Two hundred years of deception in theoretical physics

Let's start with the question: Who is cheating whom? The cheaters, and at the same time those who are deceived, are the theoretical physicists themselves. Because in the first place they deceive themselves, and then completely unconsciously deceive the next generations of physicists and societies of different countries that trust in the truth of the science of physics. This scam has been going on for almost two centuries. It began with the discoveries of André Marie Ampére. It can be assumed that it began with the publication in 1826 of Ampére's most important work,"Treatise on the mathematical theory of electrodynamic phenomena based solely on experiments" ("Mémoire sur la théorie mathématique des phénomenes électrodynamiques uniquement déduite de l'expérience"). It was then that the false arguments concerning electromagnetic phenomena began to be propagated.

Today, for example, in physics tutorials you can find mathematical formulas that describe the force of interaction 1) between small sections of two parallel conductors with an electric current, 2) between two square frames with an electric current, when the sides of both squares are parallel and their middle points lie on a straight line perpendicular to the planes of both frames, 3) between two current coils, which are at a certain distance from each other and their axes lie on one straight line. In each of these cases, the impact force depends on the value of the currents flowing either in both parallel sections of conductors, or in both parallel square frames, or in both coils. According to the guides, the direction of the interaction forces depends on the direction of the flowing electric currents. If the directions of the currents are the same, the objects attract each other, and if the directions of the currents are opposite, the objects repel each other.

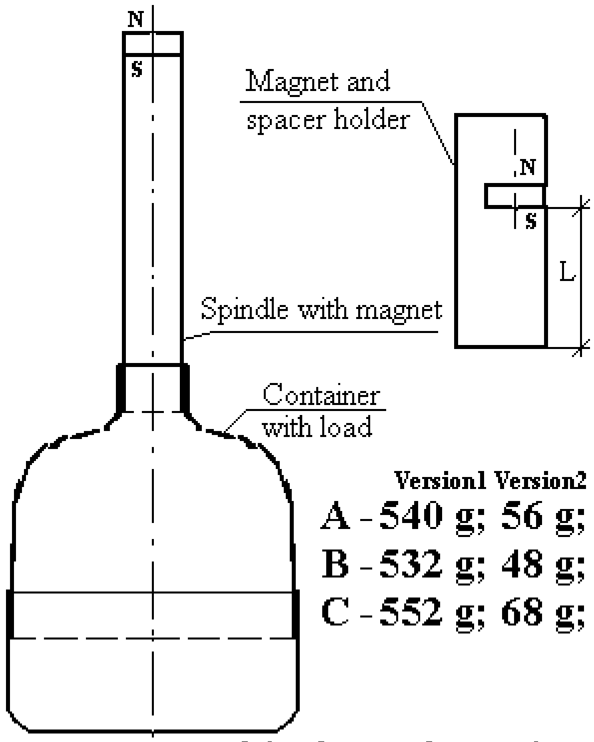
And there is not a single word about the fact that when you change the direction of the current flow (without changing the absolute value of the current) - for example, when the currents first flow in the same direction, and after the change they flow in opposite directions - then changes the absolute value of the acting force.

As it can be assumed, the current situation in theoretical physics arose as a result of an inaccurate description of electromagnetic phenomena, which was made by Ampére. It is not known whether he intentionally ignored the difference between the forces of repulsion and attraction of the same objects when changing the direction of the electric current flowing through them, or whether he did not notice the difference in these interactions due to the inaccuracy of the measurement methods. It is also possible that he made the assumption that the forces of attraction and repulsion were equal between these objects and did not endeavor to verify this assumption experimentally. Whatever the actual experiments Ampére carried out, the results, the results of his arguments were accepted in theoretical physics. And the physicists who accepted the results of Ampére's experiments and arguments, and the physicists from the next generations, did not think for almost two hundred years to check the correctness of the conducted experiments and Ampére's arguments and correct them.

Because, undoubtedly, either in the experiments that Ampére carried out or in the arguments he made on the basis of these experiments, there must be a mistake somewhere. Because when two magnets interact with each other in two experiments - when at the same distance between them and their poles are positioned appropriately, in one experiment the magnets attract each other, and in the other experiment they repel each other - the value of the force of interaction between the magnets is not the same.

In the simple experiments carried out by the author using electronic scales, the difference between the force of repulsion and the attraction force of two magnets, for the same distance between them, was approx. 50% (of attraction force). The experiments were carried out using a simple device, the weight of which was measured by means of an electronic scales.

The device consisted of a container, into which a suitable load could be placed, and a wooden mandrel, on the end of which was a magnet in the form of a tablet with a diameter of 18 mm and a thickness of 5 mm. The device was supplemented with a holder for the second magnet in the form of a tablet - this holder was used simultaneously to control and determine the distance between the poles of two magnets when measuring the weight of the container with a load. The device is shown in the figure below.



Measurement of the force of attraction and repulsion of magnets-tablets using an electronic scale - variability of weight indications - every 2 grams.
A - weight of the container with the load,
B - weight: container with "attraction",
C - weight: container with "repulsion".

The experiments consisted in making three measurements and comparing the results of these measurements with each other. First, the weight of the device itself was measured - the figure shows the weight as result A (the experiment was performed in two versions). Then the weight of the instrument was measured when it was reduced due to the attraction between the magnets (results B), and then the weight of the instrument was measured when it was increased due to the repulsion between the magnets (results C).

In version 1, the weight of the container with the load, but without any interaction between the magnets, was 540 grams. When the magnets were attracted to each other at distance L, the measured weight of 540 grams decreased to 532 grams, i.e. the value of the attraction force was 8 grams. On the other hand, when the magnets repelled each other at distance L, the weight of 540 grams increased to 552 grams, i.e. the force of repulsion was 12 grams.

In the blog, to facilitate the task of those who would like to repeat these experiments, the author wrote as follows:
“You put "the container with the load" on the scale – the "spindle with magnet is "facing up". You read the weight indication - this is the weight of "the container with the load " when it is not influenced by anything. An additional influence will arise when you take "a magnet holder" in your hand and start "from the top" (along a vertical line) to approach one magnet to another (i.e. magnet in the holder to the one which is glued on the mandrel) in such a way that the magnets are brought as close as possible to the distance L, but without the physical touch of the holder and the mandrel with the magnet.
The magnet is mounted not too tightly in the holder and can be easily removed to reverse the direction of its poles in relation to the part of the holder that "measures" the distance between the magnets during the

experiment.
Thus, both attraction and repulsion are "measured" by the magnitude of changes in weight indication. During of attraction between the magnets, the measured weight is reduced, because part of this weight is supported by a "hand with a magnet". And during the repulsion between the magnets, the measured weight increases, because the hand, through the magnetic field, presses the device "down".
One should only be careful to take readings of the balance indication at the right times - precisely at those moments when the distance between the magnets is L, but there is no contact between the holder and the pin.”

Based on the results of the experiments conducted by the author of the experiment, that is, on the basis that there is a difference between the forces of repulsion and attraction of two magnets, one can guess where in his experiments Ampére made a mistake. One can guess, but without additional experiments, it is impossible to pinpoint this place exactly. Because there are two places where a mistake could be made. In order to select and check one such place, experiments with accurate measurements should be carried out, but instead of two magnets, two coreless electric coils with current should be used in the experiments. If the results of the measurements of the forces of repulsion and attraction between these current coils differ from each other in a similar way as in the case of interaction of two magnets with each other, it will indicate that a similar difference also exists in the case of, for example, mutual interaction with each other of two parallel conductors with current or two square frames with current.

On the other hand, if the forces of repulsion and attraction for the same distance between the coils were the same, this would mean that Ampére was right in his arguments and the mathematical formulas he derived are correct. Then the error would be that it was wrongly assumed that the interaction of two electric coils with the current is similar to the interaction of two magnets with each other. It would also mean that there is some additional physical factor involved in the interaction between the two magnets, which exists and is related to the matter of the magnets, but not in the interaction of the electric coils with the current. Then this physical factor in the case of magnets would be precisely the reason why the repulsion between them is stronger than attraction.

Now, to improve the description of electromagnetic phenomena in theoretical physics, it is necessary to perform appropriate physical experiments and work out the results obtained. But before that, physicists-theorists should realize that changes are necessary in the description of electromagnetic phenomena - should realize this, because they should in fact introduce these changes into the scientific circulation. And it is necessary to introduce changes because what theoretical physics in this field currently has at its disposal is insufficient. This is evidenced by the fact that nowadays practice is much ahead of theory. For example, in university laboratories, magnetic motors are presented, the principle of operation of which cannot be described on the basis of currently existing theories.

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Poland, Legnica, 2013.12.20.