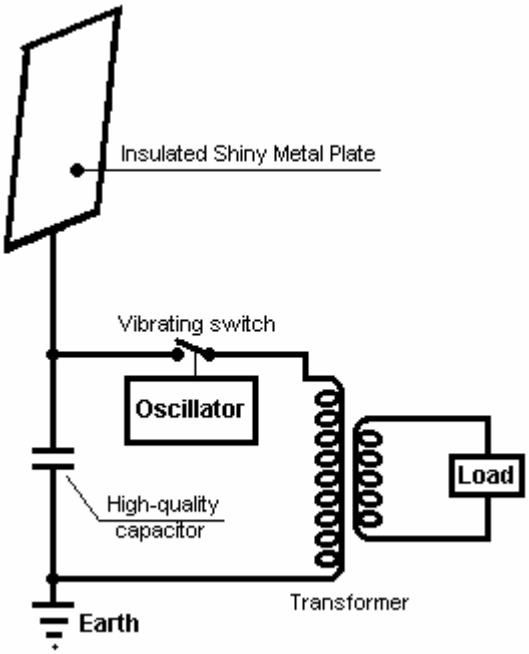
Chapter 7: Aerial Systems

It is generally thought that aerials are not capable of gathering much power. The popular conception is that the only power available is low level radio waves from distant radio transmitters, and while it is certainly true that radio waves can be picked up with an aerial, the real sources of power are not radio transmitters.

For example, we will be looking at information from Hermann Plauston and he considered any aerial system of his which did not produce more than an excess power of 100 kilowatts, as a "small" system. Thomas Henry Moray demonstrated his system to audiences repeatedly, pulling in power levels of up to 50 kilowatts. These power levels are not produced by radio station signals.

Nikola Tesla's System. Nikola Tesla produced an aerial device which is worth mentioning. It was patented on May 21st 1901 as an "Apparatus for the Utilisation of Radiant Energy", US Patent number 685,957.

The device appears simple but Tesla states that the capacitor needs to be "of considerable electrostatic capacity" and he recommends using the best quality mica to construct it as described in his 1897 patent No. 577,671. The circuit draws power via an insulated, shiny metal plate. The insulation could be spray-on plastic. The larger the plate, the greater the energy pick-up. The higher the plate is elevated, the greater the pick-up.



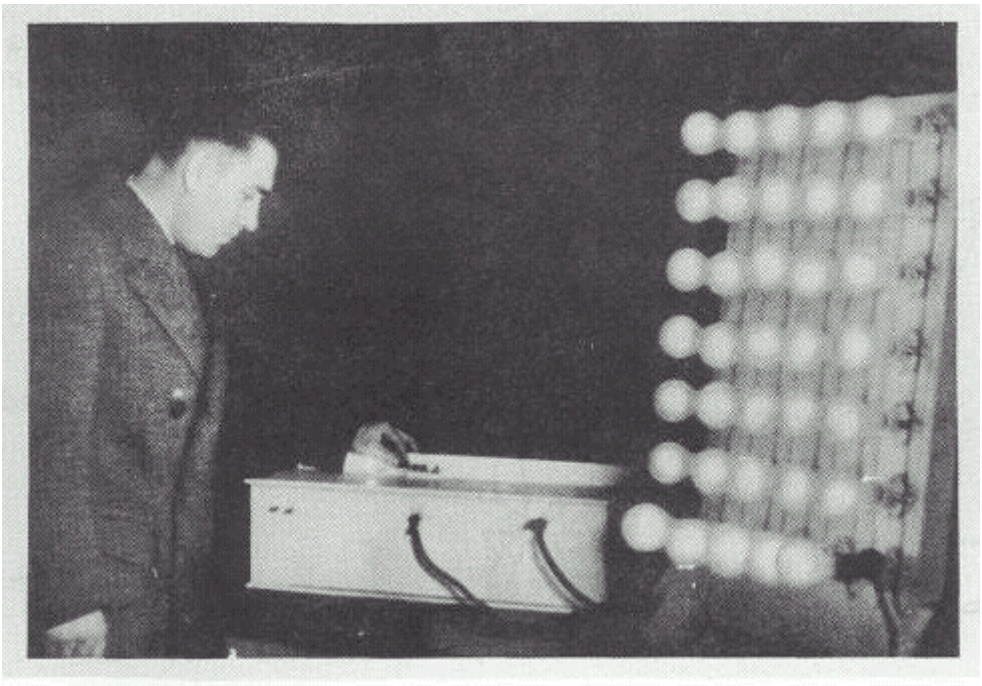
This system of Tesla's picks up energy day and night. The capacitor gets charged up and a vibrating switch repeatedly discharges the capacitor into the step-down transformer. The transformer lowers the voltage and raises the current available and the output is then used to power the electrical load.

It seems probable that this device operates primarily from static electricity, which some people believe is a manifestation of the zero-point energy field. Tesla's equipment might well operate when fed by a motor-driven Wimshurst machine instead of a large aerial plate. Details of home-built Wimshurst equipment are available in the book 'Homemade Lightning' by R.A. Ford, ISBN 0-07-021528-6.

Thomas Henry Moray In this field, Thomas Henry Moray is outstanding. By 1936 he had developed a piece of apparatus which was capable of putting out high power with no human-generated input power at all.

Moray's equipment is said to have contained a germanium diode which he built himself in the days before solid-state devices became readily available. The equipment was examined and tested many times. On dozens of occasions, he demonstrated the equipment driving a bank of twenty 150W bulbs, plus a 600W heater, plus a 575W iron (a total of 4.175 kW). The power picked up by this device needed only small diameter wires and had characteristics different from conventional electricity. One demonstration which was repeated many times, was to show that the output power circuit could be broken and a sheet of ordinary glass placed between the severed ends of the wire, without disrupting the supply. This type of power is called "Cold electricity" because thin wires carrying major power loads, do not overheat. This form of energy is said to flow in waves which surround the wires of a circuit and not actually trough the wires at all. Unlike conventional electricity, it does not use electrons for transmission and that is why it can continue through a sheet of glass which would stop conventional electricity dead in its tracks.

On one occasion, Moray took his equipment away from all urban areas to a place chosen at random by a critic. He then set up the equipment and demonstrated the power output, well away from any man-generated electrical induction. He disconnected the aerial and showed that the power output stopped immediately. He connected the aerial again to generate the output as before. He then disconnected the earth connection which stopped the output again. When the earth wire was connected again, the output power returned. He found that the power output level fell somewhat at night.



He developed various versions of the device, the latest of which did not need the aerial or earth connections, weighed 50 pounds and had an output of 50 kilowatts. This device was tested in both an aeroplane and a submarine, thus showing the device to be fully self-contained and portable. It was also tested in locations which were fully shielded from electromagnetic radiation.

Moray was shot and wounded in an assassination attempt in his laboratory. This caused him to change the glass in his car to bullet-proof glass. He was threatened many times. His demonstration equipment was smashed with a hammer. When threats were made against his family, he stopped rebuilding his equipment and appeared to have turned his attentions to other things, producing a device for 'therapeutic' medical treatment.

In his book "The Energy Machine of T. Henry Moray", Moray B. King provides more information on this system. He states that Moray was refused a patent on the grounds that the examiner couldn't see how the device could output so much power when the valve cathodes were not heated. Moray was granted US Patent 2,460,707 on 1st February 1949 for an Electrotherapeutic Apparatus, in which he included the specification for the three valves used in his power device, apparently because he wanted them to be covered by a patent. As far as can be seen, the valve shown here is an oscillator tube. Moray claimed that this tube had the very high capacitance of 1 Farad when running at its resonant frequency. Moray liked to use powdered quartz as a dielectric in the capacitors which he made, and he had a habit of mixing in radium salts and uranium ores with the quartz. These materials may well be important in producing ionisation in these tubes and that ionisation may well be important in tapping the energy field.

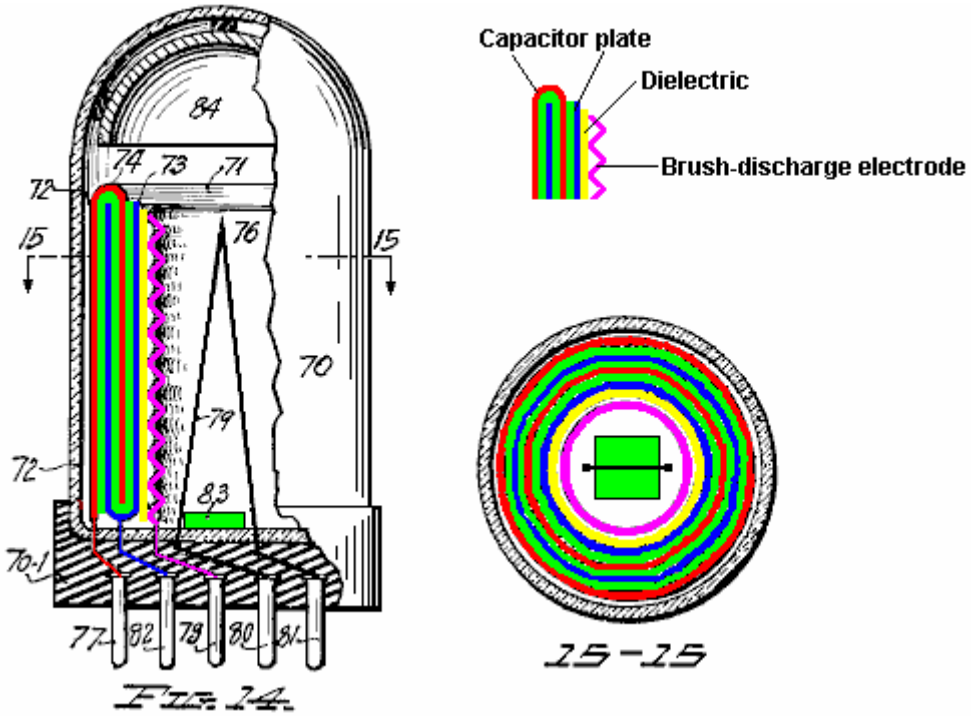


Fig. 14.

The tube shown above has a six-layer capacitor formed from two U-shaped circular metal rings with the space between them filled with a dielectric material. The plates are shown in red and blue, while the dielectric is shown in green. Inside the capacitor, there is a separate ring of dielectric material (possibly made from a different material) and an inside ring of corrugated metal to form an ion brush-discharge electrode. The capacitor and electrode connections are taken to pins in the base of the tube.

Quartz is suggested for the material of the outer covering of the tube and the wire element numbered **79** in the diagram is said to be a heating element intended to be powered by a low-voltage current source. However, as Moray had an earlier patent application refused on the grounds that there was no heating element in his tubes, it is distinctly possible that the heating element shown here is spurious, and drawn solely to avoid rejection by the examiners. In his patent, Moray refers to the capacitor in this tube as a "sparking" capacitor, so he may have been driving it with excessively high voltages which caused repeated breakdown of the capacitor material.

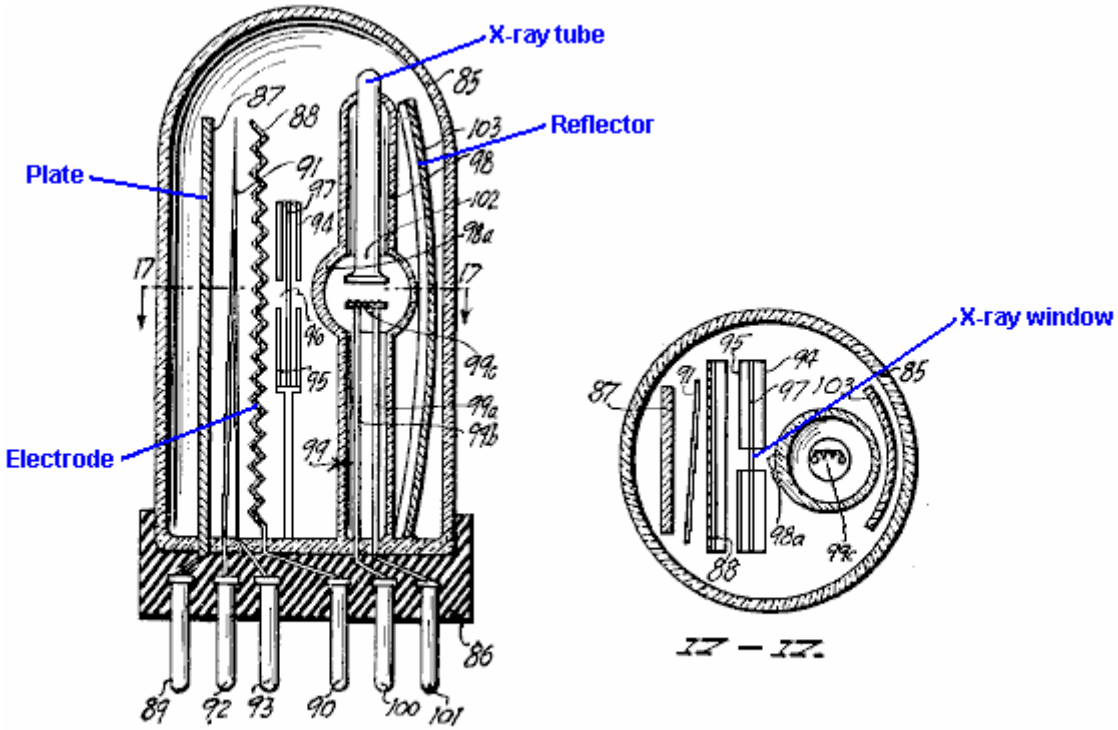


FIG. 16.

The tube of Fig.16 above, uses a different technique where an X-ray tube is used to bombard a corrugated electrode through a screen containing an X-ray window. It is thought that a brief burst of X-rays was used to trigger very short, sharp bursts of ions between the anode and cathode of the tube and these pick up extra energy with every burst.

An alternative version of this tube is shown in Fig.18 below. Here the construction is rather similar but instead of an X-ray window, a lens and reflector are used to cause the ionisation of the switching channel between the anode and cathode. In both tubes, the corrugated electrode supports a corona build-up just prior to the short X-ray switching pulse, and it is thought that the ions contribute to the intensity of the resulting pulses which emerge from the tube. Very short uni-directional pulses are capable of causing conditions under which additional energy can be picked up. From where does this extra energy come? In 1873, James Clerk Maxwell published his "Treatise on Electricity and Magnetism" and in it he pointed out that the vacuum contains a considerable amount of energy (Vol. 2, p. 472 and 473). John Archibald Wheeler of Princeton University, a leading physicist who worked on the US atomic bomb project, has calculated the flux density of the vacuum. Applying Einstein's $E=mC^2$ formula indicates that there is enough energy in every 1 cc of "empty" space, to create all of the matter in the visible universe which can be seen with our most powerful telescopes. That amount of energy is so great as to be beyond imagining. This energy field is referred to as "Universal Energy", "Cosmic Energy" or "Zero Point Energy". At this time, we do not have any instrument which responds directly to this energy and so it is almost impossible to measure.

The existence of this energy field is now widely accepted by mainstream science and it is borne out by the situation found at quantum levels. It is generally thought that this energy is chaotic in form and for useful energy to by drawn from it, it needs to be restructured into a coherent form. It appears that uni-directional electromagnetic pulses of one millisecond or less, can be used to cause the necessary restructuring as they generate an outward coherent wave of radiant energy, from which energy can be extracted for use in most electrical devices, if a suitable receptor system is used. Tom Bearden states that at the quantum level, the seething energy of this field appears continuously as positive and negative charges. As these are evenly distributed, the net charge at any point is always zero. If a "dipole" (two opposite charges near each other) is created anywhere, then it polarises the energy field disrupting the previously even distribution of charges and causing massive streams of energy to radiate outwards from the dipole.

A voltage pulse acts as a dipole, provided the voltage rise is fast enough, and that is what causes a wave of radiant energy fanning out from the location of the voltage pulse. Batteries and magnets create continuous dipoles and so cause the local quantum energy field to send out continuous streams of massive power which can be utilised if (and only if) you know how to do it. The search for mechanisms to capture and use even a tiny fraction of these energy streams is what the "free-energy" field of research is all about. Some people

say that there is no such thing as “free-energy” because you have to pay for the device which captures it. That is like taking a bus trip to a car dealership where they are giving away new cars, and saying that your new car was not a “free” car because you had to pay a bus fare to reach the car dealership.

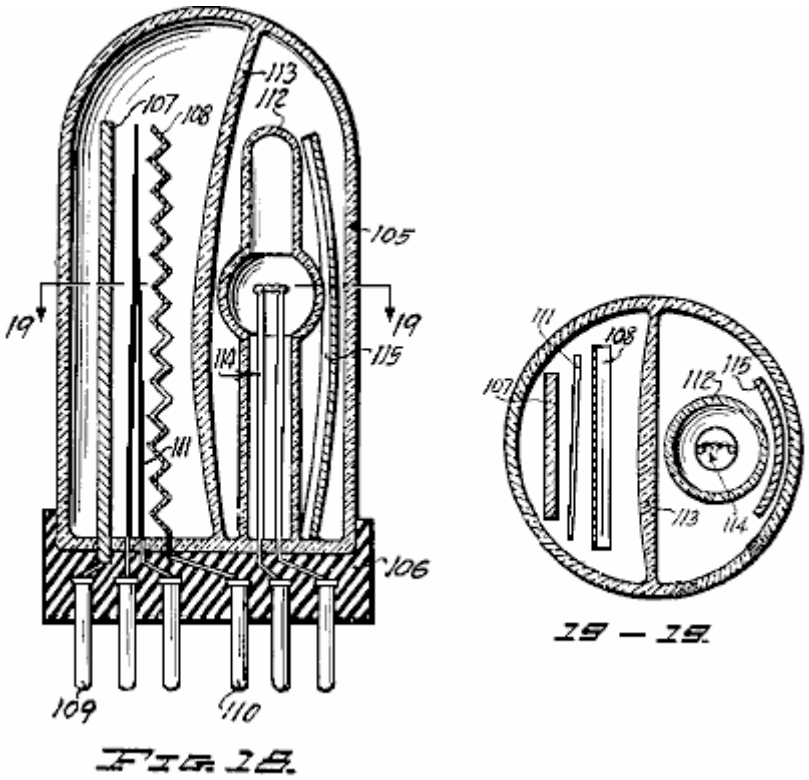
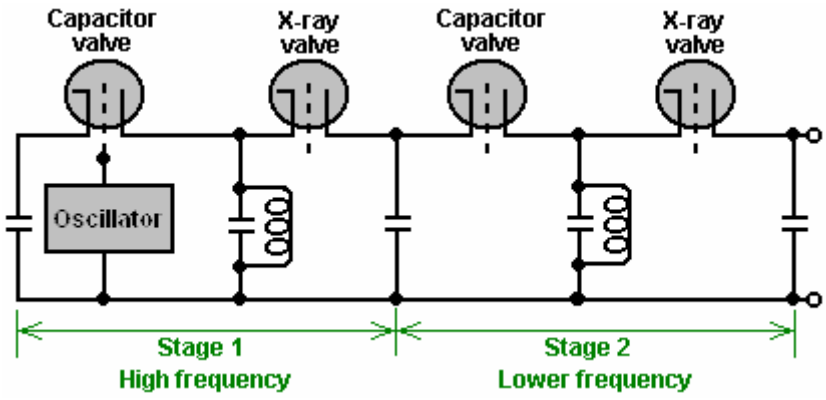


Fig. 2.

Moray King suggests that the circuit used by Thomas Henry Moray was as follows:



There can be little doubt that Thomas Henry Moray built several versions of his apparatus, each of which produced output power well in excess of any input power needed. It seems highly likely that most of them used no input power whatsoever, and if there were any others, they will have been powered by a tiny fraction of the output power. If mild radioactive material was used as described, then the output power could in no way be attributed to that source alone, since the output power was thousands of time greater than any power available from the radioactive materials.

It is perhaps time to explain a little more about, voltage, power and current. We have been raised with the notion that it is necessary to “burn” a fuel to get power, that batteries “run down” when used and that you have to keep turning the shaft of an electrical generator to be able to draw current from it. These things are not actually true. The relatively recent field of Quantum Mechanics shows that if a charge, such as an electron has, is positioned in what is supposed to be “empty” space, it is not alone. The “empty” space is actually seething with energy, to the extent that “virtual” particles are popping into existence for a fraction of a second and then disappearing again. They are called “virtual” because they exist for such a short time.

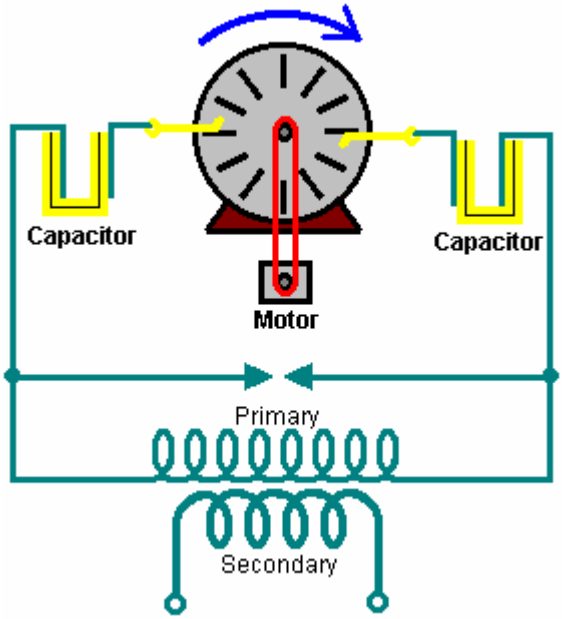
Because of the negative charge of the electron, the particles appearing and disappearing around it will all be positive in charge. The electron has "polarised" the space around itself because it has a charge. The instant that a positive "virtual" particle appears, there are two charges near each other - minus on the electron and plus on the particle. When you have two opposite charges near each other, they form a "dipole". Dipoles form a gateway through which energy from the environment flows continuously. An instant later, the particle disappears, but it's place is immediately taken by another virtual particle. The result is a continuous stream of energy flowing out from the dipole.

Batteries with their positive and negative terminals are electrical dipoles, so too are generators when the input shaft is spun. Permanent magnets with their North and South poles are magnetic dipoles. Both of these have continuous streams of energy flowing through them. So, why then do batteries run down and lose their charge? The reason is that we power circuits using a closed loop. The energy flowing out of one terminal flows into the opposite terminal and instantly destroys the dipole. A new dipole has to be created every split second if the circuit is to deliver power, and it is that self-destructive method of use which causes the battery to discharge or which needs the generator shaft to be rotated continuously.

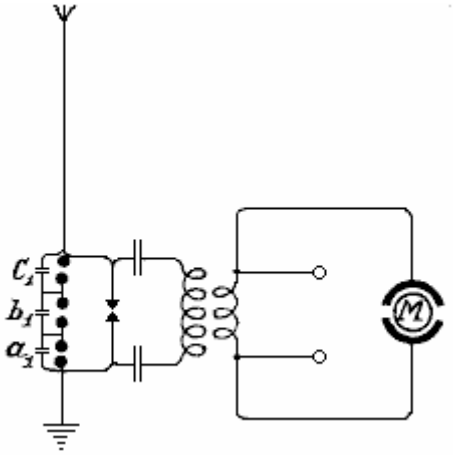
If a different operating technique is used, where the dipole is not continuously destroyed, then devices which can provide a continuous stream of energy drawn from our natural environment can be constructed. This is not magic, just the next step in conventional science and engineering. Thomas Henry Moray managed it, initially with an aerial and earth like a crystal set to provide the dipole, his device was able to draw many kilowatts of power from the environment. No fuel was needed, the energy is already there surrounding us all, all of the time. As far as I am aware, nobody has managed to replicate Moray's device (which was the reason for it being violently suppressed) but knowing that it existed and was repeatedly demonstrated to work perfectly well, is useful in that it shows that it is possible to tap the massive zero-point energy field with a practical, home-constructed device.

Hermann Plauston' Systems. Hermann Plauston was granted US Patent 1,540,998 in June 1925. The patent is similar in style to Tesla's pick-up system and it illustrates the principle with a system which is very much like Paul Baumann's "Testatica" device hidden away in a Swiss religious commune. The patent is very detailed with 37 drawings showing different arrangements, and it is shown in full in the Appendix. In fact, the patent reads more like a tutorial rather than a patent.

A system of this type should most definitely be taken seriously: Hermann considers one of his systems with an output of 100 kilowatts as being a "small" system. He illustrates several different methods of energy capture and several methods of increasing the effectiveness of the captured energy. While an installation to capture a continuous supply of 100+ kilowatts is unrealistic for an individual, there is the distinct possibility of making a scaled-down version which is capable of providing serious levels of free power. Reading his patent through carefully is definitely to be recommended.



Herman starts by illustrating how working electricity can be taken from a Wimshurst machine. The Wimshurst output voltage is very high and the current capacity is very low and most people would dismiss it out of hand as being totally inadequate for any kind of practical work. However, Hermann boosts the power level by feeding the output into a step-down transformer which lowers the output voltage to a convenient level and raises the available current in proportion to the reduction in voltage. This is the same technique patented by Nikola Tesla. The apparatus which Herman illustrates is shown here:

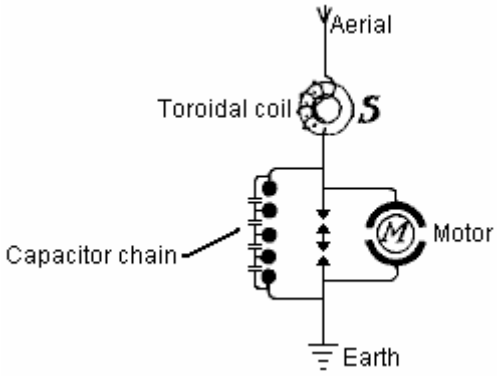


His patent says: “By suitably selecting the ratio between the number of turns in the primary and secondary windings, with regard to a correct application of the coefficients of resonance (capacitance, inductance and resistance) the high voltage of the primary circuit may be suitably converted into a low voltage high current output. It should be remembered that a spark produces a very sharply rising voltage pulse and that unbalances the local quantum energy field, as described earlier, producing very large energy flows as the local environment returns to its balanced steady-state. The spark, which is produced by relatively low power, is used as a trigger for vastly larger energy flows, which feed the step-down transformer, producing serious current at reasonable voltage, capable of doing useful work, without the requirement for any input power from the user.

You will notice how simple this circuit is. Three capacitors “a1”, “b1” and “c1” in a chain, form a single high-voltage capacitor. The blobs shown connected across these capacitors are emergency discharge spark gaps put there to deal with unusual events like the aerial being hit by a lightning strike. This circuit is very much like the Wimshurst machine circuit which Hermann uses as an illustration of the principle of operation of these kinds of circuits. In this circuit, he shows a special motor marked “M” which is driven by the circuit and he also shows output terminals which can have other equipment connected across them.

When the oscillatory discharges in the primary circuit become weaker or cease entirely, the capacitors are charged again by the static electricity until the accumulated charge again breaks down across the spark gap. All this is repeated as long as electricity is produced by the static machine through the application of mechanical energy to it. Herman states that without the spark gap arrangement across the three capacitors connected between the aerial and the earth, “it is impossible to collect and render available large quantities of electrical energy.”

In addition to the use of spark gaps in parallel, a second measure of security is also necessary for taking the current from this circuit. This is the introduction of protective electromagnets or choking coils in the aerial circuit as shown by **S** in the diagram below. A single “electromagnet” having a core of the thinnest possible separate laminations is connected with the aerial. In the case of high voltages in the aerial network or at places where there are frequent thunderstorms, several such toroidal-wound coils may be connected in series.



In the case of large units, several such magnets can be employed in parallel or in series parallel. The windings of these electromagnets may be simply connected in series with the aerials. In this case, the windings should be made up from several thin parallel wires, which together, make up the necessary cross-sectional area of wire. The winding may be made of primary and secondary windings in the form of a transformer. The primary winding will then be connected in series with the aerial network, and the secondary winding more or less short-circuited through a regulating resistor or an induction coil. In the latter case it is possible to regulate, to a certain extent, the effect of these choking coils.

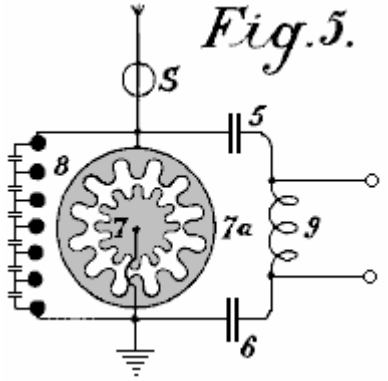
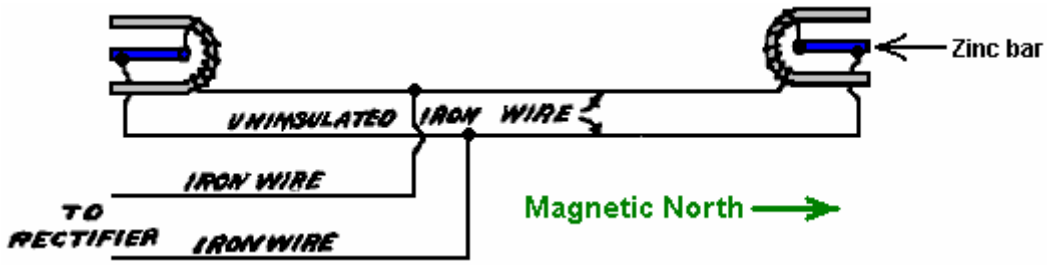


Fig.5 shows an arrangement for producing large currents which can be used directly, without motors, to provide heating and lighting. The main difference here is that the spark gap consists of a star-shaped disc **7** which can rotate on its own axis and is rotated by a motor opposite similarly fitted electrodes **7a**. When separate points of the stars face one another, discharges take place, thus forming an oscillation circuit with capacitors **5** and **6** and inductor **9**. A motor may also be connected directly to the ends of inductor **9**.

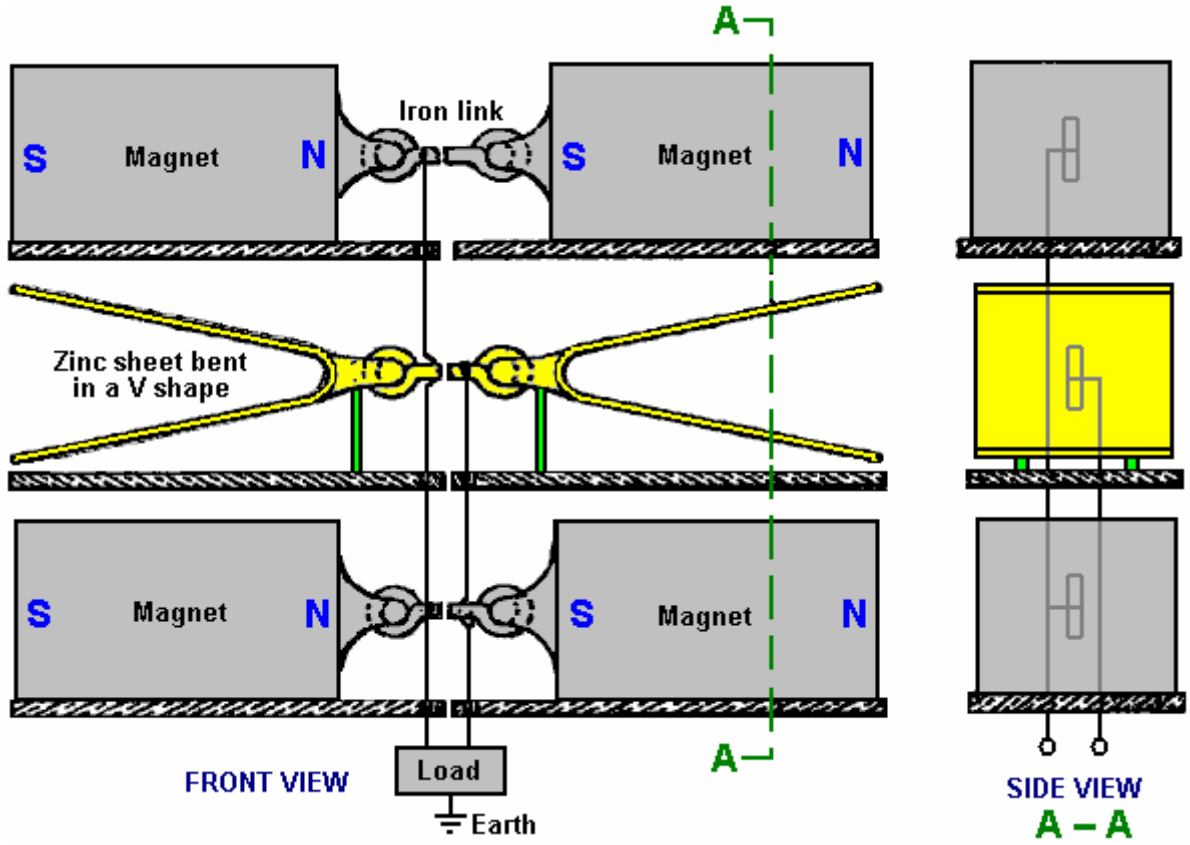
The patent continues by showing many ways to increase the power of the aerial system and many ways of applying the output to practical electrical devices. It contains 37 diagrams, a wealth of practical information, and a copy of it is in the Appendix.

Roy Meyers' Device. Roy Meyers was granted UK Patent 1913,01098 in January 1914. The patent, which is included in the Appendix, shows an extremely simple device which produces an electrical output without any form of visible input whatsoever. This intriguing device was discovered when testing a very simple form, where two horseshoe magnets were interconnected with soft iron wire and two bars of zinc placed between the legs of the magnets. Roy found that he got an output of 8 volts using just two 4-inch magnets with 1-inch square legs and zinc bars of similar size. The physical orientation of the device is very important. The patent says that current is collected if the open ends of the magnets are pointing in a North - South direction and not if they are positioned in the East - West direction. However, replication attempts seem to indicate the reverse of this with energy pick-up occurring when the alignment is East-West. Indications are that this is not an easy device to get operating correctly.

The first arrangement is shown in the following diagram:



Roy developed his system further and found that while it works indoors, it does perform better if located outdoors and raised to a height of fifty or sixty feet. However, that is by no means essential, and the output power and voltage can be increased by increasing the number of collector units. Roy developed these to produce the style shown here:



The zinc acts more effectively if installed as sheets bent into a V shape. The magnets and zinc sheets can be stacked vertically and/or horizontally and the greater the number used, the greater the electrical output. A good earth connection is recommended and presumably, the average cold water pipe of any house provides a more than adequate earth connection which is convenient to use, provided the pipework is made of metal.

Raymond Phillips Snr. Presents an interesting patent US 4,685,047 of 4th August 1987, entitled "Apparatus for Converting Radio Frequency Energy to Direct Current". While this patent speaks of radio-frequency energy, I can see no particular reason why that would be the only energy which could be picked up by this circuitry. The patent information is as follows:

Abstract:

This patent describes an apparatus and methods for converting radio frequency energy into direct current for generating electric power. It includes a dipolar antenna for receiving radio frequency energy and a circuit for converting the radio frequency energy to direct current. The circuit has a positive output line connected to

one pole of the antenna and a negative output line connected to the other pole of the antenna. A positive transmitting diode is in the positive output line and a negative transmitting diode is in the negative output line. First and second bus lines and a pair of tuned circuits of opposite polarity couple the positive output line and negative line to the bus line with one of the bus lines being connected to ground. Each tuned circuit includes a first bridging line connecting the positive output line to the first and second ground lines and a second bridging line connecting the negative output line to the first and second ground lines. Each bridging line has in it, a diode connected with a polarity which is reversed with respect to the input diode. The bridging lines of each tuned circuit are connected to one another by an inductor and have capacitors placed between the diode and the bus lines. A Direct Current device is connected to the positive line of the circuit.

Background of the Invention:

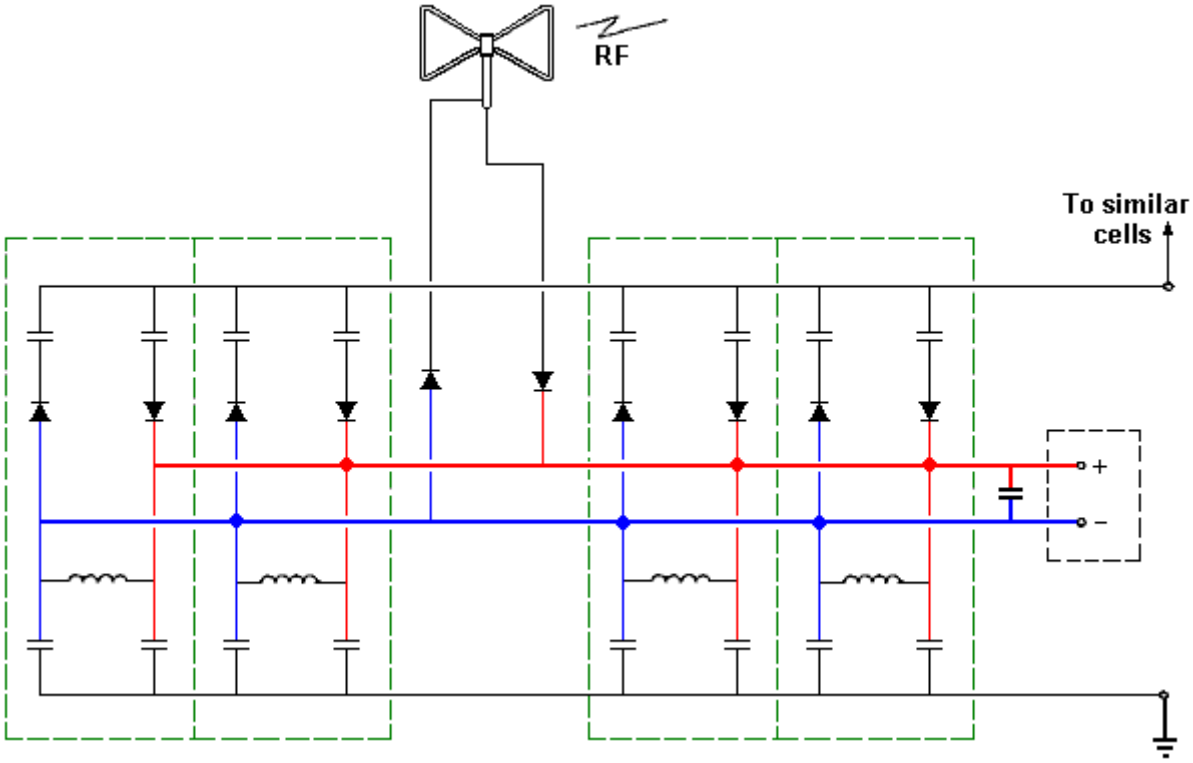
This invention shows an apparatus for converting radio frequency energy to Direct Current of sufficient magnitude to power devices such as battery chargers and electric motors without the use of amplification.

There has long been interest in technology directed to transmitting electrical energy over a distance without using wires. Development of such a technology has enormous potential. This was first recognized by Nikola Tesla who in 1899 constructed a 200 foot Tesla coil rated at 300 kilowatts at 150 kilocycles. Tesla hoped to set up standing waves of electrical energy around the whole surface of the earth, so that receiving antennas set at optimum points could tap the power when needed. Tesla was able to light hundreds of lamps at a distance of about 40 kilometers with his device without using wires. The scheme has generally remained a scientific curiosity but has provided the initial groundwork for current developments wherein attempts are being made to transmit power using microwaves. However, power transmitted by microwaves is envisioned in the form of a beam of very high intensity which is focused from a microwave generator to a receiving antenna. This technology is envisioned as being used for many types of purposes, however, the focused microwave beam is not suitable for many applications because the beam must be directed toward a receiving antenna and cannot be transmitted through most objects, including living objects, without destroying those objects.

This invention relies on converting energy from standing waves which are emitted from radio frequency antennas in the RF range rather than the microwave range. Of particular interest are very low frequencies which are not used in communications and are available for transmitting power. Also of interest are the low frequency waves emitted by the earth due to pulsing of its magnetic field. These low frequency standing "earth" waves can be picked up by receivers tuned to them.

Summary of the Invention:

This invention shows an RF antenna for receiving radio waves. The RF antenna connected to a circuit configured to convert the RF signals to Direct Current. The radio frequency signals received by the antenna are transmitted to two leads, one being rectified to produce positive voltage and the other rectified to produce negative voltage. The positive voltage lead is connected directly to a positive output line and the negative voltage lead is connected directly to a negative output line. The positive output line is connected to a pair of bus lines through a first pair of capacitors, while the negative output line is connected to the pair of bus lines by a second pair of capacitors. Placed between the first bus line and the positive output line is a reverse diode of negative polarity, while placed between the negative output line and first bus line is a reverse diode of positive polarity. The positive and negative output lines are connected to one another through an inductor which is in parallel with the capacitors of the first and second pair connected between the second bus line and the positive and negative output lines.



In one implementation of the invention this circuit is duplicated for each positive and negative output line. In another the circuit is coupled to additional identical circuits in order to increase the direct current output of the arrangement. In another implementation, the antenna used is a dipolar antenna of aluminium wire arranged in a "butterfly" configuration.

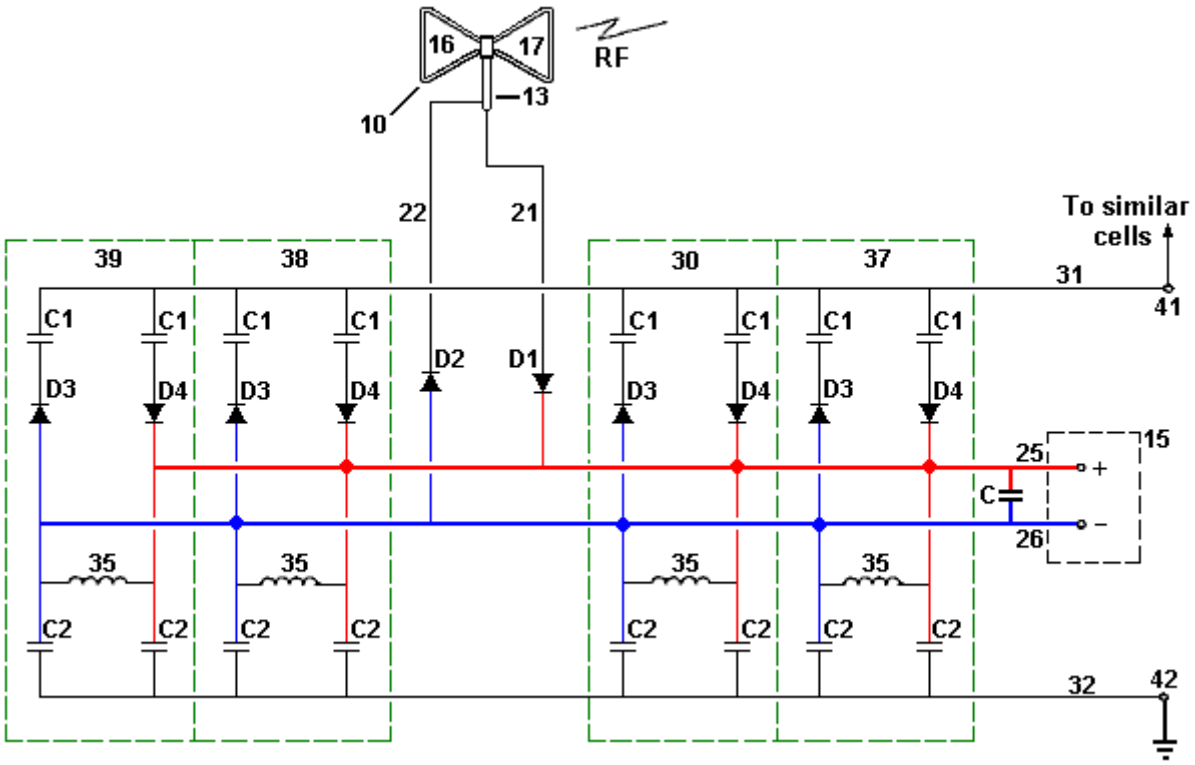
This invention uses these elements to generate direct current of sufficient power to perform tasks such as charging batteries, lighting lamps and powering direct current electric motors without the use of amplifiers.

Brief description of the drawing:

The reference characters used show the same or similar parts in each views, and what is shown is a diagram of a circuit, a driven device and a dipolar antenna which receives radio frequency waves which are then converted to DC current for powering the driven device.

Description of the preferred embodiment:

Referring now to the drawing below, there is shown a dipolar antenna, designated generally by the numeral **10**, which receives radio frequency waves from an RF transmitter.



These waves are passed to the conversion circuit through a coaxial cable **13** and the DC output current of the circuit is used to power an output device **15**, which may be, for example, a battery charger, DC motor, or lighting device. The circuit has no other power inputs and so has no amplifiers for boosting the RF energy.

The source of frequencies which can be converted to Direct Current by the circuit shown may include sources of high frequency (HF), low frequency (LF), very low frequency (VLF) and extremely low frequency (ELF) radio waves as well as seismic vibration of the earth's magnetic fields.

Preferably, the dipolar antenna **10** is formed of two triangular loops of aluminium wire **16** and **17**, one of which is connected to the annular conductor **21** of the coaxial cable **13** and the other of which is connected to the centre conductor **22** of the coaxial cable. The size of the bipolar antenna **10** is dependent on the particular application to which it is put. In one embodiment of the invention, the antenna **10** is approximately **12** inches in width and **18** inches in length. Such an antenna is used to receive five watt energy, such as that generated by a walkie-talkie or citizen-band radio.

The outer conductor of the aerial is connected to positive lead **21** and the centre conductor of the coaxial cable is connected to the negative lead **22** of the circuit. A positive transmitting diode **D1** is placed between the lead **21** and the positive output line **25**. A negative transmitting diode **D2** is placed between the lead **22** and the negative output line **26**.

In order to provide a DC output of sufficient power, a number of inductance-capacitance RF tuned circuits **30**, each forming a positive cell, or a negative cell, are used to connect the positive output line **25** and negative output line **26** to the first and second bus lines **31** and **32**, respectively. Bus line **32** is connected to ground while bus line **31** can be connected to similar circuits. Inductor **35** serves as a radio frequency choke. As is seen of the drawing, the RF tuned circuit cell 30 is repeated a plurality of times. In the specific example shown, the circuit has separate cells **30, 37, 38** and **39**. The cells **30** and **38** are of opposite polarity and balance one another, while the cells **37** and **39** are of opposite polarity and also balance one another. In order for the system to function, a pair of opposite polarised cells must be used. The particular number of cells **30** and the value of the components in it, are determined by the configuration of the dipole antenna **10** and the power and frequency of the RF transmitter.

This radio frequency to direct current conversion circuit may itself be connected to a duplicate circuit via pin **41** so as to provide additional direct current output on lines similar to positive output line **25** and negative output line **26** the output lines may be connected together in order to boost the total output of the system.

An operative embodiment of the invention uses the following elements:

Diodes: D1, D2, D3 and D4 - Germanium Diodes, type **1N34A**,
Inductors: **35-47 millihenry** R. F. Choke
Capacitors: C1 and C2 - **0.47 Pico Farad**s at 200 volts
Coaxial Cable: 13 - 50 ohms
Dipolar Antenna: aluminium wire triangular loops approximately 12 inches by 18 inches.

From the foregoing description, one skilled in the art can easily ascertain the essential characteristics of this invention, and without departing from the spirit and scope of it, can make various changes and modifications of the invention to adapt it to various uses and conditions.

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