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Nestell et al.

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(45) **Date of Patent:** \*Sep. 24, 2002

(54) **VEHICULAR COMPONENT ASSEMBLY WITH HARD COATED ELEMENT**

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(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **09/962,743**

(22) Filed: **Sep. 25, 2001**

**Related U.S. Application Data**

(63) Continuation of application No. 09/332,632, filed on Jun. 14, 1999, which is a continuation of application No. 08/895,956, filed on Jul. 17, 1997, now Pat. No. 6,000,814.

(51) **Int. Cl.**<sup>7</sup> ..... **F21V 5/00**

(52) **U.S. Cl.** ..... **362/520; 362/267; 362/311; 428/412**

(58) **Field of Search** ..... **362/520, 267, 362/549, 310, 311, 293, 509, 510; 359/513; 428/412**

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**OTHER PUBLICATIONS**

A copy of four (4) photographs of a conventional lens and a gasket as shown in FIGS. 14A and 14B.

*Primary Examiner*—Sandra O’Shea

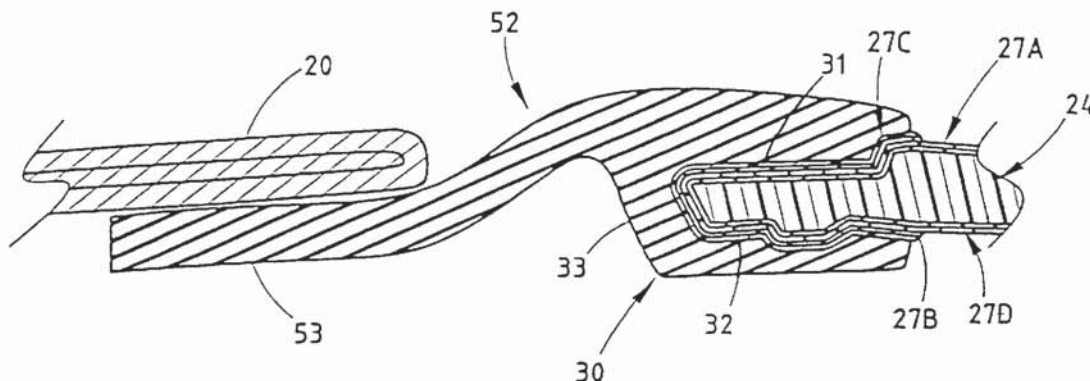
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(57) **ABSTRACT**

A vehicle component assembly includes a hard coated polymeric element with a resinous polymeric molded element or gasket integrally molded to a predetermined area thereof. Preferably, the element is a polycarbonate optical lens, such as a headlight lens, which is coated with a protective coating or hard coat which provides abrasion resistance and optionally includes ultraviolet radiation absorbers to protect the resinous polymeric molded element from UV radiation degradation. Adhesion is improved by priming the area of the polycarbonate element which receives the gasket with a primer coating. Preferably, the area to be gasketed is primed with a first adhesion promoting primer followed by a second adhesion promoting primer, wherein the first adhesion promoting primer improves the adhesion of the second primer to the protective coating, while the second primer, in turn, improves the adhesion of the molded element or gasket to the first primer and the hard coated element. The gasket is preferably molded on a peripheral portion of the element which may include grooves or other formed portions for mechanical interlocking the gasket with the polymeric element. Preferably, the gasket is formed from a melt-processible gasket material, such as polyvinyl chloride, thermoplastic urethane, or an ethylene-styrene polymer.

**35 Claims, 8 Drawing Sheets**



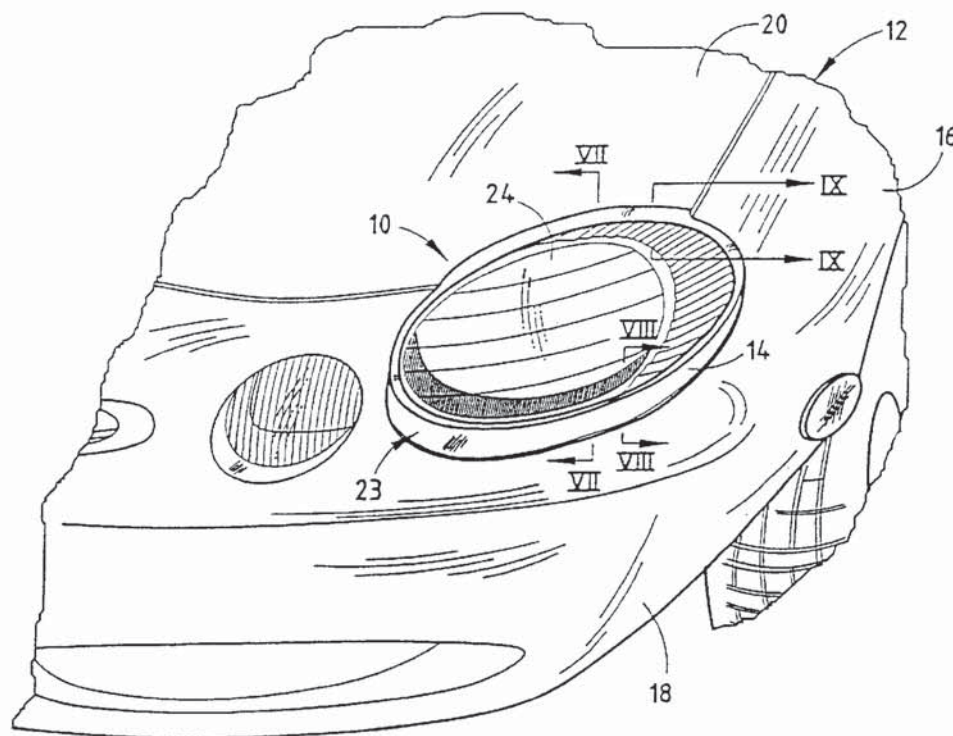


FIG. 1

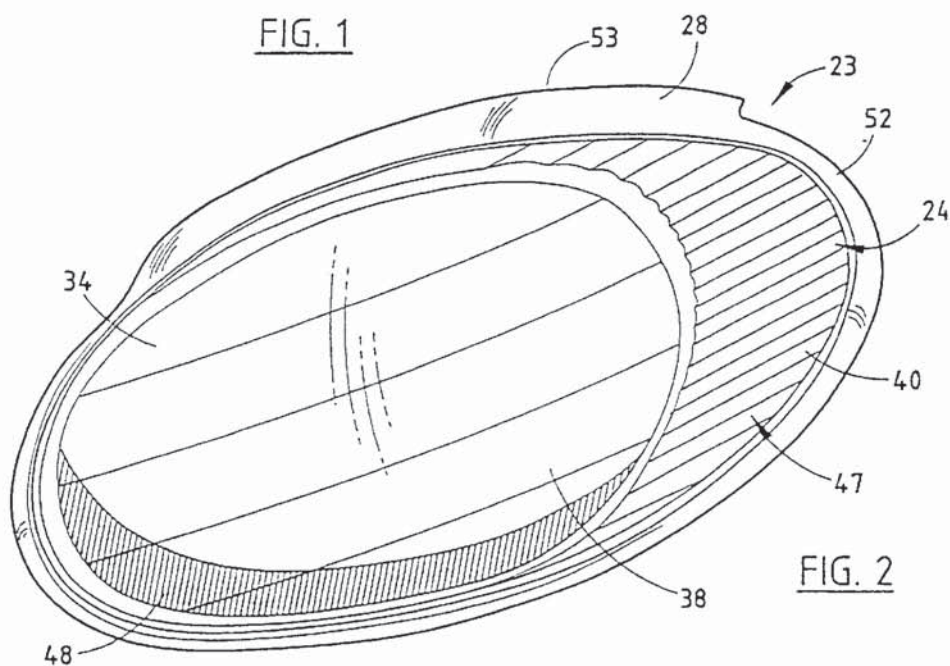


FIG. 2

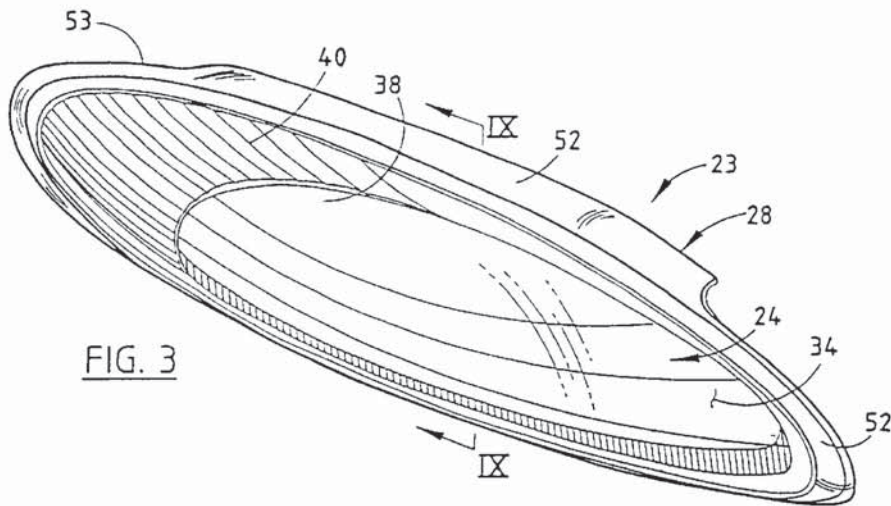


FIG. 3

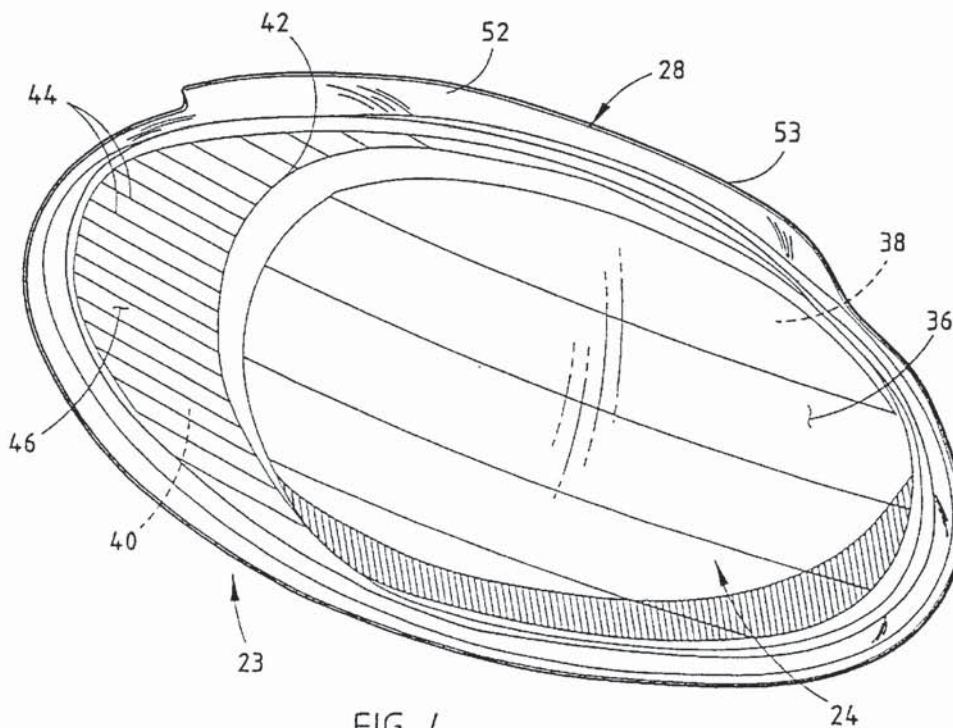


FIG. 4

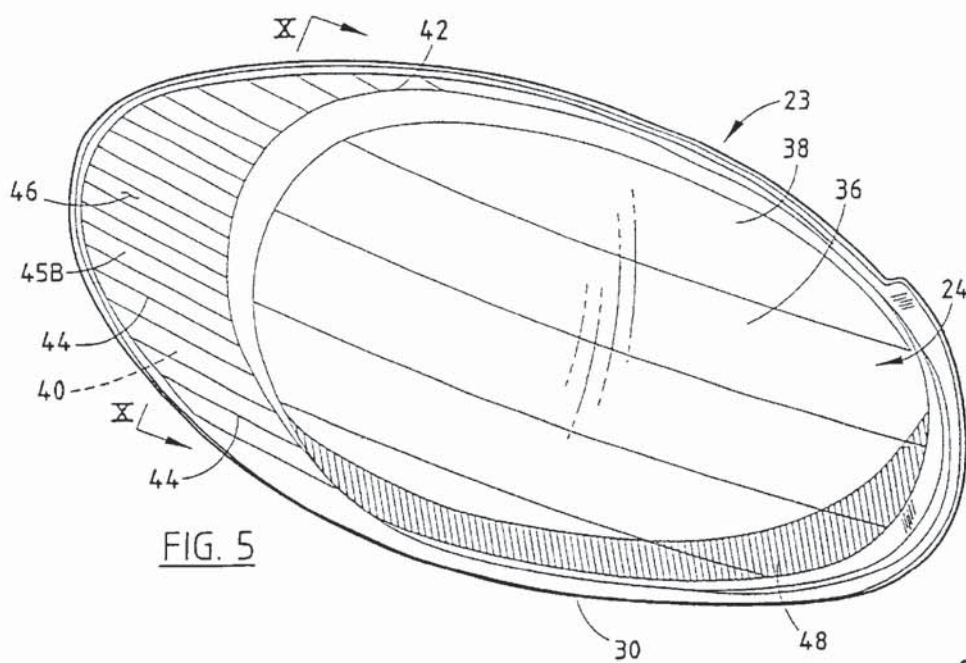


FIG. 5

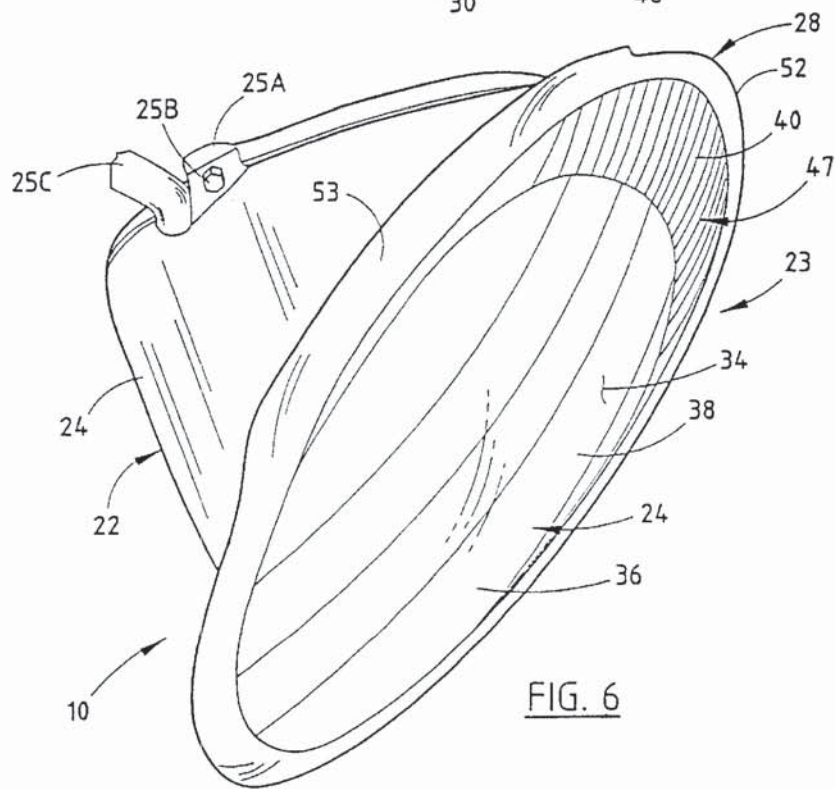


FIG. 6

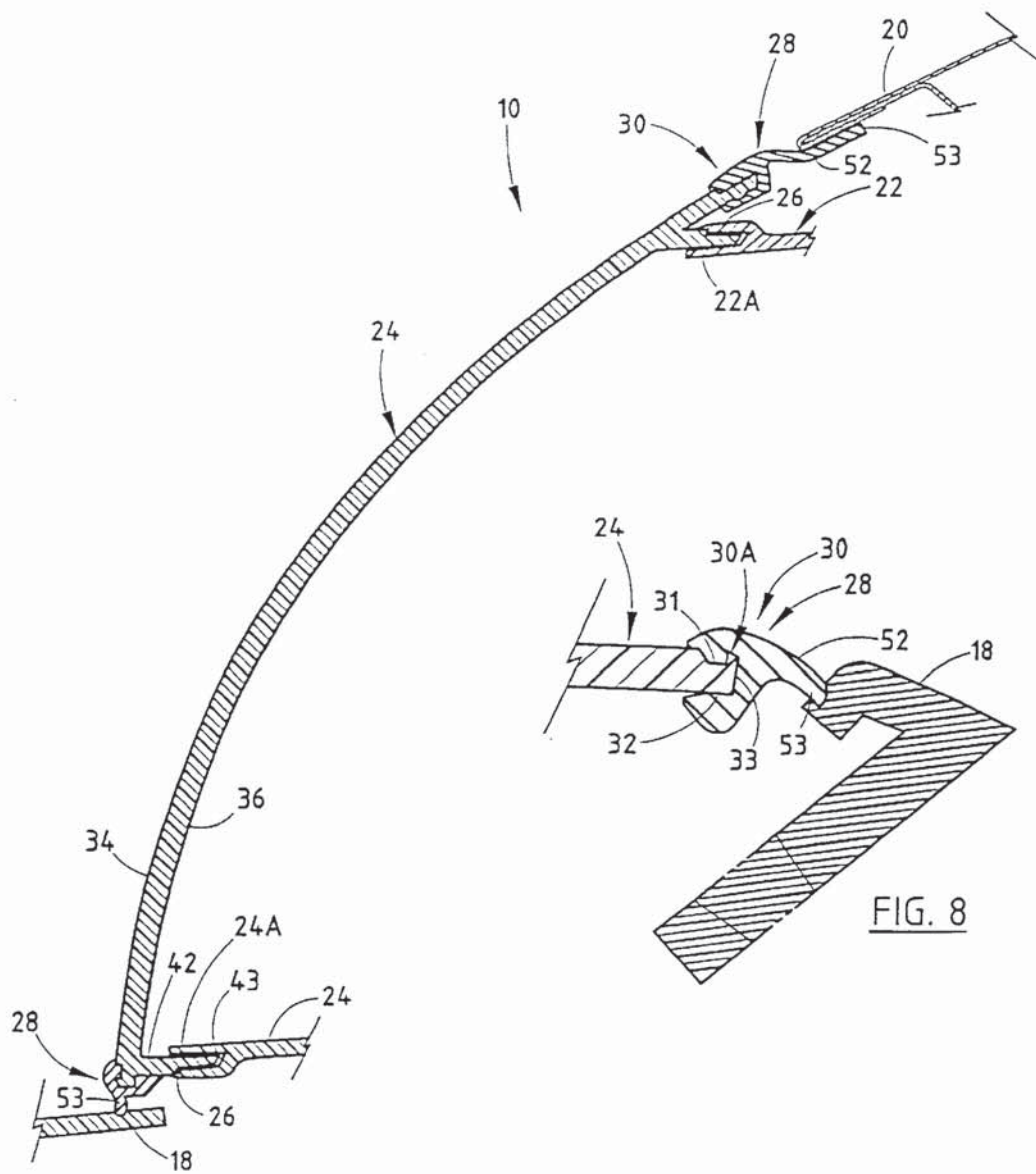


FIG. 7

FIG. 8

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