



US005613751A

United States Patent [19]

[11] Patent Number: **5,613,751**

Parker et al.

[45] Date of Patent: **Mar. 25, 1997**

[54] **LIGHT EMITTING PANEL ASSEMBLIES**

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[73] Assignee: **Lumitex, Inc.**, Strongsville, Ohio

[21] Appl. No.: **495,176**

[22] Filed: **Jun. 27, 1995**

[51] Int. Cl.⁶ **F21V 7/04**

[52] U.S. Cl. **362/31; 362/27; 362/235; 362/297; 362/308**

[58] Field of Search **362/26, 27, 31, 362/235, 249, 297, 299, 300, 308, 329, 330, 346, 800**

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Primary Examiner—Ira S. Lazarus
Assistant Examiner—Alfred Basichas
Attorney, Agent, or Firm—Renner, Otto, Boisselle & Sklar, P.L.L.

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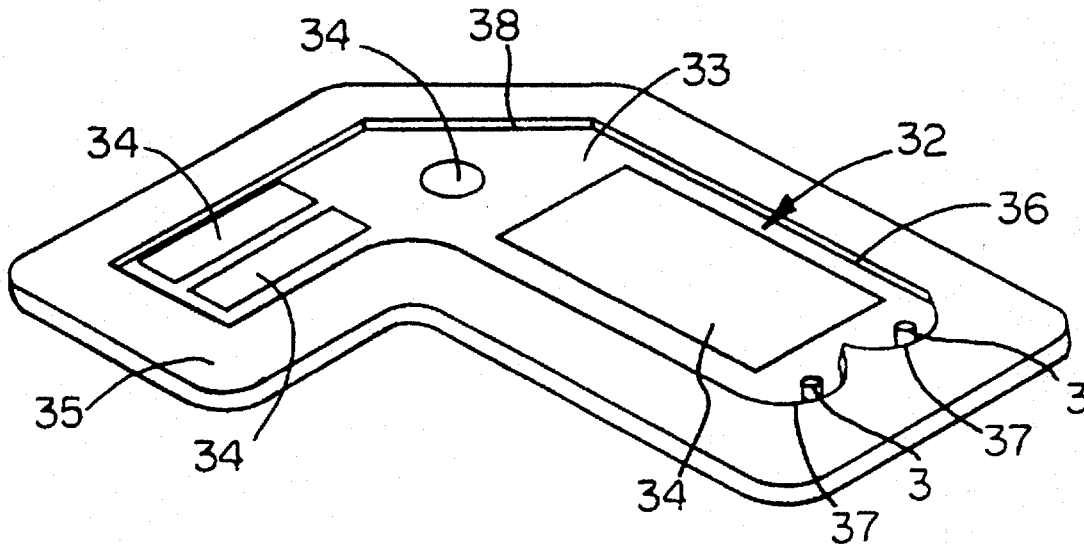
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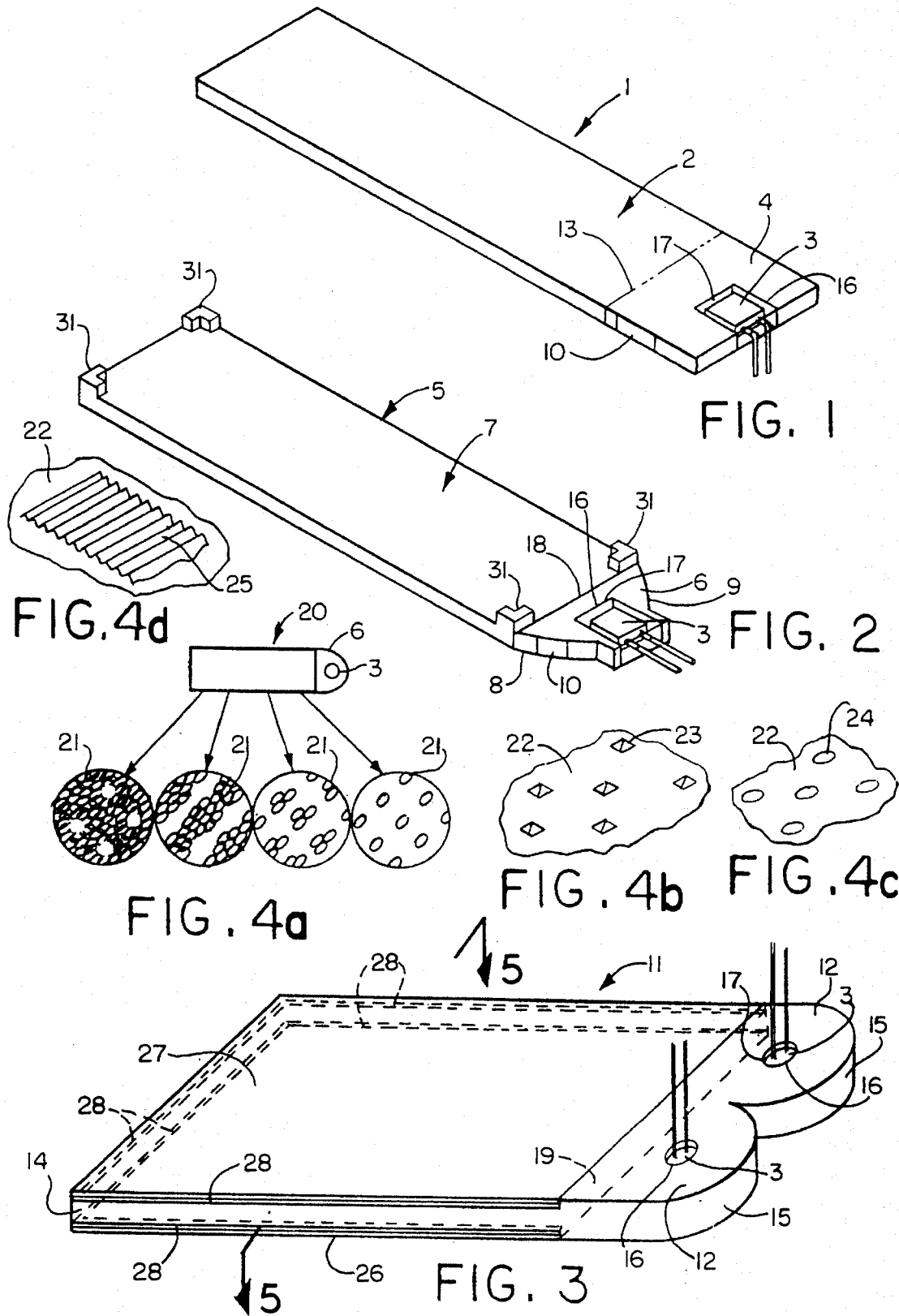
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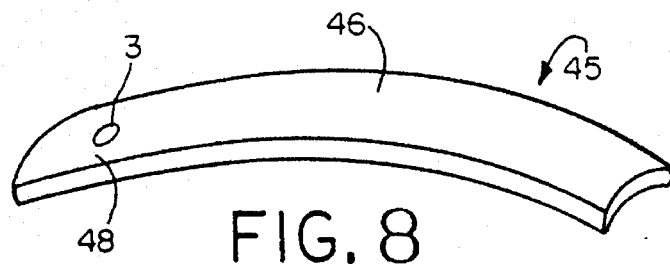
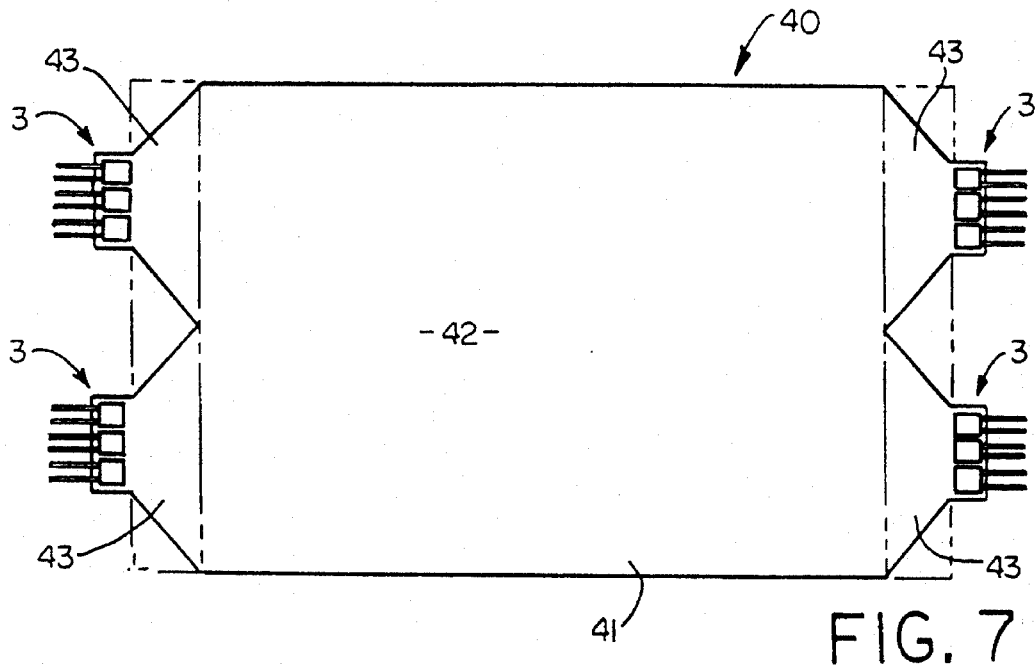
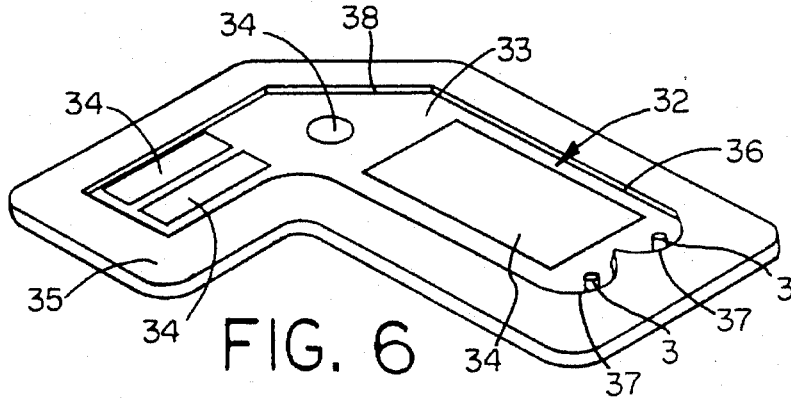
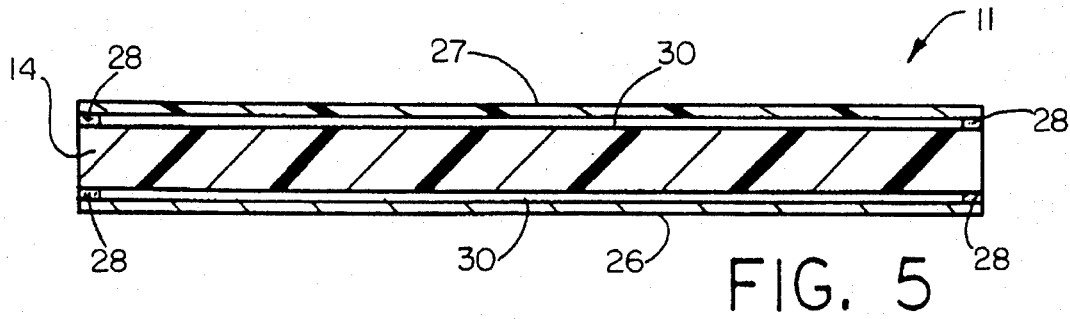
[57] **ABSTRACT**

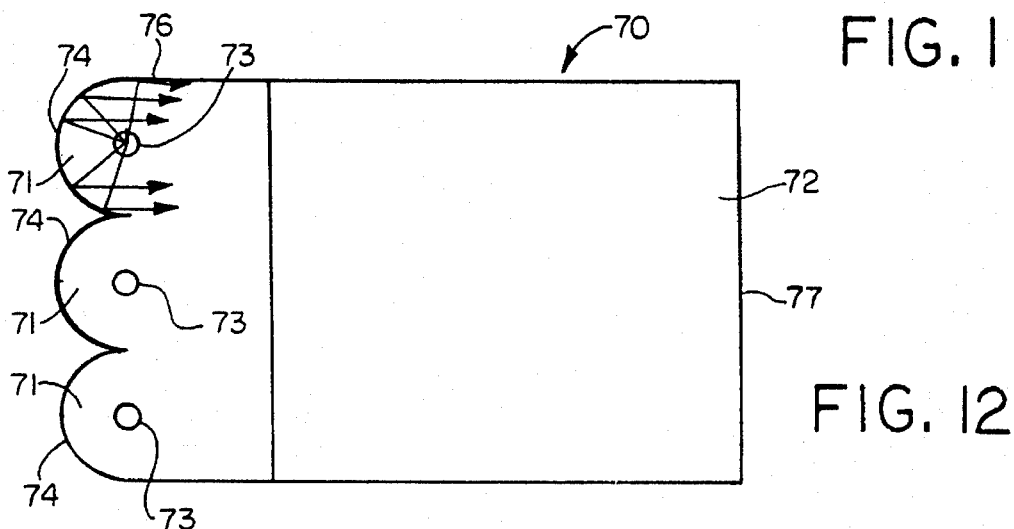
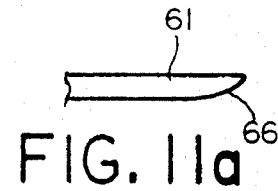
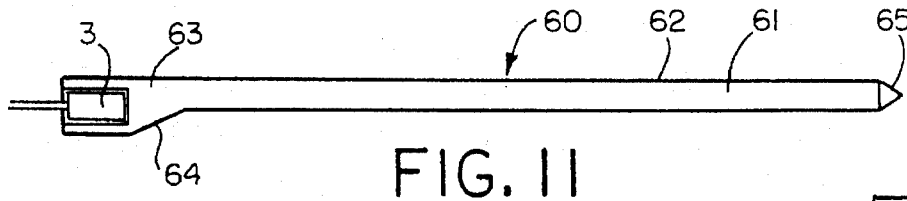
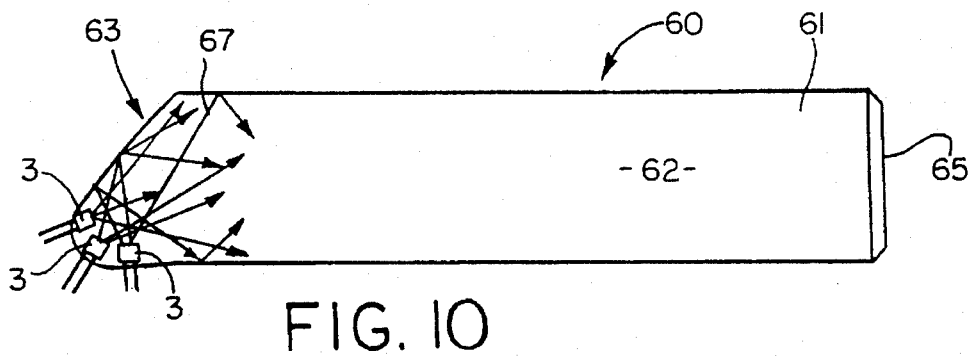
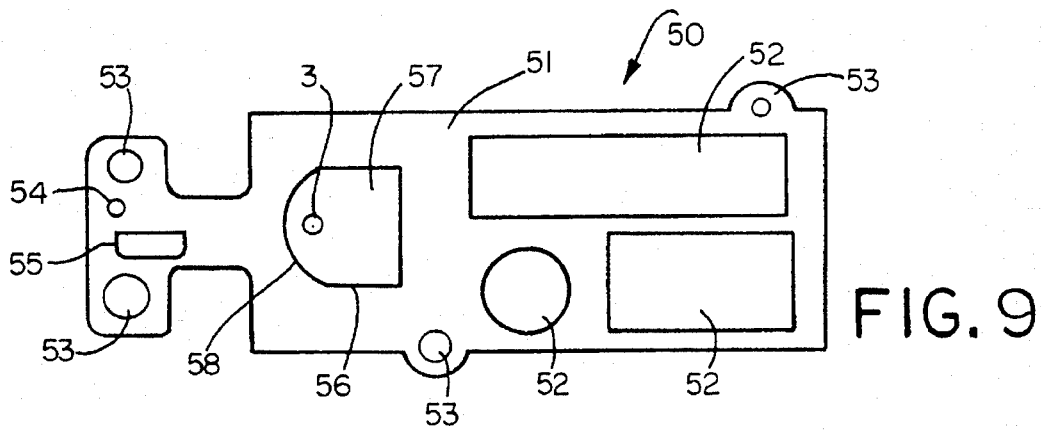
Light emitting panel assemblies include light emitting panel members and one or more light sources positioned/embedded in a light transition area, which increases the efficiency of light entering the panel members along the light input area to be emitted from one or more light emitting surfaces along the length of the panel members. Light may be reflected or refracted by a surface which changes the path of a portion of light such that it enters the input area of the panel member at a more acceptable angle. A uniform light output distribution may be produced by utilizing a pattern of light extracting deformities.

97 Claims, 4 Drawing Sheets









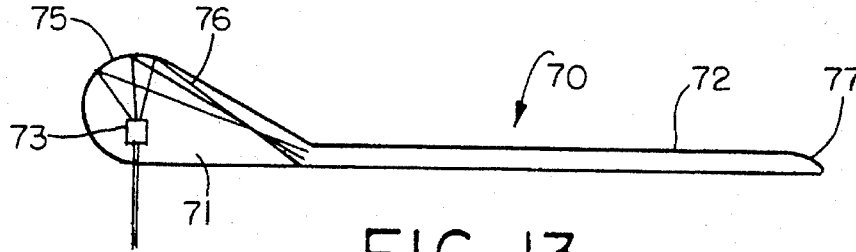


FIG. 13

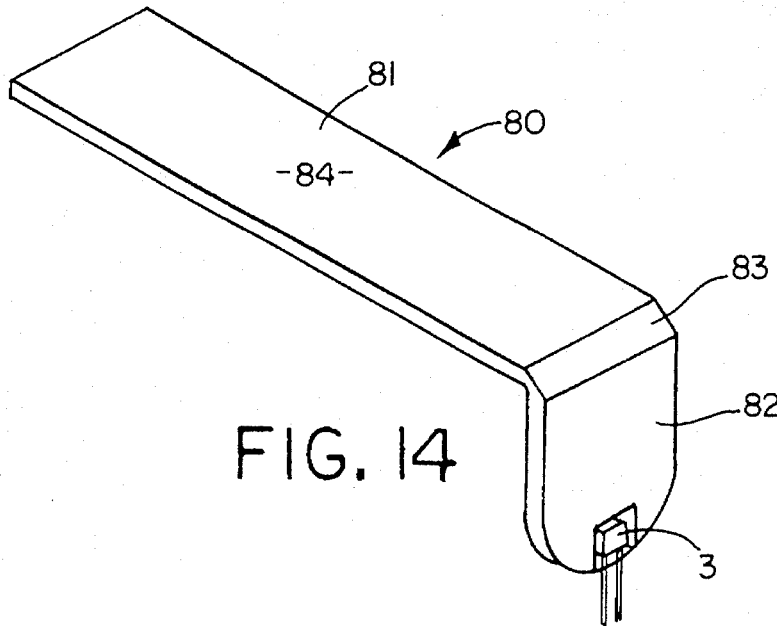


FIG. 14

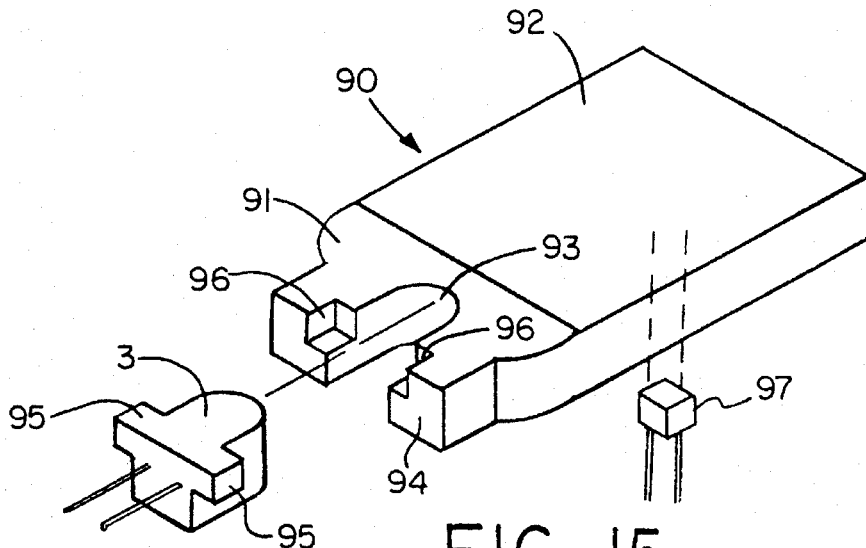


FIG. 15

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