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Geaghan

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(54) **TOUCH SENSITIVE DEVICES WITH COMPOSITE ELECTRODES**

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(52) **U.S. Cl.** **345/173**; 345/156; 178/18.01; 178/18.06

(58) **Field of Classification Search** 345/156-179; 178/18.01-18.05
See application file for complete search history.

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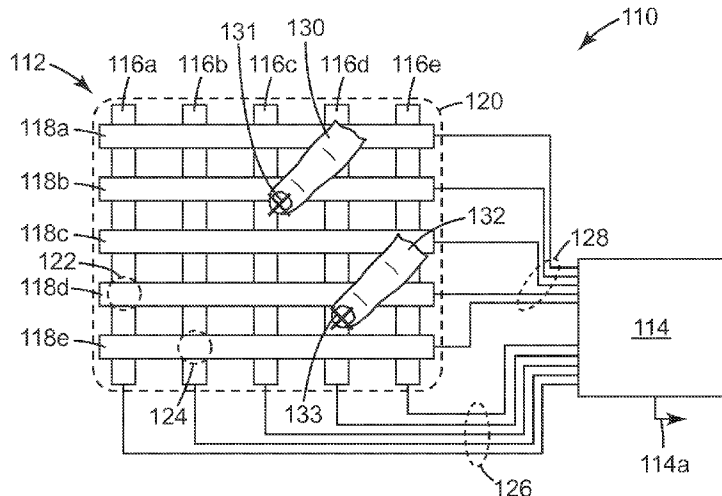
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(57) **ABSTRACT**

A matrix touch panel having upper and lower electrodes, the upper electrodes being composite electrodes made of a plurality of spaced micro-wires, and allowing, for example, an electric field from lower electrodes to pass between the micro-wires and thereby capacitively couple with a touching object, such as a finger.

20 Claims, 12 Drawing Sheets



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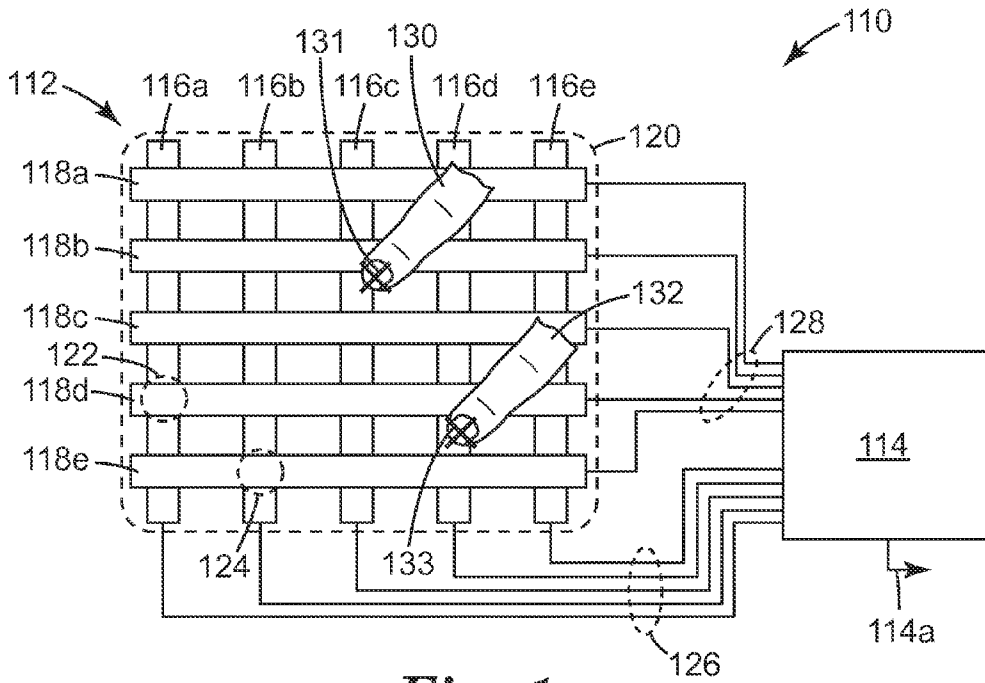


Fig. 1

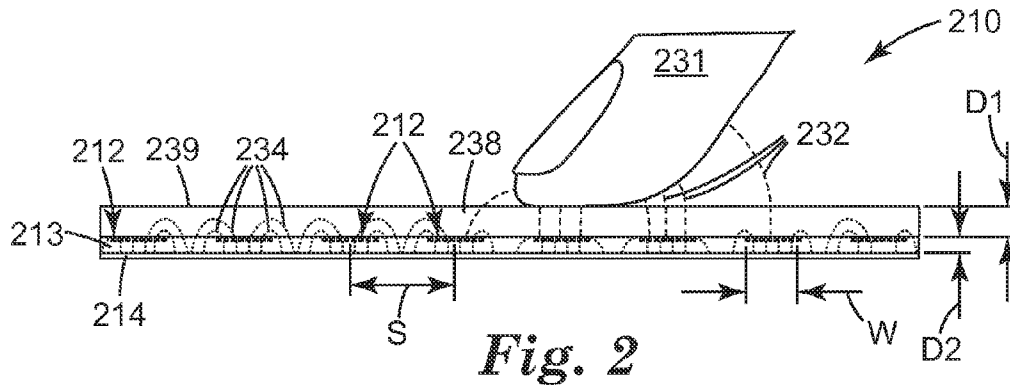


Fig. 2

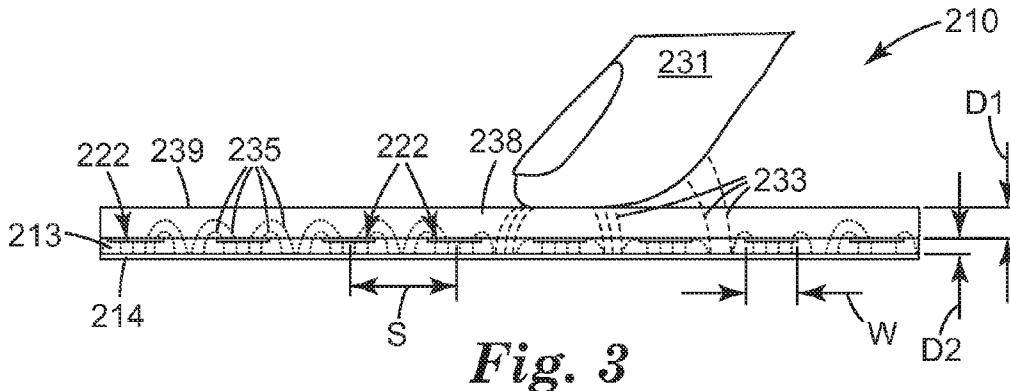


Fig. 3

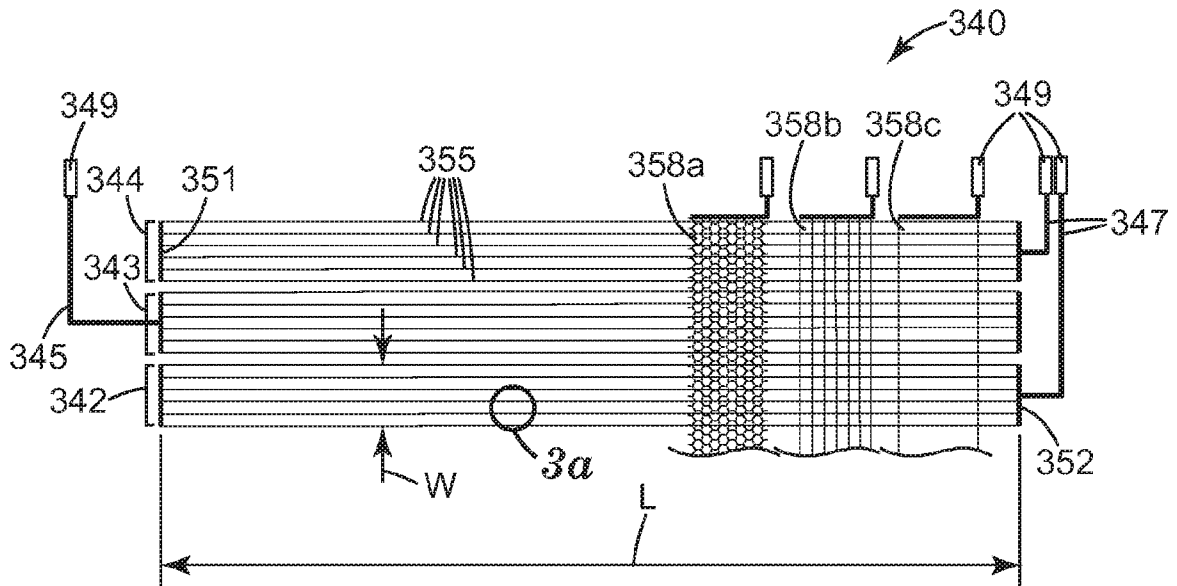


Fig. 4

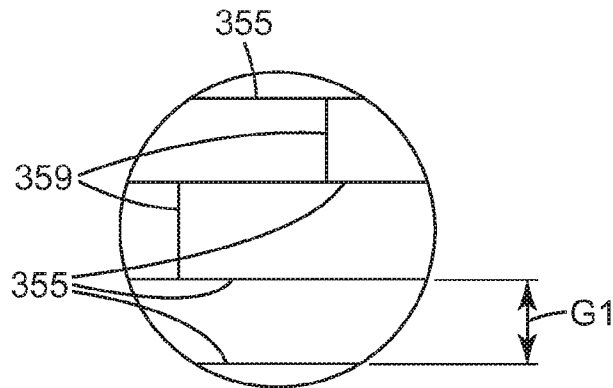


Fig. 4a

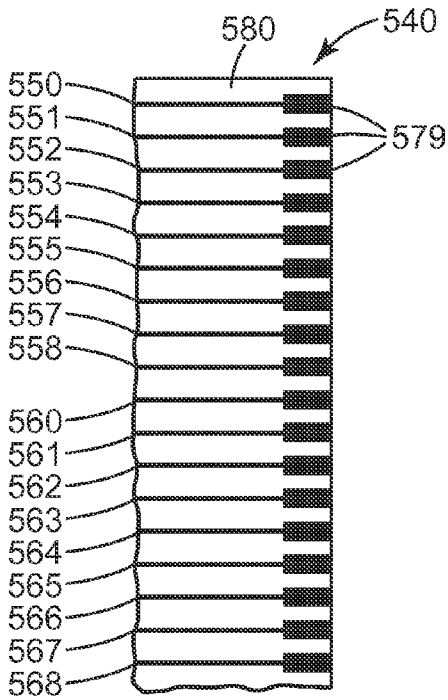


Fig. 5a

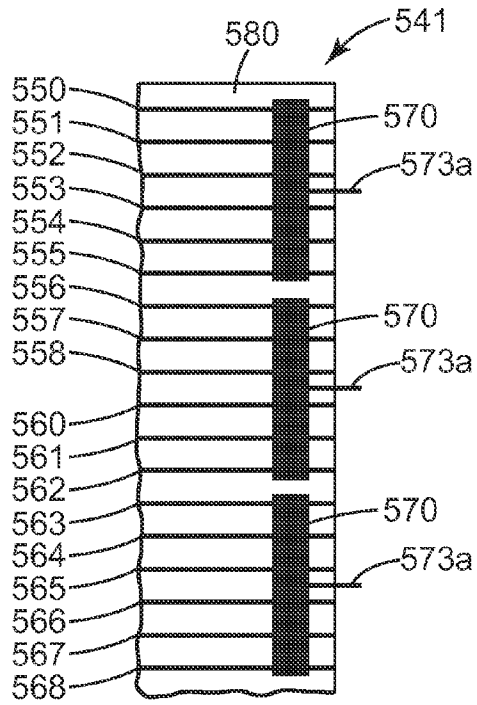


Fig. 5b

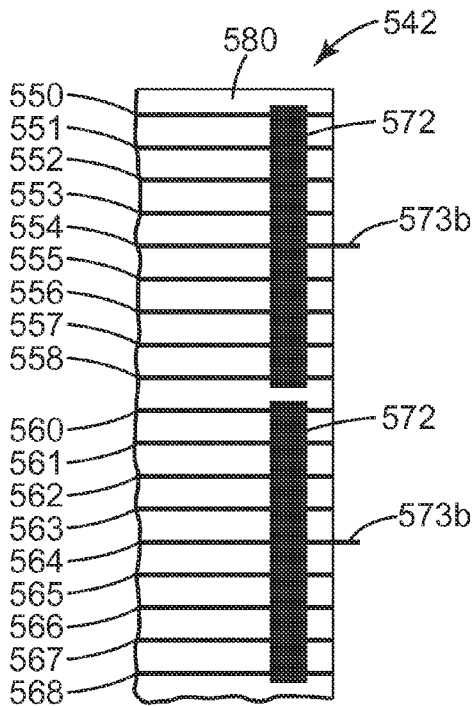


Fig. 5c

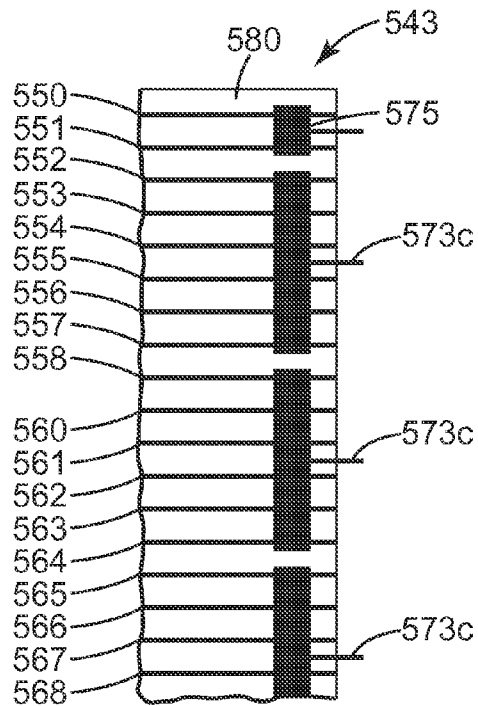


Fig. 5d

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