



# United States Patent [19]

[11] **Patent Number:** 5,921,651

**Ishikawa**

[45] **Date of Patent:** Jul. 13, 1999

[54] **SURFACE LIGHT SOURCE DEVICE OF SIDE LIGHT TYPE HAVING DIFFUSING ELEMENT WITH IMPROVED DISTRIBUTION PATTERN OF LIGHT**

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[21] Appl. No.: **08/624,313**

[22] Filed: **Mar. 27, 1996**

### [30] Foreign Application Priority Data

Mar. 31, 1995 [JP] Japan ..... 7-097450

[51] Int. Cl.<sup>6</sup> ..... **F21V 8/00**

[52] U.S. Cl. .... **362/31; 362/26**

[58] Field of Search ..... 362/31, 26, 27

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### [57] ABSTRACT

A dot pattern of a light guide plate is optimally designed for a surface light source device of side light type. A lamp **1** is disposed at the side of the light guide plate **2** and light introduced from a light incidence surface into the light guide plate **2** is emitted from a luminous surface. The dot pattern is arranged on the rear surface of the light guide plate **2** according to the following principles: (1) there is a (gradient) portion where the rate of area occupation of the dot pattern increases from a region (usually a far region) lowly exposable to light from the lamp **1**; and (2) there is no sharp variation in the rate of area occupation of the dot pattern. At a corner of the light guide plate **2**, a substantially triangular dot pattern is disposed for compensating any luminance drop due to the location in the vicinity of an electrode portion **1a** of the lamp **1**.

**3 Claims, 9 Drawing Sheets**

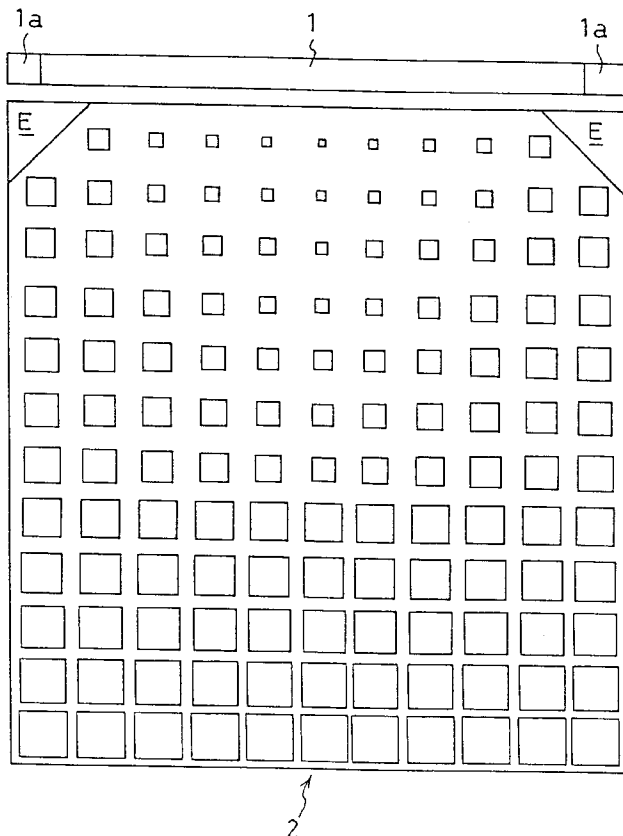


FIG. 1 PRIOR ART

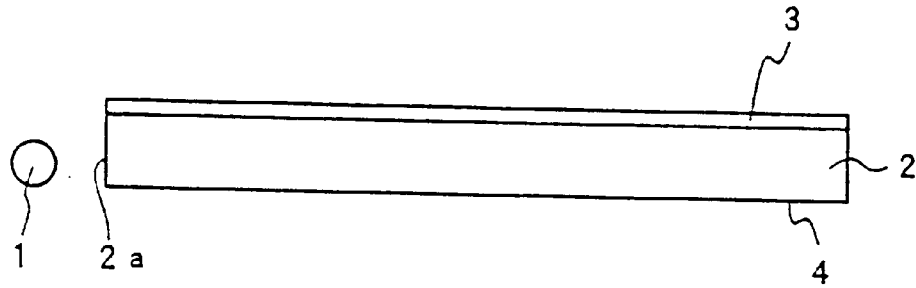


FIG. 2 PRIOR ART

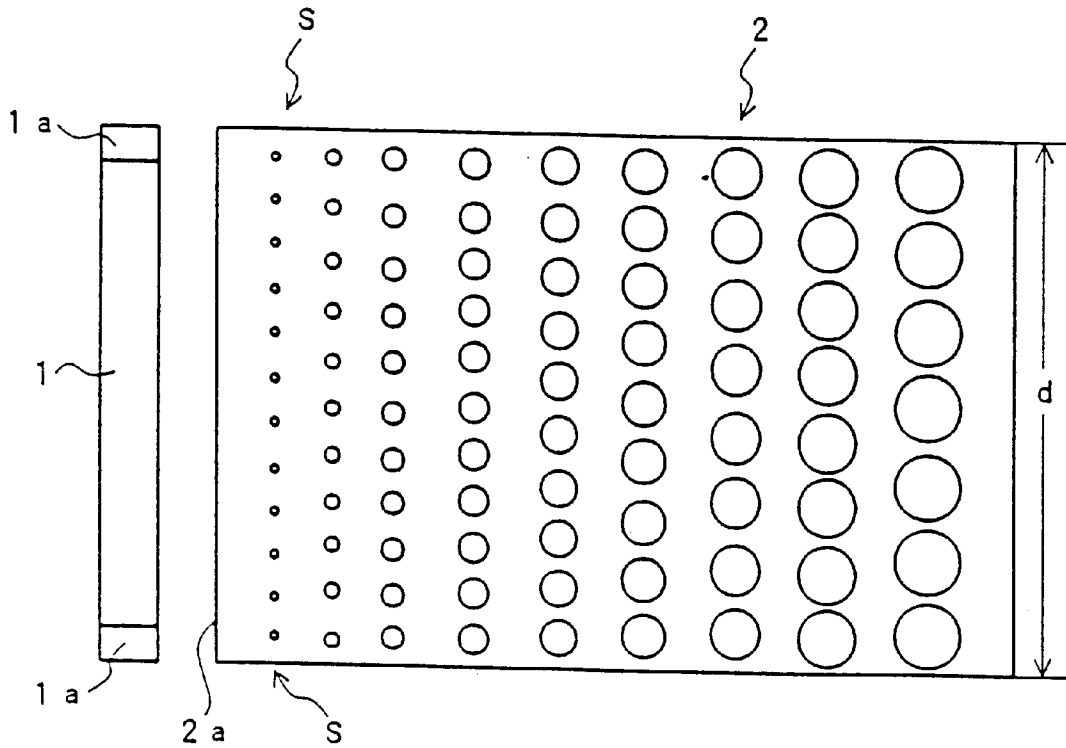


FIG. 3 PRIOR ART

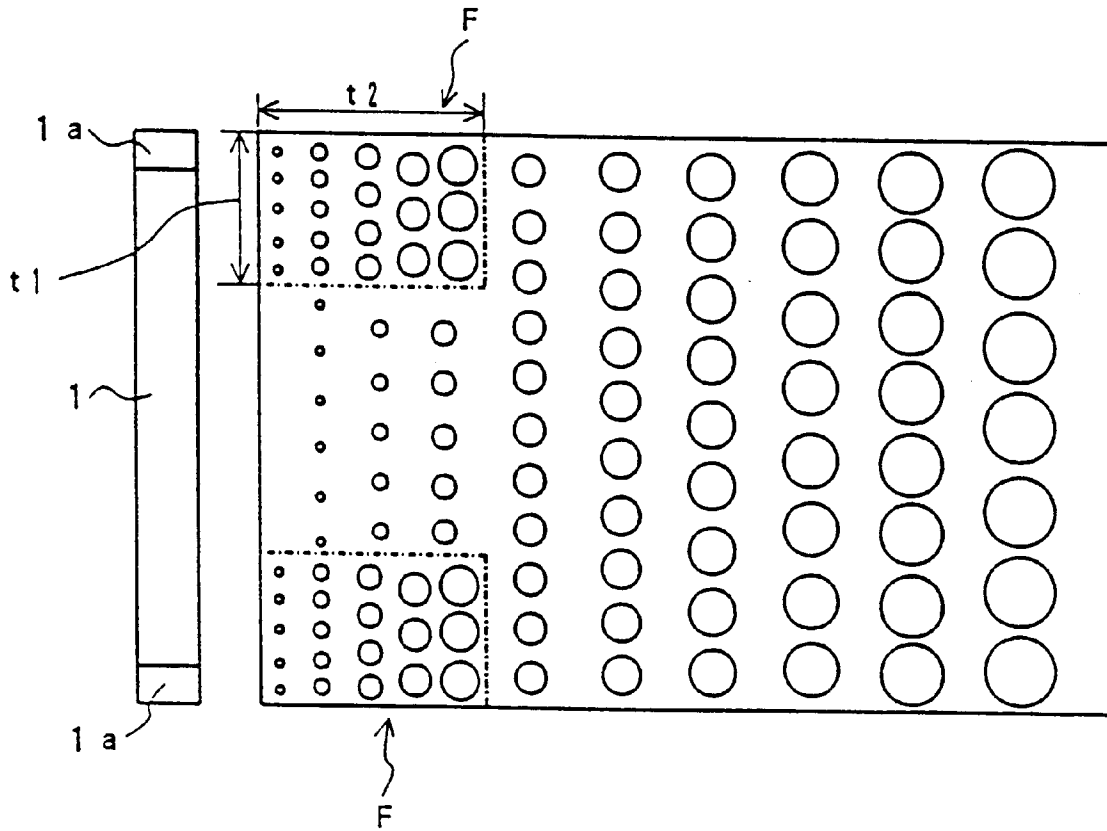
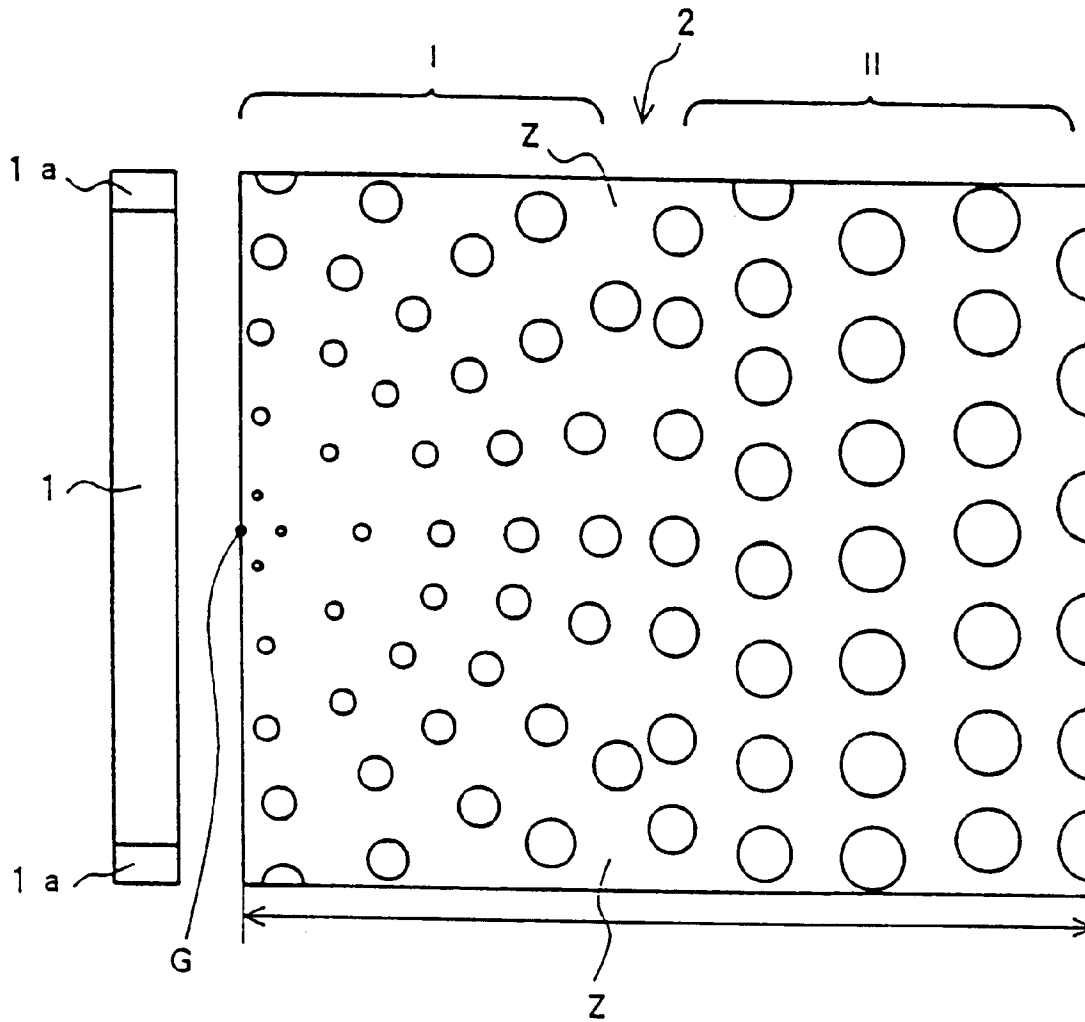


FIG. 4 PRIOR ART





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