

[54] REPERFORABLE BRIDGE PLUG

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[52] U.S. Cl. 166/123; 166/135; 166/181; 166/192

[58] Field of Search 166/118, 123, 131, 135, 166/140, 179, 181, 184, 188, 192, 196

[56] References Cited

U.S. PATENT DOCUMENTS

2,928,469	3/1960	Crowe	166/135
3,000,443	9/1961	Thompson	166/192
3,054,453	9/1962	Bonner	166/135
3,100,533	8/1963	Fredd	166/181
4,432,418	2/1984	Mayland	166/135

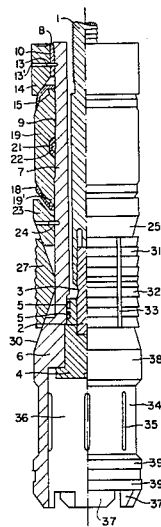
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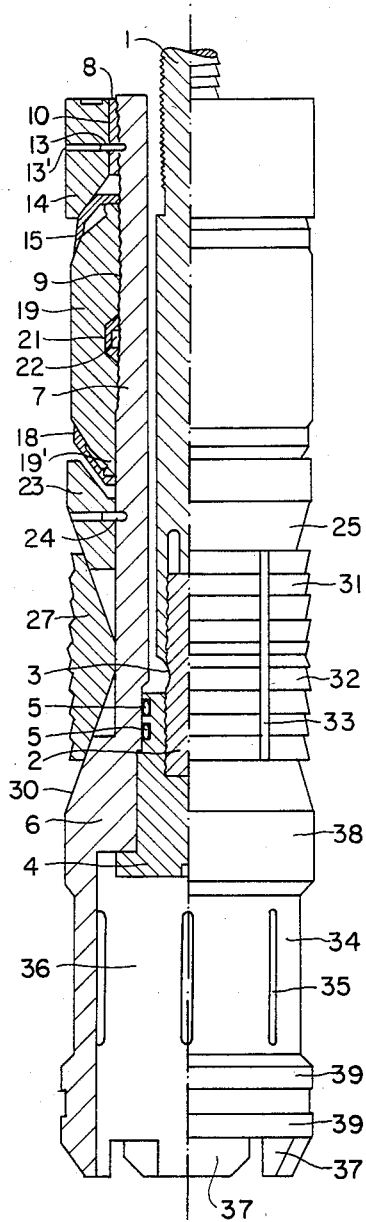
[57] ABSTRACT

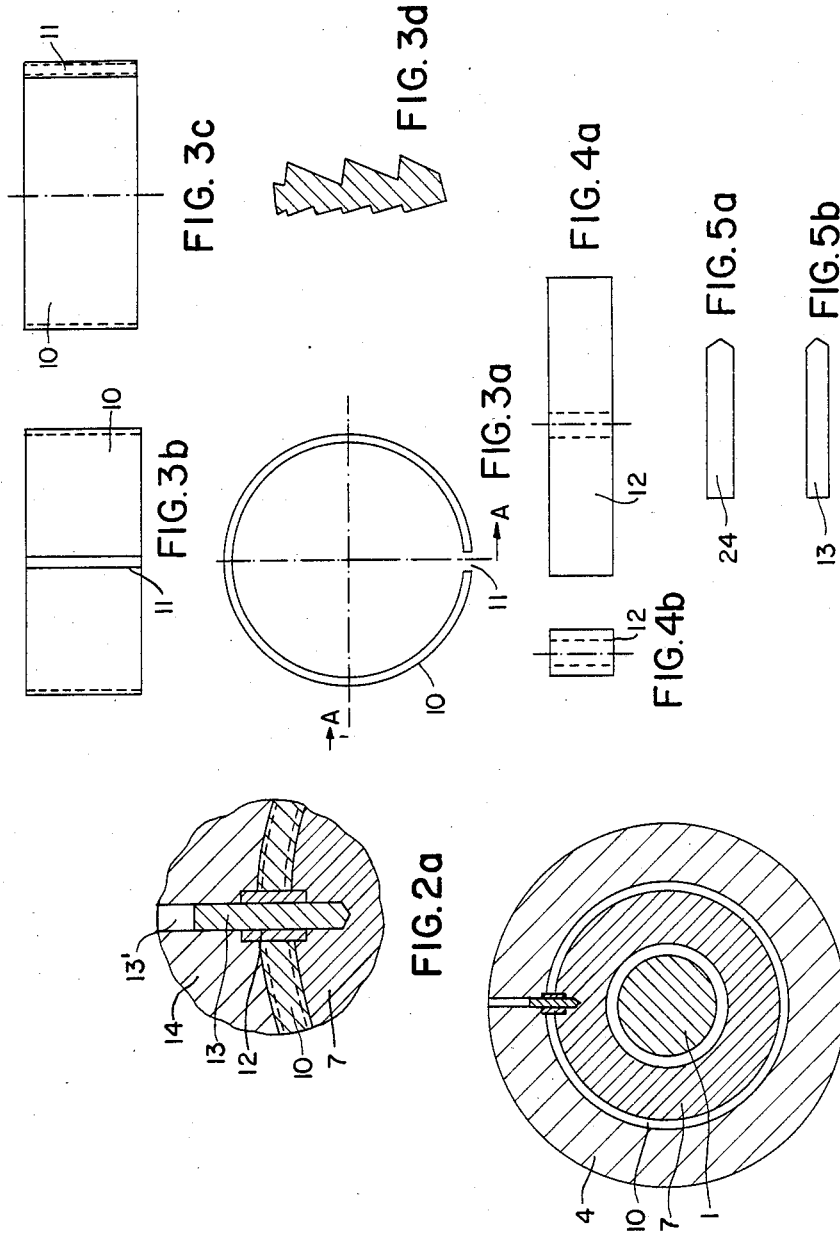
A reperformable bridge plug fastenable to a tool through a weak point and integrated by an elastic gasket between support and compression pieces has a dentated fastener for fastening to a tube line, a bridge plug having

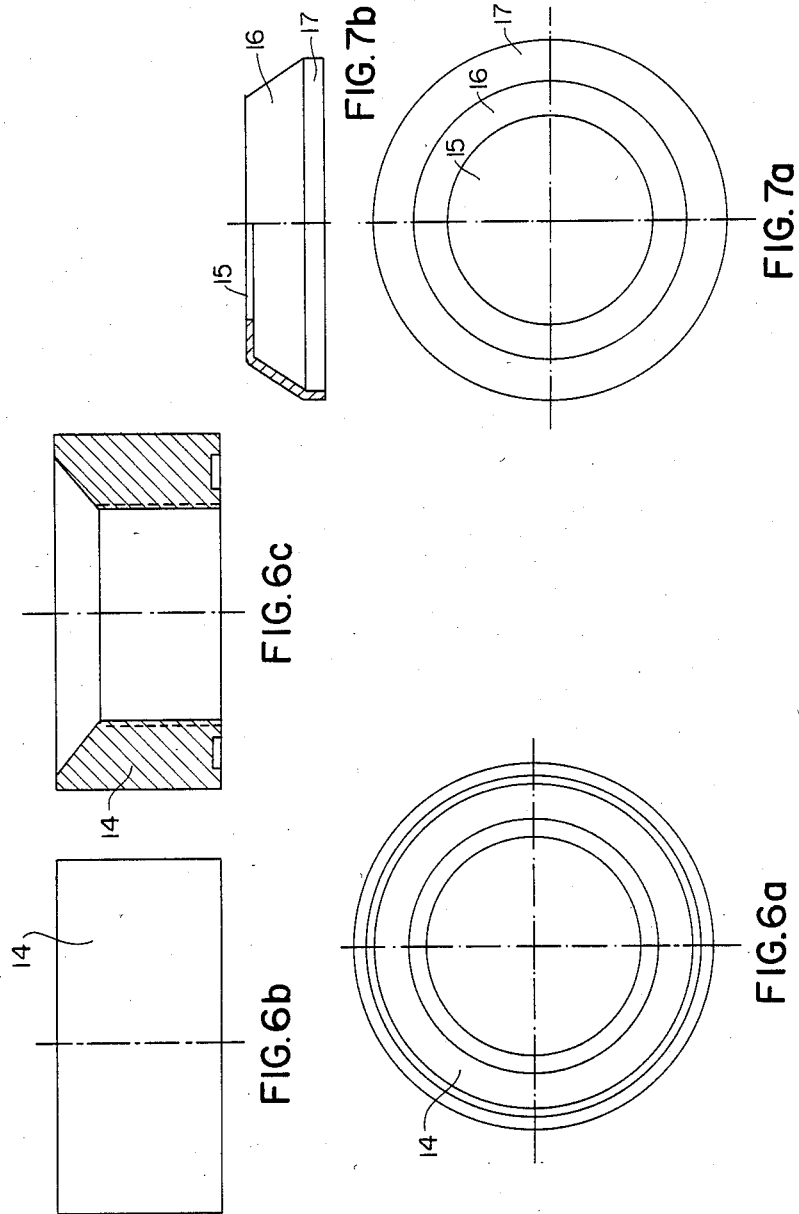
a tubular body with upper and lower ends, an enlarged diameter hollow portion on the lower end portion of the bridge plug forming a chamber, a plurality of slots through the wall of the chamber so that it communicates with the exterior of the bridge plug body, a plurality of calibrated rings formed by enlargements of the exterior surface of the wall calibrated to fit the well diameter in which the bridge plug is to be applied, an interchangeable converter plug mounted in the end of the tubular body adjacent the enlarged portion between the chamber and tubular body, a lower compression piece located below the elastic gasket and fastened to the tubular body by a fuse pin and having an external frusto conical surface thereon, a frusto conical surface on the exterior of the enlarged diameter portion spaced below the lower compression piece, and wherein the dentated fastener comprises a cylindrical jaw member mounted on the tubular body between the lower compression piece and the enlarged diameter portion, two oppositely directed diverging frusto conical surfaces on the interior surface of the jaw member at least partially operatively engaging respectively in superposition the frusto conical surfaces on the lower compression piece and enlarged diameter portion, substantially circumferential saw teeth on the exterior surface of the jaw member, and a plurality of circumferentially spaced axially directed slots in the exterior surface of the jaw member to produce weak fracture areas which fracture in response to predetermined relative movement of the lower compression piece and enlarged diameter portion of the bridge plug toward each other.

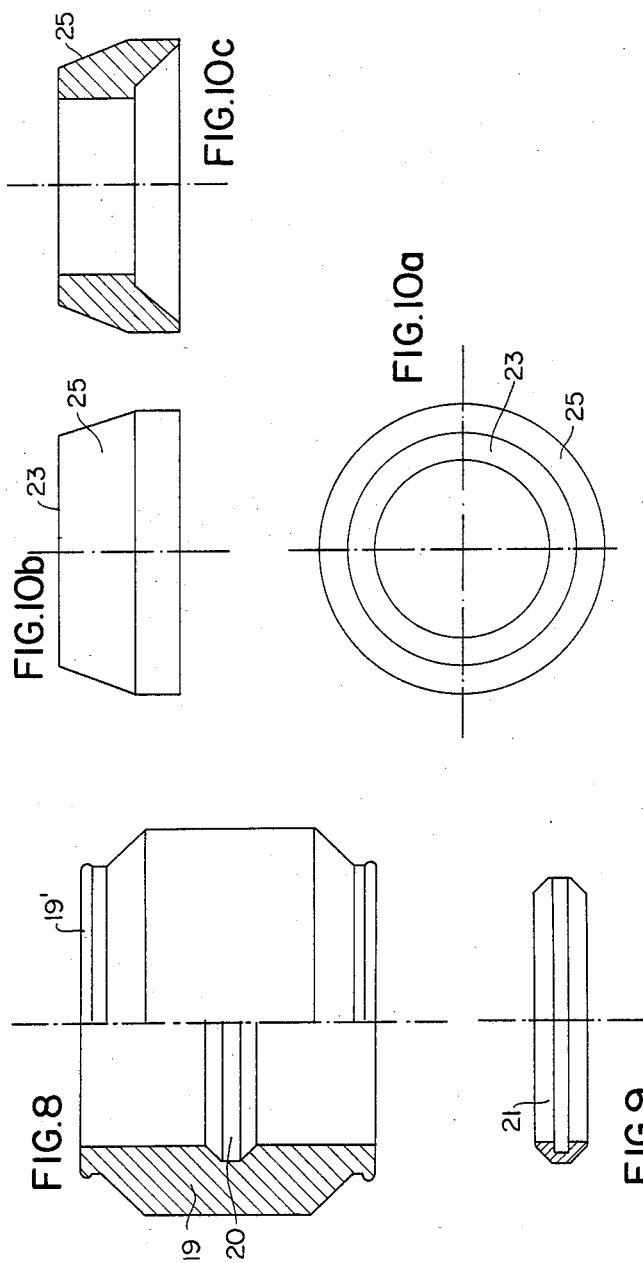
19 Claims, 32 Drawing Figures











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