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PAINT SHIELD FOR VEHICLE WHEELS

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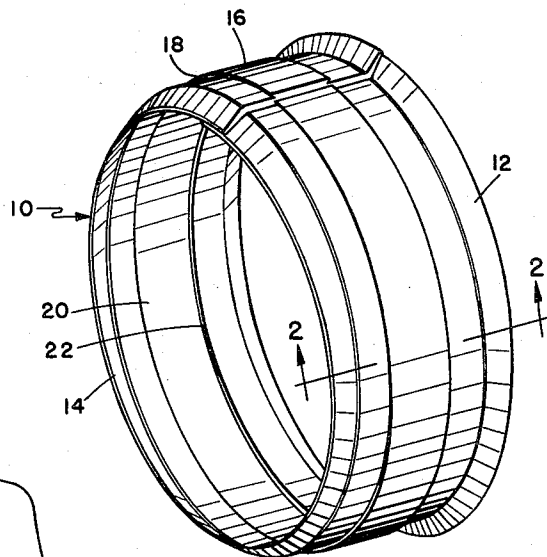


Fig. 1

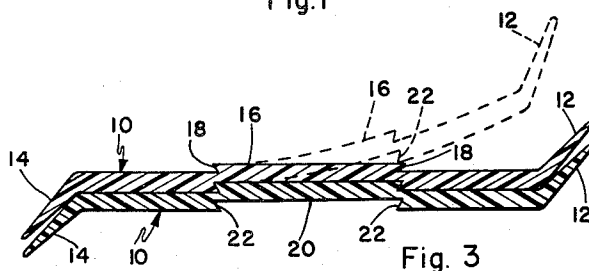


Fig. 3

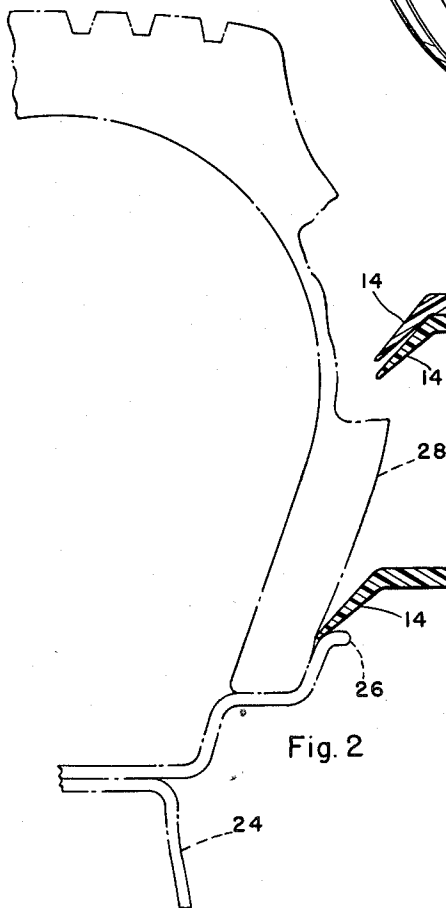


Fig. 2

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1

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3 Claims. (Cl. 118—505)

The present invention relates generally to masking devices and more particularly to a paint shield for circular objects such as vehicle wheels.

The primary object of this invention is to provide a paint shield comprising a strip or band of generally flexible material which can be adjusted to fit various sizes or wheels to shield either the tire or the wheel disc while one or the other is being painted.

Another object of this invention is to provide a shield which is perfectly adapted for use in pairs, one spaced inside the other to mask an annular strip for painting two-tone wheel discs or in painting wheel discs a color different from the attached tire rims.

Another object of this invention is to provide a paint shield of novel design which permits the ends to be easily interlocked by their own particular shaped structure, without the use of additional clamps or fastening devices, so that the shield is held firmly in place.

Another object of this invention is to provide a paint shield which, due to its flexibility, is easily cleaned, since any paint thereon cracks and flakes off when the shield is flexed.

Another object of this invention is to provide a paint shield which is adapted for fabrication from many different materials, so that the choice of materials can be according to the dictates of availability and price considerations, the exact sizes and proportions being matters easily determined to suit particular conditions and needs.

Another object of this invention is to provide a paint shield which is practicable and inexpensive to manufacture.

Finally, it is an object to provide a paint shield which is simple and convenient to use and which will give generally efficient and durable service.

With these and other objects definitely in view, this invention consists in the novel construction, combination and arrangement of elements and portions, as will be hereinafter fully described in the specification, particularly pointed out in the claims, and illustrated in the drawing which forms a material part of this disclosure, and in which:

Figure 1 is a perspective view of the shield;

Figure 2 is an enlarged sectional view taken on the line 2—2 of Figure 1, a wheel assembly being shown fragmentarily in broken line; and

Figure 3 is a sectional view similar to Figure 2 showing the interlocking of the ends of the shield the view being taken through the overlapped ends of the shield, one edge of the outer portion being shown in dash line as disengaged from the inner portion.

Similar characters of reference indicate similar or identical elements and portions throughout the specification and throughout the views of the drawing.

Referring now to the drawing in detail, the shield comprises an elongated, strip 10 of flexible, generally resilient material such as polyethylene, nylon or some similar plastic material. It is, of course, desirable that

2

the material used should be inert to solvents used in the various paints which may come in contact with the shield. Each longitudinal edge of the strip 10 has angularly outwardly extending, tapered flanges 12 and 14, the flange 12 on one longitudinal edge of the strip and the flange 14 on the opposed edge. The flanges extend at acute angles, preferably approximately 45 degrees, from the opposite faces of the strip. If the flanges are parallel, storage and shipping of the shields is greatly facilitated. Thus, when the strip 10 is bent into circular form as shown in Figure 1, one flange extends angularly outwardly while the other flange is disposed angularly inwardly.

The faces of the strip 10 are provided with interfitting deformations in order that overlapping ends of the strip can be interlocked when the strip is bent into circular form. In the embodiment illustrated, one face of the strip 10 has a longitudinal raised rib 16 substantially centrally disposed on the strip and parallel to the edges thereof, said rib having outwardly flaring edges 18, so that the rib constitutes a wide, flat dovetail type element. The other face of the strip 10 has a longitudinal channel 20 similar in size and shape to the rib 16 and disposed directly opposite said rib, said channel having angularly inwardly tapered edges 22 to fit the flared edges 18 on said rib. The rib 16 and channel 20 thus comprise the male and female components, respectively, of a dovetail type joint.

To fix the strip 10 in circular form for attachment to a wheel, the ends are interlocked as shown in Figure 2, with the rib 16 of one end of the strip fitted into the channel 20 at the other end. This is best accomplished by bending or flexing one edge of the strip as indicated in dash line, inserting one edge 18 of the rib 16 into the corresponding portion of the channel 20 and then snapping the other edge of the channel into place over the rib. The resiliency of the material facilitates this snapping together of the ends. Alternatively or additionally one end may be slid into the other as the strip is placed on the wheel, so that the diameter can be accurately adjusted.

In use, the shield fits closely around the rim of a wheel 24, the flange 14 fitting over the rim bead 26 and contacting the tire 28, as shown in Figure 2. The tapered edge of the flange 14 fits securely into the angle formed between the rim bead 26 and tire 28, yet does not cover any portion of the tire outside the diameter of said rim bead. Thus either the wheel 24 or the tire 28 may be painted on its entire visible surface without having to adjust the shield. The two opposed flanges 12 and 14 provide considerable rigidity for the shield and also enable the shield to be reversed, should one flange be damaged, and when the shape of the article to be painted makes the use of one flange easier than the use of the other. Since the flanges 12 and 14 extend from opposite faces of the strip, the shield is adapted for internal and external application to annular flanged elements such as vehicle wheels and rims, without disconnection of the ends thereof and reversal. The flexibility of the shield greatly simplifies its cleaning, since the material may be manually flexed to flake off dried paint, any residue being easily removed with a brush.

The dovetail shape of the rib 16 and channel 20 is perhaps the simplest and most practical structure for connecting the ends of the shield, but it should be understood that other cross-sectional shapes of wedge or tapered form, either flat or curved and single or in multiple may be used without departing from the concept of a unitary, flexible shield having interlocking, adjustable end portions.

The shield may be used to mask other portions of the wheel assembly if necessary, such as when painting the

3

wheel rim and wheel disc in different colors. In such instances, the outwardly turned flange 12 may be engaged with the wheel if desired and two, concentric, spaced shields may be used simultaneously for such annular strip painting.

I claim:

1. A paint shield for vehicle wheels, comprising: an elongated unitary strip of flexible, resilient material; one face of said strip having thereon a deformation extending longitudinally of the strip; the other face of said strip having a deformation extending longitudinally of the strip and configured and dimensioned to fit into the first mentioned deformation; the ends of said strip being in overlapping relation when said strip is bent into substantially circular form as in use and said deformations being interlocked in self-locking relation to maintain said form; and

4

at least one edge of said strip having a laterally disposed, unitary and continuous wheel-engaging flange extending outwardly at an acute angle to an adjacent portion of the strip, said wheel engaging flange being discrete from said deformations.

5

2. A paint shield according to claim 1 wherein said deformation extends throughout at least a major portion of the length of said strip.

10

3. A paint shield according to claim 1 wherein said deformation is coextensive in length with said strip.

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