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(54) Title: PROBE AND SYSTEM FOR MEASURING TRANS-EPITHELIAL ELECTRICAL RESISTANCE AND TRANS-EPITHELIAL POTENTIAL DIFFERENCE

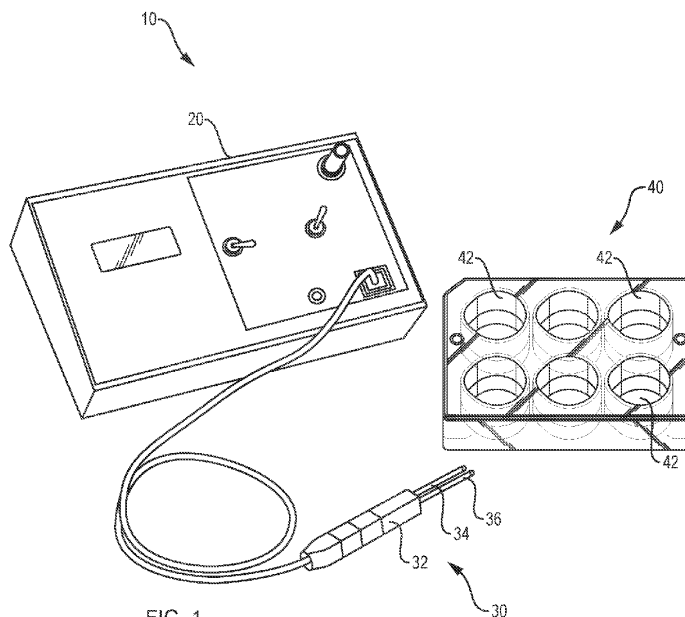


FIG. 1

(57) Abstract: A probe (30) for a trans-epithelial electrical resistance and trans-epithelial potential difference instrument (10) may include a temperature sensor configured to record the temperature in a well of a cell culture plate while collecting a TEER or TEPD measurement. The temperature sensor may be surface mounted on one of the legs (36) of the probe, may be disposed within a tube disposed proximate to one of the legs of the probe, or, when the probe legs are tubular, may be disposed within the conduit of one of the legs. The apical and basolateral legs may be formed as printed circuit board assemblies, where the sensing elements are subjected to an electroless nickel, immersion gold treatment process to coat the sensing elements in a layer of nickel and then a layer of gold. The apical and basolateral legs may also be formed from 304 stainless steel and may be tubular in shape.

[Continued on next page]

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