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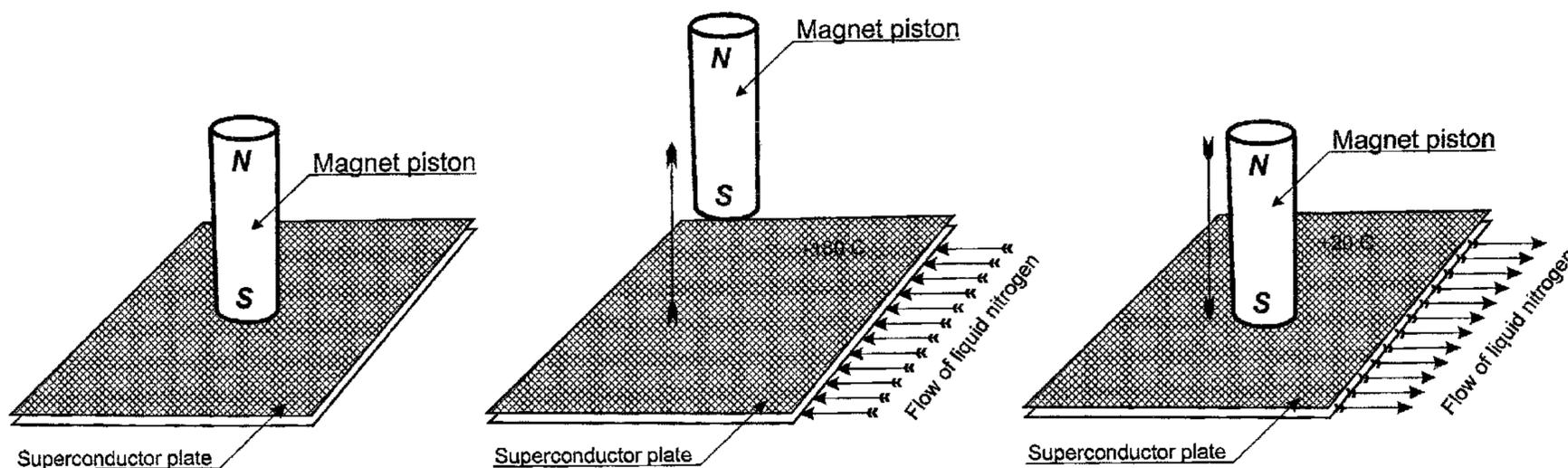
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(54) Titre : MOTEUR CRYOGENIQUE SUPERCONDUCTEUR A PISTON

(54) Title: PISTON SUPERCONDUCTOR CRYOGENIC ENGINE



(57) Abrégé/Abstract:

Essence of invention is piston superconductor cryogenic engine. It consists of plate made of superconductor material, device for supplying liquefied gas (liquid nitrogen) underneath the superconductor plate and magnet pin, located on upper surface of superconductor plate. Principle of work is based on fact that superconductor generates inductance current with its own magnetic field which makes magnet pin placed in that field move away from it. My invention would incorporate this phenomenon to build piston-like engine. Piston-pin made of magnetic metal is placed upon superconductor plate of normal atmospheric temperature. (See Fig. 1 of enclosed drawing) Under the superconductor plate there is device which supplies liquid nitrogen to cool superconductor plate down to -180°C . When liquid nitrogen cools down the superconductor plate, it produces inductance currents, which in turn affect magnet pin and thrust it away from plate, which means up (Phase 1, Fig. 2). Then nitrogen supplying device goes off quickly and temperature of superconductor plate goes up to normal ($\sim +20^{\circ}\text{C}$). Inductance currents within the plate vanish, nothing affects magnet pin any longer, so gravity takes over and magnet pin goes down (Phase 2, Fig. 3). Then nitrogen supplying device goes on again and cycle repeats. Magnet pin goes up and down with the same frequency nitrogen supplying device goes on and off, so magnet pin works as a piston and with some auxiliary device its up-and-down movements could be easily transformed into rotation.

ABSTRACT

Essence of invention is piston superconductor cryogenic engine. It consists of plate made of superconductor material, device for supplying liquefied gas (liquid nitrogen) underneath the superconductor plate and magnet pin, located on upper surface of superconductor plate.

Principle of work is based on fact that superconductor generates inductance current with its own magnetic field which makes magnet pin placed in that field move away from it.

My invention would incorporate this phenomenon to build piston-like engine. Piston-pin made of magnetic metal is placed upon superconductor plate of normal atmospheric temperature. (See Fig. 1 of enclosed drawing)

Under the superconductor plate there is device which supplies liquid nitrogen to cool superconductor plate down to -180°C . When liquid nitrogen cools down the superconductor plate, it produces inductance currents, which in turn affect magnet pin and thrust it away from plate, which means up (Phase 1, Fig. 2).

Then nitrogen supplying device goes off quickly and temperature of superconductor plate goes up to normal ($\sim +20^{\circ}\text{C}$). Inductance currents within the plate vanish, nothing affects magnet pin any longer, so gravity takes over and magnet pin goes down (Phase 2, Fig. 3). Then nitrogen supplying device goes on again and cycle repeats. Magnet pin goes up and down with the same frequency nitrogen supplying device goes on and off, so magnet pin works as a piston and with some auxiliary device its up-and-down movements could be easily transformed into rotation.

SPECIFICATION

My invention is, in fact, piston superconductor cryogenic engine for transformation of energy of magnetic field of superconductor into back-and-forth or rotating movement of engine axle. Great advantage of that kind of engine is that it is ecologically clean, it does not consumes any fossil fuel like oil or natural gas and its fuel (liquid nitrogen) is cheap, fully recyclable, and its reserves are practically inexhaustible

FIELD OF APPLICATION

- Any area where ecologically clean engine of medium power could applied.

CLAIM

Embodiment of invention in which an exclusive property or privilege is claimed are defined as follows:

Piston superconductor cryogenic engine.

Superconductor-cryogenic engine

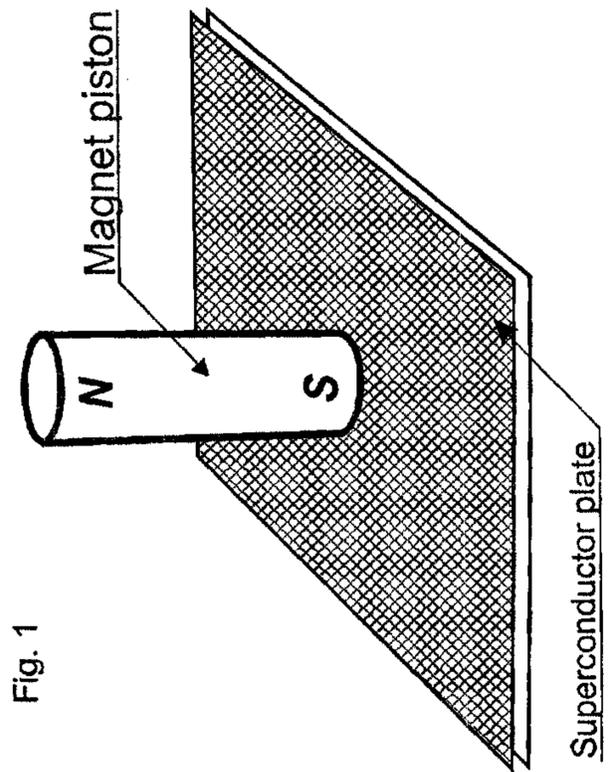


Fig. 1

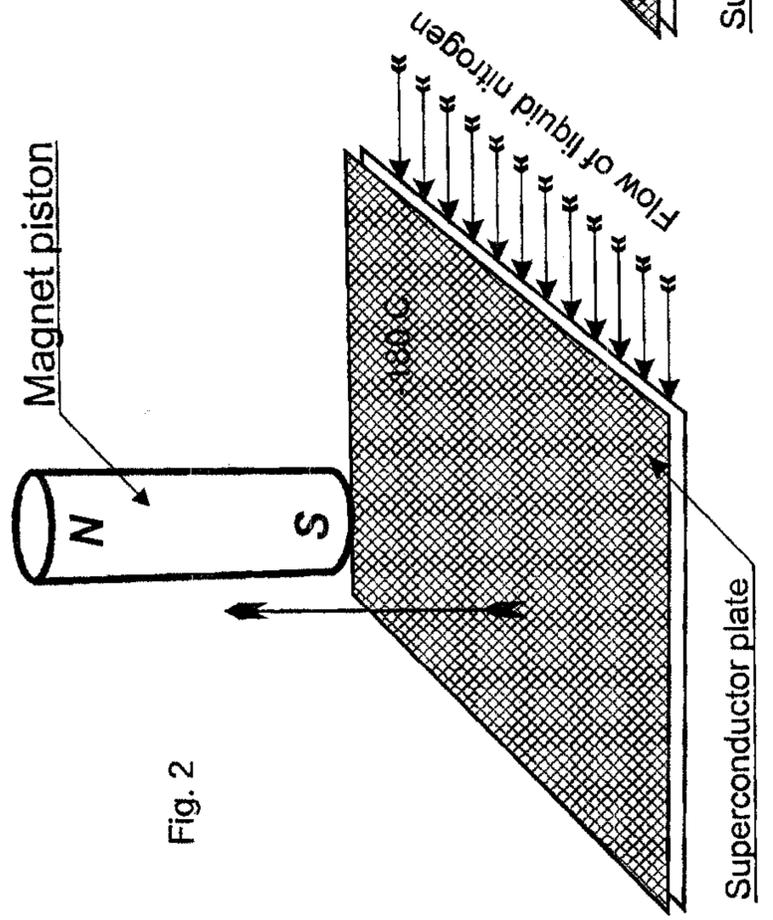


Fig. 2

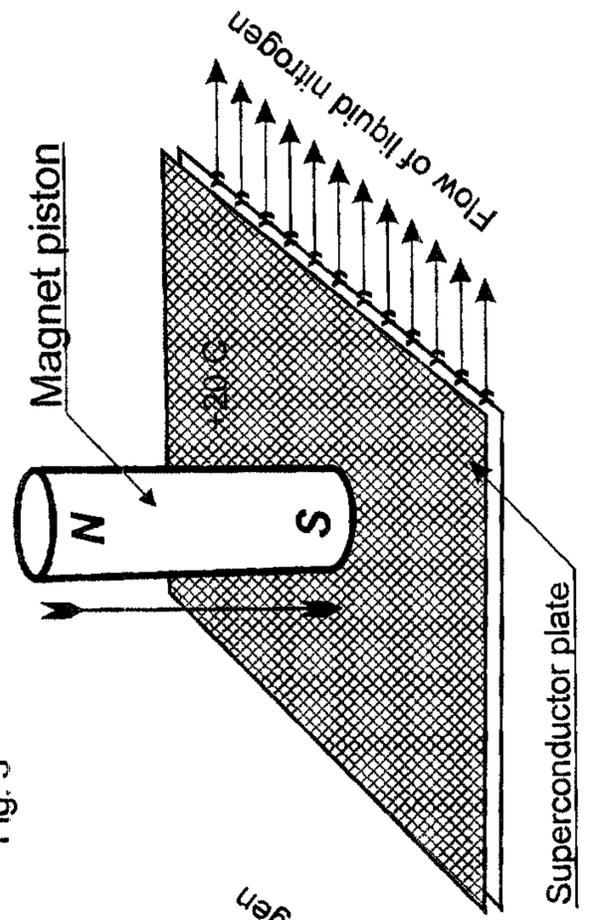


Fig. 3

