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A request for restoration of the right of priority by the EPO as designated Office has been granted (R. 49ter.2 PCT, Art.122 EPC)

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(54) **STATIONARY ION/PLASMA ENGINE**

(57) The invention relates to space technology and can be used in electric jet engines, as well as in vacuum-plasma apparatus. Proposed is a stationary ion/plasma engine comprising a magnetically conductive housing having mounted therein a discharge chamber with an annular ionization and acceleration channel, said chamber having an outer annular surface and an inner annular surface and being made of an electrically insulating material, the chamber having an open outlet on one side, and being coupled by its opposing, bottom side, to the magnetically conductive engine housing via a fastening means in the form of an annular metal cage; mounted inside the discharge chamber is a hollow annular gas distributing anode in communication with a reservoir of gaseous working fluid, and a cathode fastened to the

magnetically conductive housing, the engine further having a magnetic system consisting of coils with magnetically conductive cores, and the magnetically conductive housing, wherein the outer and inner annular surfaces of the discharge chamber are described by wave-shaped generating lines which give rise to concentric grooves on the annular surfaces of the discharge chamber; the means for fastening the discharge chamber to the magnetically conductive engine housing is configured in the form of an annular metal cage with wave-shaped walls, which have a profile analogous to the profile of a wave-shaped generating line of the discharge chamber, and is fastened to the magnetically conductive housing with the aid of fastening elements, the wave-shaped walls of the cage surrounding the outer and inner annular sur-

faces of the discharge chamber; cut into the wave-shaped walls of the cage are slots that divide the walls into individual wave-shaped petals, wherein the wave-shaped petals of the cage contact with the cylindrical magnetically conductive housing and are pressed by the latter to the discharge chamber within the limits of elastic deformation of the petals. The proposed solution simplifies assembly of the ion/plasma engine, allowing automatic positioning of the discharge chamber in relation to the engine axis, while also protecting the discharge chamber against the effects of temperature deformation of the structural elements of the engine.

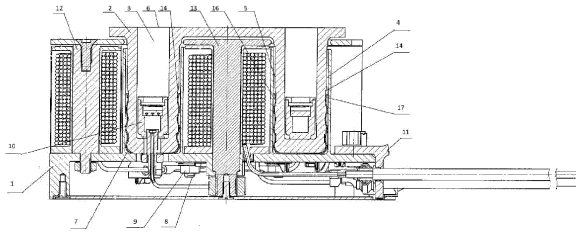


Fig. 1