

*The following is a collection of sections of text that are quoted from the British Intelligence Objectives Sub-Committee Trip Report No. 2394 BIOS Target Number: C31/4799) entitled: 'THE INVENTION OF HANS COLER, RELATING TO AN ALLEGED NEW SOURCE OF POWER', BIOS FINAL REPORT No. 1043: ITEM No. 31', as made available to the public by the U.K. Department of Scientific and Industrial Research, National Lending Library for Science and Technology. The author of the report is named as R. Hurst, Ministry of Supply.*

On page 1, under the heading: *OBJECT OF VISIT AND SUMMARY:*

Coler is the inventor of two devices by which it is alleged electrical energy may be derived without a chemical or mechanical source of power. Since an official interest was taken in his inventions by the German Admiralty it was felt that investigation was warranted, although normally it would be considered that such a claim could only be fraudulent.

Accordingly Coler was visited and interrogated. He proved to be co-operative and willing to disclose all details of his devices, and consented to build up and put into operation a small model of the so-called 'Magnetstromapparat' using material supplied to him by us, and working only in our presence. With this device, consisting only of permanent magnets, copper coils, and condensers in a static arrangement he showed that he could obtain a tension of 450 millivolts for a period of some hours: and in a repetition of the experiment the next day 60 millivolts was recorded for a short period. The apparatus has been brought back and is now being further investigated.

Coler also discussed another device called the 'Stromerzeuger', from which he claimed that, with an input of a few watts from a dry battery an output of 6 kilowatts could be obtained indefinitely. No example of this apparatus exists, but Coler expressed his willingness to construct it, given the materials, the time required being about three weeks.

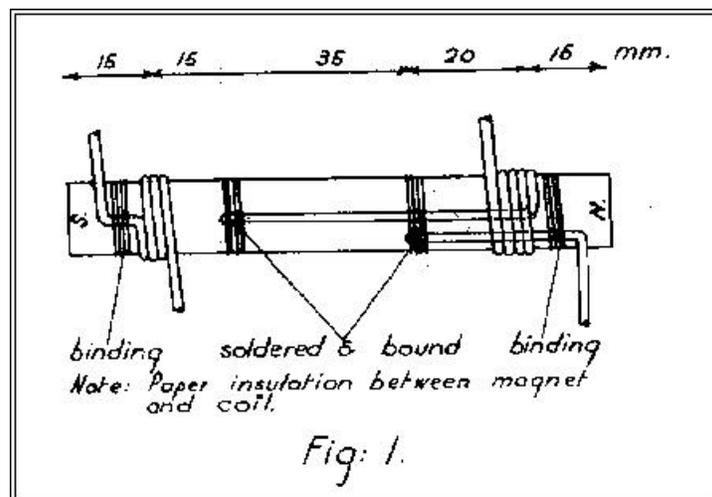
Opportunity was taken to interrogate Dr. F. Modersohn who had been associated with Coler for ten years and had provided financial backing. He corroborated Coler's story in every detail.

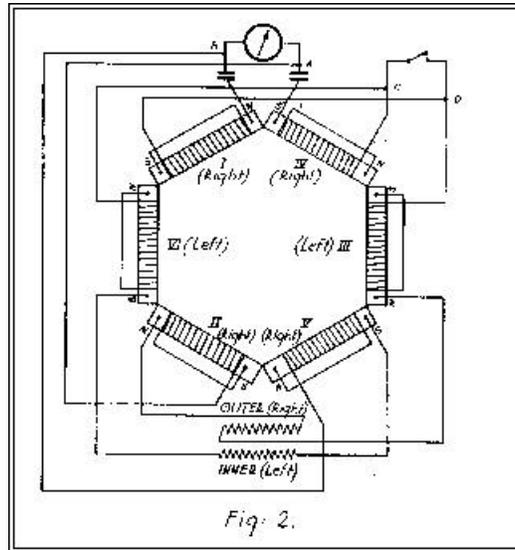
Neither Coler nor Modersohn were able to give any theory to account for the working of these devices, using acceptable scientific notions.

#### 1. The 'Magnetstromapparat'

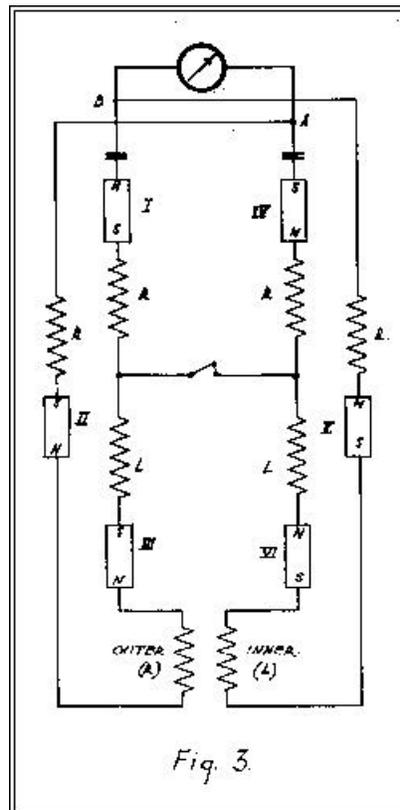
This device consists of six permanent magnets wound in a special way so that the circuit includes the magnet itself as well as the winding. (See Fig. 1).

These six magnet-coils are arranged in a hexagon and connected as shown in the diagram (Figs. 2 and 3), in a circuit which includes two small condensers, a switch and a pair of solenoidal coils, one sliding inside the other. To bring the device into operation the switch is left open, the magnets are moved slightly apart, and the sliding coil set into various positions, with a wait of several minutes between adjustments. The magnets are then separated still further, and the coils moved again. This process is repeated until, at a critical separation of the magnets, an indication appears on the voltmeter. The switch is now closed and the procedure continued more slowly. The tension then builds up gradually to a maximum, and should then remain indefinitely. The greatest tension obtained was stated to be 12 volts.





The 'Magnetostromapparat' was developed by Coler and von Unruh (now dead) early in 1933, and they were later assisted by Franz Haid of Siemens-Schukert, who built himself a model which worked in December 1933. This was seen by Dr. Kurt Mie of Berlin Technische Hochschule and Herr Fehr (Haber's assistant at K.W.I.), who reported that the device apparently worked and that they could detect no fraud. One model is said to have worked for 3 months locked in a room in the Norwegian Legation in Berlin in 1933. No further work appears to have been done on this system since that date.



## 2. The 'Stromerzeuger'

This device consists of an arrangement of magnets, flat coils and copper plates, with a primary circuit energized by a small dry battery. The output from the secondary was used to light a bank of lamps and was claimed to be many times the original input and to continue indefinitely. Details of the circuit and a theory as to its mode of operation were given (summarized in

Appendix I). (Note by H. Aspden: This Appendix is not included in these Web pages. I cannot accept Coler's theory, which suggests that electrical charges are also tiny magnetic poles, of north or south polarity, which can move with current through the magnet and somehow gain energy from the magnet. Quite clearly, Coler did not understand why his device worked.)

In 1925 Coler showed a small (10-watt) version to Prof. Kloss (Berlin), who asked the Government to give it a thorough investigation, but this was refused, as was also a patent, on the grounds that it was a "perpetual motion machine". This version was also seen by Profs. Schumann (Munich), Bragstad (Trondheim) and Knuden (Copenhagen). Reports by Kloss and Schumann are translated in Appendices II and III.

In 1933 Coler and von Unruh made a slightly larger model with an output of 70 watts. This was demonstrated to Dr. F. Modersohn, who obtained from Schumann and Kloss confirmation of their tests in 1926. Modersohn then consented to back the invention and formed a company (Coler G.m.b.h.) to continue the development. At the same time a Norwegian group had been giving financial support to Coler, and these two groups clashed. Modersohn's connection with Rheinmetall Borsig, and hence with the official Hermann Goering, combined to give him an advantage in this. Coler then in 1937 built for the Company a larger version with an output of six kilowatts.

In 1943 Modersohn brought the device to the attention of the Research Department of the O.K.M. The investigation was placed under the direction of Oberbaurat Seysen, who set Dr. H. Frohlich to work with Coler from April 1, 1943 to September 25, 1943. Frohlich was convinced of the reality of the phenomena and set about investigating the fundamentals of the device. He apparently concentrated on a study of the energy changes which occur on the opening and closing of inductive circuits. At the end of the period he was transferred to B.M.W. to work on aerodynamic problems and is now working in Moscow.

In 1944 a contract was arranged by O.K.M. with Continental Metall A.G. for further development, but this was never carried out owing to the state of the country. In 1945 the apparatus was destroyed by a bomb, in Kolberg, whither Coler had evacuated. Since that time Coler had been employed sometimes as a labourer. Modersohn had severed his connection with Rheinmetall Borsig, of which he had been a Director, and was working for the Russian authorities as a consultant in chemical engineering.

*Following the above historical background commentary, the next three sections presented the REPORT as being, respectively, an interrogation of Coler, an interrogation of Modersohn and the actual construction and testing of the device by Coler in the presence of the visiting U.K. Government scientists:*

#### 1. Interrogation of Coler

Coler was questioned first about the history of his inventions, when the details above were given.

He was then questioned about the theory of the devices, but he was unable to give any coherent suggestions as to the mechanism. He stated that his researches (apparently conducted with crude apparatus) into the nature of magnetism had led him to conclude that ferromagnetism was an oscillating phenomenon, of frequency about 180 kHz. This oscillation took place in the magnetic circuit of the apparatus and induced, in the electrical circuit, oscillations the frequency of which, of course, depended on the values of the components used. These two phenomena interacted and gradually built up tension (*meaning voltage*). As the mechanism was not understood the proper arrangement could not be worked out, but had been arrived at by experiment, and the apparatus had to be brought into adjustment by similar trial and error methods. Coler stated that the strength of the magnets did not decrease during use of the apparatus; and suggested that he was tapping a new sort of energy hitherto unknown, - "Raumenergie" (Space-energy). Coler gave a resume of the work done by Dr. Frohlich for O.K.M., and produced a copy of Frohlich's report (translation reproduced as Appendix IV) and a report of his own (part of which is given in Appendix V).

Coler was next asked if he would consent to build models of these devices if material was made available. He agreed that he could do this and stated that it would take one week to construct a 'Magnetstromapparat' and a month to construct 'Stromerzeuger'. Accordingly we supplied the magnets, condensers and copper wire needed for the former, and Coler proceeded to build an apparatus as discussed in Section 3. A list of the material required to build the 'Stromerzeuger' was drawn up by Coler.

#### 2. Interrogation of Dr. F. Modersohn

Modersohn was questioned about the history of these devices, with which he had been concerned financially, and corroborated the details given by Coler. He stated that he had at first disbelieved Coler's claims, but had taken great precautions to eliminate fraud. He had seen the 70 watt 'Stromerzeuger' working on a number of occasions and had taken it

while working from one room to another. All parts were visible and nothing was hidden. As he was himself not an expert he had tried to get experts to examine it thoroughly, but reputable scientists either refused to have anything to do with it at all, or else were more concerned to find a fraud than to see how it worked. The exception was Dr. Frohlich, who was convinced of the reality of the effect and who also believed that the secret was to be found in the energy changes in the special inductive circuit used. He had made experiments to test his ideas, but Modersohn denied knowledge of his results. Modersohn was extremely methodical and showed his files on the subject: these contained copies of all letters and reports concerning the device, since 1933.

### 3. Construction and Testing of the 'Magnetstromapparat'

In our presence and with material supplied by us (some brought from England and the rest bought locally) Coler built an apparatus as shown in Figs. 1, 2 and 3. It is to be noted that some magnets are wound in a clockwise direction looking at the N pole (called left) and others in an anti-clockwise direction (called right). The magnets were selected to be as nearly equal in strength as possible, and the resistance of the magnet-coil was uniform (about 0.33 ohm). The physical arrangement was as shown in Fig. 2 in a breadboard style. Measurements of voltage and current across A-B were made by Mavometer. A mechanical arrangement of sliders and cranks for separating the magnets evenly all round was made up.

On July 1, 1946 experiments were being continued after three days of fruitless adjusting, and when the magnets were at a separation of about 7 mm the first small deflection was noted (about 9 a.m.). The switch was closed and, by slow adjustment of the sliding coil and by increasing the separation of the magnets to just over 8 mm, by 11 a.m., the tension was raised to 250 millivolts and by 12.30 p.m. it was 450 millivolts. This was maintained for another 3 hours, when a soldered tag became disconnected, and the meter slowly dropped back to zero. Soldering up the broken connection did not restore the tension. The magnets were closed up and left overnight and the same procedure for finding the adjustment was repeated on July 2, 1946. After about three hours a deflection of 60 millivolt was obtained; this was maintained for more than 30 minutes, but then decreased to zero when further adjustments were tried.

During all this work the model was completely open, and nothing could be hidden in it. The breadboard and meter could be picked up and moved round the room, tilted, or turned, without effect.

The apparatus would appear to be too crude to act as an a receiver of broadcast energy, or to operate by induction from the mains (the nearest cable being at least 6 feet away), and the result must for the moment be regarded as inexplicable.

