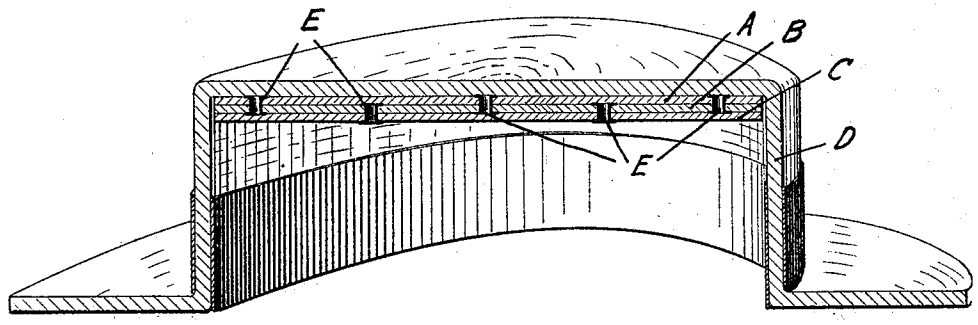
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SUN PROTECTING LINING FOR HATS, CAPS, OR THE LIKE.

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1,405,061. Patented Jan. 31, 1922.



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ILIA MOUROMTZEFF, OF NEW YORK, AND EMMANUEL I. LANDRESS, OF BROOKLYN, NEW YORK, ASSIGNORS, BY DIRECT AND MESNE ASSIGNMENTS, TO RICHARD VITOLO, OF NEW YORK, N. Y.

SUN-PROTECTING LINING FOR HATS, CAPS, OR THE LIKE.

1,405,061. Specification of Letters Patent. Patented Jan. 31, 1922.

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To all whom it may concern:

Be it known that we, ILIA MOUROMTZEFF, a citizen of Russia, residing in the city of New York, borough of Manhattan, county and State of New York, and EMMANUEL I. LANDRESS, a citizen of the United States, residing in the city of New York, borough of Brooklyn, county of Kings, and State of New York, have invented a certain new and useful Sun-Protecting Lining for Hats, Caps, or the like, of which the following is a specification.

This invention relates to a lining for hats, caps and the like and the object of the invention is to provide such a lining as will reflect or disperse the rays of the sun for the purpose of keeping the head cool.

It is well known that certain colors possess the qualities of reflecting or dispersing the rays of the sun while other colors have the quality of absorbing the sun rays, e. g. what are generally termed the light colors reflect while the darker colors, in several cases, absorb. It is further well known that the sun's spectrum embodies several colors, certain of which are particularly active in rendering and imparting heat to a ray of sunshine. The most active of these colors are embodied in the red and orange rays of the sun and these rays are generally termed the heat rays. We have found that by passing sunlight through a plurality of superimposed colors that the heat of the sunlight is reflected and dispersed and that such light as penetrates all of the colors is practically obviated of any perceptible heat.

With the foregoing considerations in mind the object of the present invention is to provide a lining for hats, caps and the like which embodies the provision of a plurality of superimposed colors through which the rays of the sun will be required to pass before impinging the head of the wearer and by this construction provide a hat which will be cool and comfortable even when worn on the hottest summer day and subjected to the glaring rays of the sun.

Features of the invention, other than those specified, will be apparent from the hereinafter detailed description taken in conjunction with the accompanying drawings.

In the accompanying drawings we have shown a hat in central section and associated with said hat a lining of the present invention is illustrated. The drawings show the preferred embodiment of the invention as carried out in men's straw hats but it will be understood that the invention is not limited to the particular showing made, which is for the purpose of illustration only and does not define the limits of the invention.

In the accompanying drawings D designates a well known form of a man's straw hat. In the crown of this hat is placed a lining embodying three or more plies of material A, B, and C, which are superimposed on one another and secured within the crown of the hat by sewing or in any other suitable manner. Both the top and sides of the crown may be lined if desired but, as shown, only the top of the crown is lined. In practice, the sides of the crown may be provided interiorly with lining of the same number of plies as the top or of a lesser number without departing from the spirit of the invention, although it is found unessential to line the sides as the most excessive heat impinges the top of the crown.

The plies A, B and C are of different colored material and each ply is preferably composed of fabric which is shiny or glossy on its upper side and has a dull finish on its lower side although this is not absolutely essential. In practice the upper face of each ply is of silk or satin finish on a cotton backing and this imparts the desired luster to the upper face of the plies so as to better adapt them to reflect the sun rays. The successive plies are preferably secured together with eyelets E which not only hold them together but facilitate the ventilation of the crown of the hat through the lining. The eyelets E are preferably staggered but as the material from which the lining is made is light and thin, proper ventilation is assured.

In one of the practical embodiments the lining of this invention is formed of three plies, the plies A being red, ply B orange, and the ply C of some relatively dark color preferably violet. With this coloring experiments have shown that as the heat of the sun penetrates the crown of the hat and impinges the ply A, the infra red rays of the sun will be reflected and as these are the

strongest rays of the sun spectrum the rays which pass through the ply A and impinge the ply B will have been divested, by the passage through the ply A, of the infra-red rays. In the passage of the remaining rays through the ply B, the yellow or orange rays will be sifted out so that by the time that the remaining rays impinge the ply C all that is left are the more or less relatively cool rays and these are absorbed, reflected and dispersed by the ply C so that any light which may sift through the lining will be devoid of such heat as would be objectionable or uncomfortable. It will, of course, be understood that the particular colors may be differently arranged or that other combination of colors might be employed but the foregoing assembling has been found to give very efficient results. The invention has been particularly described as associated with a man's straw hat but it is equally well applicable to caps and hats of other forms as well as to ladies' millinery. Moreover, the invention may be employed in protecting the heads of animals by sun shades such as are frequently applied to horses on hot summer days.

Viewing the invention in broad aspect it may be said to embody the superimposing of a plurality of plies of material of different colors, which when subjected to the rays of the sun selectively and collectively sift out the various rays of the spectrum for the purpose of precluding the passage of heat therethrough. If desired the colors may be so associated that one or more plies through which the sun is first required to pass may be of colors which reflect certain of the rays of the sun and the remaining ply or plies be of such color or colors as will absorb the remaining rays. As a straw hat is really nothing more or less than a sun shade, it will appear that the invention is adaptable to sun shades broadly, and as such may well be employed in the manufacture of parasols and the like.

We are aware that hat crowns have been made consisting of several layers of different material stitched together, an example of which is shown in the patent to Fritsch, 403,934, of May 28, 1889. However, structures of this character widely differ from the present invention in that there is no provision in such hats for the sifting out of the heat rays of the sun's spectrum. If heat is to be excluded, the inventors have heretofore endeavored to accomplish this result by using pressed felt or asbestos plies which are generally made considerably thicker than the lining ply of the hat. In the present invention no thick felt or asbestos plies are required as the present invention operates on an entirely different scientific principle of utilizing the power of different colors to dissipate the heat in the sun's spectrum. We are aware that colored linings have been placed in hats particularly women's hats and straw hats for men's use in the summer time as well as in felt and derby hats for use in the winter time. However, in every case, the use of colors has merely been for esthetic reasons and intended to beautify the appearance of the hat. They are not chosen with any intention to dissipate the sun's rays and in most cases they positively will not. In no case has a multiply hat lining of different colors, all of which plies may be made of light material such as silk or other fabric and which colors are so chosen as to sift out the heat from the sun's spectrum, been used. In a lining embodying the present invention, the colors may be such as to allow the light to pass through the hat, but will divest it of its heat rays. Such a hat is much cooler to wear than a felt lined hat which operates on substantially the same principle as the asbestos lining in an ice box since it is intended to insulate the interior of the hat from heat on the exterior thereof.

Having thus fully described our invention, what we claim as new and desire to secure by Letters Patent is:

1. A lining for hats, caps and the like embodying a plurality of superimposed plies of relatively thin, light weight material of different colors intended to successively sift out the heat of the sun's spectrum for the purpose of precluding the passage of such heat through the lining while not, necessarily, precluding the passage of light therethrough.

2. A lining for hats, caps and the like embodying a plurality of superimposed plies of material of different colors the upper surface of each ply having a luster and the lower surface of each ply having a dull finish whereby, during the subjection of the lining to the sun rays, certain heat colors of the spectrum are sifted out to preclude the transmission of heat through the lining.

3. A lining for hats, caps and the like embodying a plurality of superimposed plies of different colors, which colors are adapted to successively sift out the heat of the sun spectrum for the purpose of precluding the passage of such heat through the lining, each two adjacent plies having air ventilation holes extending therethrough.

4. A sun protector embodying a plurality of superimposed plies of relatively thin, light weight fabric of different colors intended to successively sift out the heat of the sun's spectrum for the purpose of divesting the sunlight of its heat.

In testimony whereof, we sign our names to this specification.

ILIA MOUROMTZEFF.
EMMANUEL I. LANDRESS.