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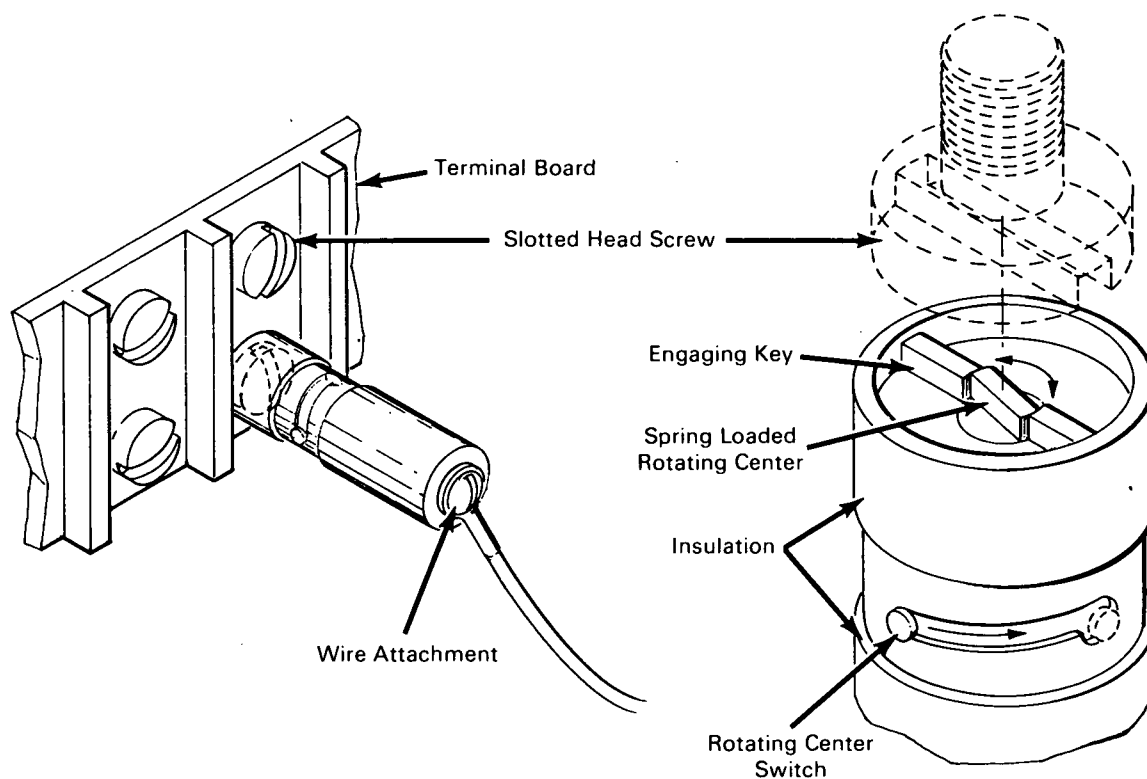
Brief 70-10488

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## Electrical Test Wire Attachment Device



Terminal boards and similar devices where electrical connections are affixed by machine screws with slotted heads are in common usage throughout industry. Test wire leads can be attached to this type connection by removing the screw to accept a test lead lug, but the procedure is time consuming and often difficult. Another method for temporary connections is to use a clip around the screw head; however, the clip is often easily displaced from the screw head.

A test lead wire attachment device has been developed which quickly and securely engages the screw head by expansion against the side walls of the screw head slot. A view of the slot-engaging end of the device is shown in the figure. The two stationary projections and the spring loaded rotatable center section form a screwdriver-like blade which enters the screw head slot when the center section is rotated counterclockwise. The engagement and retention are also shown

(continued overleaf)

in the figure; when the center section is allowed to rotate, the edges of this section grip the screw slot side walls.

The commercial unit used for the prototype allowed the tool to be preset to the slot-entering position by means of a cocking feature. When the shaft was held stationary, a counterclockwise rotation of the forward sleeve allowed a pin, located at the opening between the insulation, to enter the slot depression. By pushing the shaft towards the screw, the pin is released from the depression, allowing the spring to rotate the center section.

At a convenient location in the shaft of the device, provision was made to retain a test lead wire. A hole was drilled and tapped for a machine screw which was used to retain a terminal lug containing the lead wire.

To insulate the device from accidental contact, heat shrinkable tubing was used for the forward and shaft

ends. Insulation is increased at the forward sleeve end when the tubing extends a distance at least equal to the engaging key and spring-loaded rotating center projections.

**Note:**

Requests for further information may be directed to:  
Technology Utilization Officer  
Kennedy Space Center, Code AD-PAT  
Kennedy Space Center, Florida 32899  
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**Patent status:**

No patent action is contemplated by NASA.

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