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2,502,535

ARM REFLECTOR FOR PEDESTRIAN PROTECTION

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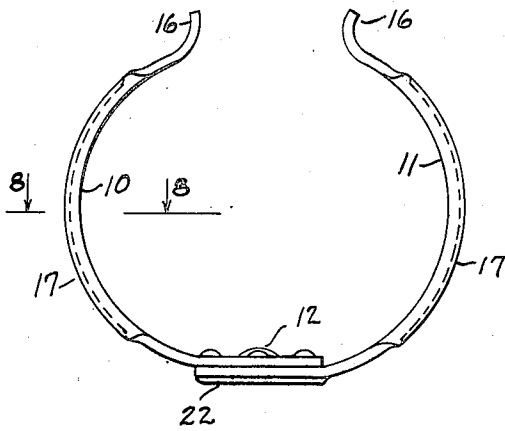


Fig. 1.

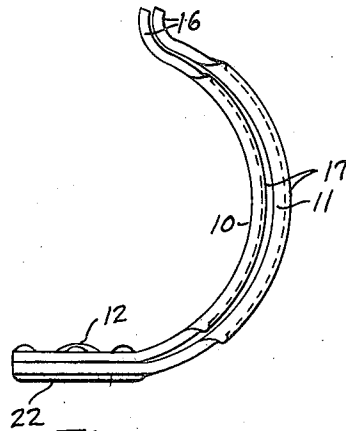


Fig. 2.

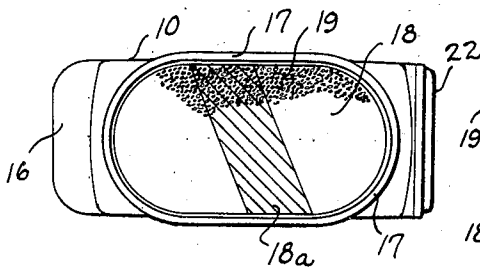


Fig. 3.

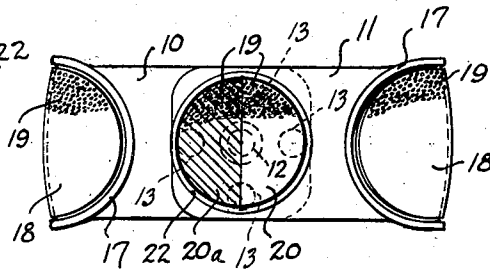


Fig. 4.

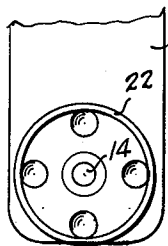


Fig. 5.

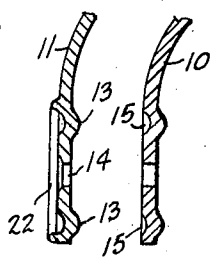


Fig. 6. Fig. 7.

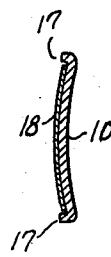


Fig. 8.

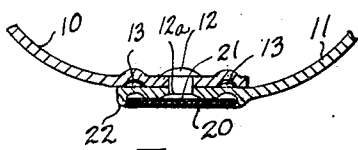


Fig. 9.

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UNITED STATES PATENT OFFICE

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ARM REFLECTOR FOR PEDESTRIAN PROTECTION

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2 Claims. (Cl. 88-80)

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This invention relates to a reflector which is to be worn on the arm of a pedestrian or cyclist as a warning to motorists after dark, and has for an object to provide a light weight, small, convenient arm band which may be worn on the arm of persons when walking on or near the highway at night and has light reflecting means which may be readily seen at a considerable distance, so that the driver of an approaching automobile will be warned of their presence.

It has for its further object to provide a device of the type mentioned above which is strong and durable, and which a pedestrian or cyclist will find convenient to carry and thus feel freer to use it than he would a more bulky or less convenient device.

It has for its further object to provide an arm band of a type heretofore described which is provided with an efficient light reflecting means so that despite its small size the device will afford maximum protection.

With the foregoing and other objects in view I have devised the construction illustrated in the accompanying drawing forming a part of this specification. It is, however, to be understood the invention is not limited to the specific details of construction and arrangement shown, but may embody various changes and modifications within the scope of the invention.

In the drawing:

Fig. 1 is a side view of the device showing the device in the open position for use;

Fig. 2 is a side view showing the device in the closed position for convenient carrying;

Fig. 3 is a view looking from the left of Fig. 1;

Fig. 4 is a view looking from the bottom of Fig. 1;

Fig. 5 is a view of a portion of the device showing the means for securing the two gripping arms together;

Fig. 6 is a partial section through the pivoting means of one of the arms;

Fig. 7 is a partial section through the pivoting means showing the other arm;

Fig. 8 is a section taken substantially on line 8-8 of Fig. 1, and

Fig. 9 is a partial section through the pivoting means showing a detail of the pivoting means.

The device comprises a flexible spring clamping band comprising two curved flexible strips or arms 10 and 11 composed of spring steel, or plastic, or other suitable material. The strips 10 and 11 are pivoted together by a rivet 12 so that they may be folded for carrying purposes as shown in Fig. 2, the strips 10 and 11 being somewhat

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rounded or curved in cross section, as shown in Fig. 8, so that they will nest together when in the position shown in Fig. 2, as heretofore described. A series of ribs or elevations 13, preferably four in number, is provided on the arm 11, in positions equally spaced around the pivot hole 14 and equidistant from the pivot 12. The ribs 13 fit into similarly spaced recesses or depressions 15 in the other arm 10, thus providing a means for holding the arms 10 and 11 in the open position, as shown in Fig. 1, or in closed position or folded together, as shown in Fig. 2. The spring or resiliency of the arms or side members retain the ribs or elevations 13 in the recesses 15 and thus retain these side members either in the open or closed positions, but yield sufficiently to permit the side members to be relatively turned about the pivot between the open and closed positions. The arms or side members 10 and 11 are substantially semicircular in shape, the ends opposite the pivot 12 being turned outwardly, as at 16, so that the strips or arms 10 and 11 may be readily slipped around the arm of the wearer. A portion of each of the arms 10 and 11 is provided with turned-up edges or ribs, as at 17, to form a recess or depression in which the reflecting means is secured. These raised edges or ribs provide raised or outwardly extending protective walls surrounding the recesses or depressions to protect the edges of the light reflecting material mounted in the recesses, as will presently be described.

The reflecting means 18 comprises a strip composed of paper or other similar flexible backing material on which is cemented a surface layer of very small glass beads 19 held by cellulose or similar waterproof cement. This is cemented to the outer surfaces of members 10 and 11 by suitable cement. The beads cover the entire reflecting surfaces, although they are shown on only a portion of them in the drawing to simplify it. Also the thickness of the various elements are greatly exaggerated on the drawings over what they would be in actual construction. This reflecting material is in common use on highway posts and other similar locations. A very satisfactory material is that known as "Scotchlite," and may be purchased on the market under this name. The reflecting material may be provided in various arrangements of colors, an example of which, shown in Fig. 3, would be a green strip 18a with a white background. Through the use of various colors and designs arrangements, it is possible to standardize the type of reflector which would be worn by pedestrians or cyclists and the like, thereby enabling the driver of an automobile

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to identify the wearer as such. The portions 18a and 20a are sectioned to indicate the color green, but of course could be any color desired. It is clear that since the reflecting surface is placed around the curved strips or arms 10 and 11 that the reflecting material 19 would reflect light coming from the front, back or side. It is also clear that as the reflecting material seats in a recess, as heretofore described, it is protected by the rib or flange so that the edges of the material are protected from being frayed or broken by rubbing against other objects.

An additional reflecting piece 20 is placed in the form of a bull's-eye over the rivet 12, and is secured in place by being cemented to a washer 21 composed of paper or other similar material, the washer 21 in turn being cemented to the arm 11 around the rivet opening. Thus when the arms are turned around the pivot between the open and closed positions, relative turning of the rivet 12 will not damage the reflector, since the reflector 20 is not in contact with the rivet. The head 12a of the rivet is preferably countersunk and flat. The reflecting bull's-eye 20 may also be in different colors or designs to enable identification of the wearer. A suggested form, shown in Fig. 4, comprises half the bull's-eye 20a being green, for example, and the other half being white. This member 20 is also preferably mounted in a depression or surrounded by a raised rib or flange 22 to protect the edges of the reflecting material 20.

It is clear with this device being small and compact, the wearer may conveniently carry the device in the pocket or pocket-book, or it may be conveniently carried in the glove compartment of a car, and because of this convenience it is more apt to be worn than would a more bulky device. However, in spite of its small size, the maximum of protection is afforded through the use of an efficient reflecting means, as it may be easily seen at a considerable distance, giving ample warning to the driver of the car. It may even be readily seen through fog. The transverse curvature of the members and the reflecting means, as indicated in Fig. 8, increases the angles at which the reflected light may be seen.

Having thus set forth the nature of my invention, I claim:

1. An arm reflector of the character described comprising two longitudinally curved flexible resilient band members overlapped at one end and with a rivet pivoting said ends together to permit the members to swing relative to each other in substantially the planes of the bands between a closed position closely nested one on the other in substantially parallel relation and an open position in alignment to embrace the

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arm of the wearer, the outer head of the rivet being flat and in substantially the plane of the outer surface of the member, said surface being formed with a depression surrounded by raised protective walls, a washer secured in the depression over the rivet head, a bright light reflecting material over the washer within said walls, and a covering of bright light reflecting material on the outer surfaces of said members extending for a substantial portion of the length of each member, and said reflecting material being flexible so that it can bend with the bands without breaking.

2. An arm reflector of the character described comprising two longitudinally curved flexible resilient band members overlapped and pivoted together at one end to swing relative to each other in substantially the planes of the bands between a closed position closely nested one on the other in substantially parallel relation and an open position in alignment to embrace the arm of the wearer, cooperating means on the overlapped portions to yieldingly lock the members in either position, the outer surfaces of said members being formed with depressions extending for a substantial portion of the length of each member and surrounded by raised protective walls, the outer overlapped end being provided with a depression around the pivot surrounded by raised protective walls, and a light reflecting covering means cemented in and covering substantially the whole surface of each depression comprising a flexible backing capable of flexing with the band without breaking and with its outer surface covered with reflecting beads and arranged with its edges within the raised walls to be protected thereby.

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