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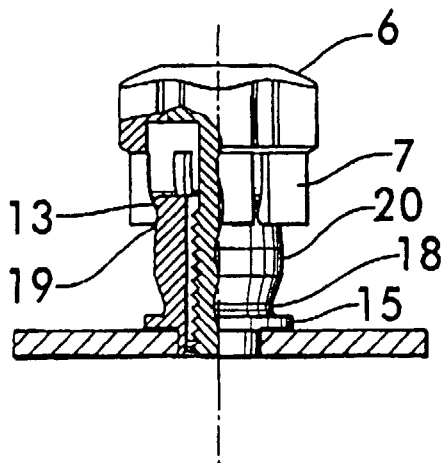
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(54) Title: HYBRID PANEL FASTENER WITH SNAP-ON CAP



(57) Abstract: A two-piece panel fastener includes a barrel-shaped metal retainer which holds a screw. The screw includes a threaded shaft and a plastic cap which has longitudinally-extending resilient fingers which engage the outer surface of the retainer to captivate the screw. The retainer has a chamfered top flange along its top edge, a circumferential bulge area around its outer surface approximately in the middle of its length, and a base at the bottom. Two circumferential valley regions of reduced diameter are located along the outer surface of the retainer. The first valley region is located between the chamfered top flange and the bulge area and the second is located between the bulge area and the base. When the fingers occupy either of the valley regions, the screw is captively held at either of two stable positions of retraction or extension. The retainer is preferably rigidly affixed to a circuit board by soldering a base flange at the bottom of the retainer to the top surface of the board. After the retainer is separately soldered to the circuit board and the retainer has cooled, the screw and cap assembly are joined to the retainer by snap action of the resilient cap fingers.



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