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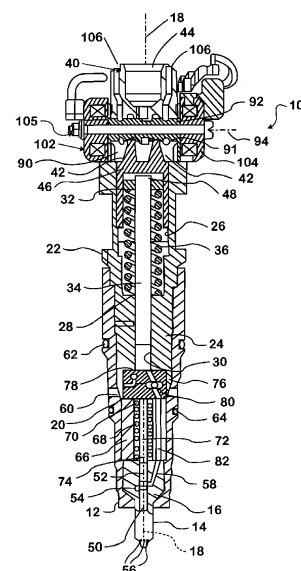
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(54) **Electric-actuated control valve of a unit fuel injector**

(57) A unit fuel injector (10) has a control valve (40) in which a valve spool (92) is displaceable within a bore (91) of a valve body (90) between a limit of displacement that fully opens an oil outlet port (42) to an oil inlet port (44) while closing an oil drain port (106) to the oil outlet port (42) and a limit of displacement that closes the oil outlet port (42) to the oil inlet port (44) while opening the oil outlet port (42) to the oil drain port (106). The valve spool (92) has a spool body (96) whose geometry defines an exterior envelope of the valve spool (92). Permanent magnets (98,100) are disposed within a bore (91) of the spool body (90) inside of the exterior envelope, and electromagnets (102,104) are electromagnetically coupled with the permanent magnets (98,100) for displacing the valve spool (92) within the valve body bore (91).



**FIG. 1**