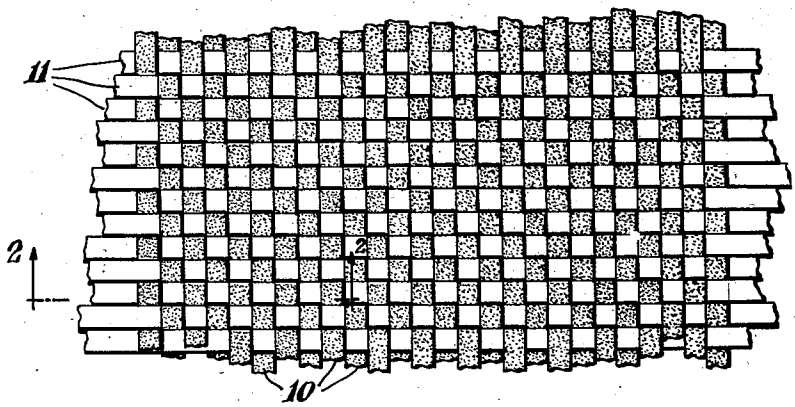


Fig. 2



Fig. 3

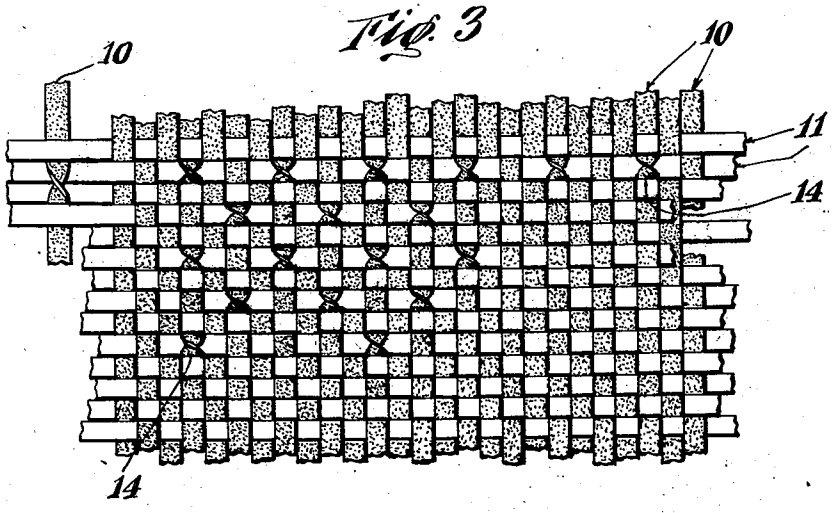
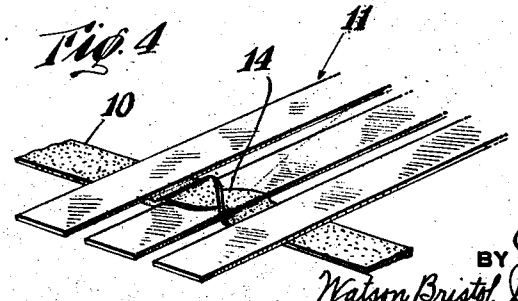


Fig. 4



INVENTOR
Eli Hyman
BY
Watson, Bristol, Johnson & Leavenworth
ATTORNEYS

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WOVEN FABRIC

Eli Hyman, Brookline, Mass., assignor to Hy-Sil Manufacturing Company, Revere, Mass., a corporation of Massachusetts

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6 Claims. (Cl. 139—420)

This invention relates in general to lustrous fabrics for decorative purposes and in particular to a fabric having a metallic lustre and to correlated improvements designed to enhance the lustre and decorative appearance of the same.

It is a general object of the invention to provide a fabric characterized by having a high metallic lustre and a high reflectivity for radiation.

It is a specific object of the invention to provide a fabric comprising bands having a metallic lustre, the lustrous threads being associated with other bands in such a manner that the metallic lustre is not affected.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises a new and improved article having the elements and the relation of elements one to another all as set forth in the following detailed description and the scope of the application of which will be indicated in the claims.

For a more complete understanding of the nature and objects of the invention, reference should be had to the accompanying drawing in which:

Fig. 1 is a general view of one embodiment of the improved fabric of the invention;

Fig. 2 is a detailed view in section of another embodiment of the novel article of the invention taken transverse of the warp bands;

Fig. 3 is a detailed view of another embodiment of the article of the invention; and

Fig. 4 is an enlarged perspective view of the article shown in Fig. 3.

In accordance with the present invention, a lustrous fabric for decorative purposes is prepared by the use of warp bands comprising a plurality of flat strips of material having a metallic lustre. The warp bands may comprise strips cut from a self-sustaining sheet of metal such, for example, as tin, aluminum, silver, gold, etc., and/or strips cut from a composite sheet material comprising a layer of flexible backing material, for example, paper, preferably transparent non-fibrous cellulosic material, such as regenerated cellulose, leather, etc., and a thin film of coating material having a high metallic lustre and a high reflectivity for visible radiation such as a metal.

For woof bands of the fabric there is employed a plurality of flat strips of a transparent material. The flat woof bands may comprise visca artificial horsehair in the form of ribbons having a substantially flat cross-section and/or flat threads cut from a sheet of transparent flexible material such, for example, as regenerated cellulose, cellulose esters, cellulose ethers, gelatin, casein and synthetic plastics in sheet form.

Referring to the drawing like numerals refer to like parts throughout. The fabric shown in Fig. 1 may be formed by taking a plurality of flat warp bands 10 having a metallic lustre, laying these bands closely side by side and binding them together in a known manner with woof bands 11 comprising flat strips of transparent material. Since the woof bands 11 are transparent, they may be woven with the warp bands as closely and as tightly as desired without detracting from the lustre of the metallic warp bands 10.

When the lustrous warp bands 10 comprise strips of a self-sustaining metal, the fabric is reversible, in that both sides have a metallic lustre. In the fabric of Fig. 2, the warp bands 10 comprise strips 12 cut from a composite material such, for example, as a sheet of regenerated cellulose coated with a thin film 13 of metal such, for example, as silver, gold, platinum, etc. by a known method such, for example, as cathode sputtering. The fabric formed with such composite lustrous strips will likewise be reversible since the lustrous metal film 13 may be seen through the transparent backing, thus the material will have a lustrous appearance from the reverse side.

It has been found that the decorative character of the lustrous fabric may be greatly enhanced by twisting the warp and/or woof bands at spaced intervals through an angle of at least 180° during the process of producing the fabric. Referring to Figs. 3 and 4, it will be observed that the bands running in one direction, for example, the warp bands 10 which comprise a flat strip of metal, have been twisted through an angle of 180° with respect to the longitudinal axis of the band. Twisting of a metallic warp band 10 produces a multiplicity of facets 14 which reflect light with a scintillating effect that greatly enhances the decorative character of the fabric and relieves the monotony of a flat surface. If desired, the transparent material forming the woof bands 11 likewise may be twisted as above described. The number of spacing and degree of the twist may be varied as desired to enhance the decorative character and impart to the fabric a lustrous appearance.

The improved article of the invention may serve as an insulating material if the metallic warp bands 10 employed have a high reflectivity for radiation. When thus employed, the metallic warp bands 10 are woven preferably closely side by side without twisting, so as to form a substan-

tially opaque material. Since the woof bands 11 are highly transparent, they do not detract from the reflectivity of the metallic warp bands 10 where they cross the same.

The article of the invention is especially adapted for use as a decorative material in wearing apparel and in all kinds of millinery material; also as wall hangings, curtains, draperies, lamp shades, etc.

It is obvious that the invention may be practiced by using the strips having a metallic lustre in the woof and the transparent strips in the warp and that the metallic strips may be formed by flattening round wires or in other suitable ways. Since certain modifications in the article which embodies the invention may be made without departing from its scope, it is intended that all matter contained in the above description shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

I claim:

1. As an article of manufacture, a lustrous fabric comprising series of flat warp and woof bands, the bands of one series consisting of flat, flexible strips of a material having a metallic lustre and the bands of the other series consisting of flat strips of a flexible transparent material with at least some of the bands being twisted at spaced intervals through an angle of 180° to produce facets reflecting light with a scintillating effect, the band being in a flat condition between said intervals, said fabric having the appearance of being composed entirely of bands having a metallic lustre.

2. As an article of manufacture, a lustrous fabric comprising series of flat warp and woof bands, the bands of one series consisting of flat, flexible strips of a material having a metallic lustre and the bands of the other series consisting of flat strips of a flexible transparent material with the metallic lustre bands being twisted at spaced intervals through an angle of 180° to produce facets reflecting light with a scintillating effect, the band being in a flat condition between said intervals, said fabric having the appearance of being composed entirely of bands having a metallic lustre.

3. As an article of manufacture, a lustrous fabric comprising series of flat warp and woof bands, the bands of one series consisting of flat, flexible strips of a material having a metallic lustre and the bands of the other series consisting of flat strips of a flexible transparent material, with the transparent bands being twisted at spaced intervals through an angle of 180° to produce facets reflecting light with a scintillating effect, the band being in a flat condition between said intervals, said fabric having the appearance of being composed entirely of bands having a metallic lustre.

4. As an article of manufacture, a lustrous fabric comprising series of flat warp and woof bands, the bands of one series consisting of flat flexible strips of metal having a metallic lustre and the bands of the other series consisting of flat strips cut from a flexible sheet of transparent material, with the bands running in one direction being twisted at spaced intervals through an angle of 180° to produce facets reflecting light with a scintillating effect, the band being in a flat condition between said intervals, said fabric having the appearance of being composed entirely of bands having a metallic lustre.

5. As an article of manufacture, a lustrous woven fabric consisting of flat bands, the bands extending in one direction consisting of flat flexible strips of a metallic material having a metallic lustre and a high reflectivity and the bands extending transversely of said first-named bands consisting of flat strips of a flexible transparent material, whereby the bands of the metallic material are visible through the bands of said transparent material.

6. As an article of manufacture, a lustrous woven fabric consisting of flat bands, the bands extending in one direction consisting of flat flexible strips of a metallic material having a metallic lustre and a high reflectivity and the bands extending transversely of said first-named bands consisting of flat strips of a flexible transparent regenerated cellulose, whereby the bands of the metallic material are visible through the bands of said transparent regenerated cellulose.

ELI HYMAN.