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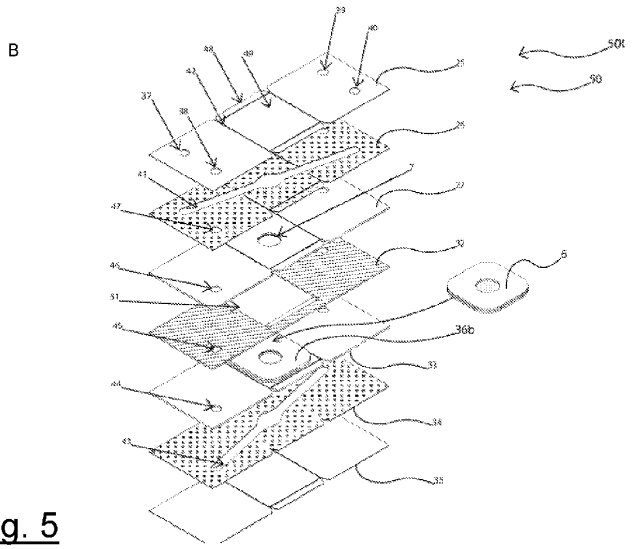


Fig. 5

(57) Abstract: The present invention relates to a cartridge (6) adapted to house at least one biological sample (58) therein, wherein said cartridge comprises at least two overlapping layers (2, 3, 4, 5), wherein said layers consist of: - at least one layer consisting of highly hydrophobic, inert, and biocompatible material, with contact angle $\Theta_c \geq 90°$, hydrophobic layer (2, 5); - optionally, at least one layer (3, 4) of double-sided adhesive material; wherein, in the absence of said at least one layer (3, 4) of double-sided adhesive material, said overlapping layers are connected together by chemical and/or physical bonding; wherein each of said overlapping layers (2, 3, 4, 5) has at least one inner hole (7) and said at least one inner hole (7) is pervious when said layers (2,3, 4, 5) overlap one another; wherein said at least one inner hole (7) is closed by said at least one

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biological sample (58), where loaded in said cartridge (6). The present invention further relates to a fluidic device (200, 500) and a fluidic devices-support station complex (600) comprising said cartridge, and to the use thereof in static and/or dynamic bicompartmental biological cultures.