

[54] **GLOVE OR MITTEN WITH COLORED MESH BACKING**

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[22] Filed: **Nov. 13, 1972**

[21] Appl. No.: **305,966**

[52] **U.S. Cl.**..... **2/158, 2/167**

[51] **Int. Cl.**..... **A41d 19/00**

[58] **Field of Search** **2/16, 158, 159, 160, 161 R, 2/161 A, 163, 167**

[56] **References Cited**

UNITED STATES PATENTS

258,337	5/1882	Witherell	2/158
3,341,861	9/1967	Robbins	2/167 X
3,036,927	5/1962	Jerothe	2/167 X

FOREIGN PATENTS OR APPLICATIONS

469,818	12/1950	Canada	2/161 R
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[57] **ABSTRACT**

A hand covering, such as a workman's glove or mitten having a front portion of wear-resistant leather-like material for covering the palm, thumb and front surfaces of the fingers and wrist of a wearer, and a back portion for covering the back of the hand and fingers of the wearer. The back portion is of mono-filament material loosely woven or interlaced to provide open spaces for free movement of air therethrough, whereby the interior of the covering is effectively ventilated. The monofilament material is colored with high light-reflective coloring matter, and the back portion is formed to provide spaced ridges so that light is reflected at various angles from the back portion.

2 Claims, 6 Drawing Figures

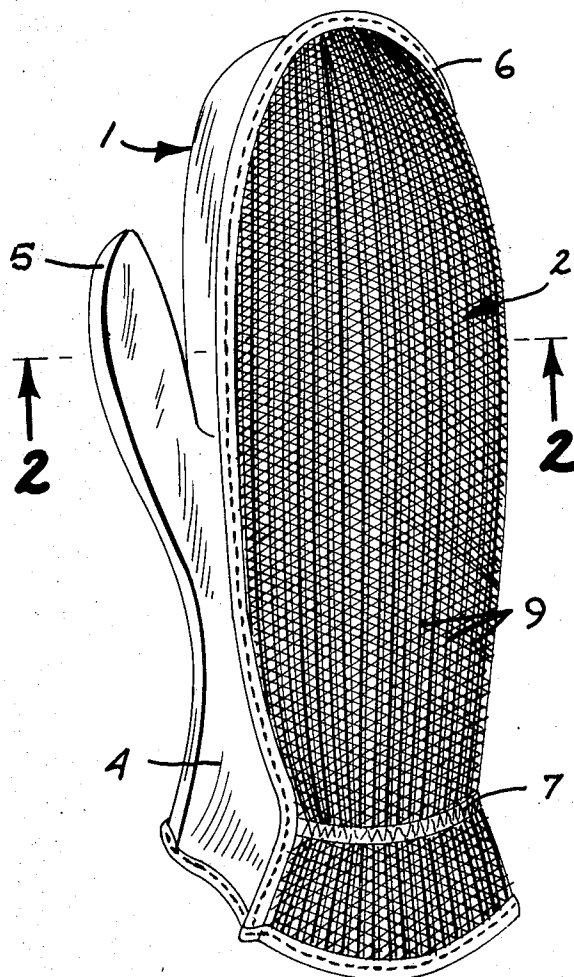


FIG. 1

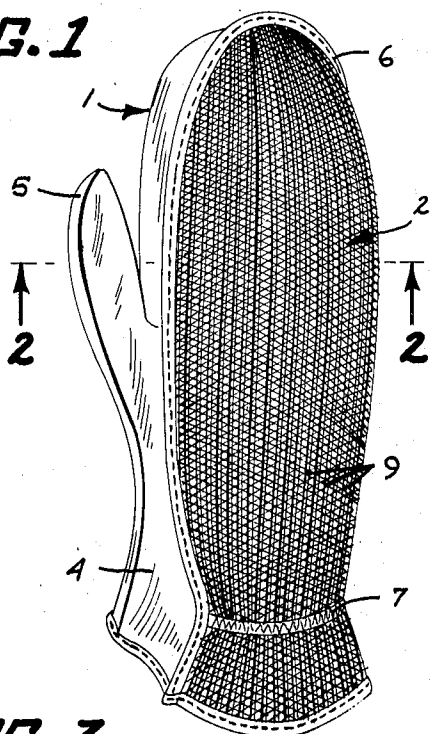


FIG. 2

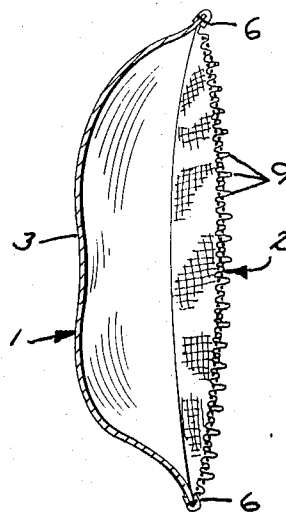


FIG. 3

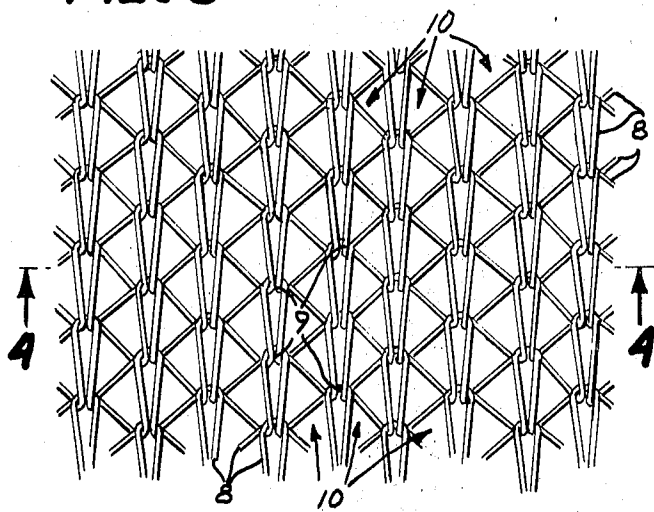


FIG. 4

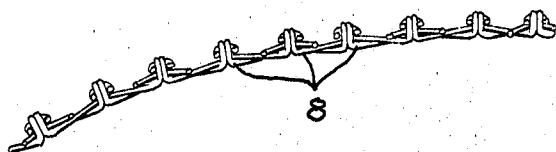


FIG. 5

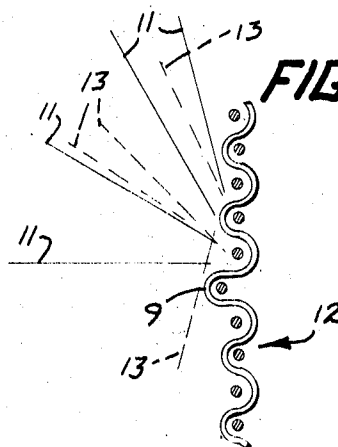
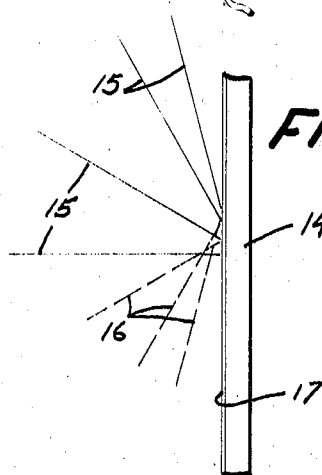


FIG. 6



GLOVE OR MITTEN WITH COLORED MESH BACKING

BACKGROUND OF THE INVENTION

This invention relates to workmen's gloves or mittens, which, for the protection of the workers' hands, are usually worn in warm weather as well as during cold seasons. For the most part, such mittens and gloves are made entirely of heavy canvas, leather or other similar materials, and are highly uncomfortable in warm weather, causing undue perspiration of the wearer's hands, and early decay of the glove or mitten material. Knitted gloves having leather facing on the palms and fingers are known, these being usually of wool or other effective heat-insulating material, and they are intended for winter use only. Hand coverings, such as gloves or mittens, having reflective portions affixed thereto are also known, these being usually of leather or closely knitted or woven fabric, and uncomfortably warm during summer weather.

SUMMARY OF THE INVENTION

An important object of this invention is the provision of a worker's hand covering, such as a work glove or mitten, which can be worn in relative comfort in warm weather, as well as in colder seasons.

Another object of this invention is the provision of a glove or mitten as set forth, which has a back portion of highly light reflective material, clearly visible from different angles.

To the above ends, we provide a hand covering having a front portion of wear-resistant close-knit material for covering the wearer's palm, thumb and adjacent sides of the fingers and wrist, and a back portion for covering the back of the wearer's hand and at least some of the fingers. The back portion is made up of loosely interlaced mono-filaments and formed into spaced apart ridges that project outwardly with respect to the back portion. The loose open mesh arrangement provides ventilating spaces through the back portion, the spaces combining to provide a total open area that is substantially greater than the area covered by the filaments alone. The monofilament material is colored with bright, highly reflective coloring matter so as to be clearly visible in various directions and at various angles of the lightimpingement thereagainst.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a view in perspective of a mitten showing the ventilated back portion of this invention;

FIG. 2 is an enlarged transverse section taken substantially on the line 2—2 of FIG. 1;

FIG. 3 is a greatly enlarged fragmentary view in elevation of a portion of the back panel of the mitten of FIGS. 1 and 2.

FIG. 4 is a transverse section taken generally on the line 4—4 of FIG. 3;

FIG. 5 is an enlarged fragmentary section of open mesh woven material; and

FIG. 6 is a fragmentary view in section of sheet material having a generally flat outer surface.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

A workman's mitten is shown in FIGS. 1 and 2 as comprising front and rear portions 1 and 2 respectively,

the front portion 1 being preferably made of leather or similar wear-resistant material, to provide a palm section 3, a wrist section 4 and a thumb covering section 5. The back portion 2 is substantially coextensive in length and width with the front portion 1 and is sewn or otherwise secured along its opposite side edges and outer end to the marginal edges of the front portion 1 by stitching or the like, indicated at 6. In the embodiment illustrated, the wrist section of the back portion 2 is provided with a band of elastic material 7 in a well-known and conventional manner, to enable the mitten to be applied to the wearer's hand, and to hold the mitten against accidental removal from the wearer's hand.

The back portion 2 is in the nature of a flexible panel comprising filaments 8 of mono-filament material, preferably synthetic plastic material, dyed or otherwise treated with bright colored highly reflective and luminescent coloring matter such as that commonly known and manufactured and sold under the trademark "DAY-GLO". The filaments 8 are knit, woven or otherwise interlaced to form laterally spaced, parallel ridges 9 that project laterally outwardly from the plane of the back portion 2, the ridges 9 extending longitudinally of the glove or mitten from the wrist portion to the outer end or finger tip end of the mitten. The filaments 8 are so loosely interlaced as to define relatively large spaces 10 therebetween, the spaces 10 being of a size to provide a total open area greater than that covered by the filaments 8 only. With this arrangement, the back portion 2 provides for ample ventilation for the interior of the glove or mitten so that the wearer's hand is comfortable even when the mitten is worn in summer weather. Thus, the wearer's hand may be protected from rough materials which he may be handling without undue discomfort from perspiration, and the life of the material of the front portion 1 is not unduly shortened by decay due to perspiration.

The laterally outwardly projecting ridges 9 are highly effective in making the back portion 2 of the glove or mitten clearly visible on cloudy days or after dark when artificial light is needed at a work site. This is particularly valuable when the back portion 2 is viewed from an angle oblique to the plane of the back portion 2. Such a situation is illustrated in FIGS. 5 and 6. In FIG. 5, light rays are indicated by full lines 11 as impinging on a loosely woven mesh sheet 12 and being reflected therefrom in directions indicated by dotted lines 13, approaching parallel relationship with the plane of the sheet 12. With the filaments of the sheet 12 being dyed with luminescent coloring matter, emitted light will travel from the filaments of the sheet 12 in all directions therefrom including those of the reflected rays 13. In FIG. 6, light rays are shown as impinging against the relatively flat unbroken surface of a solid sheet of material 14, these rays being indicated at 15. Obviously, the rays 15 will be reflected from the sheet 14 at substantially the same angles as they approach the sheet 14, the reflected rays being shown by dotted lines and indicated at 16. Even with a coating of luminescent coloring matter, as indicated at 17, light emitted from the coating 17 will not be nearly as visible to the eye of a viewer when the surface is seen from a highly acute angle as when the surface 17 is viewed along a line normal to the surface.

The glove or mitten of this invention is particularly useful to workmen who labor in areas of vehicular traffic such as city streets or on railroad tracks, during the

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bright hours of the day, as well as during times of poor visibility. In railroad work it has been found that signals given by a switchman wearing the mitten of this invention, are much more visible to a locomotive engineer at a distance, than when the switchman is wearing ordinary gloves or mittens. While wearing the glove or mitten of this invention, a worker on a city street is much more clearly visible to drivers of vehicles than heretofore and, as above indicated, the workmen can wear the glove or mitten in comfort, even in warmer weather.

While we have shown and described a commercial embodiment of our improved hand covering, it will be understood that the same is capable of modification, without departure from the spirit and scope of the invention, as defined in the claims.

What is claimed is:

1. A hand covering comprising; a front portion of close grained wear resistant material for covering the

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thumb, palm and adjacent side of a wearer's wrist and fingers; and a back portion for covering the back of the hand, fingers and wrist of the wearer and comprising a panel of filaments of mono-filament material interlaced in open loose-woven arrangement to define laterally spaced parallel loose-woven ridges projecting outwardly from the plane of the panel, and open spaces co-operating to provide a total open area substantially greater than the area covered by the filaments only, said filaments being colored with luminescent coloring matter, the opposite side of said ridges and the outer edge surface thereof having surface areas that are adapted to reflect and emit light in various directions relative to the plane of the back portion.

2. The hand covering defined in claim 1 in which said ridges extend longitudinally of the hand covering from the wrist portion to the outer end thereof.

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