

the large upper mercury trough, then along the fault of the disk (which now serves as a Barlow disk), then down through the small mercury trough, and reaches the negative electrode. The torque on the current in the Barlow disk caused by the action of the permanent magnets will be clockwise, while the torque on the yoke caused by the action of the cylindrical current "covering" the electromagnet will be clockwise.

Let us then see how the machine works as a generator, rotating it by an external torque (I used a boring machine as shown in fig. 39). If the torque is anti-clockwise, the Faraday disk will drive the positive charges to the positive electrode, while the König-Marinov machine will drive the positive charges to the negative electrode. Thus current will flow in this direction in which the induced tension is stronger.

In my machine the stronger tension was induced in the Faraday disk and thus when rotated by an external torque the tension induced in the circuit was the difference between the tensions induced in the Faraday disk and in the König-Marinov machine. The idea of the machine was to run it as a perpetuum mobile if the driving torque produced by the König-Marinov machine would be more than the sum of the braking magnetic torque produced by the Faraday disk generator and the friction torque.

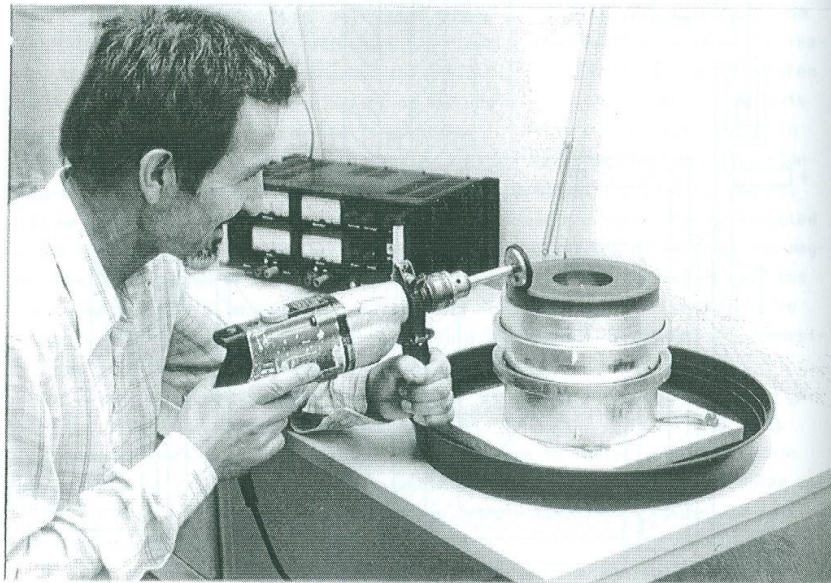


Fig. 39. Photograph of the machine ADAM.

The circuit was closed because of the produced new energy, see by the energy losses in the circuit, according to the energy conservation law, in the second case the coast-down time must be shorter.

With my solid Faraday disk of copper, the coast-down times in the second case were always shorter and thus it was not possible to say whether energy was produced from nothing.

However, I exchanged the copper Faraday disk by a disk filled with mercury. With such a liquid Faraday disk I measured coast-down times at a closed circuit longer than the coast-down times at open circuit. This was a clear indication that energy was produced from nothing (see the data in Ref. 6, p. 324). The differences, however, were too small, and in 1985 I took the decision that it will be extremely difficult (perhaps impossible, because of the big heat losses) to "close the energetic circle" and to make ADAM or another similar machine running as a perpetuum mobile. Thus since 1985 I have no more experimented with cemented Faraday disks but I follow actively the experimental activity of other researchers (Bruce de Palma, whom I visited in 1985 and then invited twice at conferences in Europe, the Dillingen group, Tewari, etc.).

According to my concepts, whether the Faraday disk is cemented or uncemented, nothing changes in the appearing electromagnetic forces. Thus, according to me, the observed violation of the energy conservation law is due to the "mechanism" of generation of current in the rotating disk and to the transmission of the ponderomotive forces acting on the generated current to the "ions' lattice" of the bulk metal. And my experiments showed that if the current is generated not in solid but in liquid metal, the braking mechanical effect is less.

The detailed report on my machine ADAM (which is now sold in England) is published in Ref. 6, p. 324, but between the hundreds of constructors of cemented Faraday disks (or N-MACHINES, according to de Palma's terminology) there is no single one who has done his Faraday disk of mercury except me.

53. THE NONPOLAR MACHINE MAMIN COLIU

The Faraday disk generator is a machine with generator and motor effects but there are suspicions (confirmed by me only for the case of a liquid Faraday disk) that when used as generator the produced electric power is more than the appearing braking mechanic (i.e., "ponderal") power.

My nonpolar MAMIN COLIU MACHINE (Marinov's Motional-transformer INductor COupled with a LIghtly rotating Unit) is a generator without motor effect, so that when the machine generates electric power the braking mechanic power is zero.

I constructed six variations of MAMIN COLIU (their diagrams and photographs are given in Ref. 43, p. 84), but I was unable to "close the energetic circle" and to run it as a perpetuum mobile (the reasons are given beneath).

The explanation why a violation of the energy conservation law appears in the MAMIN COLIU machine certainly is to be searched in the non-linear character of magnetization of iron (see beneath).

The scheme of the MAMIN COLIU machine with toroidal yoke (the first four variations were with toroidal yokes) is shown in fig. 40 and with cylindrical yoke (the last two variations were with cylindrical yokes) in fig. 41 which was the drawing serving for the construction of the fifth model (MAMIN COLIU V). The photograph of MAMIN COLIU V is given in fig. 42 and MAMIN COLIU V dismantled is shown in fig. 43.

I shall give the principle of action referring to fig. 40 which is the most simple.

In the gap of a torus of soft iron with permeability μ there are two similar disks consisting of an equal number of sectors of axially magnetized magnets. In the space between the sectorial magnets there are sectors of non-magnetic material (in my first

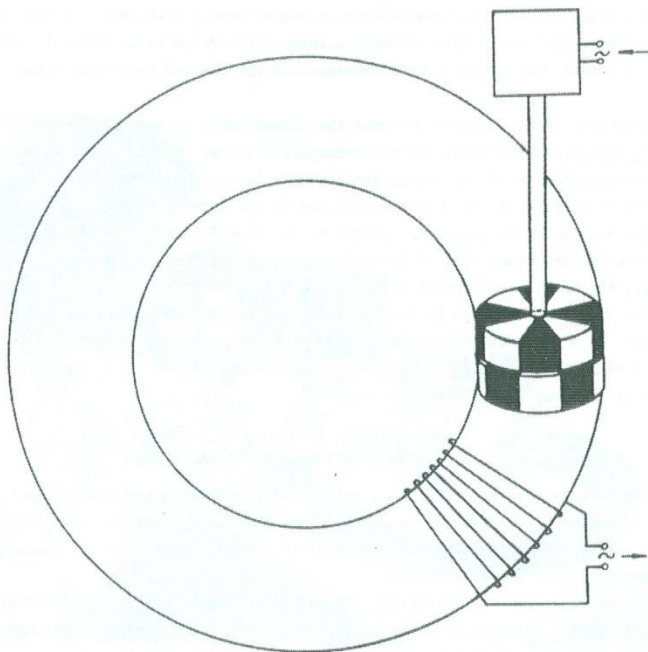


Fig. 40. Principal diagram of the nonpolar machine MAMIN COLIU.

variations I used bronze). The one disk is solid to the torus and the other can be rotated by an electromotor. When the sectorial magnets of the rotating disk overlap the bronze sectors, there is a certain magnetic flux Φ in the torus and when the sectorial magnets overlap the solid sectorial magnets, there is another flux Φ' in the torus. Because of the changing magnetic flux, a tension is induced in the coil and if short-circuiting it, current flows. However, if sending current to the coil, because of the complete symmetry (nonpolar machine), there is no motion of the rotor.

To make some simple calculations, let us suppose that the half of the rotor and of the solid disk is a permanent magnet and the other half bronze and that the torus has a very large radius. To make the analysis still more pure, let us consider the two half circular magnets as electromagnets generating magnetic tension U_m every one.

According to formula (20.11), when the rotating magnets overlap the stationary bronze sectors, the magnetic flux generated by any of them will be $\Phi_1 = U_m/R_m$, where R_m is the reluctance of the torus and is given by formula (20.13), so that the common flux will be $\Phi = 2\Phi_1 = 2U_m/R_m$. When the rotating magnets overlap the stationary magnets, their common magnetic tension will be $2U_m$ and the generated magnetic flux will be $\Phi' = 2U_m/R_m = \Phi$, if R_m will remain the same. However in the second case the magnetic intensity in one half of the torus will be higher and in the other much lower (in the ideal case equal to zero). As μ depends in a very complicated way on the magnetic intensity, the reluctance R_m (see formula (20.13)) does not remain constant and $\Phi' \neq \Phi$. This difference in the magnetic fluxes leads to the induction of electric tension in the coil. I even can not say whether Φ or Φ' is larger, I measured only induced tension and induced current and I noted that this induced current has no braking action (i.e., zero Lenz effect - see Sect. 54.2).

The electric tension generated in VENETIN COLIU VI reached at high velocities of the rotor 50 V. Because of the complete symmetry of the system (see fig. 41), the current induced in the coil could not produce a torque on the magnets. Thus the electric power generated by the coil was produced from nothing.

As I used magnets whose hysteresis loop was not an ideal rectangle, there was a feeble torque acting on them when big current was sent in the coil because the material of the magnets with a differential permeability (see fig. 3) different from unity introduced certain assymetry. But if the magnets should be ideal, say, electromagnets, no torque can appear.

In figs. 41 and 42 one sees how have I neutralized the attractive and repulsive forces between the magnets in the stationary and rotating disks (the four rotating magnets and the two stationary magnets are clearly seen in fig. 43). For this aim I added another system of stationary and rotating disks with permanent magnets (above in fig. 41) identical to the initial system of stationary and rotating disks generating the variable magnetic flux (below in fig. 41). The upper system serves only to

balance the forces between the permanent magnets in the lower system, as when the upper magnets attract one another the lower magnets repel each other (and vice versa). So the axle rotates very easily and a small 6-volt motor (see it in fig. 42 on the top) smoothly rotates the axle.

In the machine MAMIN COLIU VI both systems of stationary and rotating magnets are "in the iron" and thus both systems generate variable magnetic flux (fig. 44). Here

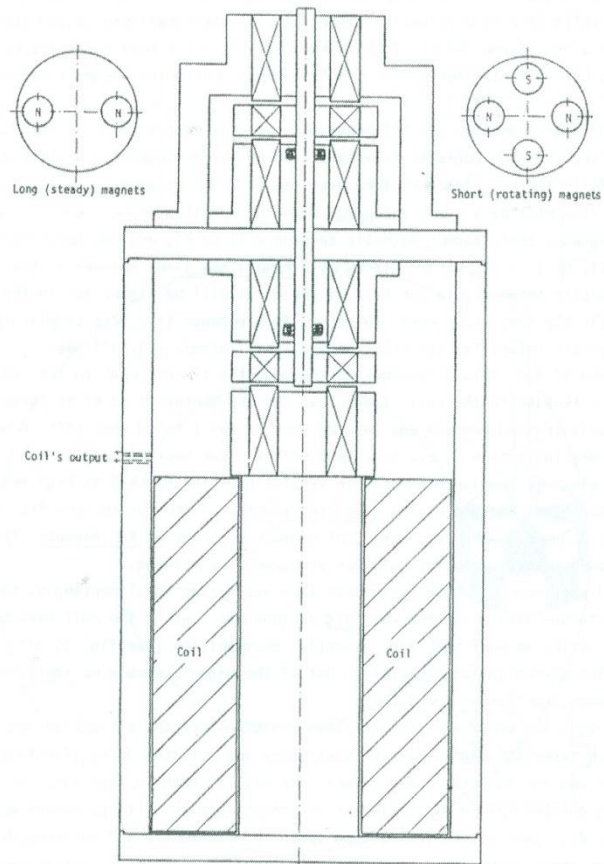


Fig. 41. Diagram of the machine MAMIN COLIU V.

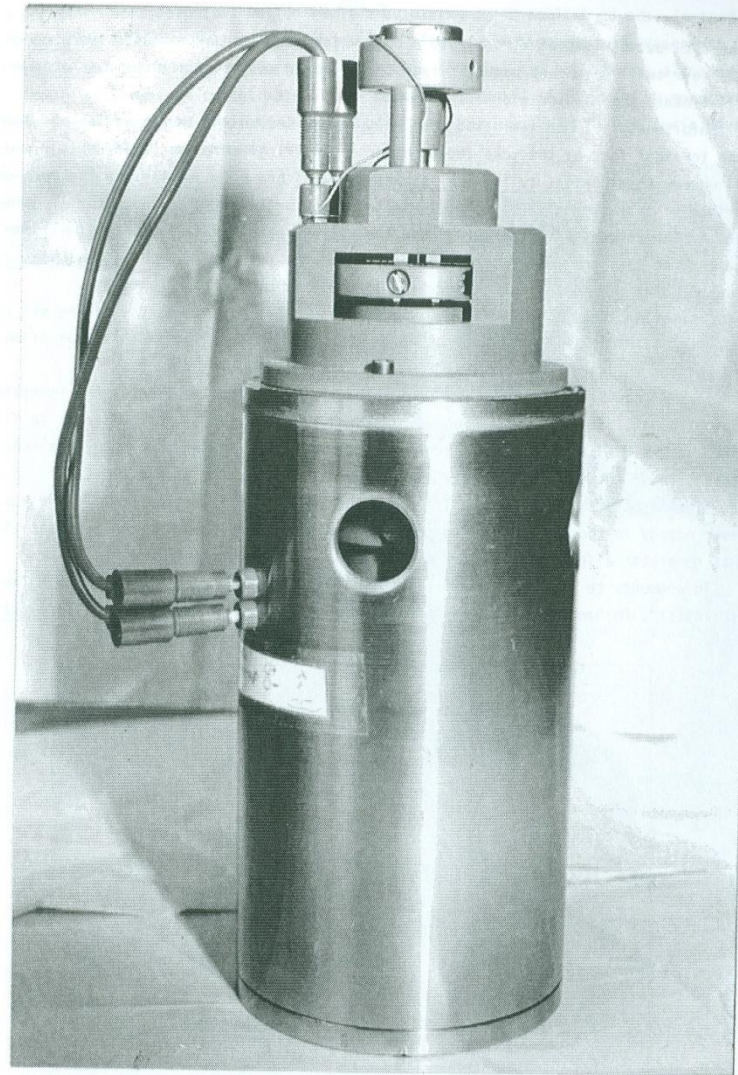


Fig. 42. Photograph of the machine MAMIN COLIU V.

the a.c. output is sent directly to a coil which attracts and repulses synchronously the four small permanent magnets fixed to the rotor and at sufficient output power will rotate the machine eternally.

Unfortunately I had laminated iron only in the second and fourth variations where the toroidal form of the yoke led to other asymmetrical effects. MAMIN COLIU V and VI were with a perfect cylindrical symmetry, but I had no money to make the yoke deprived of eddy currents (by using laminated iron, or ferrite, or the material corovac of the company VACUUMSCHMELZE) and the current produced was very low (milliamperes), so that the power was not enough to run the driving motor. This was the only reason which did not allow me to run MAMIN COLIU as a perpetuum mobile.

Exhausting thoroughly my financial resources with the construction of the six variations of MAMIN COLIU, I interrupted in 1988 the construction of this type of machines for the time when enough money will be available.

Thus if the iron in MAMIN COLIU would be deprived of eddy currents, the generated output power, after rectification, can be sent to the driving motor as shown in fig. 42, and the machine can be run as a perpetuum mobile. I repeat once more, the reason that I could not do this was only one: the lack of money.

I published the description of MAMIN COLIU in two paid advertisements^(44,45), however nobody in the world tried to construct this simple machine and to see that it has generator effect but no motor effect.

In comments to the second advertisement, S. A. Hayward wrote⁽⁴⁶⁾ that I am a "mad scientist". Perhaps Mr. Hayward was right, as only a mad man can publish the exact

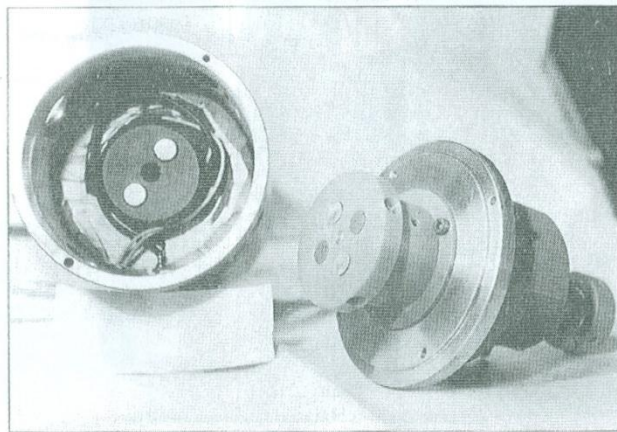


Fig. 43. The machine MAMIN COLIU V dismounted.

description of a perpetual motion machine by paying 3.942 English pounds, instead to use this money for its construction. Only after publishing the advertisements, I read the following words of Gorgias (483-380): "Nothing can be known at all; and if it could be known, it cannot possibly be communicated; and if it could be communicated, it will never be understood or believed" and concluded that two millenia have changed nothing in human mind.



Fig. 44. Photograph of the machine MAMIN COLIU VI.