Foldable Connector Assembly for Electronic Device

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- Electrical Engineering
- NSWC Crane

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- Connectors
- Crane
- Mechanical Engineering

Automatic test equipment (ATE) is commonly used for final quality control, endurance testing, environmental testing, for field tests on terminals, computers and other electronics. The costs associated with ATE created a demand for multi-purpose test equipment, useable for a wide variety of units under test (UUT). The ATE often used an adapter to interface and connect with each UUT. Consequently, there is a need for connector assemblies that conserve space and also provide meant to completely cover the array of male and/or female pin-like connectors resident on many electronic devices and/or testing equipment. An apparatus for this purpose should be durable due to the nature of its use, and economical to manufacture and sell to provide for widespread use.

Naval Surface Warfare Center, Crane Division (NSWC Crane), has developed and patented a connector assembly with foldable card guides that completely cover the array of electrical connectors resident on the connector housing. The connector assembly prevents the ingress of dirt and particle matter to the array of connector pins resident on the connector assembly. It prevents harm to an individual due to the inadvertent touching of an exposed connector pin. The foldable device guides incorporate spring-loaded bullet pins and radial locators positioned at the points where they are pivotally attached to a connector housing to lock in either an open or closed position. This technology is fabricated of a variety of strong, non-conductive materials to provide a high level durability as required by the nature of its usage. Additionally, the design is simple and straightforward, and can be economically manufactured.

Advantages:
- Save space
- Protection again dirt and particle matter
- Secures the testing unit for shipment
- Decrease the chances of personnel injury
- Cost saving

Potential Applications:
- Communication
- Electronic Systems
- Aerospace
- Semiconductor
- Industrial
- Medical
- Military

People:
- Rensi, Edward G. (Project leader)

Intellectual Property:

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