

Ex. PGS 1042



United States Patent [19]

Ambs et al.

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[45] **Date of Patent:** **Jan. 4, 2000**

[54] **SEISMIC STREAMER POSITION CONTROL MODULE**

4,694,435 9/1987 Magnesville 367/17
5,443,027 8/1995 Owsley et al. 114/244

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[57] **ABSTRACT**

[21] Appl. No.: **09/128,336**

[22] Filed: **Aug. 3, 1998**

[51] **Int. Cl.⁷** **G01V 1/00**

[52] **U.S. Cl.** **367/17; 114/235; 114/244; 114/242**

[58] **Field of Search** 367/61, 17; 181/110; 340/7; 114/235, 244, 242

A seismic streamer position control module has been invented having a body with a first end and a second end and a bore therethrough from the first end to the second end for receiving a seismic streamer therethrough, at least one control surface, and at least one recess in which is initially disposed the at least one control surface, the at least one control surface movably connected to the body for movement from and into the at least one recess and for movement, when extended from the body, for attitude adjustment. In one aspect the seismic streamer position control module body has tapered ends.

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,943,483 3/1976 Strange 114/235

20 Claims, 5 Drawing Sheets

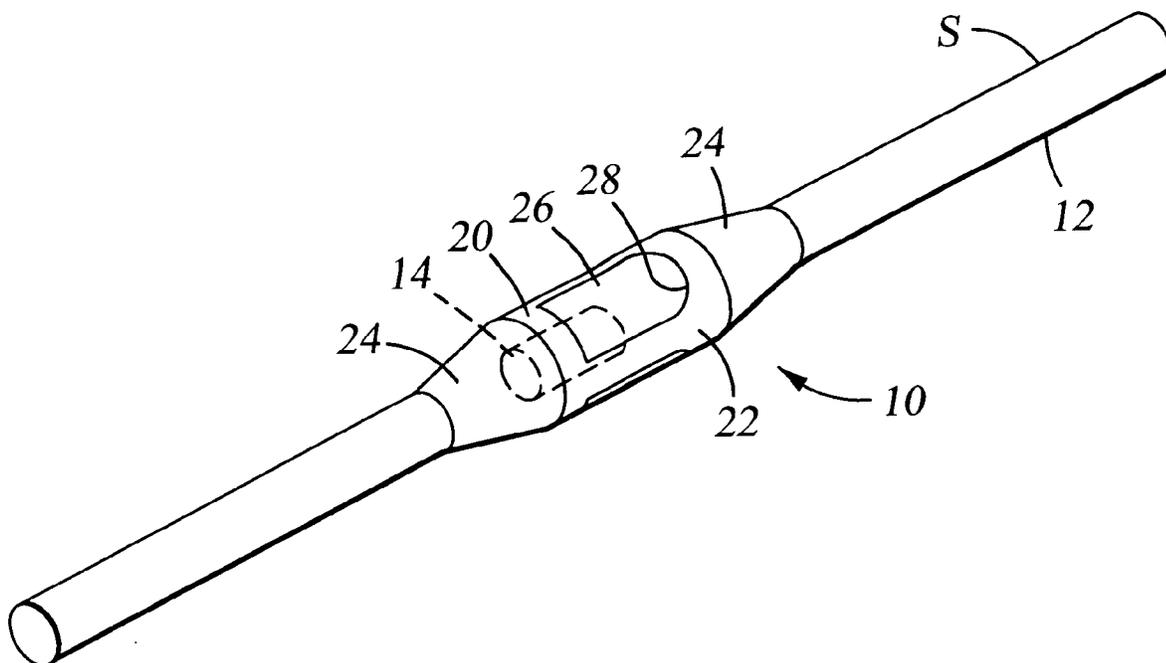


Fig. 1

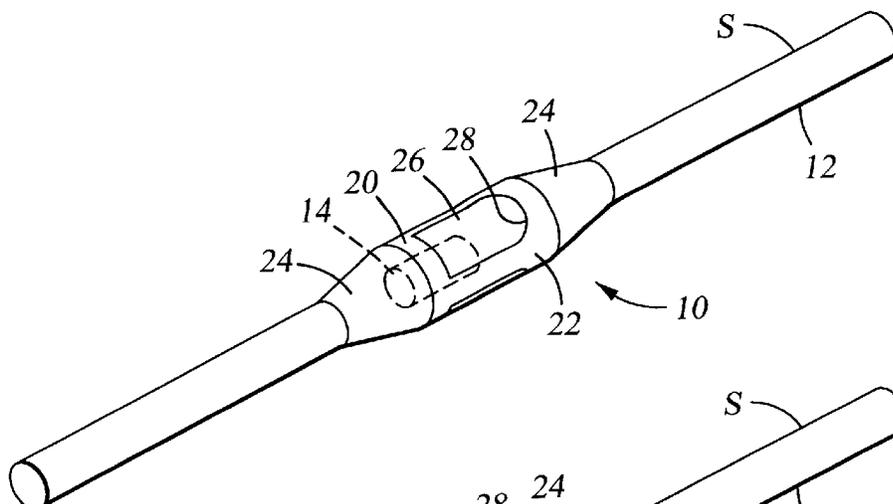


Fig. 2

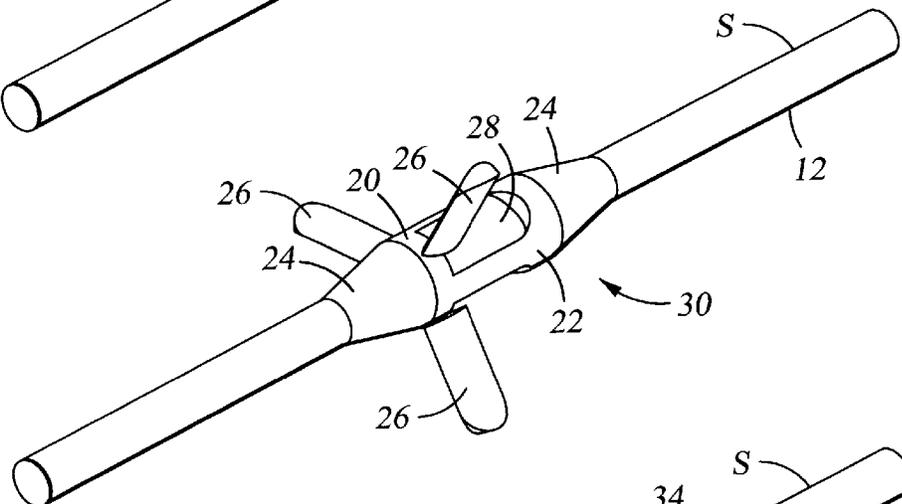


Fig. 3A

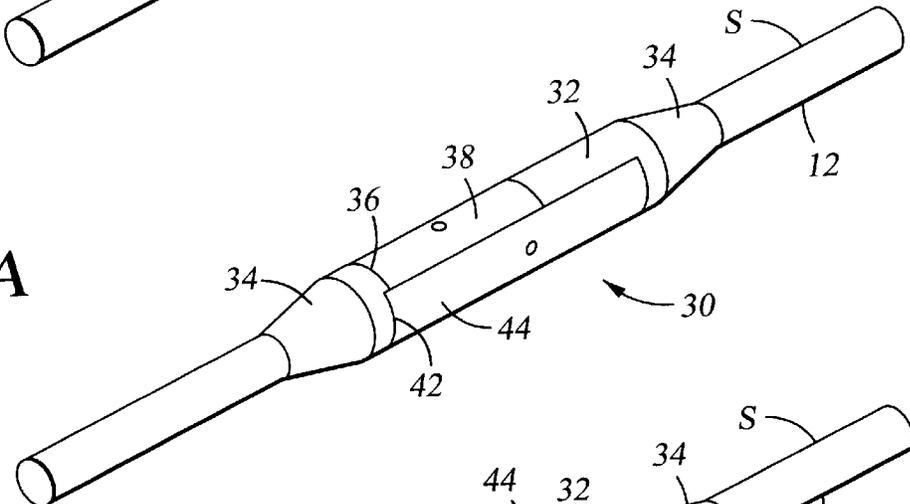
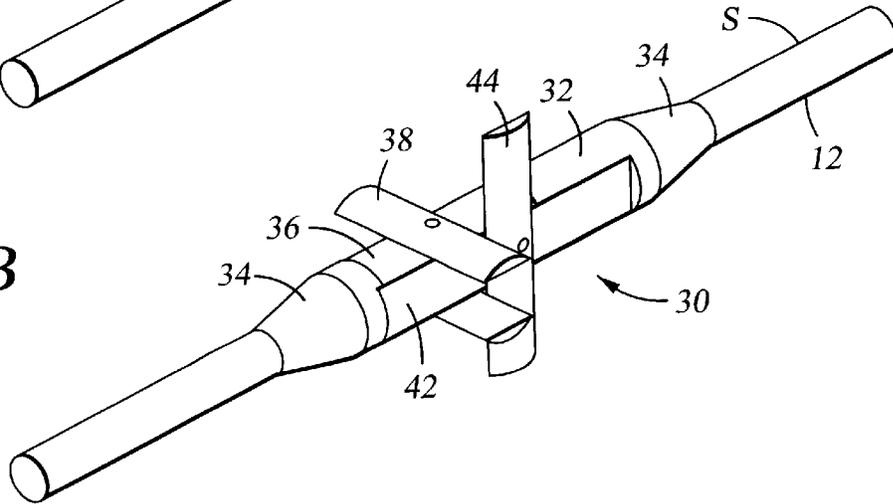


Fig. 3B



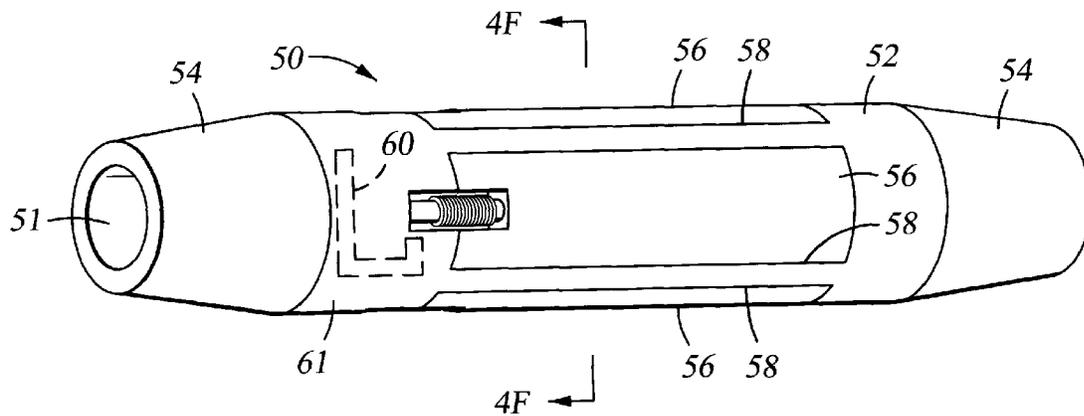


Fig. 4A

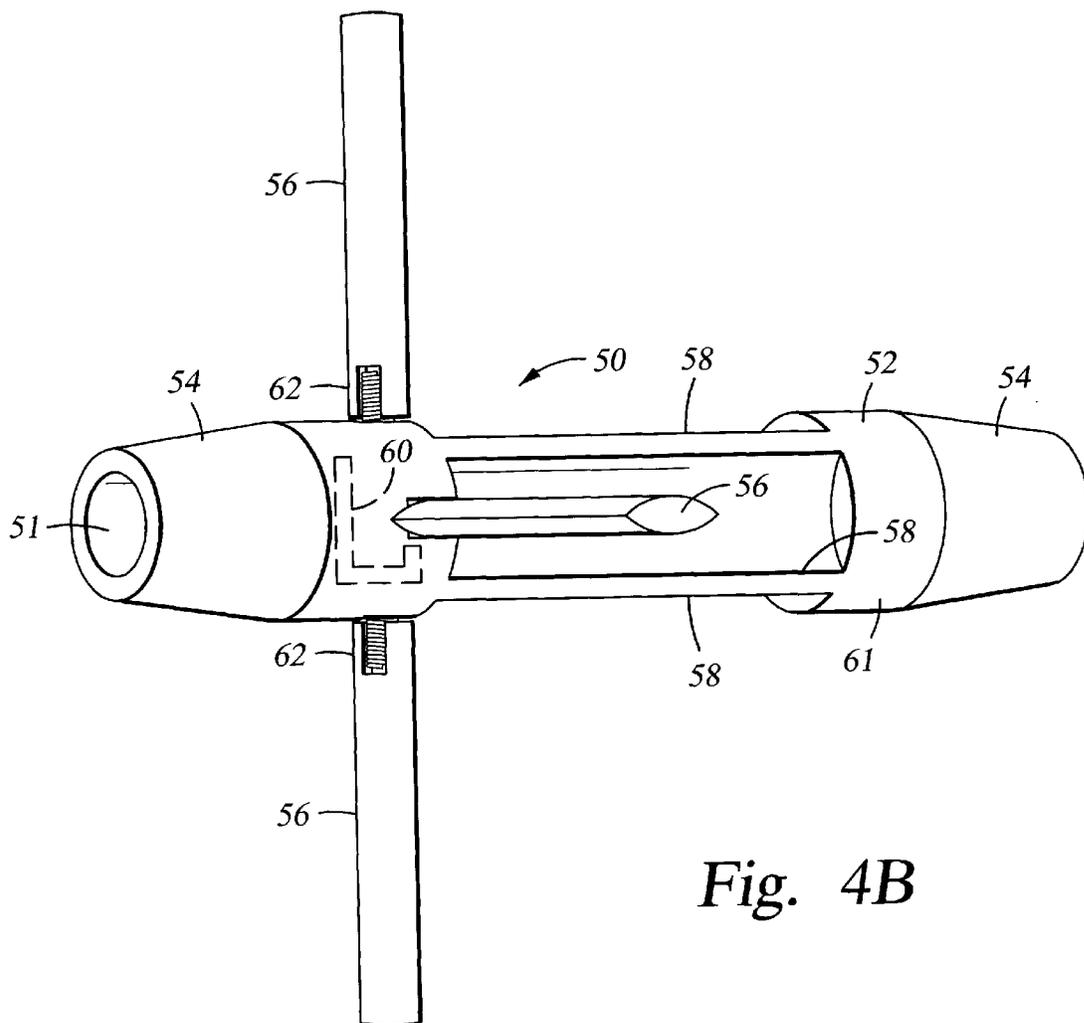


Fig. 4B

Fig. 4C

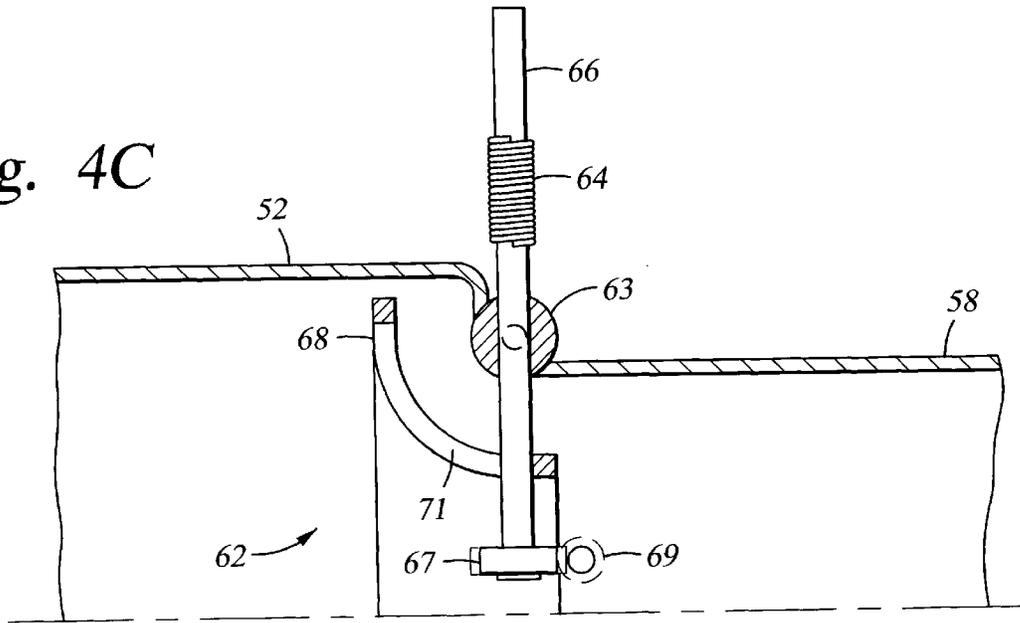


Fig. 4D

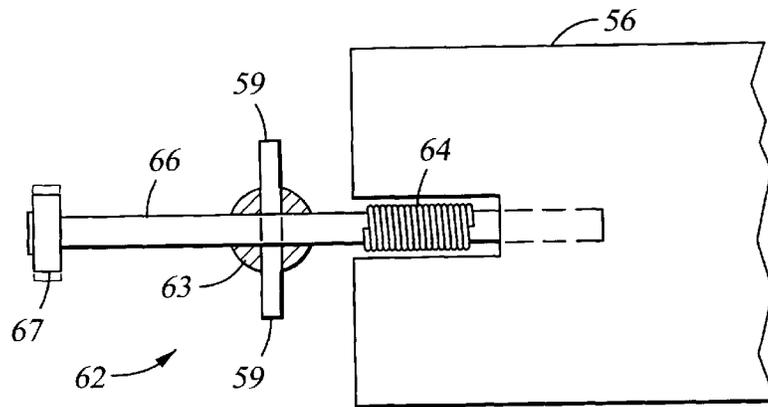
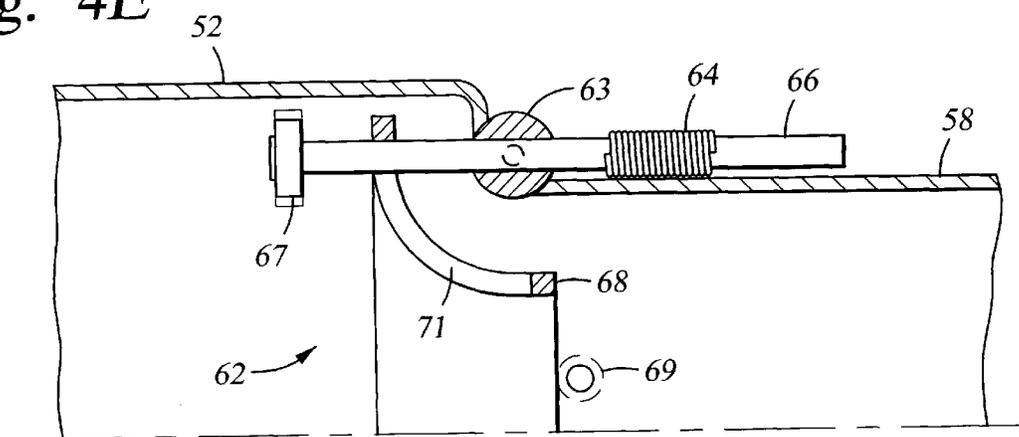


Fig. 4E



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