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(54) **Improved transmission element for downhole drilling components**

(57) An apparatus for transmitting data between downhole tools is disclosed in one embodiment of the present invention as including an annular core (70) constructed of a magnetically-conductive material. At least one conductor (72), electrically isolated from the annular core, is coiled around the annular core. An annular housing (28) constructed of an electrically conductive

material is used to partially enclose the annular core and the conductive coil. The annular housing is shaped to reside within an annular recess (76) formed into a surface of a downhole tool, and is electrically insulated from the surface. A biasing member (96) is used to effect a bias between the annular housing and the annular recess, urging the annular housing in a direction substantially perpendicular to the surface.

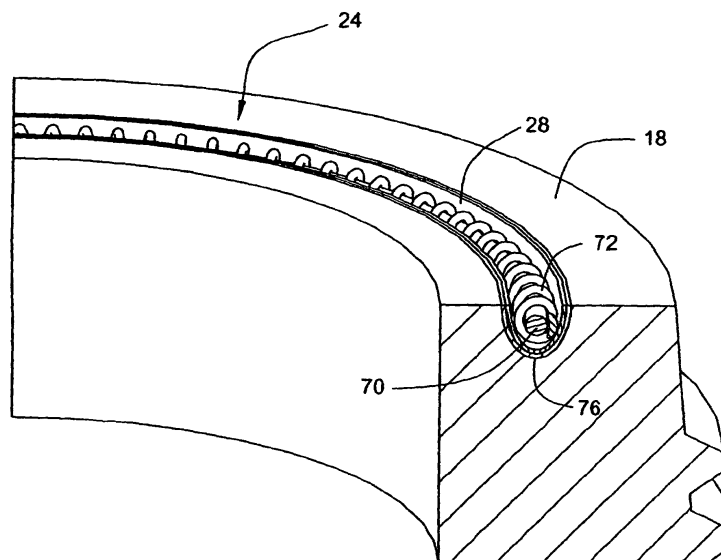


Fig. 13



European Patent
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EUROPEAN SEARCH REPORT

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			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 11 October 2004	Examiner Georgescu, M
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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