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(54) **SEMICONDUCTOR DEVICE AND METHOD OF FABRICATING THE SAME**

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(52) **U.S. Cl.** ..... **257/72; 257/57; 257/59; 257/83; 257/257; 257/290; 257/351; 257/368**

(58) **Field of Classification Search** ..... 257/57, 257/59, 72, 83, 257, 290, 347, 351, 36  
See application file for complete search history.

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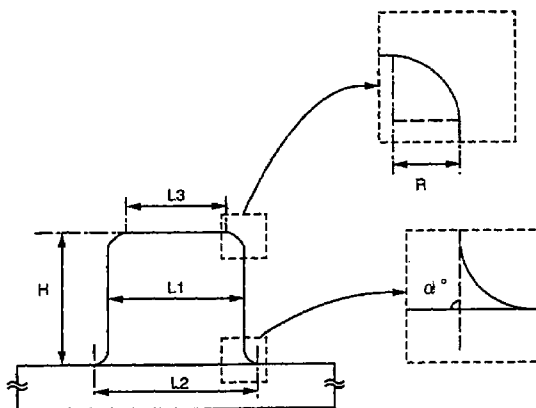
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(57) **ABSTRACT**

There is provided a high quality liquid crystal panel having a thickness with high accuracy, which is designed, without using a particulate spacer, within a free range in accordance with characteristics of a used liquid crystal and a driving method, and is also provided a method of fabricating the same. The shape of a spacer for keeping a substrate interval constant is made such that it is a columnar shape, a radius R of curvature is 2 μm or less, a height H is 0.5 μm to 10 μm, a diameter is 20 μm or less, and an angle α is 65° to 115°.

By doing so, it is possible to prevent the lowering of an opening rate and the lowering of light leakage due to orientation disturbance.

**124 Claims, 25 Drawing Sheets**



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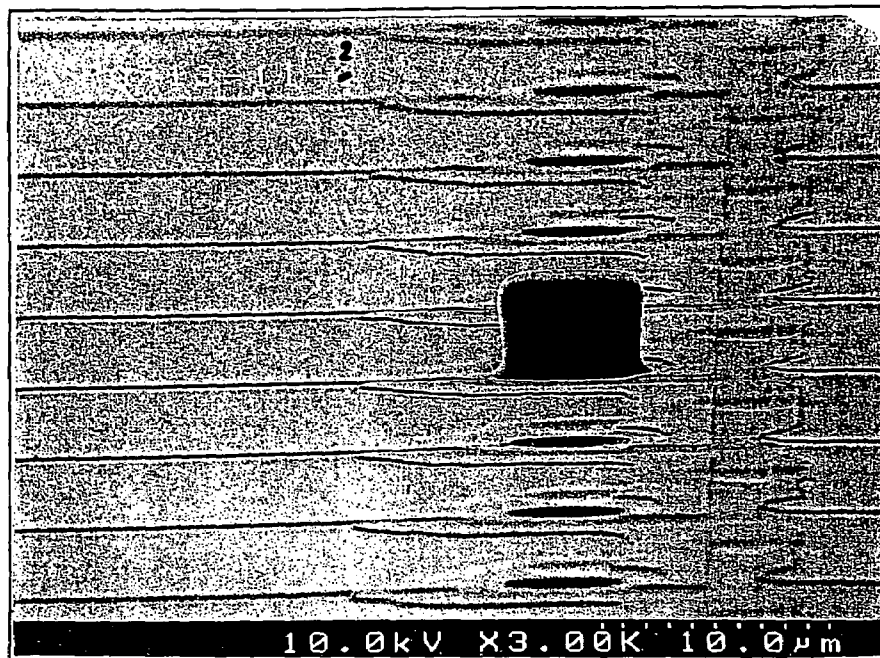


Fig. 1A

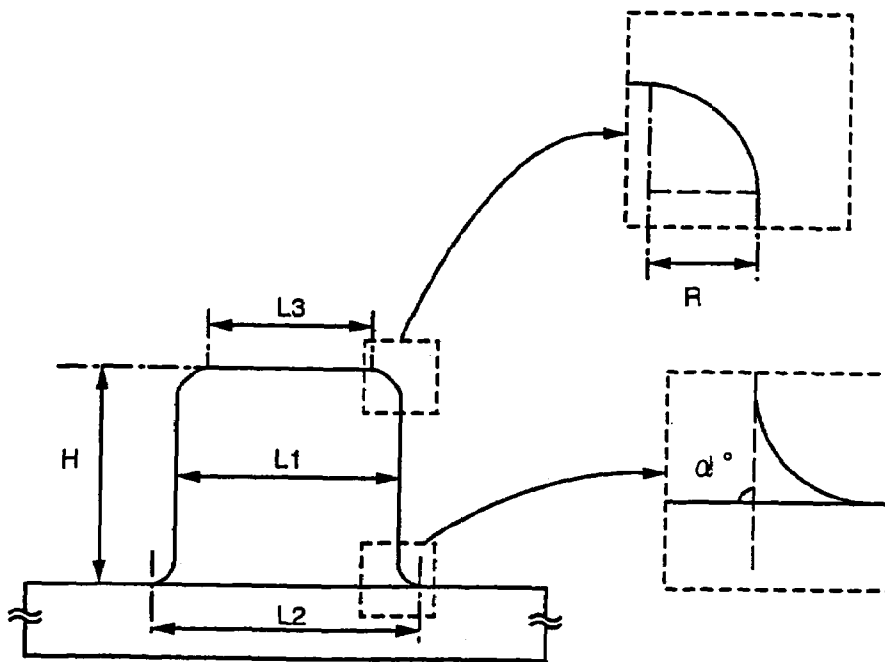


Fig. 1B

Fig. 2A

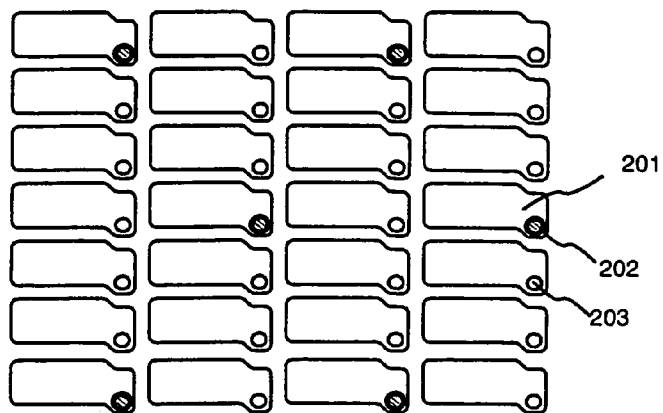


Fig. 2B

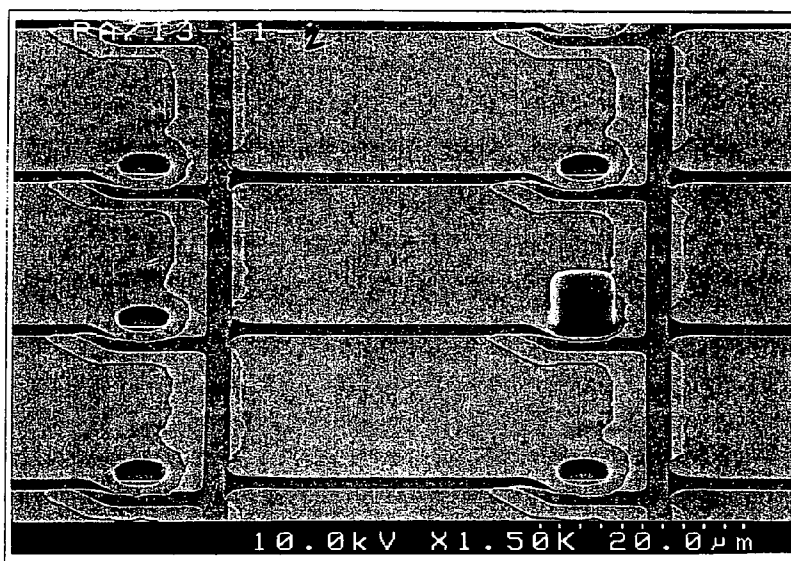
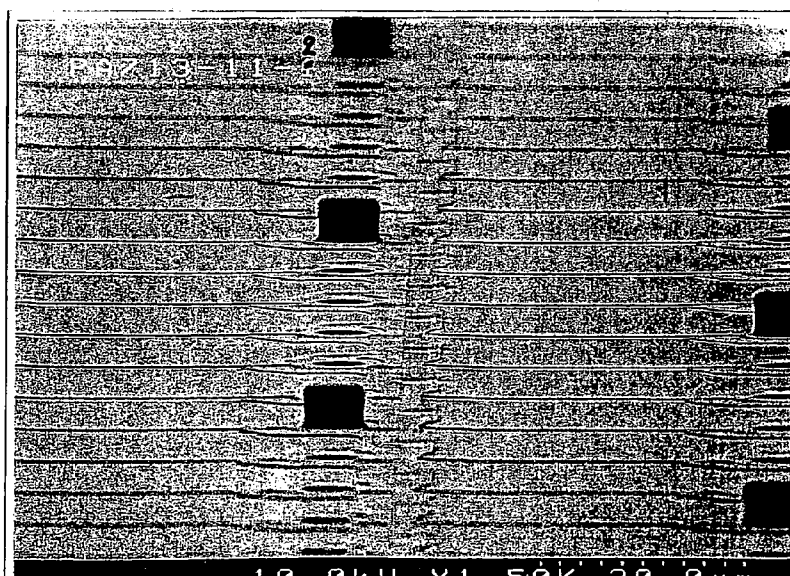
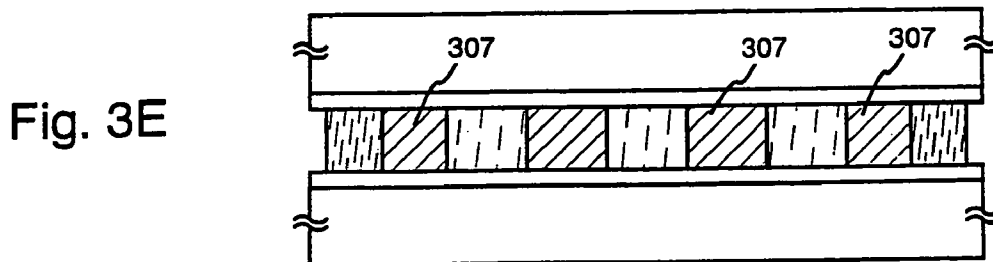
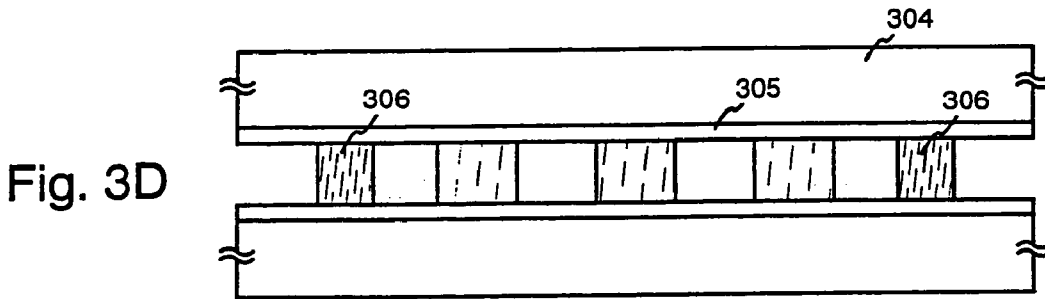
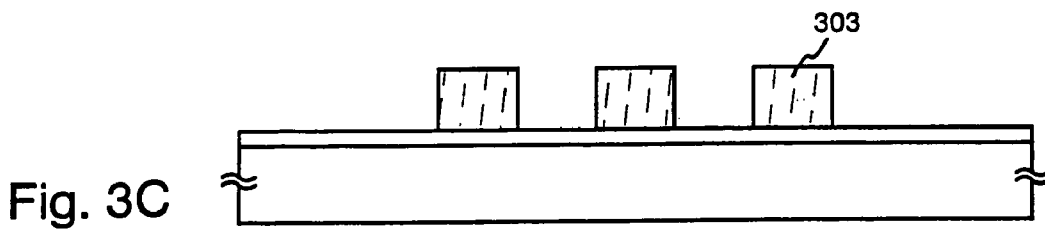
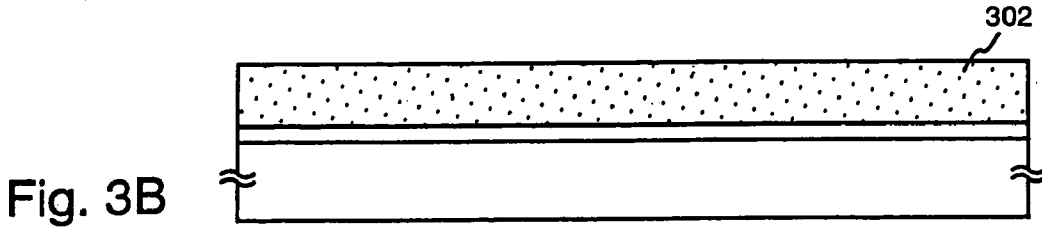
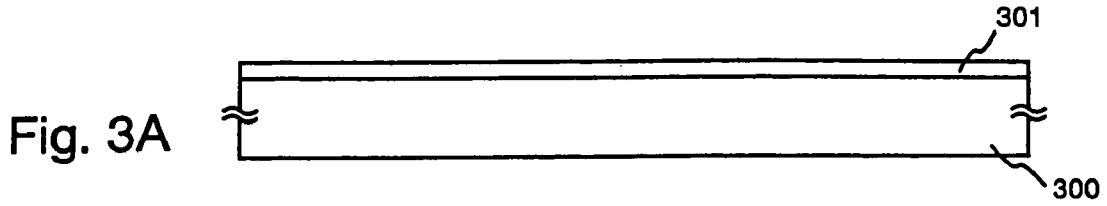


Fig. 2C







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