

Patent Experts Now are Between a Rock and a Hard Place

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"If a wire is being moved in scalar magnetic field S then current, which is induced inside it, will not decelerate the conductor movement but help its movement. Therefore, having "Siberian Kolya" magnet, by means of scalar magnetic field it is possible to design perpetual motion machines".

From the preface by Stefan Marinov to the book by G. Nikolaev [1].

There can appear a question: who Stefan Marinov and Kolya are? How is it possible to design a perpetual motion machine, if, as we know from school, it is principally impossible?

One and a half of ten years ago Paul Bauman, an unassuming Swiss physicist, invented a strange engine. The engine reminds of an electrostatic machine with Leyden jars. Two acrylic discs with 36 narrow sectors of thin aluminum, which are stuck on the discs, rotate in different directions. Common gramophone records were used as the discs in the first pre-production models. The engine was started up with pushing the discs into different directions. Speed of the discs rotation lied in the interval from 50 to 70 rpm. After starting, the discs were able to rotate without any assistance or time limitation. At the same time direct voltage value in electric circuit is approximately 300-350 V at current strength value of up to 30 Amperes. The examination and practical application of the new engine were realized in the town of Linden nearby Bern, where about 250 people live. The town meets its power demand by means of Bauman's engines. It is not connected up to any external power supply system.

Stefan Marinov, a famous physicist, the head of Institute of Fundamental Physics of Graz city (Austria), was interested in this unusual engine. The scientist visited Linden several times, where he made his investigations. In Graz he worked with Bauman's engine, which had been presented him by the author of the device. The rotation energy value of the engine discs was approximately equal to 100 milliwatt. This value was many thousands times less than the output of the engine. Therefore, the engine should be called "generator". The system of 10 kWt output had plastic discs of about two-meter diameter.

Marinov represented the results of his observations in the series of publications. However, the scientist had no time to finish his fundamental work. On 15 of July of 1997 an unknown murderer threw the professor Stefan Marinov out of a window of a university library, which is located in the centre of Graz. The criminal was not found, and the case was closed. Such a situation had happened more than once before, when there were attempts upon lives of those inventors who dealt with nonorthodox scientific ideas. We can mention, for example, Rudolf Diesel, the creator of Diesel internal-combustion engine, who disappeared without a trace, when he shipped to the USA. J. Marsol, who in 50s of the XX century patented a molecular internal-combustion engine working on water, zinc, and antimony, shared his fate. After the publication of the patent application Marsol perished along with his family and collaborators of his laboratory. In the last case it has been ascertained that the work on the inventor's engine was stopped under the pressure of transnational oil monopolies. They would have lost prosperous business and huge benefits if car engines could run on water instead of oil.

The case with Bauman's engine has appeared to be more successful. Different releases about it have been published in the scientific and technical magazines in different countries. However, nobody can explain the physical principle of engine operation.

Marinov mentioned a certain Kolya in the preface to the book named in the epigraph to this article. There is the question of who is Kolya. Kolya is G.V. Nikolaev, a physicist from Tomsk, Doctor of Physico-Mathematical Science. He is the head of Scientific and Technical Centre of Non-traditional Electrodynamics. Nikolaev is very famous abroad for his works not only among physicists. His foreign colleagues name him Siberian Kolya. In Russia he is little known. On the 3d of April of 2002 at the conference of Commission of Power-Accumulating Systems of Russian Academy of Science Nikolaev gave a very interesting scientific report on Scalar Magnetic Field. In this report the possibility of the existence of perpetual motion machine was theoretically proved.

Let us mention the attitude of some representatives of traditional science to the works by Marinov, Nikolaev, and many other researchers, whose research results are contrary to the traditional knowledge.

In an article which has been recently published in "IS. Industrial Property" [2], its authors T. Lakomkina and R. Polischuk write: "new fallacious works have been recently appearing. They deal with "miraculous" methods of energy generation and other sensations of this kind." Moreover, the huge amount of new proposals in the area of non-traditional power-accumulating systems has been lately making.

It should however be noticed that, at least according to the theory of probability, all these works cannot be

fallacious. Probably, this amount of the proposals and works are caused by the fact that the time of corresponding technical determinations has come. There is nothing casual in life.

It is reasonable that numerous works on designing of non-traditional energy sources has been appearing for the last years. Since natural energy resources soon will be depleted, and the environment is greatly polluted, humanity is anxious for the possibility to obtain energy directly from matter. Matter gives the energy by two ways, i.e. there are two ways of change of some particles into another that is accompanied with energy generation.

The first way is the making of extreme conditions (i.e. highest temperature and pressure, in the presence of which nuclear fusion occurs, and the great amount of energy is generated). However, this way may cause the total environment pollution and even the absolute destruction of the environment.

The second way, which has been already chosen by many inventors, is the making of such conditions at that nature gives its energy without experience of any violence. For example, the sensational experiments in the area of nuclear fusion made by Fleishman - Pons (the USA, 1989) are known. According to these experiments there was observed nuclear fusion at the electrolytic deuteration of the crystal lattice of titanium and palladium. To tell the truth, E.P. Kruglyakov notices [3] that many laboratories all over the world have made attempts to confirm the results of Fleishman - Pons's experiments, but all the attempts were unsuccessful. Nevertheless, it should be noticed that an inventor might obtain such results, which cannot be obtained by examiners.

It is interesting to notice that sometimes authoritative scientific magazines use to publish releases about the methods of "cold nuclear fusion". (One of the latest releases is devoted to Paterson's method of water hydrolysis by fusion with lithium electrolyte and nickel-palladium catalyst. This method was patented in the USA). Nevertheless, none of the works was realized in practice. Obviously, some powerful forces, which can lose their profit, influence and do not allow the works to be realized even at the stage of experimental models.

There is another cause, why the new methods of energy generation are omitted. For a scientist, who has learned since his school days that such technologies are very difficult and expensive, and sometimes need huge temperature and pressure action it is difficult to believe that such a process can proceed in common cooking battery at room temperature and atmosphere pressure. It is known that the cost for a thermonuclear reactor designing has already come to \$100 billion. However, scientists from different countries still have to work at the reactors. As it is forecasted, first industrial thermonuclear reactors can appear only in 2030. It is incomprehensible, why it is impossible to follow parallel paths to reach the aim of huge energy resources acquirement.

Respectable American scientific magazine of "Science" describes a model, which is tested now in the national laboratory of the USA in Ockridge. A glass of deuterated acetone is placed nearby an ultrasound source, neutron generator and neutron counter. Blebs appear in the acetone under the action of ultrasound. Appeared blebs burst at once, and their covers begin to move very quickly to the center of the glass. In other words, a shock wave comes off the wall of the glass and then moves to the centre where it focuses. As measuring has shown, temperature value in the focus reaches 50 million Kelvin. In these conditions the fusion of tritium and helium occurs. However, the reaction proceeds too slowly. Now one of the leading experts of this scientific branch, Academician of Russian Academy of Science R.I. Nigmatulin and other scientists are working at the acceleration of the reaction [4].

There is a declaration in the article [2]: "it is possible to choose principally unscientific branches, in which science has already proved the impossibility of the aim realization. The all types of perpetual motion machines belong to such unscientific branches." The declaration seems to be too categorical. Declaring such things these authors work for those forces (which have been already mentioned), which are not interested in the practical realization of the greatest projects.

The following example shows that it is erroneous to consider these problems as unscientific.

Sometimes ago, according to some well-known Academicians' declarations, there was an opinion that being a diamagnetic, water is indifferent to magnetic field action. The president of Academy of Science of USSR A.P. Alexandrov jestingly said that water magnetization is as impossible as the Immaculate Conception. The experts of Russian Patent Office could not but know about it. Since that they declined the applications for water activation by means of magnetic field. The experts of Inspectional Council urged the declarants to refuse of their "pseudo-scientific" proposals.

Having no doubts in the possibility of water magnetization, I proposed the principally new method of its magnetic processing. It was approved by famous Soviet physicist I.L. Gerlovinov (by the way, Academician L. Landau considered him to be his teacher). My proposal was as following. The known conditions of the magnetic processing of water make the water to be deuterated by electrons, which come from ambient space [5] (as it turns out now, from physical vacuum). This was evident from Landau's diamagnetism of free electrons. This method of the magnetic processing of water systems was not contrary to the existent physical ideas and allowed to interpret the numerous anomalies of magnetized water.

However, such an alternative scientific branch as the electrochemical electrolysis processing of water had being already developed. The main advantage of this method was the stable repetition of results whereas

the effect of magnetic processing depended on the electric charge of atmosphere and other factors. This way water magnetization sank into oblivion, while there has been given lots of patents for electrolyzers. Obviously, life puts everything to its own place, and there is no need to compose the list of anti-scientific themes.

After the publication in "Inventor and Rationalizer" ("Izobretatel i Ratsionalizator") magazine of "Output > 1?" article written by me and S. Sinelnikov I received a lot of benevolent responses from readers. They sent many confirmations of the existence of devices, which used uncontrollable environmental energy. This ensured output to be more than input. However, there were unkind letters, which say that if output is more than 1 then we deal with a perpetual motion machine, which existence is principally impossible. In my opinion, this is not a forcible argument.

For example, a perpetual motion machine, which was designed in Russia in the XVIII century, should be mentioned. This is a fountain built into Kulibin's clock [7], which he presented to the empress Catherine II. I repeatedly observed the clock operation in National Museum (Havana), when I was working in Cuba. (I was not able to learn how the museum had got the clock). The principle of the fountain operation is following. There are two chambers where partial pressure is generated in such a way that the partial pressure in the lower chamber is greater than the pressure of the upper one. The partial pressure generated in the lower chamber makes water run from the lower chamber to the upper chamber. This pressure is generated because of the action of ambient space energy emanation and different evaporating areas in the lower and upper chambers. No special energy is applied here. Nevertheless, the fountain in this clock has been continuously flowing without any repair or maintenance for 300 years. This is eternity, isn't it?

The commission of experts of Russian Patent Office acted wittily and, on my mind, absolutely right, when V.I. Likhachev, one of the authors of the working model of the fountain, submitted an application for the invention. They opposed to him a reference to a device [8], which had a built-in heat source. Since the declared proposal differed from that device only by the absence of this source, the commission refused to grant the patent to Likhachev because of so-called negative novelty, i.e. the removal of any element from already known device couldn't be an invention. Novelty lies only in adding of new elements.

An expert cannot know all the peculiarities of capillary partition, which is a "hydraulic lock", and thus he can have doubts of the workability of the declared proposal. If those experts had not found that reference they could just find the confirmation of the declared effect in technical literature. By the way, there are the working models of such devices in institutions, which work at

porous ceramics. These devices are discussed at scientific and technical conferences; the reports of such conferences are published. Thus, it can be seen that the difficulties of the experts, which were mentioned in the article [2], are exaggerated.

Mostly, the expert doesn't face the problem of practical usage, because an application always has a prototype which reliability is doubtless for the expert. For example, a magnetic engine [9] has a prototype [10] on the application submitted 30 years before.

In the article [2] there is the example of impossibility to obtain energy gain by such a way as the hit of a metal construction against a solid surface. I propose to simplify the problem and instead of the metal construction examine an electron, which is used for bombarding of a mark. As it is known, one interesting fact is revealed at the procedure. When an electron hits the mark it generates energy photon; at the same time it does not disappear but stays at the mark saving as much energy as it had before the hit.

In such a situation experts cannot "base their decisions only on official fundamental science". Fundamental science principally is behind of practice because it can draw generalizations only after the thorough research and analysis of facts. However, when an inventor obtains a new technical result he grants in an application for an invent, even if science does not know the principle of its operation. In such a situation an expert has to make a decision independently. As it is seen, the statement that science must give the list of "pseudo-scientific" themes and works is objectless.

In this connection let me draw the reader's attention to the title of the article [2], viz "Patent Examination of Applications that are not Based on Scientific Knowledge". According to the cause mentioned above, this title does not contain logic. Experts have got used to the notion that a reference is the source of scientific and technical information. There is the problem of reference reliability. It is not by chance that E.P. Kruglyakov [3] operates with the notion of "information, which is represented in a reviewed magazine". However, it is incomprehensible how it is possible to guarantee the high competence, broad outlook and impartiality of reviewers.

Is the information about Bauman's engine based on scientific knowledge? Of course, many reviewed scientific and technical magazines in all over the world could not but write about it. However, these publications are contrary to scientific knowledge expressed in common laws and postulates.

Before passing on to technical determinations, it is useful to touch on the problem of **torsion fields**. The authors of the article [2] write: "these fields are principally impossible as perpetual motion machine is". Nevertheless, there are lots of announcements about torsion field generators (for example, Shpilman's

generator) and other devices which input is very little. Even if 1% of these announcements represent the facts then it can be said that the humanity is on the threshold of a break to real perpetual motion machine. We can consider G.I. Shilov and A.E. Akimov's works [13] of torsion fields to be fallacious. However, it is very difficult to conceal or distort something in our time of information technologies because everything can be controlled, so the results of such works as Shpilman's one can be easily verified.

Having read in the magazine that there are no torsion fields, I came to Shpilman's Internet site,

http://www.pmicro.kz/MISK/UFL/Almanach/N5_95/N_1.htm,

and obtained the information about torsion fields and a proposal to buy a generator, which work is based on torsion field effect. It costs \$330. Russian scientists designed such simple torsion field generators 10 years ago. In this situation the known aphorism may sound like this: "Those people, who do not recognize the own inventors, will have to feed strangers".

From another point of view, we could agree with the authors of the article [2] that perpetual motion machines and torsion field generators were not based on scientific knowledge if they had said that such devices were not based on orthodox or traditional scientific knowledge. It is incorrectly to affirm that there is no science here because according to [3] our country has expended about \$ 0.5 billion on the investigations of torsion fields.

I should say that I was not successful in understanding of 46 mathematic equations, which were cited by R. Polischuk as an example in [2]. I was not able to understand which of them disprove torsion field existence.

My assurance in torsion field existence is based on the following statements:

1. It is a well-known fact that everything that moves can generate fields (acoustic, electromagnetic and other fields like these). Electrons and other elementary particles, and even such complicated bodies as the Earth or the Sun rotate with giant speeds. Every cause has its consequence, so it may be supposed that torsion fields must accompany their rotation. Even if we know nothing about these fields then it does not mean that they do not exist.
2. Recently there was the exhibition of inventions "Archimed-2002" in Sokolniki (Moscow), where the working pre-production model of V.P. Kotelnikov's heat-generator was demonstrated [11]. A pump tangentially delivers water through a one-meter jet close to its chocked butt. An adapter connects the tube of the other butt with radiators. Delivered water is of room temperature value. Rotating in the jet the water heats up to 50-55°C. Rotating in two-meter tube the water continues

to heat approximately up to 65°C. The device does not have other elements, such as bypasses and braking devices, like in famous Potapov's heat-generator (by the way, it is still insoluble puzzle of the XX century). Hence, the probability of heating water by cavitation or tribo- or some other effects is insignificant. Moreover, if water is delivered to the jet by usual longitudinal way, even if the speed of delivery is very high, the effect is not obtained in any ways of outflow. In Kotelnikov's plant, which was demonstrated on the exhibition, the water temperature value was measured before processing in the heat-generator, and then after processing in the jet and in the tube, whereupon energy balance was calculated. Relating the obtained energy value to the engine power value, it was revealed that the output of the device was 1.5. Official science cannot explain where the extra energy is generated. Sometimes as a possible cause it is named a cavitation effect, which can be observed only in liquid mediums. However, it seems to be false as it is evident from a following example. Candidate of Technical Science Yu.A. Tuyukin, who recently was the chief technologist of "Vetroen" factory, designed a fan, which warmed all the production area. The power value of the fan was 5kWt, and it was of 1.5-meter diameter and 0.6-meter width. In spite of its small size the fan warmed the 400-square-meter production area. Air was rotated by the fan, heated and came to tubes, which girdled the whole premise. In the fan air heated approximately up to 60-70° C. In other words, either liquids or gasses generate energy by rotating.

3. Since 1992, when Rospatent granted the first patent for torsion technologies, many successful experiments in this area have been made. Numerous experiments by A.E. Akimov, which have been made in Central Scientific Research Institution of Material Authority (St.-Petersburg) and Institution of Problems of Material Authority of Ukrainian Academy of Science (Kiev), demonstrated that when the metals were exposed by torsion field in the process of fusion their macro- and microstructure were changed. This led to the essential quality changes of the metals. Russian scientists demonstrated effective action of torsion field in the process of silumin fusion to a South-Korean company, which gave certificates for all kinds of new technologies according to very strict metrology.

It is useful to return to the article [2]. Its authors affirm that according to point 1 of the paragraph 4 of Patent Law of the Russian Federation, as perpetual motion machines principally cannot exist so they can not be used in industry, agriculture, health protection and other

areas. Hence, perpetual motion machine cannot correspond to the criterion of industrial usage. The authors has made the following conclusion: "experts must be informed about which areas, from the scientific point of view, are considered to be principally pseudo-scientific and which well-known hypotheses do not belong to the area of scientific knowledge as not confirmed by realistic physical facts". According to this statement an expert may turn down a proposal just having read the title and compared it with those, which are included in the list of pseudo-scientific themes and devices.

To tell the truth, the same situation has already happened. Some time ago such sciences as bioenergetics and cybernetics were faced with the same attitude, which was very harmful for these sciences. It seems to be strange that some experts want to follow authorities' opinion. By the way, in the article there are many references to Academician E.P Kruglyakov [3] as an indisputable authority. It is interesting to notice that the Academician is the head of Commission of pseudo-science of Russian Academy of Science but his opinion cannot be considered to be the Academy of Science's opinion. When the president of the Academy of Science Yu.S. Osipov founded this commission he at the same time founded the Commission of alternative energy sources. I am a representative of this Commission.

The most interesting fact that, in spite of perpetual motion machines are considered to be impossible to design, in the interrelation patent classification these machines are represented by four types, i.e. the devices of F 03 G 7/00 type are mechanic, of B17/041 type are hydraulic, of H 02 K 53/00 type are electro hydraulic, and of H 02 N 11/00 are magnetic and electric. Since the Patent Law of the Russian Federation exists about 100 such inventions have been registered. It is clear, that all of them use some natural forces. Nevertheless, in such devices great driving force is not observed because of that the elements of thermodynamics and other laws objectively act. Since that I began this article from the reference to the principal necessity of developing the new methods of energy obtaining from the environment. This aim is impossible to achieve without serious scientific researches.

The first perpetual motion machines have been hardly able to rotate themselves. They have just tried to outwit the acting laws of mechanics. However, now the scientific world experiences the transitional moment when "weak" perpetual motion machines give way to devices designed on the base of the newest scientific achievements. These new devices will connect the human with more and more cognizable outer world which has unlimited energy contents.

At all times people want to make powerful natural forces work for them. Fairy tales about the magic carpet or seven-league boots originate from this desire. At all the exhibitions of inventions "Archimed", beginning from

the first one which took place in 2000 at All-Russian Exhibition Centre, many perpetual motion machines have been demonstrated. They were thundering, sparkling, rotating and jumping without visible external application of force. It should be said for revising, that in its essence perpetual motion machine is a device, which uses the energy of ambient space for its own work. It is worth to view the space attentively.

According to J. Willer Planck, density value of the energy of physical vacuum, where the human exists, is 10^{95} g/cm³, whereas density value of nuclear matter is 10^{14} g/cm³. The higher values of vacuum fluctuation energy are known. In other words, we live in the immense ocean of energy, which will be used with perpetual motion machines. Thus the devices are worthy of better attitude than it was shown in the article [2].

Nowadays the humanity is on the threshold of a new scientific and technical revolution. In this situation the examination of the inventions, which were discussed in this article, is threatened by two dangers, which are like a rock and a hard place. The first danger is to grant a patent for a device, which will not be demanded by industry. The second one is to throw away a technical proposal, which can give very useful effect, make the human's life better. In the first case nothing will be lost because a declarant pays all expenditures as a duty. In the second case everything will be lost.

I am sure that, contrary to the authors of [2]'s fear, the competent experts, who make the majority in RPTO, will always choose the first case.

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