

# Flux-machine And Its Analogues

Review prepared by correspondent Alla Pashova, Russia

Flux-machine (or  $\Phi$ -machine, since configuration of its field resembles the Russian letter “ $\Phi$ ”) was designed by Alexander V. Frolov during the first half of 1990s.  $\Phi$ -machine description was published more than once on the pages of scientific periodicals (1994, Institute of New Energy, Newsletter, June 1994, p.9.; 2002, New Energy Technologies, 2002, p.3), and it is well known to many researchers concerning themselves with such kinds of engineering.

Let us consider the arrangement of  $\Phi$ -machine; see Fig. 1 (first published in 1994). A report was presented at the conference «New ideas in natural science», 1996 in Saint Petersburg (see photo in Fig. 1). The primary coil is mounted in the center of generator; two secondary ones are diametrically wound on a ring core. An air gap between ring and central magnetic circuits are of particular importance. **Two magnetic fluxes from two coils are balanced, and, thereby, there is no reaction in the primary circuit.**

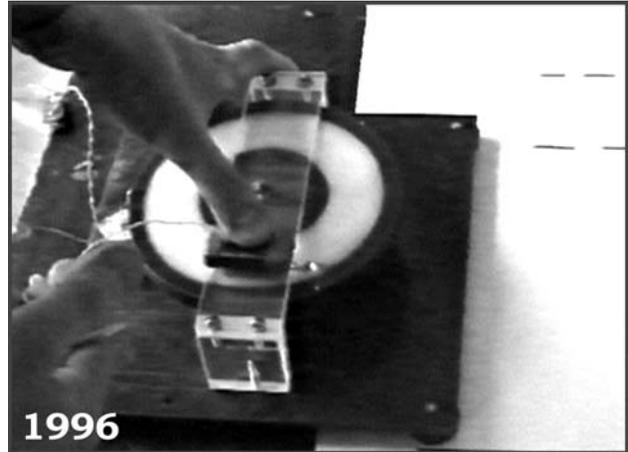


Fig.1

See also Fig. 7, p.29 – the analogy is evident

The device bears some similarity to the Gramm’s generator (Zenob Theophyl Gramm, 1826-1901, Belgium-France, took out a patent for an electric ring-rotor generator in 1869). In Gramm’s generator (Fig. 2) the ring rotor with a toroidal winding rotates. The toroidal winding touches two diametrically located conducting brushes. It turns out that in the ring of the rotor all winds of one rotor half create a field which is directed towards a field created by the other rotor half.

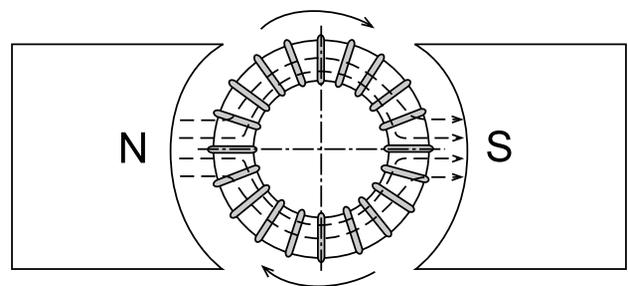
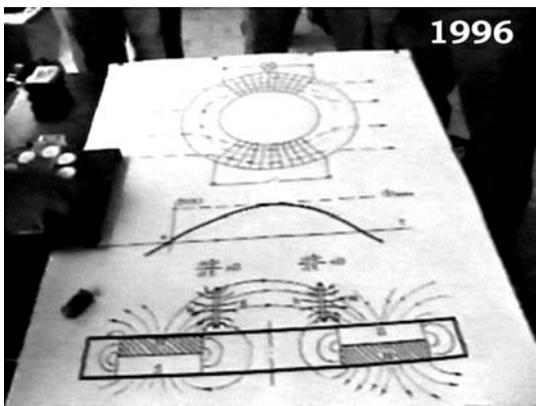
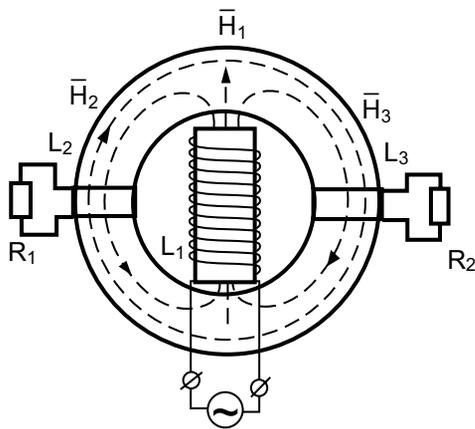


Fig. 2

An example of analogous device is represented in Fig. 3 (information is from the website: <http://www.skif.biz/energy/arhiv1-6.shtml>), and also in Fig. 4 (we have written about this invention in New Energy Technologies, Issue #5 (8), 2002, article by V.I. Boryak, Email: spin@i.com.ua).

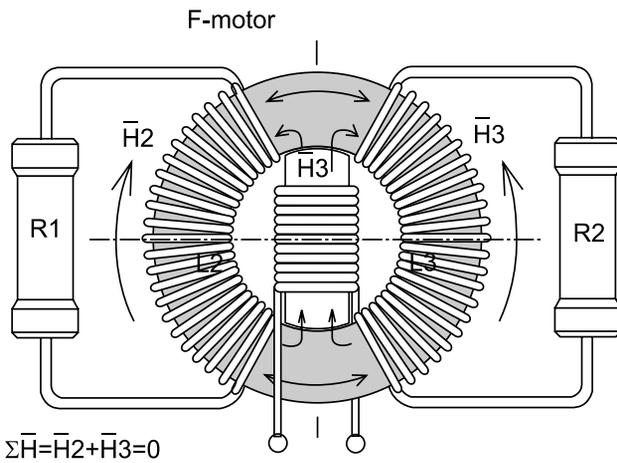


Fig. 3

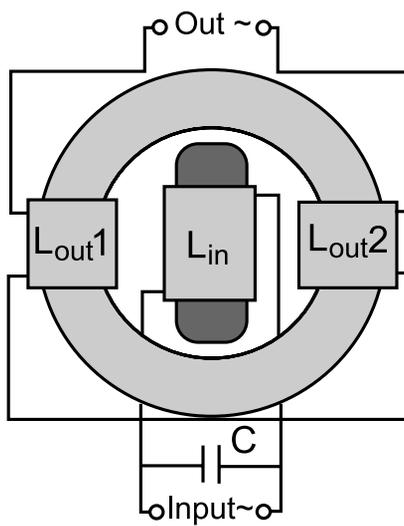


Fig. 4

In August 1999, according to Stephen Hartman (Hartman Multimedia Service, Email: hart@harti.com, info@ccard.net), a German research team designed a toroidal generator. As stated by the researchers, it obtained more than 1.200 W by load while efficiency exceeded 100%!

This subject has become very popular among different researchers. Fig. 5 illustrates a design with a magnet rotating in the center (designer - Olaf Berens, Email: olaf.berens@prognost.com).

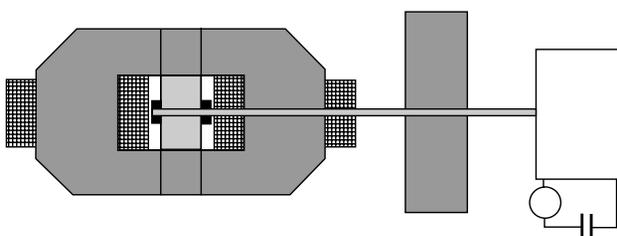


Fig. 5

One more example from the USA: in February, 2003 Donald Hofmann (USA) filed an application for patenting "Generators and transformers with toroidally wound stator winding». Below we publish the description of the patent.

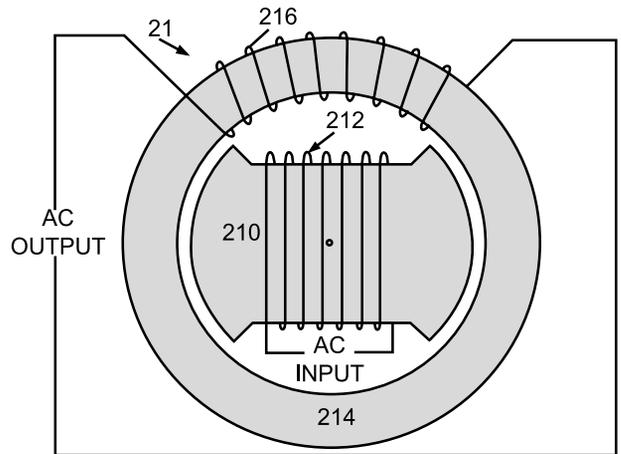
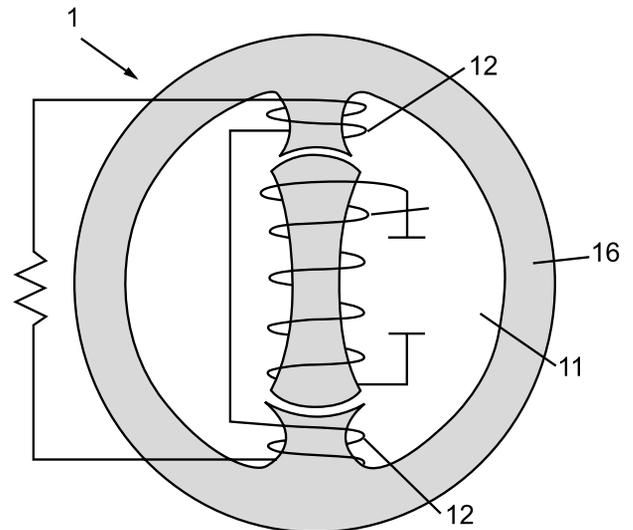


Fig. 6

Inventors: Steven L. Sullivan, USA; David L. Goulet, USA; Donald Hofmann, USA.

Electrical generators are provided with toroidally wound stator windings electrically connected in series; a high permeability stator core, preferably an amorphous magnetic alloy material, glassy metal or HYPERCO™ 50 laminations; and a rotor. The toroidally wound stator coils and the stator core trap essentially all of the flux fields generated by the stator coils within the stator core. Since there is essentially no magnetic field leaving the stator, there is essentially no flux field interaction with the field generated by the rotor. The reduction of flux field interaction also reduces counter torque.

According to another embodiment of the invention, open positions of a rotor may be filled with magnetic material, preferably iron. Filling open portions of the rotor may assist in reducing undesirable flux leakage from the rotor. By trapping substantially all of the flux within the rotor, interaction between rotor and stator flux is reduced. In this manner, counter torque is reduced thereby increasing the overall efficiency of the device.

A prototype of this embodiment was constructed using a standard 10 kWtt gas-powered generator. The stator was removed from the generator and its housing. The stator windings were removed from the stator and rewound by hand using a No. 10 size copper wire with 180 winds wrapped in a toroidal fashion around approximately 180 degrees of the stator.

The stator was then reinstalled in the modified housing and re-attached to the gas-powered generator. A standard 12 volt car battery was attached to the input of the rotor. A 12.92 volt input with 0.8 Amps was measured as the input to the rotor. The output was measured as 6.5 volts with a 40 Amp output. A series of input and output measurements were taken for various inputs.

*Editor: Thus input power is 10 Wt, and output power is 260 Wt.*

So, the old well-known ideas have found new ways of embodiment, though their essence remains unchanged. Let us note that Faraday Labs Ltd has been working on creating a prototype of  $\square$ -machine with a toroid of 200 mm in diameter.

***Please, read more about this in the next issue!***



*Editorial: We publish the specification of several interesting patents, which were taken out by Russian inventors for recent years.*

### **Russian patents on alternative energetics**

- . №93001754, 1996.06.27, Converter of gravitational forces into energy, V.V. Mironov and others
- . №92008720, 1995.02.10, Slavic method to produce energy by conversion of gravitational forces, V.V. Mironov
- . №93006696, 1995.04.30, Supporting converter of gravitational forces into energy, V.V. Mironov
- . №2001121071, 2003.04.10, Method to create energy in liquid, heat-generator and heat-and-power device, A.Yu. Baurov and others
- . №2132109, 1999.06.20, Generator of mechanical energy, A.Yu. Baurov and others
- . №2001125794, 2003.05.10, Generator of static electricity, S.I. Danilov
- . №2001120796, 2003.04.10, Electric power device, D.M. Belyi
- . №98116077, 2000.05.10, Heat engine (monotherm, "perpetual mobile of second-type"), V.I. Likhachov and others
- . №93048971, 1996.04.20, Float engine, I.P. Tchinarev
- . №94023174, 1996.03.27, Gravitational-hydrostatic engine, I.P. Tchinarev
- . №98112650, 2000.03.20, Water engine, V.A. Gylchuk
- . №2001115953, 2003.03.20, Potential engine by Prokopenko, V.F. Prokopenko
- . №2001115954, 2003.03.20, Potential amplifier by Prokopenko, V.F. Prokopenko
- . №2001124364, 2003.04.20, Drum of gravitation (gravity), I.A. Strelnikov
- . №95107181, 1997.02.20, Method to convert energy of physical vacuum into energy of physical space, O.K. Plev and others
- . №92008695, 1995.04.20, Method to get overunity efficiency, Yu.V. Karasev and others
- . №93006851, 1995.04.30, Principle, method and device for circulation of mass by force of gravitation and inertia, G.S. Kirichenko
- . №93039885, 1996.05.20, Hydro-gravitational electric power station, L.S. Konkov
- . №93036371, 1995.11.27, Method to convert energy created in result of interaction of earth's gravity force and air bearing capacity into electric energy, V.I. Kovalenko
- . №93025690, 1996.07.27, Method and device to convert heat energy into mechanical one, A.I. Lendyaev
- . №2001122885, 2003.04.20, Rotary method to convert magnetic energy into mechanical one, L.N. Mezentsev
- . №2001106783, 2003.02.10, Gravitational source of energy, A.D. Yurik and others
- . №2001115968, 2003.03.20, Method to convert energy, V.S. Gorelyuh