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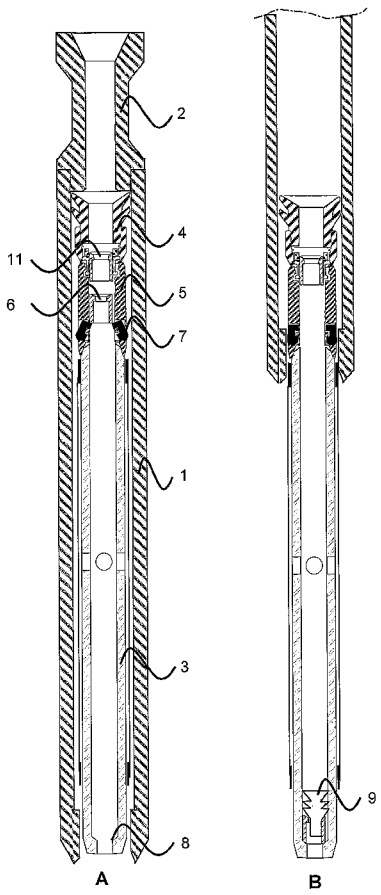
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(54) Title: HYDRAULICALLY OPERATED PROTECTOR FOR DOWNHOLE DEVICES



(57) Abstract: It is provided a tool and its operating procedure, to protect any device while lowering into a well, and especially hydraulic devices such as sensors with expandable arms or inflatable elements such as packers. The protection is mainly important in the open hole of highly deviated or horizontal wells, for any device equipped with external seal element, delicate sensor or articulated parts. This tool features an automatic sequence controlled by a single dart or a single ball launched into the running string from the surface: when the dart or the ball lands on its seat, the pressure build-up is initially applied to a piston to extract the device from the protector without exposing it to any differential pressure, then it is automatically applied to the device itself for actuation as soon as the device is entirely pulled out of the protector.

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