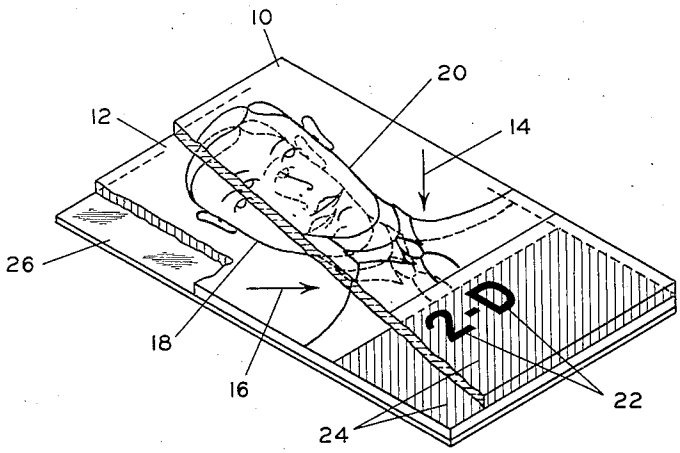
March 26, 1946. E. H. LAND 2,397,272

IDENTIFICATION BADGE

Filed Dec. 4, 1942



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Patented Mar. 26, 1946 2,397,272

UNITED STATES PATENT OFFICE

2,397,272

IDENTIFICATION BADGE

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Application December 4, 1942, Serial No. 467,860

5 Claims. (Cl. 88—65)

This invention relates to an improved identification badge.

It is an object of the invention to provide a badge of the character described which can be readily and cheaply made, which is exceedingly difficult to duplicate or counterfeit, and which immediately identifies the wearer.

Another object of the invention is to provide an identification badge comprising a light-polarizing photographic reproduction, and particularly a stereoscopic reproduction, of the owner of the badge, and in connection therewith means for enabling a guard or inspector to immediately determine the authenticity of the badge.

A further object is to provide a badge having the above advantages and comprising contrasting light-polarizing images—for example, a portrait of the wearer and some identifying indicia such as a number—combined with means enabling a guard or inspector to determine immediately the authenticity thereof.

A still further object of the invention is to provide a badge of the character described bearing indicia designating the portion of the plant or building to which the wearer of the badge may have access, and other indicia indicative of the wearer's name or time clock number, and to provide such indicia in a manner permitting an inspector or guard equipped with a suitable cooperating viewing device to determine immediately the authenticity of the badge and the wearer's right of access to the portion of the building or plant in which he may be.

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

The invention accordingly comprises an article of manufacture comprising the features of construction, combination of elements and arrangement of parts which are exemplified in the following detailed description and the scope of the application of which will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description, taken in connection with the accompanying drawing, which represents in perspective, with parts broken away, one embodiment of the invention.

The identification badge of the present invention is particularly adapted for use in plants or buildings where rigid inspection of the personnel is important, and where employees are limited in their right of access to predetermined portions of the plant or building. Situations of this kind have frequently arisen in connection with industries engaged in war work. It has become important to provide employees with a badge or identification card which is difficult or impossible to counterfeit, which immediately identifies the wearer, which designates on its face the portions of the plant or grounds to which he is entitled to have access and which bears an identifying number, such for example as a department number and/or a time clock number.

A preferred embodiment of the invention, and that form shown in the drawing, comprises essentially a photographic reproduction of the face of the badge owner, together with indicia, such for example as a color band or stripe designating that portion of the plant to which the owner is entitled to have access, and other indicia, for example department number and a time clock number, which enable an inspector or guard to readily ascertain the name of the person wearing the badge and the department to which he belongs. The photograph of the wearer of the badge is reproduced stereoscopically in light-polarizing material. This may be accomplished by taking a left eye and a right eye picture of the badge owner and reproducing the two images, preferably in substantially superimposed relation, one image being reproduced in dichroic light-polarizing material having its polarizing axis substantially perpendicular to the polarizing axis of the dichroic light-polarizing material in which the other image is reproduced. The dichroic polarizing images may preferably be formed in any suitably oriented transparent linear hydrophilic polymeric plastic material, in ways known in the art. A preferred material for use in the reproduction of such a sheet is polyvinyl alcohol.

The sheet receiving the photographic images may be either a single sheet having its surface molecules substantially oriented, the molecules of one surface being oriented in a direction substantially perpendicular to the molecules of the other surface, or it may be a composite sheet, as shown in the drawing, formed by bonding together two sheets 10, 12 of the plastic material, each of which has been stretched or otherwise treated to substantially orient its molecules, the two sheets being bonded together with the directions of molecular orientation substantially perpendicular. In the preferred embodiment of the invention this sheet or composite sheet has its surface molecules oriented in directions perpendicular to one another and at angles of 45 degrees

to the edge of the sheet, as shown clearly in the drawing by arrows 14 and 16.

A dichroic light-polarizing reproduction 18 of the left eye stereoscopic image of the owner of the badge may be formed on one surface of sheet 12, and a dichroic light-polarizing reproduction 20 of the right eye image of the owner of the badge may be formed on one surface of sheet 10 by printing thereon with a suitable dichroic stain from a prepared gelatin relief, half-tone or the like in any manner known to the art. The images may be formed in any color, or if desired in full color, in the manner shown and described in my issued patent, No. 2,289,714, or the badges may be black and white reproductions, in which case a preferred stain is one comprising iodine and an iodide.

Adjacent the stereoscopic portrait of the owner of the badge there is provided in the preferred embodiment of the invention a number or a letter and a number, or other similar indicia 22, formed in dichroic light-polarizing material oriented in substantial parallelism with one or the other of the stereoscopic images of the badge owner so that these indicia are visible when the badge is viewed either without a viewing device or when it is viewed through a polarizing analyzer with its transmission axis perpendicular to the transmission axis of the dichroic material comprising the indicia, but so that the indicia are substantially invisible when the badge is viewed through a light-polarizing analyzer with its transmission axis substantially parallel to the transmission axis of the material comprising the indicia. In the form of badge shown, indicia 22 are provided in upper plastic sheet 10.

Associated with these indicia and preferably overlying them there is provided another dichroic light-polarizing surface, for example, in sheet 12, with its transmission axis substantially perpendicular to the transmission axis of the dichroic material comprising the first-mentioned indicia 22. The material comprising this second light-polarizing surface may be a dichroic colored stain or dye or a plurality of such dichroic dyes forming a band or bands of color 24. When the object is viewed by an inspector equipped with suitable viewing devices, for example with a pair of spectacles provided with light-polarizing lenses, the transmission axes of which are perpendicular to one another and substantially at angles of 45 degrees to the horizontal, the left eye of the inspector will see the left eye image of the portrait of the wearer of the badge and either the band of color or the letter and/or numeral adjacent the portrait, and the right eye of the inspector will see the right eye stereoscopic image of the portrait and either the letter and/or numeral or the band of color. The inspector thus sees a stereoscopic portrait of the wearer of the badge which enables him to identify the wearer absolutely. He also sees with one eye a letter which may represent the department to which the wearer of the badge belongs and a number which may represent the badge wearer's time clock number, and with the other eye the inspector sees a band of color or bands of color which may indicate the portion or portions of the plant to which the badge wearer has access. By closing one eye or the other the inspector loses sight of either the color band or the letter and number accompanying the portrait of the badge wearer, and in this way is able immediately to ascertain whether the badge is or is not a genuine badge.

A reflecting non-depolarizing backing 26 is preferably provided for the entire badge, and this may comprise a strip of cardboard or stiff paper having the surface thereon in contact with the dichroic images coated with aluminum or other non-depolarizing material. Preferably the entire badge may be inserted in a transparent container, for example a container of a transparent plastic material to which there may be affixed a pin or other means, not shown, for fastening the badge to the clothing of the wearer thereof.

The stereoscopic portrait has been found to provide such an accurate means of identifying the badge owner as to make transfer of the badge with alterations in the portrait utterly impossible. Moreover, the provision of the dichroic multiple indicia of the character described has been found to complicate reproduction of the badge so as to make counterfeiting substantially impossible. The entire badge is cheap to produce, it may be produced with little more trouble than an ordinary photographic positive, it provides a positive method of identification, and an immediate and accurate means for checking on the badge wearer and determining whether he is in that portion of the plant or building in which he is entitled to be.

It will of course be apparent that many other methods of producing the dichroic stereoscopic portrait and accompanying indicia may be employed. In this connection reference should be had to my issued patents, Nos. 2,281,101 and 2,289,715, and to the issued patent to Land and Mahler, No. 2,203,687, which describe some of the preferred methods and means for producing stereoscopic, dichroic, light-polarizing transparencies and prints. It is to be understood that the invention contemplates the use of any of these methods and means or any like or equivalent methods or means.

It should be pointed out that the above described embodiment of the invention may be modified in various ways without detracting from the novelty and utility thereof. In one particularly useful modification, the system of contrasting images for each eye illustrated by indicia 22 and color bands 24 may be utilized throughout the whole of the badge. For example, instead of a stereoscopic portrait of the wearer, there may be used a single dichroic light-polarizing portrait so arranged and oriented as to be visible to only one eye of an observer wearing light-polarizing, stereoscopic viewing glasses. This single portrait may be arranged in superimposed relation with another dichroic, light-polarizing image, such as indicia 22 or any other desired contrasting image, for example the seal or trademark of the company by which the wearer is employed. It will be apparent that although the use of the portrait of the wearer is desirable, it is not essential to the invention. For example, another badge arrangement may have the wearer's number visible to one eye of an observer wearing light-polarizing viewers having their leases arranged with their axes at right angles to each other, and the seal of the company by which the wearer is employed visible to the other eye of the observer. Many similar modifications will be apparent to those skilled in the art and are to be construed as coming within the scope of the invention.

Since certain changes may be made in the above article and different embodiments of the invention could be made without departing from its scope, it is intended that all matter contained in the above description or shown in the accompany-

ing drawing 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 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.

What is claimed is:

1. An identification badge comprising, in combination, means providing substantially superimposed, right eye and left eye stereoscopic, light-polarizing reproductions of a portrait of the badge owner, the transmission axes of said stereoscopic reproductions being substantially perpendicular, and means associated therewith and providing at least one light-polarizing identifying indicium having its transmission axis substantially parallel to the axis of one of said stereoscopic reproductions, and a colored dichroic light-polarizing area having its transmission axis substantially parallel to the axis of the other said stereoscopic reproduction.

2. An identification badge comprising, in combination, means providing substantially superimposed, right eye and left eye stereoscopic, light-polarizing reproductions of a portrait of the badge owner, the transmission axes of said stereoscopic reproductions being substantially perpendicular and at angles of 45 degrees to the edges of said badge, and means associated therewith and providing at least one light-polarizing identifying indicium having its transmission axis substantially parallel to the axis of one of said stereoscopic reproductions, and a colored dichroic light-polarizing area having its transmission axis substantially parallel to the axis of the other said stereoscopic reproduction.

3. An identification badge comprising, in combination, means providing substantially superimposed, right eye and left eye stereoscopic, light-polarizing reproductions of a portrait of the badge owner, the transmission axes of said stereoscopic reproductions being substantially perpendicular, and means associated therewith and providing at least one light-polarizing identifying indicium having its transmission axis substantially parallel to the axis of one of said stereoscopic reproductions, and a colored dichroic light-polarizing area having its transmission axis substantially parallel to the axis of the other said stereoscopic reproduction, said indicia and said colored area being in substantially superimposed relation.

4. An identification badge comprising, in combination, means providing substantially superimposed, right eye and left eye stereoscopic, light-polarizing reproductions of a portrait of the badge owner, the transmission axes of said stereoscopic reproductions being substantially perpendicular, means associated therewith and providing at least one light-polarizing identifying indicium having its transmission axis substantially parallel to the axis of one of said stereoscopic reproductions, a colored dichroic light-polarizing area having its transmission axis substantially parallel to the axis of the other said stereoscopic reproduction, and means providing a light-reflecting backing for said badge, said backing having a non-depolarizing surface in contact with said portrait-providing means.

5. An identification badge comprising, in combination, means comprising molecularly oriented transparent linear polymeric plastic material having a dichroic stain incorporated therein and providing substantially superimposed, right eye and left eye stereoscopic, light-polarizing reproductions of a portrait of the badge owner, the transmission axes of said stereoscopic reproductions being substantially perpendicular, means associated therewith and providing at least one light-polarizing identifying indicium having its transmission axis substantially parallel to the axis of one of said stereoscopic reproductions, and a colored dichroic light-polarizing area having its transmission axis substantially parallel to the axis of the other said stereoscopic reproduction.

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