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United States Patent [19]

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Kaizu et al.

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[54] **CLICK-ACTION MEMBRANE SWITCH UNIT**

[75] Inventors: **Masahiro Kaizu, Narita; Atsuhiko Horii, Sakura, both of Japan**

[73] Assignee: **Fujikura Ltd., Tokyo, Japan**

[21] Appl. No.: **935,538**

[22] Filed: **Aug. 25, 1992**

[30] **Foreign Application Priority Data**

Sep. 10, 1991 [JP]	Japan	3-258534
Feb. 7, 1992 [JP]	Japan	4-022999

[51] Int. Cl.⁵ **H01H 1/10**

[52] U.S. Cl. **200/513; 200/521; 200/310**

[58] Field of Search **200/512, 514, 516, 511, 200/521, 293, 513, 310, 312, 317**

[56] **References Cited**

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ABSTRACT

[57] A click-action membrane switch unit comprises a flexible base film having two surfaces, flexible circuits formed on at least one of the two surfaces of the base film and having interdigitating electrode contacts, a resist film formed on the flexible circuits and having a window in the region of the electrode contacts, a dome-shaped click spring made of electrically conducting material and having an edge placed on the circuits, and a layer fixed to the other surface of the base film and having an opening formed in the portion of the layer which aligns with the click spring.

10 Claims, 4 Drawing Sheets

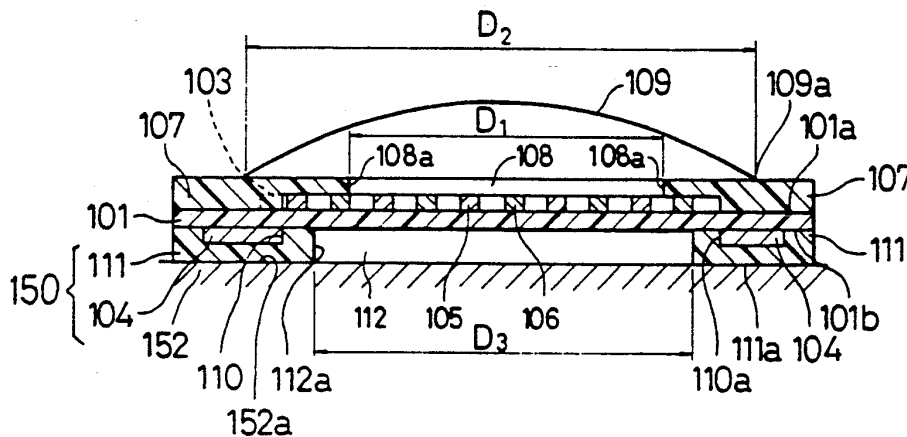


FIG. 1

PRIOR ART

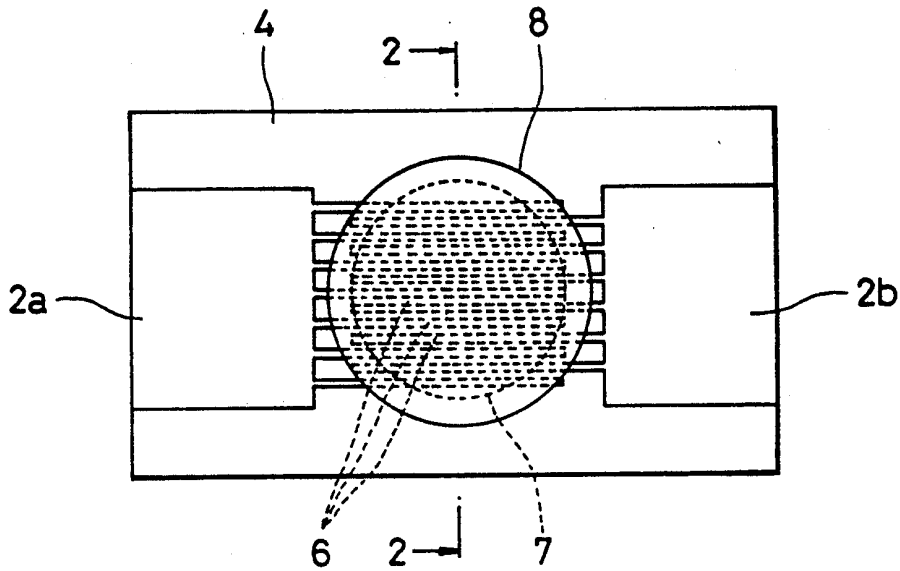


FIG. 2

PRIOR ART

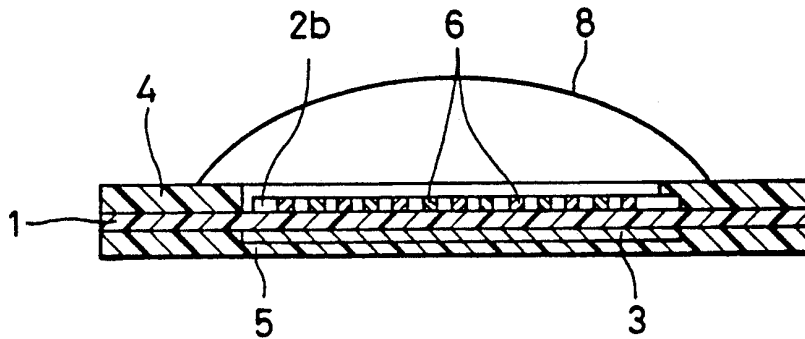


FIG. 3

PRIOR ART

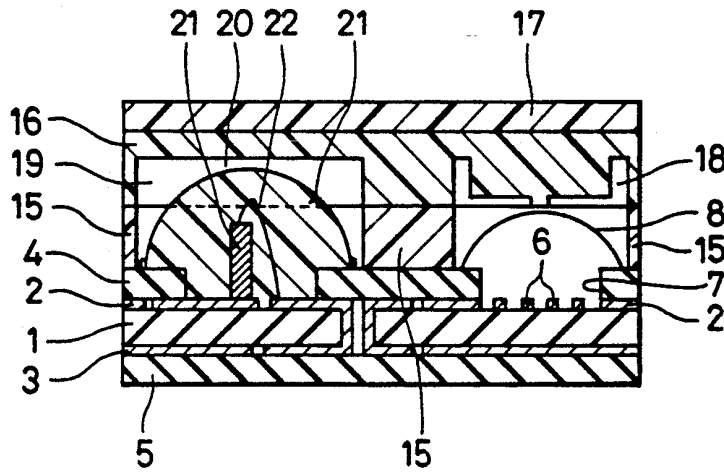


FIG. 4

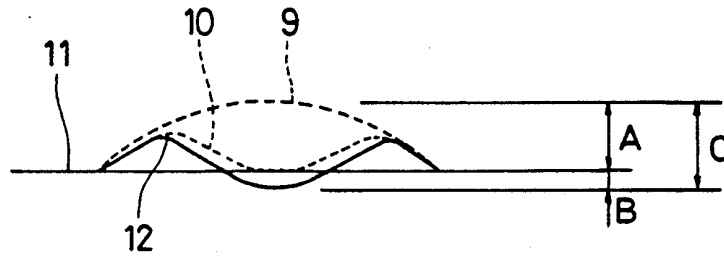


FIG. 5

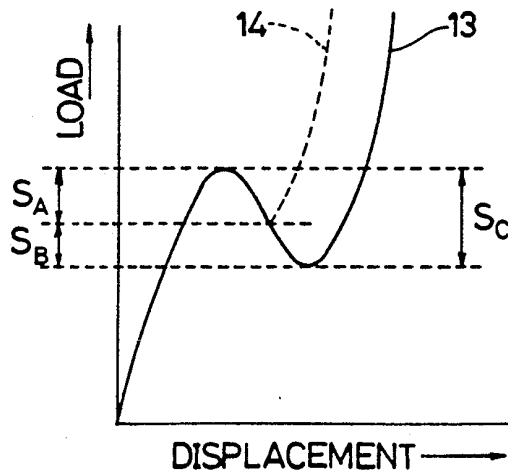


FIG. 6

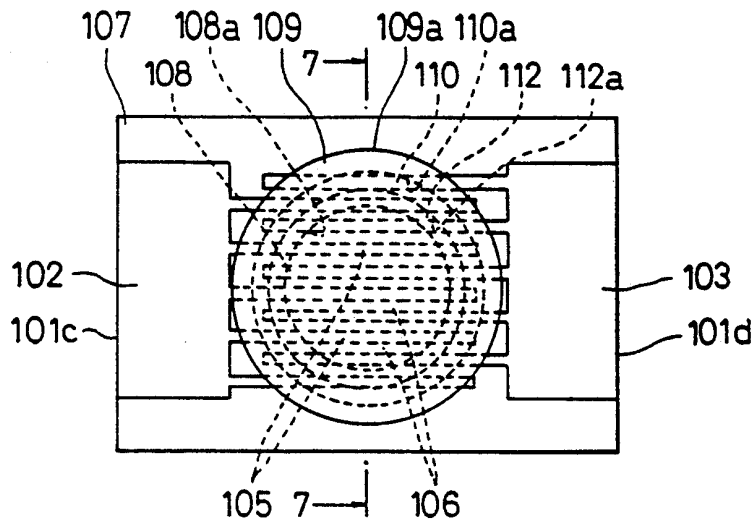


FIG. 7

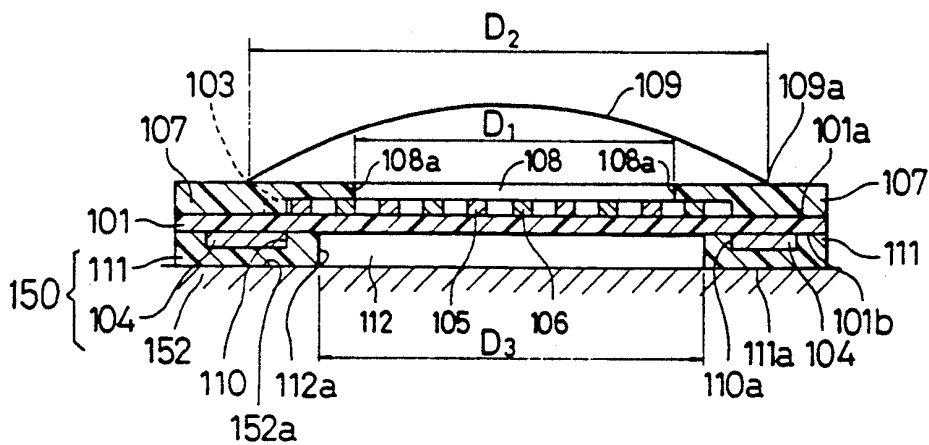


FIG. 8

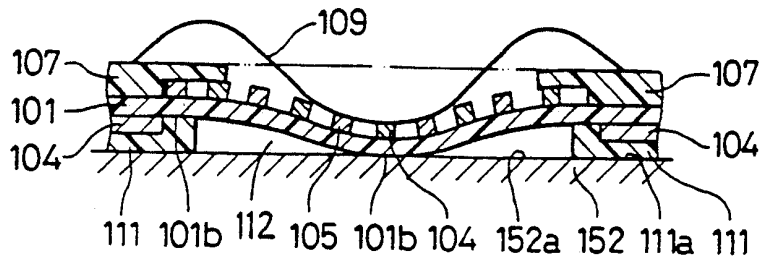


FIG. 9

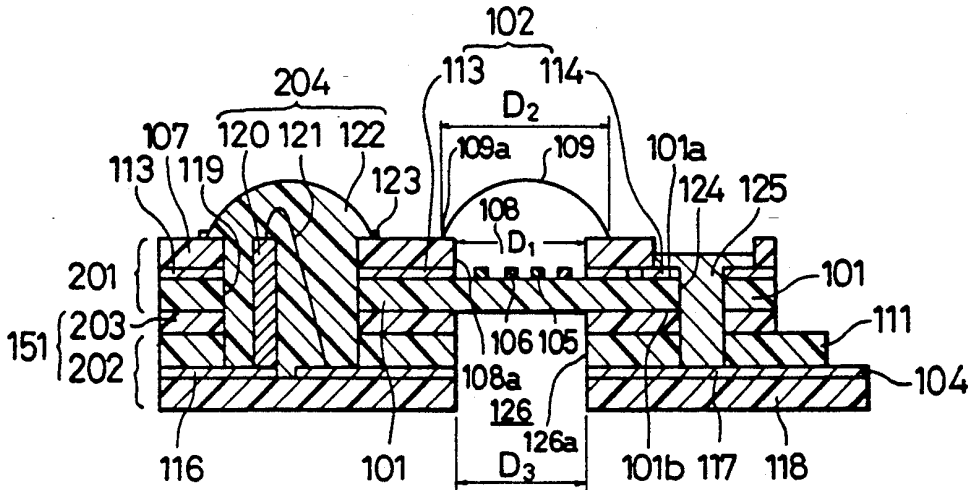
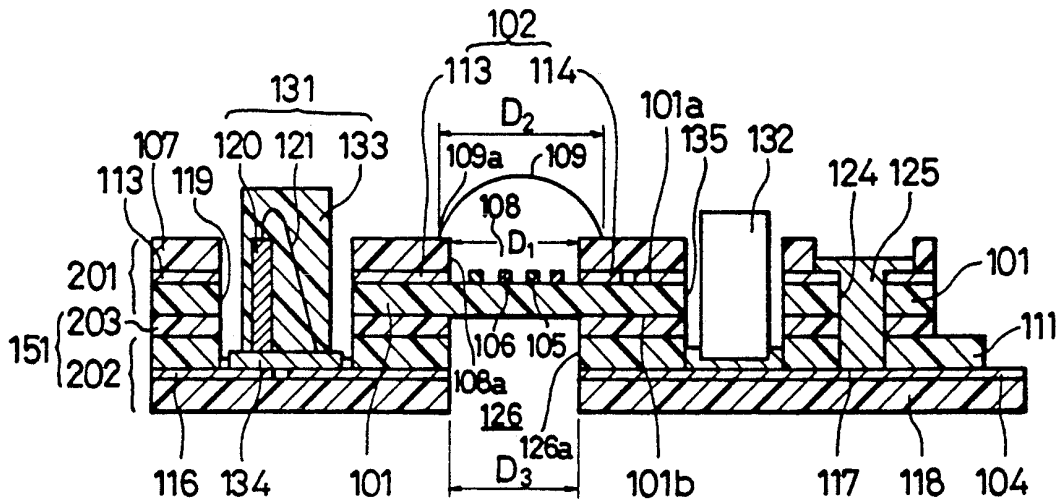


FIG. 10



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