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(54) **CAPACITIVE POSITION SENSOR**

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(57) **ABSTRACT**

A capacitive position sensor has a two-layer electrode structure. Drive electrodes extending in a first direction on a first plane on one side of a substrate. Sense electrodes extend in a second direction on a second plane on the other side of the substrate so that the sense electrodes cross the drive electrodes at a plurality of intersections which collectively form a position sensing array. The sense electrodes are provided with branches extending in the first direction part of the way towards each adjacent sense electrode so that end portions of the branches of adjacent sense electrodes co-extend with each other in the first direction separated by a distance sufficiently small that capacitive coupling to the drive electrode adjacent to the co-extending portion is reduced. Providing sense electrode branches allow a sensor to be made which has a greater extent in the first direction for a given number of sense channels, since the co-extending portions provide an interpolating effect. The number of sense electrode branches per drive electrode can be increased which allows a sensor to be made which has ever greater extent in the first direction without having to increase the number of sense channels.

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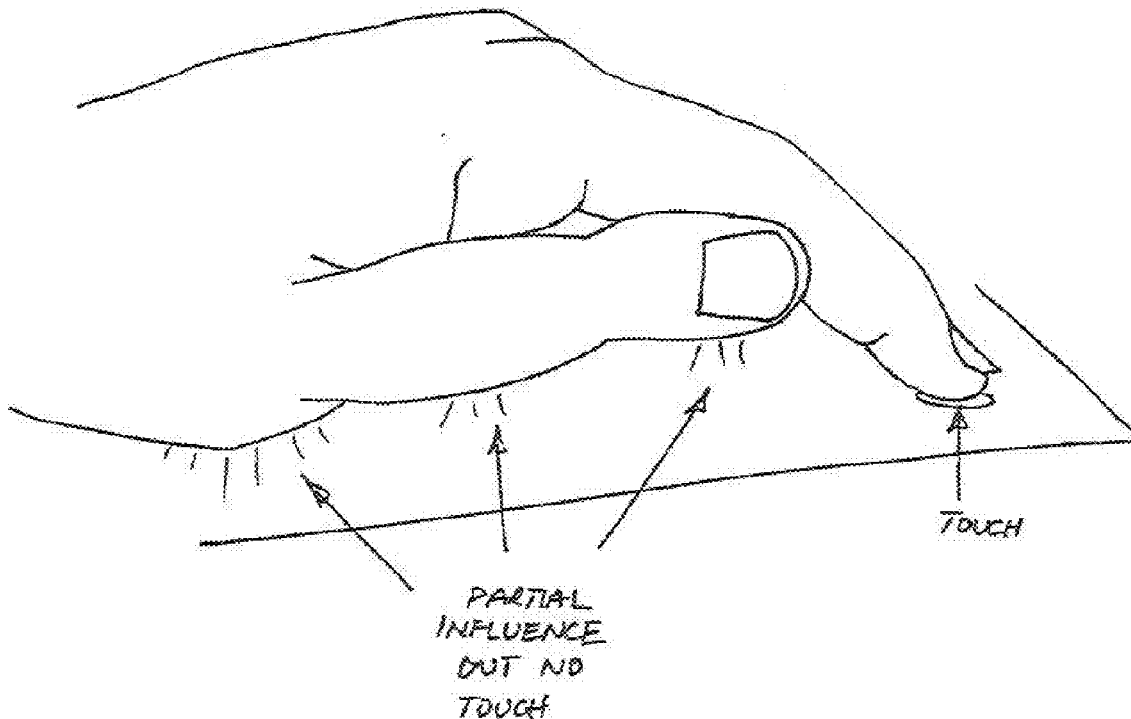
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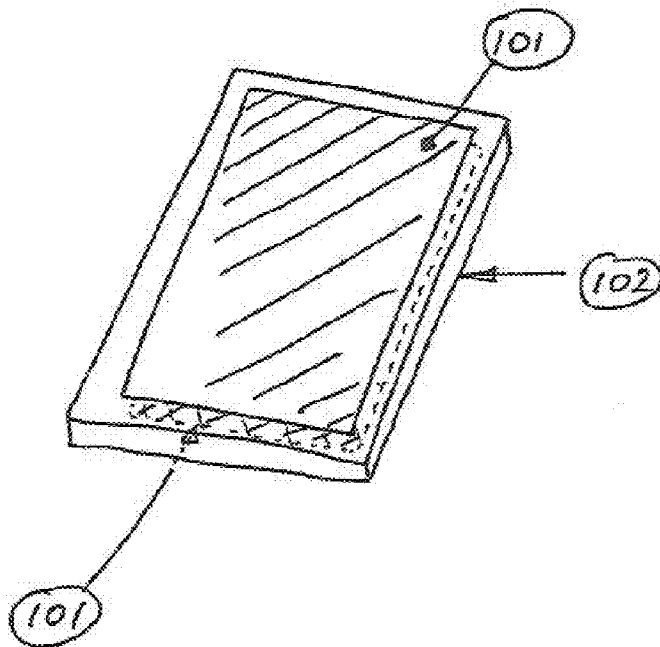
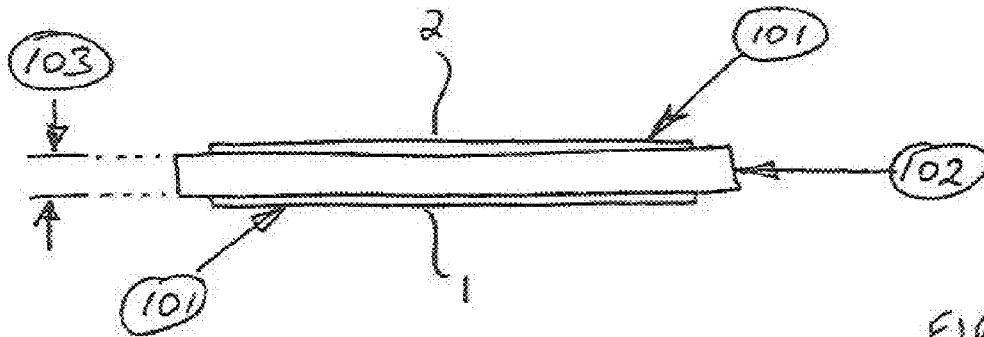
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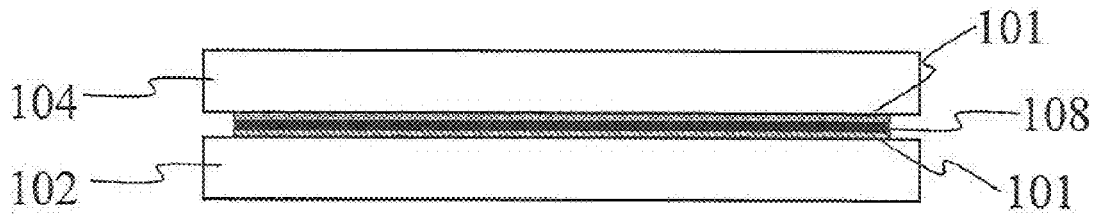


Figure 1C

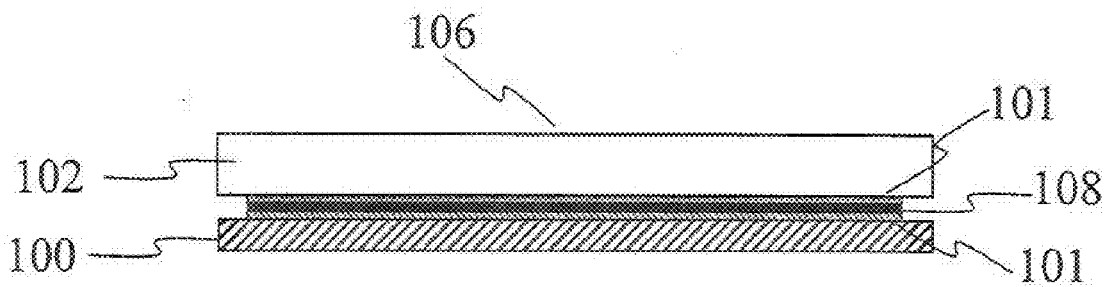


Figure 1D

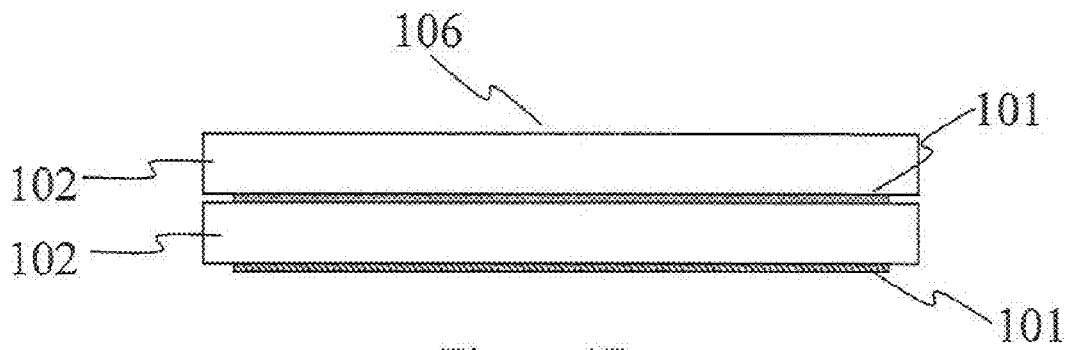


Figure 1E

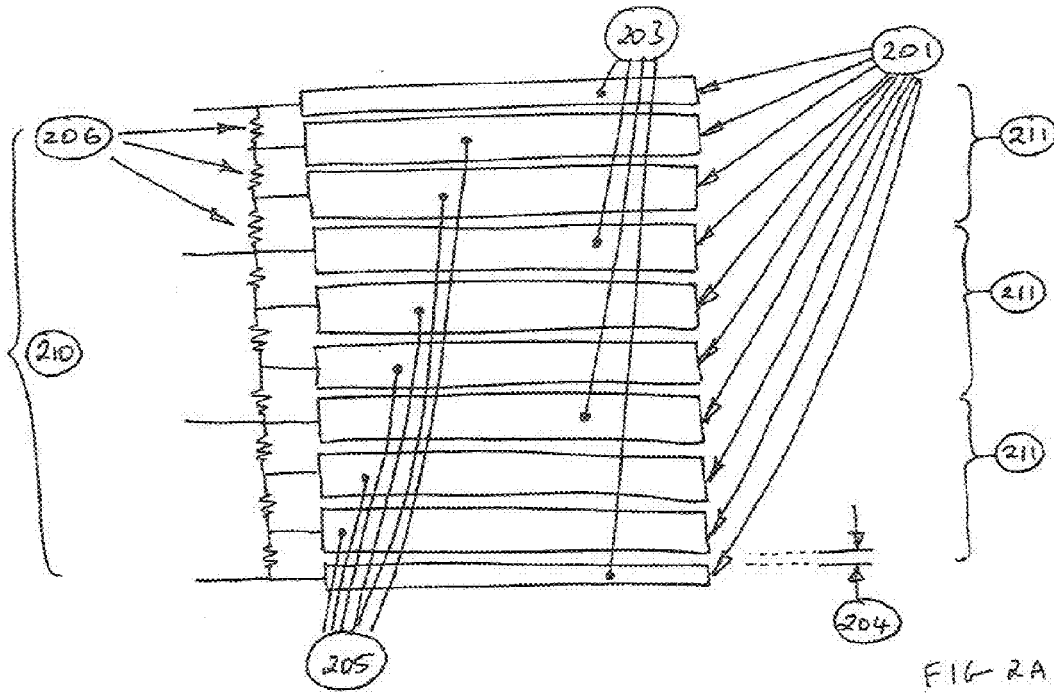


FIG 2A

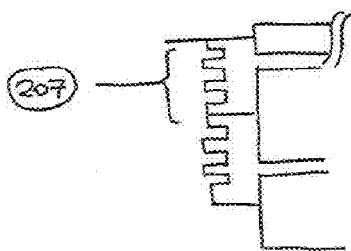
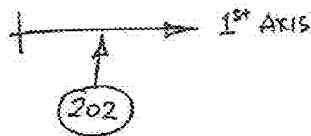


FIG 2B

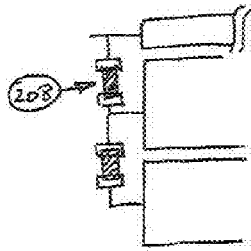


FIG 2C

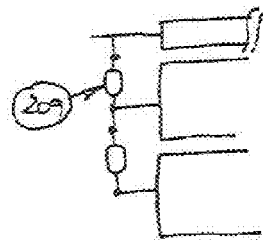


FIG 2D

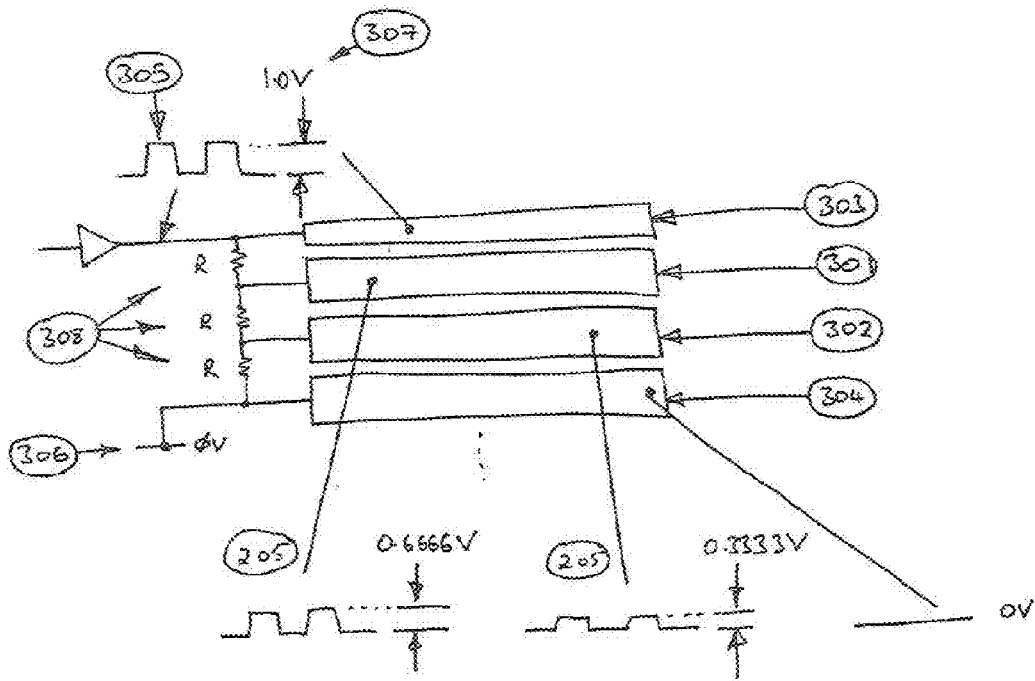


FIGURE 3

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