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(54) Title: END-HALL ION SOURCE WITH ENHANCED RADIATION COOLING

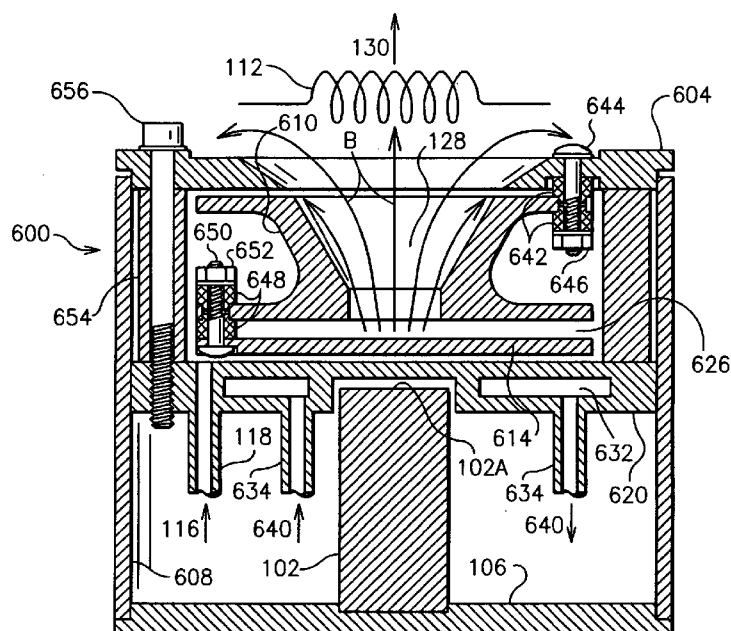


Fig. 16

(57) Abstract: In accordance with one embodiment of the present invention, an end-hall ion source has an electron emitting cathode, an anode, a reflector, an internal pole piece, an external pole piece, a magnetically permeable path, and a magnetic-field generating means located in the permeable path between the two pole pieces. The anode and reflector are enclosed without contact by a thermally conductive cup that has internal passages through which a cooling fluid can flow. The closed end of the cup is located between the reflector and the internal pole piece and the opposite end of the cup is in direct contact with the external pole piece, and wherein the cup is made of a material having a low micro-hardness, such as copper or aluminum.



— *with amended claims and statement (Art. 19(1))*