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United States Patent [19] Madsen et al.

[11] E

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- [54] LIGHT MATRIX DISPLAY SYSTEM
- [75] Inventors: Brent Madsen; Greg Slobodzian, both of Logan; Bill Kersey, Salt Lake City, all of Utah; Brent Madsen, Providence, all of Utah
- [73] Assignee: Intergrated Systems, Logan, Utah
- [21] Appl. No.: 506,861
- [22] Filed: Apr. 9, 1990

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Primary Examiner—Eugene R. LaRoche
Attorney, Agent, or Firm—Workman, Nydegger & Jensen

Related U.S. Patent Documents

Reissue of:

- [64] Patent No.: 4,820,956
- Issued: Apr. 11, 1989
- Appl. No.: 104,118
- Filed: Oct. 2, 1987

- [51] Int. Cl.⁵ G08B 5/36; G09F 9/307; H01R 33/00
- [52] U.S. Cl. 315/250; 40/550; 313/51; 315/312; 340/780; 439/888; 439/890
- [58] Field of Search 315/178, 179, 184, 185 R, 315/185 S, 192, 250, 288, 312; 313/51, 318; 358/240; 40/550; 340/780; 439/235, 375, 381, 611, 615, 617, 618, 790, 890, 918, 888

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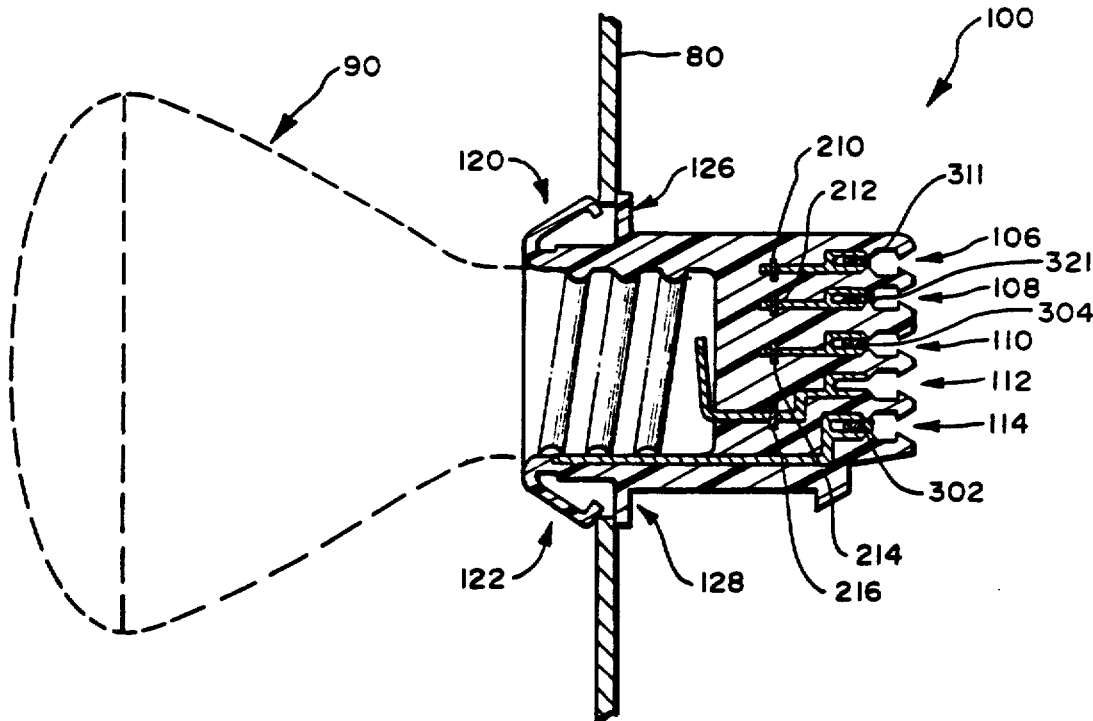
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[57] ABSTRACT

A light matrix display system and a lamp socket for use therein. The lamp socket receives a single lamp which may be easily replaced by another lamp. The lamp socket is also designed so that it may be readily replaced if necessary. A solid state switching circuit is replaceably mounted on each lamp socket. Thus, if a switching circuit fails, it may be quickly replaced without disturbing the operation of other lamps. The light matrix display system includes a plurality of lamps arranged in rows and columns. A plurality of row control conductors and column control conductors are provided which are connected to a matrix system controller. Hot and neutral AC current supplying conductors and one row control conductor and one column control conductor are directly connected to each lamp socket and the switching circuit associated with the lamp socket. When proper voltages are placed on the row and column control conductors connected to a lamp socket, current flows through the solid state switching circuit, which turns on the corresponding lamp.

32 Claims, 5 Drawing Sheets



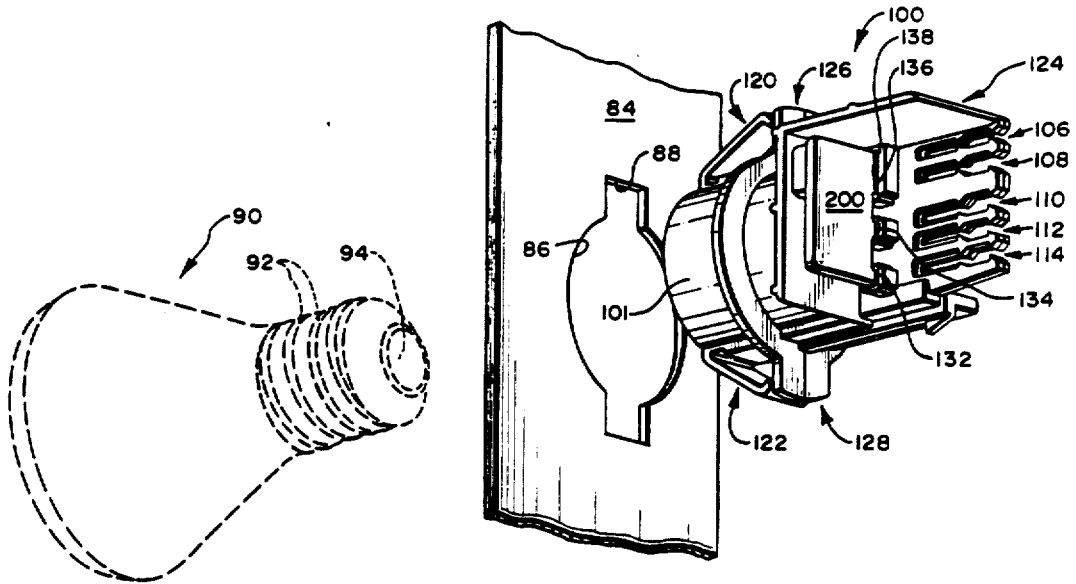


FIG. 1

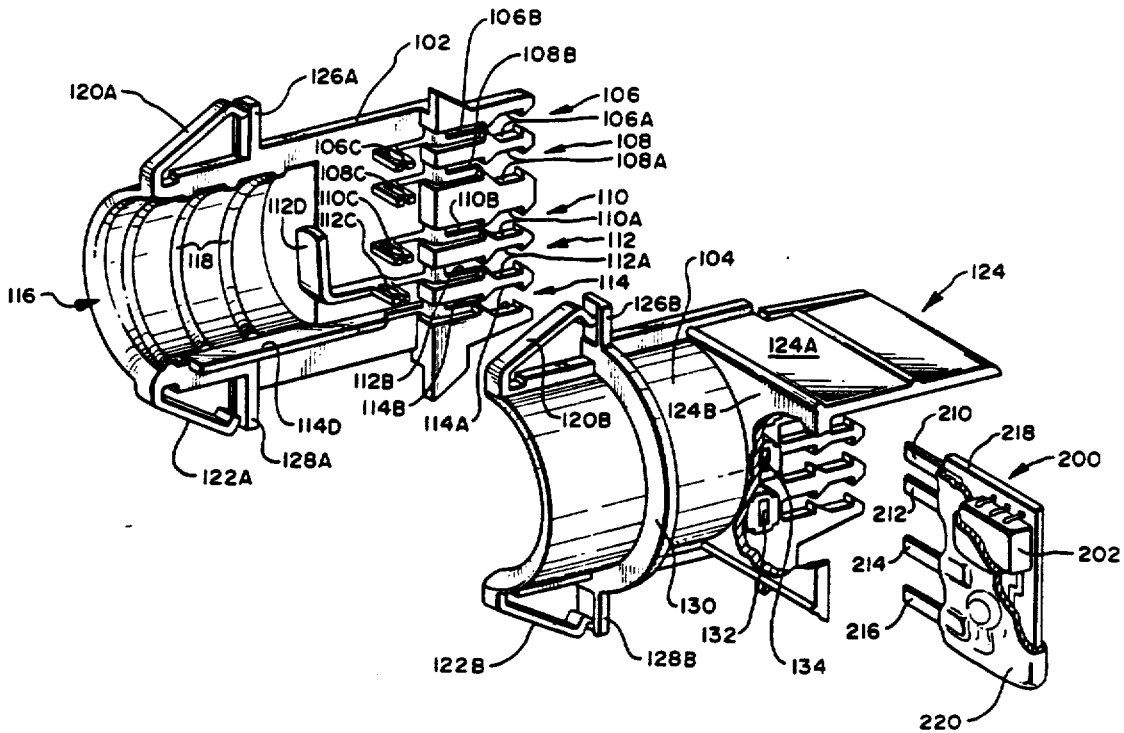


FIG. 2

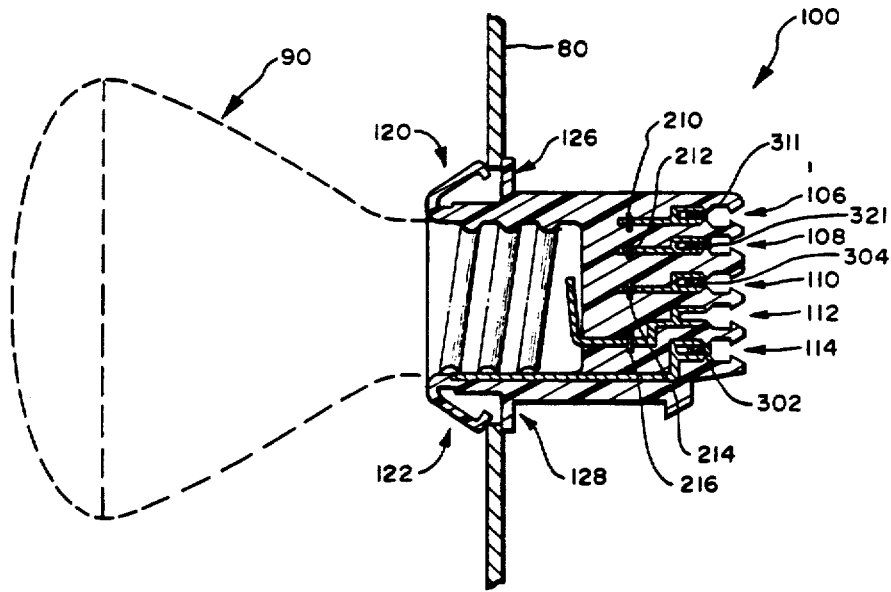


FIG. 3

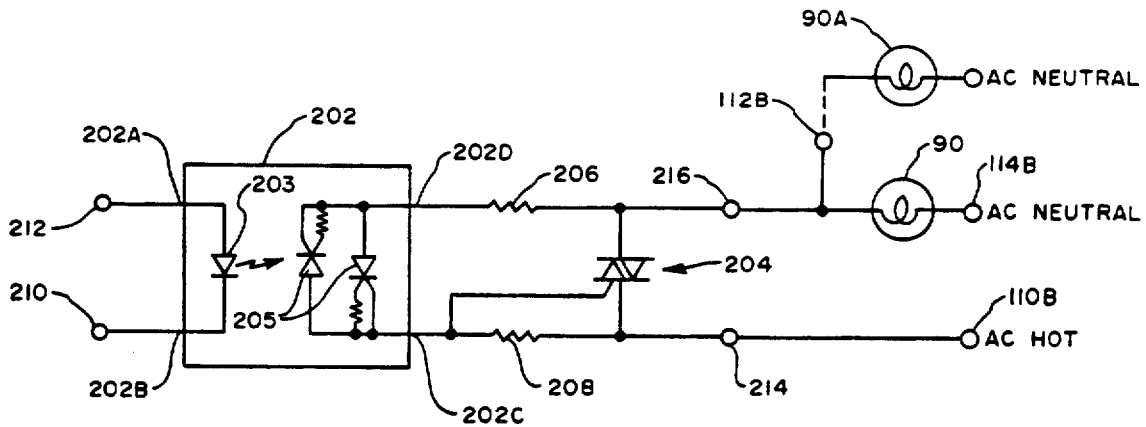


FIG. 4

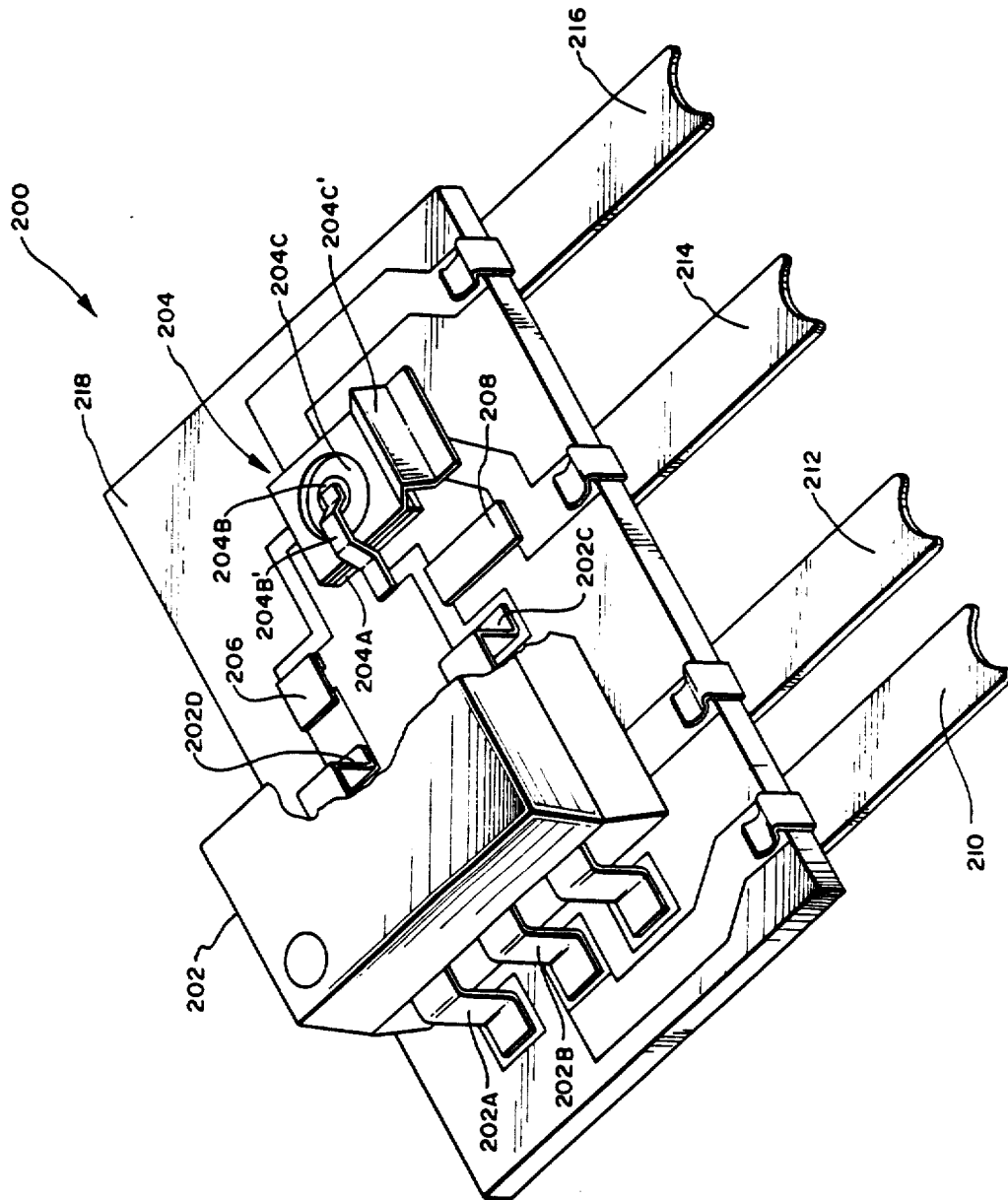


FIG. 5

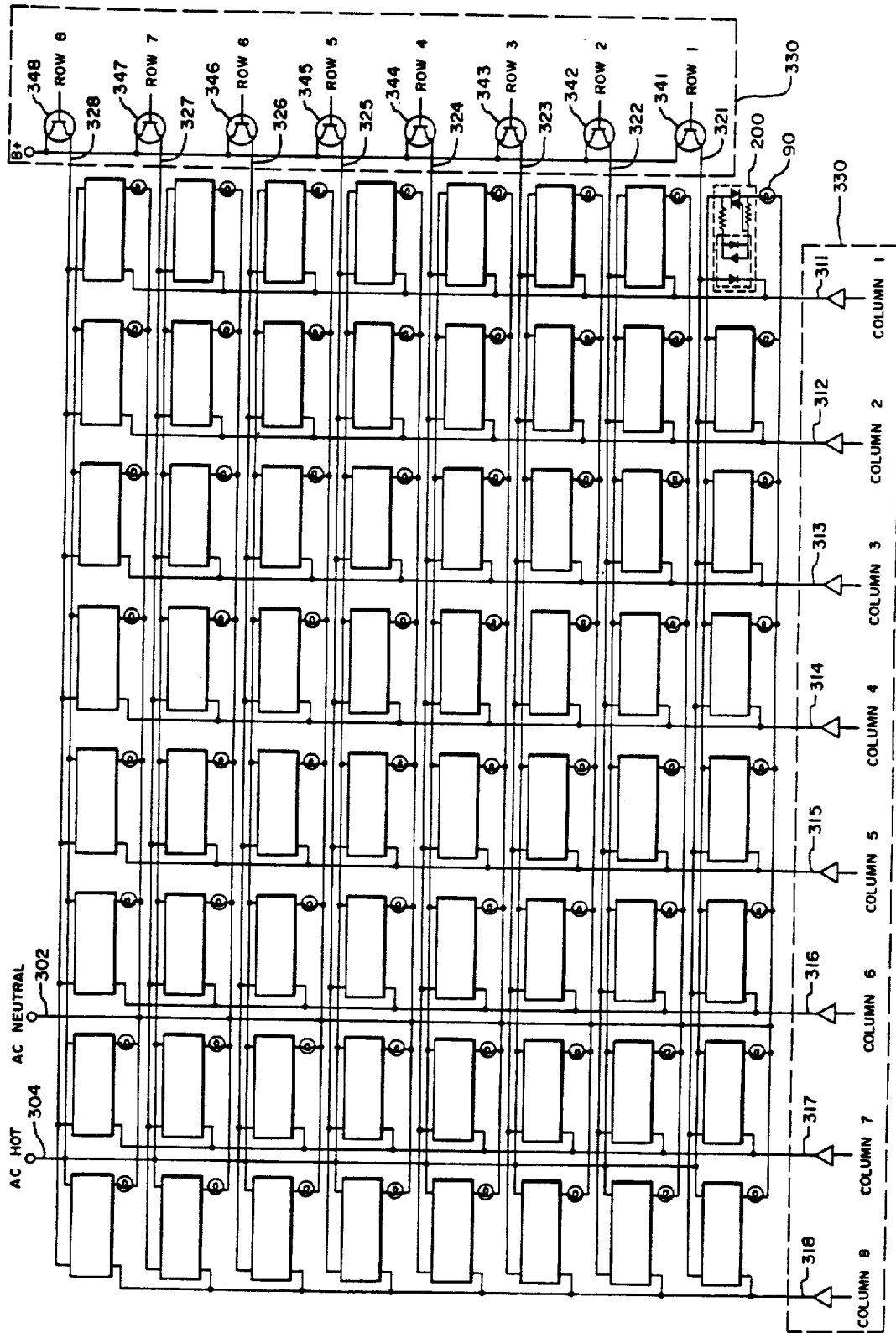


FIG. 6

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