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(54) ADAPTER FOR INTERCONNECTING ELECTRICAL ASSEMBLIES

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U.S.C. 154(b) by 0 days.

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- (52) **U.S. Cl.** **439/638**; 439/660; 439/76.1

(56) References Cited

U.S. PATENT DOCUMENTS

6,293,827 B1*	9/2001	Stokoe 439/608
6,343,957 B1*	2/2002	Kuo et al 439/638

6,364,713	B1*	4/2002	Kuo 439/638
6,722,897	B1*	4/2004	Wu 439/76.1
6,776,659	B1*	8/2004	Stokoe et al 439/608
6,786,771	B2 *	9/2004	Gailus 439/608
6,830,483	B1*	12/2004	Wu 439/638
7,163,421	B1*	1/2007	Cohen et al 439/608
2004/0072473	A1*	4/2004	Wu 439/638
2006/0068640	A1*	3/2006	Gailus 439/608

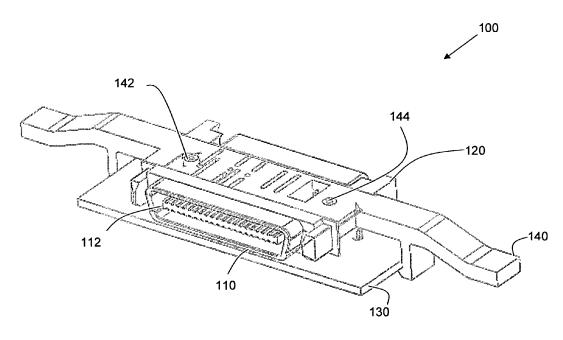
^{*} cited by examiner

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(57) ABSTRACT

An electrical connector suitable for use in an adapter. The connector includes conductive elements that can be routed in three dimensions to facilitate interconnections between connectors used to form an adapter. Simplified construction is achieved through use of connector wafers, each of which route signals in a plane such that when the wafers are organized side-by-side in a connector, signals may be routed through multiple parallel planes. Some of the wafers may include holes through which conductive elements from other wafers may pass, to that signal may be routed in a third dimension, perpendicular to the parallel planes. The adapter may be mounted on a printed circuit board or other substrate with active components. Signals may pass through the adapter in one of the parallel planes or may be routed for conditioning in the active components.

18 Claims, 13 Drawing Sheets





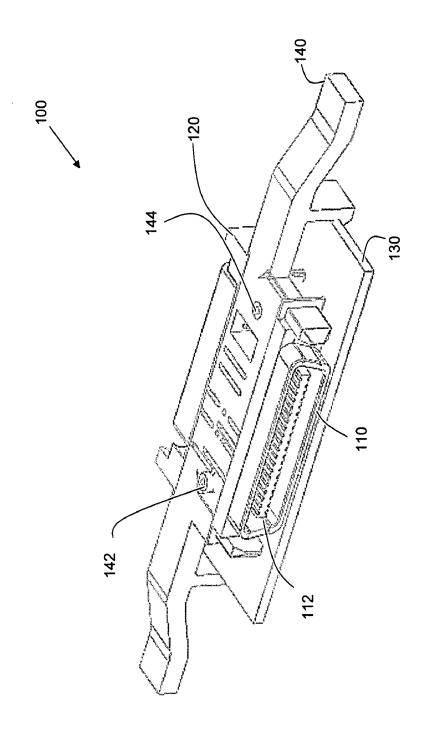


FIG.

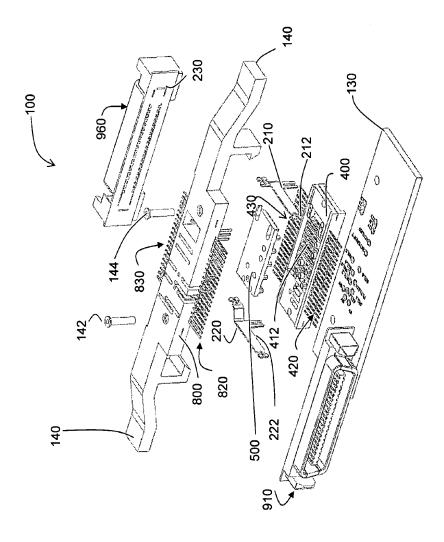
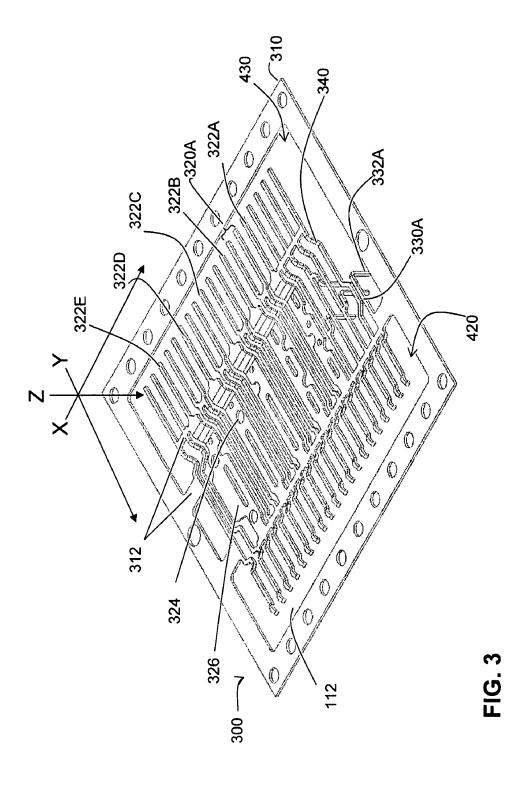
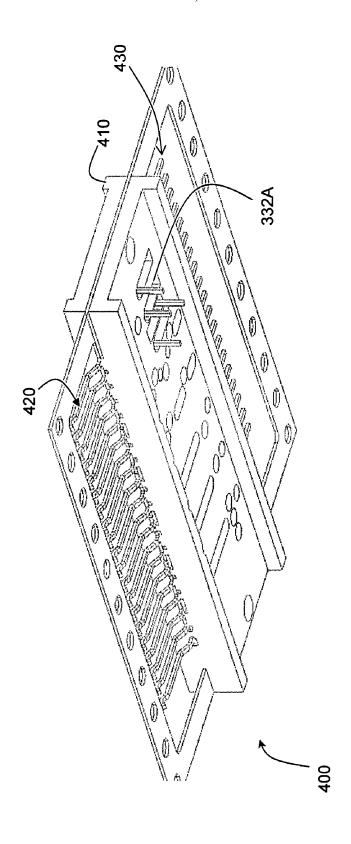


FIG. 2





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