Issue date: 19th March 2012

FREE-ENERGY:

NIKOLA TESLA SECRETS FOR EVERYBODY

by **Vladimir Utkin** u.v@bk.ru

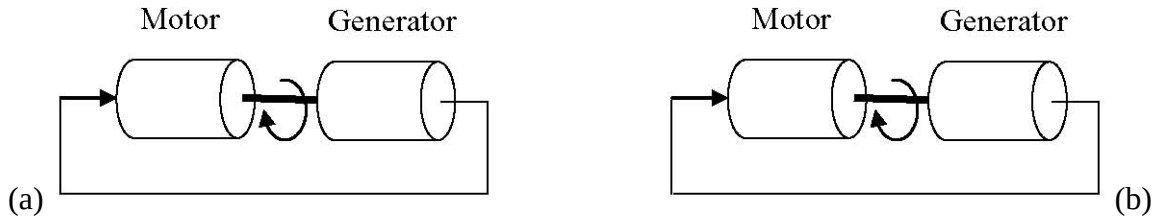
FIRST SECRET

All of Tesla's secrets are based on

ELECTROMAGNETIC FEEDBACK

EXPLANATION: An ordinary energy system comprises a generator and motor (common view), and can be completed with an electric current feedback as shown here in electrical circuit (a)

NO FREE-ENERGY **FREE ENERGY IS POSSIBLE**



Electrical feedback ElectroMagnetic field feedback

In case (a), the system once started, will slow down and stop because of friction, resistance and so on. Nikola Tesla arranged a feedback loop for the electromagnetic field: case (b), and he said:

ELECTROMAGNETIC FIELD FEEDBACK DESTROYS THE INTERACTION SYMMETRY

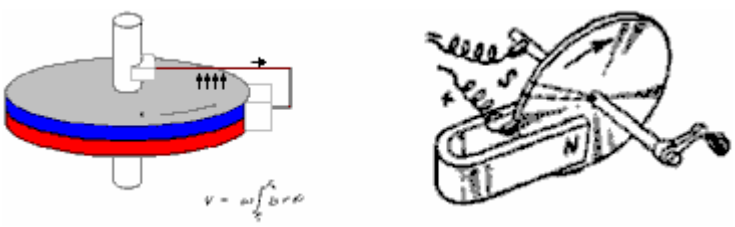
This means that an action no longer has an equal and opposite reaction

In case (b), once started, the system will accelerate in spite of friction, resistance and so on (provided that the phase of the electromagnetic feedback is positive and is sufficiently large). In order for an electromagnetic field to exist in a motor, there must be some energy input, and Tesla said:

ENERGY GENERATION BY IT'S OWN APPLICATION

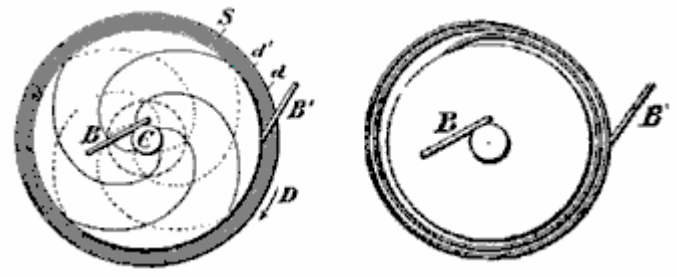
QUESTION: How can you produce positive electromagnetic field feedback?

AN ANSWER: The simplest and well-known example is Michael Faraday's unipolar motor, as modified by Nikola Tesla:



(a) (b)

An ordinary unipolar motor consists of a magnetised disk, and a voltage applied between the axis and a point on the circumference of the disc as shown in (a) above. But an ordinary unipolar motor can also consists of an external magnet and a metal disc with a voltage applied between the axis and a peripheral point on the disc as in (b) above. Tesla decided to modify this version of the unipolar motor. He cut the metal disc into helical sections as shown here:

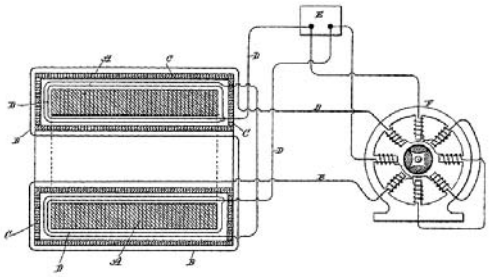


In this case, the consumption of current produces an additional magnetic field along the axis of the disc. When the current-carrying wires are tilted in one direction, their magnetic field augments the main external magnetic field. When the wires are tilted in the other direction, their magnetic field reduces the main external magnetic field. So, the current flow can increase or reduce the external magnetic field of the unipolar motor.

Amplification is not possible without applying power

If it is possible to arrange a magnetic field feedback loop for mechanical devices, then it is probably possible to arrange it for solid-state devices like coils and capacitors.

The others parts of this article are devoted to devices which use coils and capacitors. All of the examples in this article are only intended to help your understanding of the principles involved. Understanding would be made easier if we pay attention to the ferromagnetic shielding of the second coil in the transformer invented by Nikola Tesla:

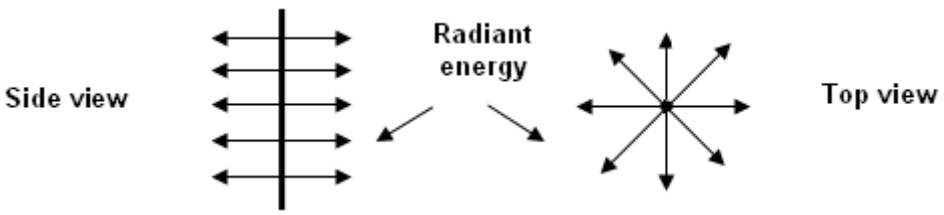


In this case, the ferromagnetic shield separates the first and second coils in the transformer from each other, and that shield can be used as magnetic field feedback loop. This fact will be useful for understanding the final part of this article. It is also helpful to consider the properties of the electrostatic field.

ELECTROSTATICS

(scalar field and the longitudinal electromagnetic waves)

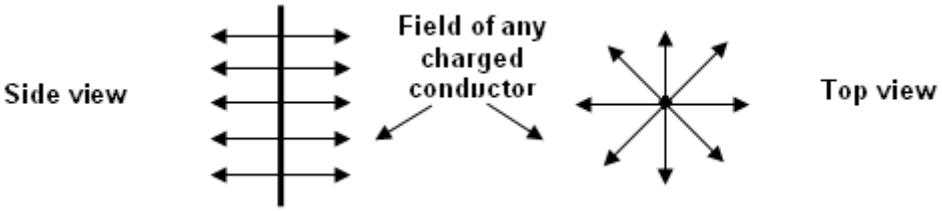
Comment: Mr. Tesla said, “there is radiant energy, perpendicular to the surface of any charged conductor, produced by a scalar electromagnetic field, thus giving rise to longitudinal electromagnetic waves”.



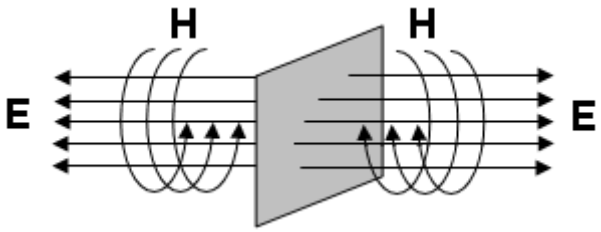
At first glance, this contradicts the age-old experience in studying the electromagnetic field (according to modern concepts, any electromagnetic field has components which are perpendicular to the direction of the propagated

electromagnetic wave), also, Maxwell's equations describe an electromagnetic field as a vector. However, the first impression is erroneous, and no contradiction exists.

Definitions of Physics: Any conductor has both inductance and capacitance, that is, the ability to accumulate charge on it's surface. A charge on the surface of a conductor creates an electric field (electrostatic field). The potential (voltage) at any point of the electric field is a scalar quantity!!! (That is, it is a scalar electric field ...).



If the electric charge of the conductor varies with time, then the electrostatic field will also vary with time, resulting in the appearance of the magnetic field component:



Thus, the electromagnetic wave is formed (with the longitudinal component of E ...).

REMARK: In order to understand how a longitudinal wave interacts with conductive bodies, one needs to read the section of electrostatics entitled "Electrification by Influence". Particularly interesting are Maxwell's equations where they mention the displacement current.

Now we come to the first secret:

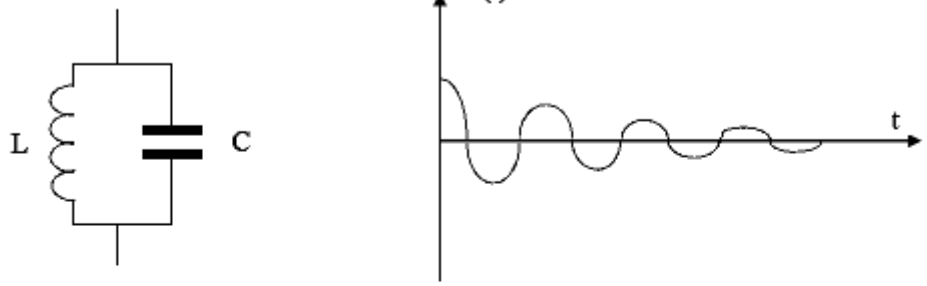
SECRET 1

The power source in Nikola Tesla's free energy device, the amplifying transformer, is a

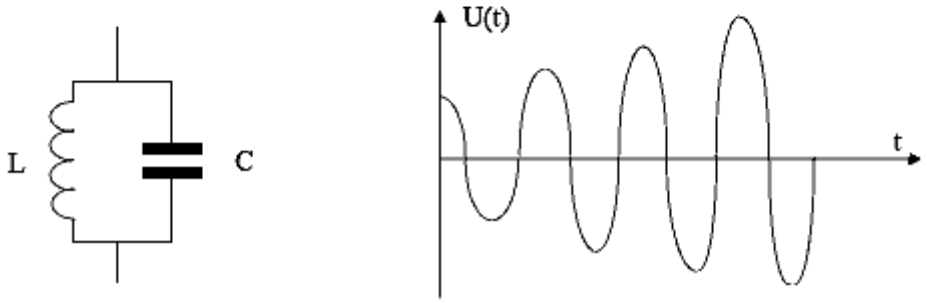
SELF-POWERED L-C CIRCUIT

EXPLANATIONS

An ordinary LC circuit – with decay



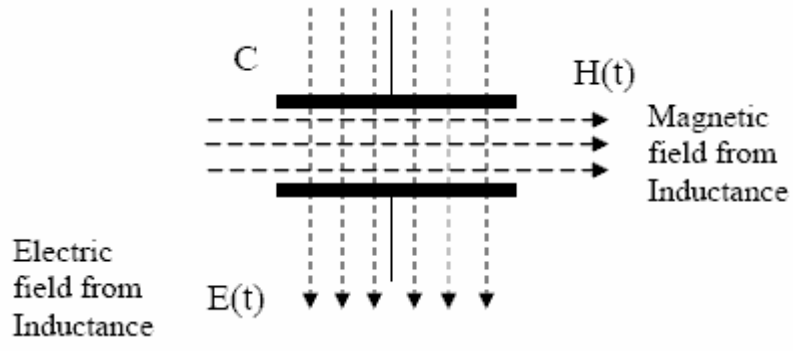
Nikola Tesla LC circuit – with amplification



HOW DO WE GET THIS RESULT?

AN ANSWER

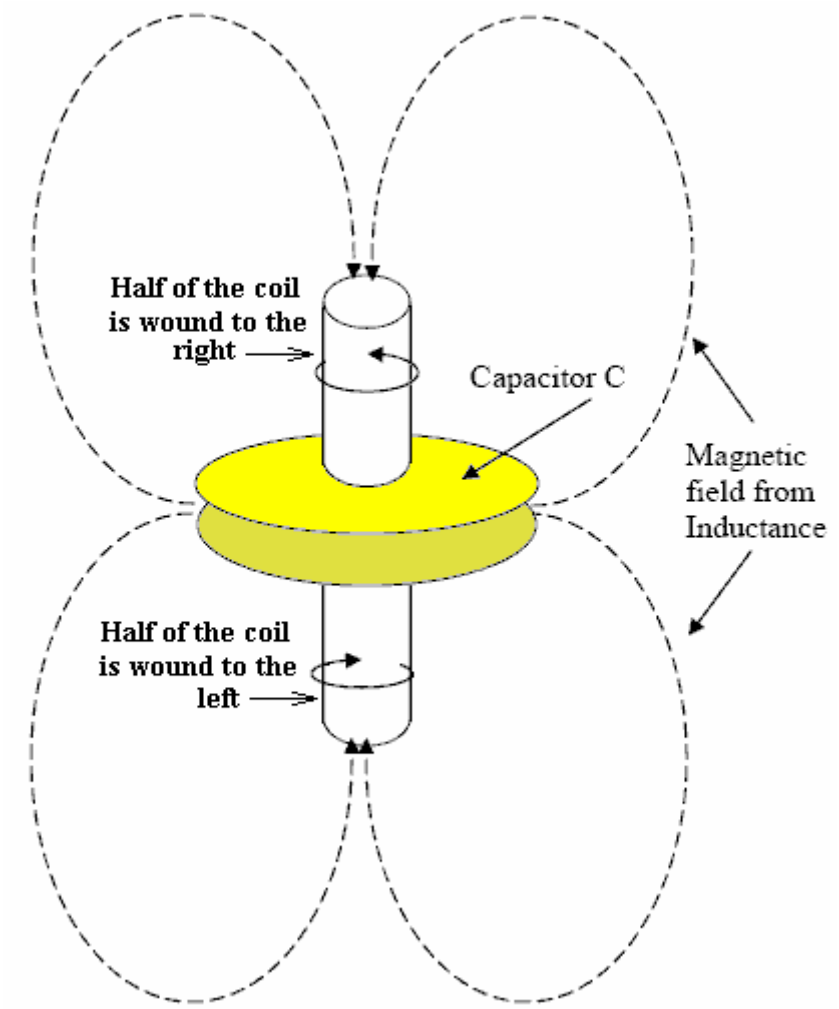
You need to charge the capacitor using the electric component of the electromagnetic field of the inductor (using the displacement current of Maxwell's equations)



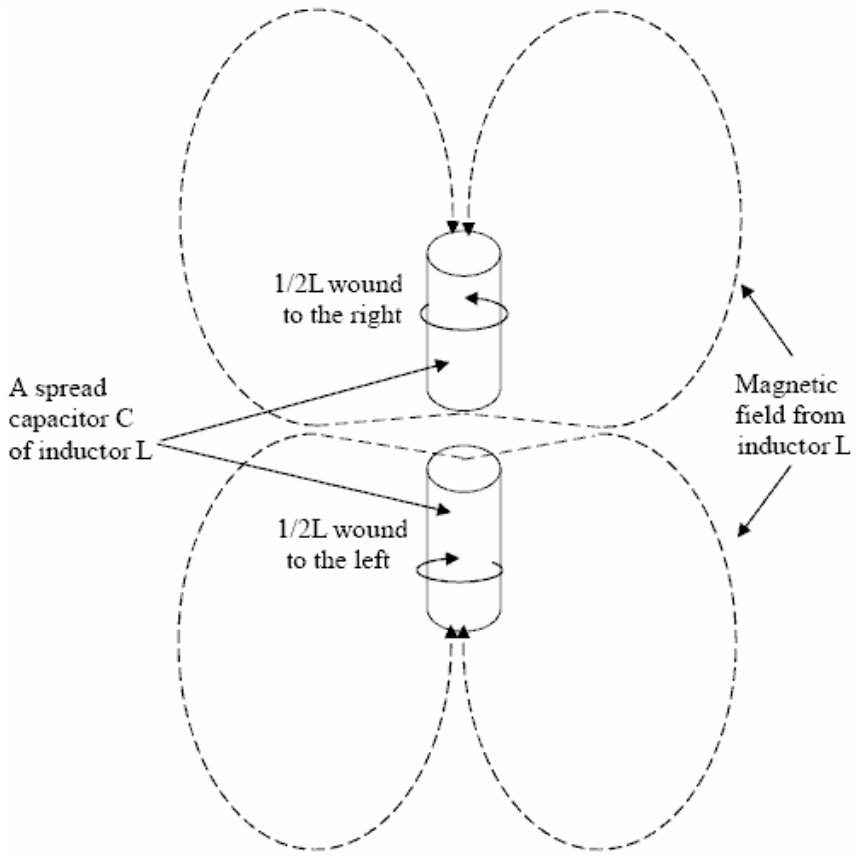
EXPLANATION

When the electric field in capacitor C is decaying, due to feeding electrical current into an inductor (not shown), the external electric field generated by the inductor tries to charge this capacitor with the inductor's displacement current. As a result, the capacitor draws energy in from the surrounding electromagnetic field, and the capacitor's voltage rises cycle by cycle.

IMPLEMENTATION A – a central capacitor is used:



IMPLEMENTATION B – no capacitors are used:



In this case instead of using a capacitor, the capacitance between the two sections of inductor L provides the necessary capacitance.

HOW DO WE START THE PROCESS?

In implementation A, you must charge the capacitor and connect it to the inductor to start the process.

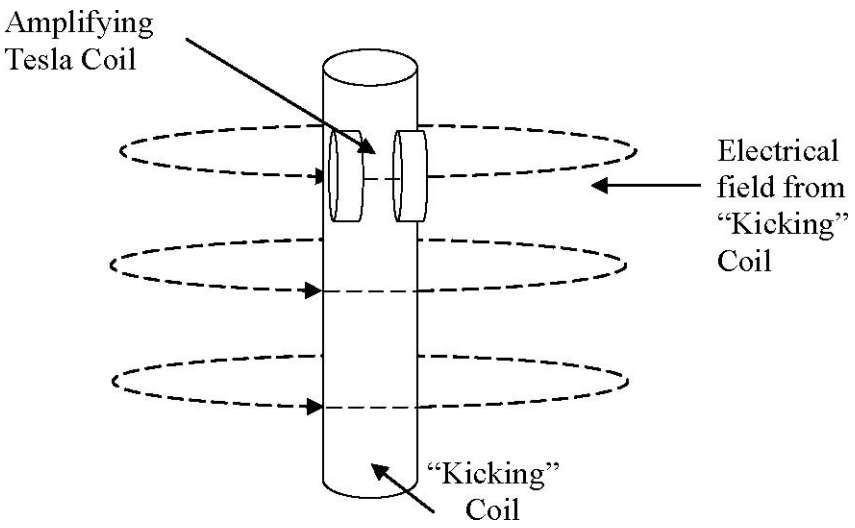
In implementation B, you must use an additional pulsing or “kicking” coil, which starts the process by providing a pulse in either the electrical field or the magnetic field (shown later on).

HOW DO WE STOP THE PROCESS?

The process of pumping energy can continue uninterrupted for an unlimited length of time and so the question arises; how do you stop the device if you should want to?. This can be done by connecting a spark gap across the coil L and the resulting sparking will be sufficient to stop the process.

THE “KICKING” PROCESS USING AN ELECTRIC FIELD

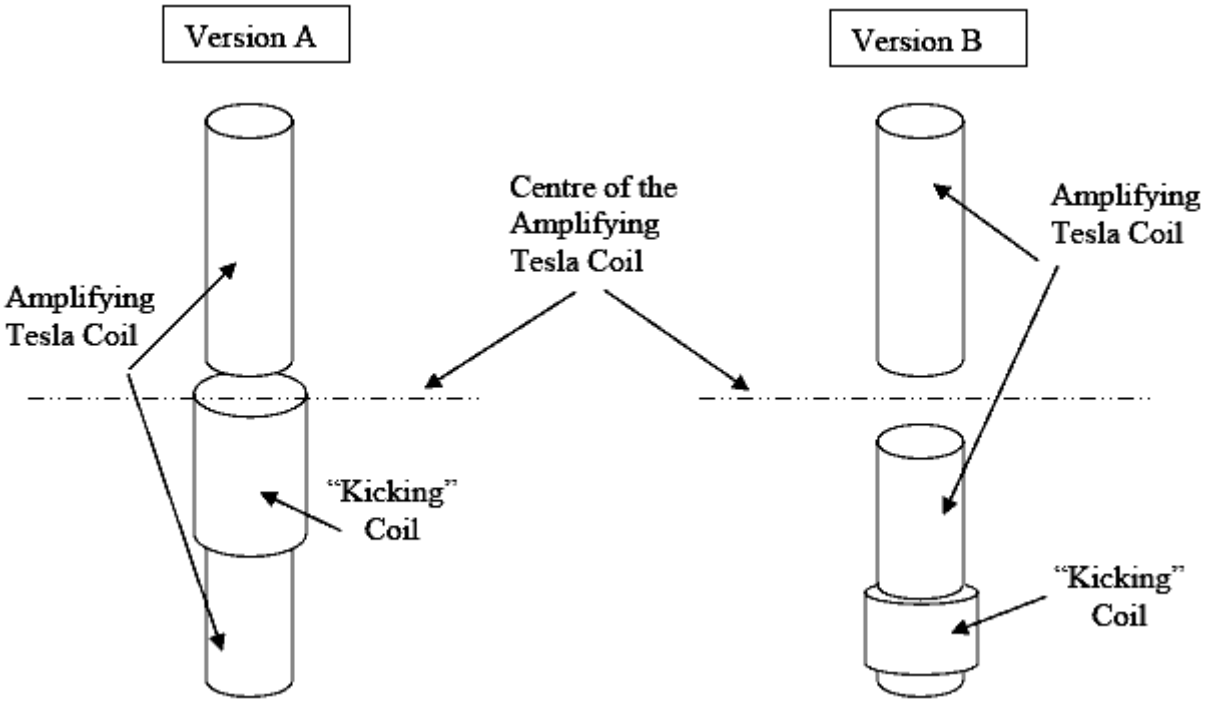
Use an additional special “kicking” coil, which can generate short powerful magnetic pulses, and install an amplifying Tesla coil along the electrical vector of the electromagnetic field of this coil.



The electrical field of the driving pulse or "kicking" coil will charge the spread capacitors of the inductor, and the process will be started. Use pulses as short as possible in "kicking" coil, because the displacement current depends on the speed of the changes in the magnetic field.

THE "KICKING" PROCESS WITH A MAGNETIC FIELD

It is not possible to "kick" the process by displacement of the amplifying Tesla coil in the uniform changing magnetic field of the "kicking" coil, because the output voltage on the ends of the Tesla amplifying coil will be equal to zero in this case. So, you must use a non-uniform magnetic field. For that you must install a "kicking" coil, not in the centre of the amplifying Tesla coil, but positioned away from the centre



IS THAT ALL TRUE, AND THE BEST TECHNIQUE TO USE?

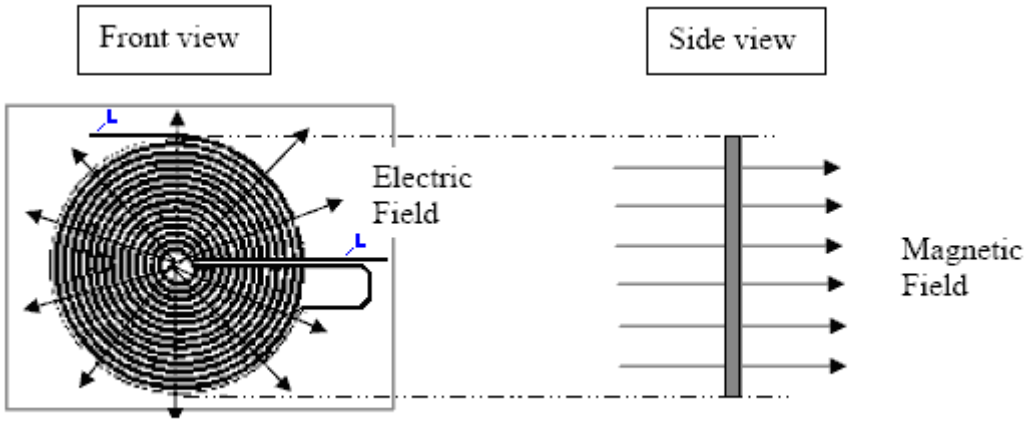
No, it is not! Nikola Tesla found more subtle and more powerful method – his bi-filar pancake coil!

BI-FILAR PANCAKE COIL – MAY BE THE BEST METHOD

The voltage between adjacent turns in an ordinary coil is very low, and so their ability to generate additional energy is not good. Consequently, you need to raise the voltage between adjacent turns in an inductor.

Method: divide the inductor into separate parts, and position the turns of the first part in between the turns of the second part, and then connect end of the first coil to the beginning of the second coil. **When you do that, the voltage between adjacent turns will be the same as the voltage between the ends of the whole coil !!!**

Next step – rearrange the position of the magnetic and electric fields in the way needed for applying amplifying energy (as described above). The method for doing this is – the flat pancake coil **where the magnetic and electric fields are arranged in exactly the way needed for amplifying energy.**



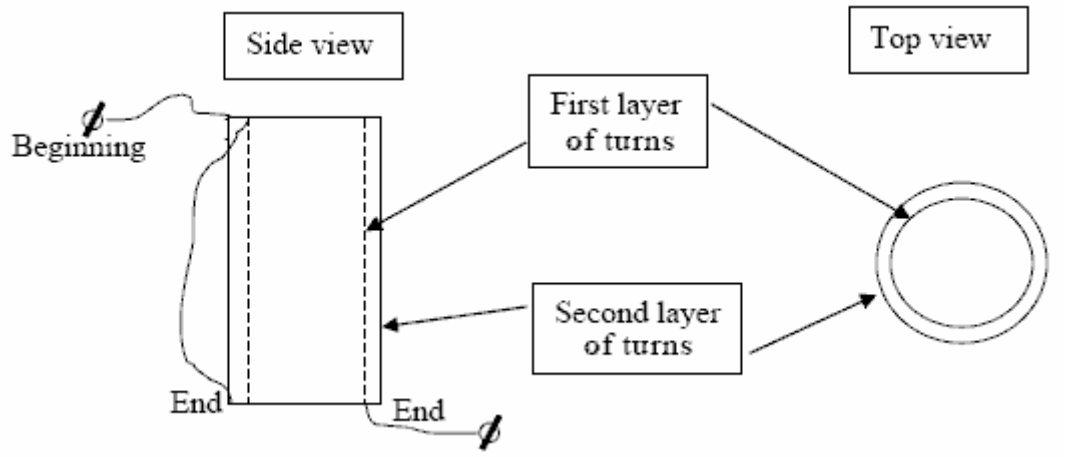
Coil for electromagnets

Now, it is clear why Tesla always said that his bi-filar pancake coil was an energy-amplifying coil !!!

REMARK: for the best charging of the natural self-capacitance of the coil, you have to use electric pulses which are as short as possible, because the displacement current as shown in Maxwell's equation, depends to a major degree on the speed of the change in the magnetic field.

THE DUAL - LAYER CYLINDRICAL BI-FILAR COIL

Instead of the standard side-by-side cylindrical bi-filar coil, the coil winding may also be arranged in two separate layers, one on top of the other:



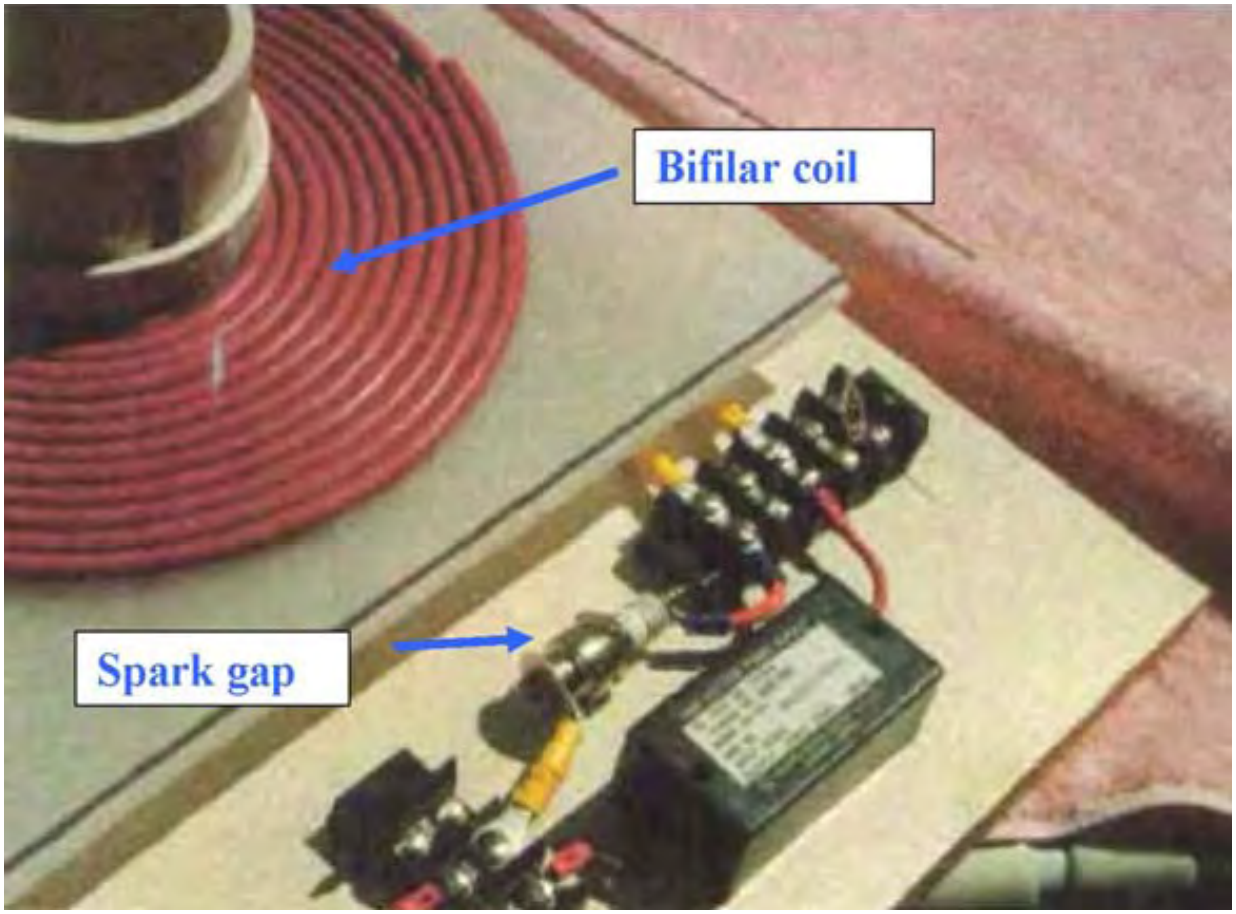
MODERN IMPLEMENTATIONS

in self-powered L-C circuits

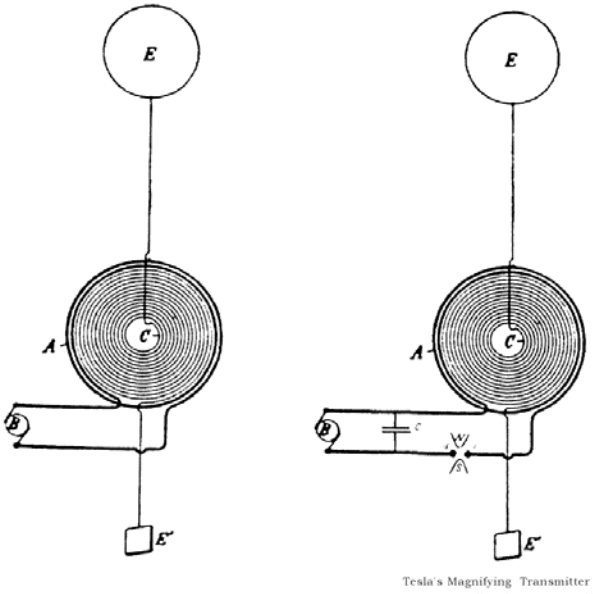
EXAMPLE 1

Using a bi-filar coil as the primary coil in a resonant Tesla transformer

By Don Smith



Explanation: The bi-filar primary coil is used as primary for energy amplification, and is pulsed through the spark gap.



Tesla's Magnifying Transmitter

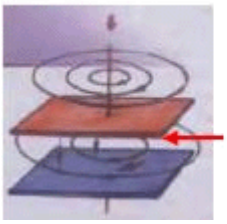
EXAMPLE 2

By Mislavskij

Is comprised of two capacitor plates sandwiching a ferrite ring core with a coil wound on it:

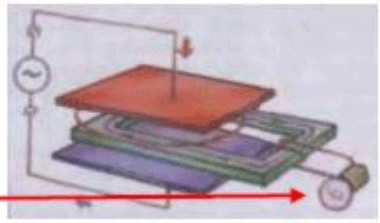
EXPLANATION

When a capacitor is charging (or discharging), this “displacement” current flow generates a magnetic field in the vacuum in a circular form (Maxwell’s equations). If a coil is wound on a ferrite toroid placed between the plates of the capacitor, then a voltage is generated in the turns of that coil:

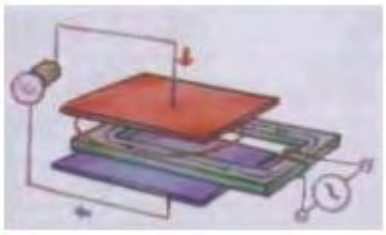


Circular magnetic field

Output power



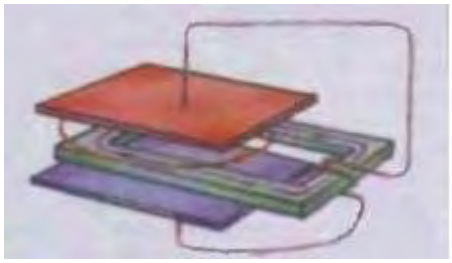
Also, if an alternating current is applied to the coil wound on the ferrite toroid, then voltage is generated on the capacitor plates.



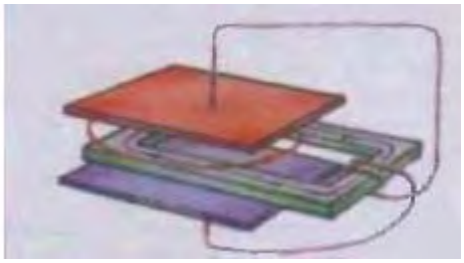
If an inductor and a capacitor are combined in an L-C circuit, then there are two cases inside such an L-C circuit:

a) energy amplification and **b) energy destruction**

The situation depends on how the coils and capacitor are connected together



Energy Generation



Energy Destruction

COMMENT: If the direction of the turns in the coil wound on the ferrite core is reversed, then the wires connecting the coil to the capacitor plates need to be swapped over as well.

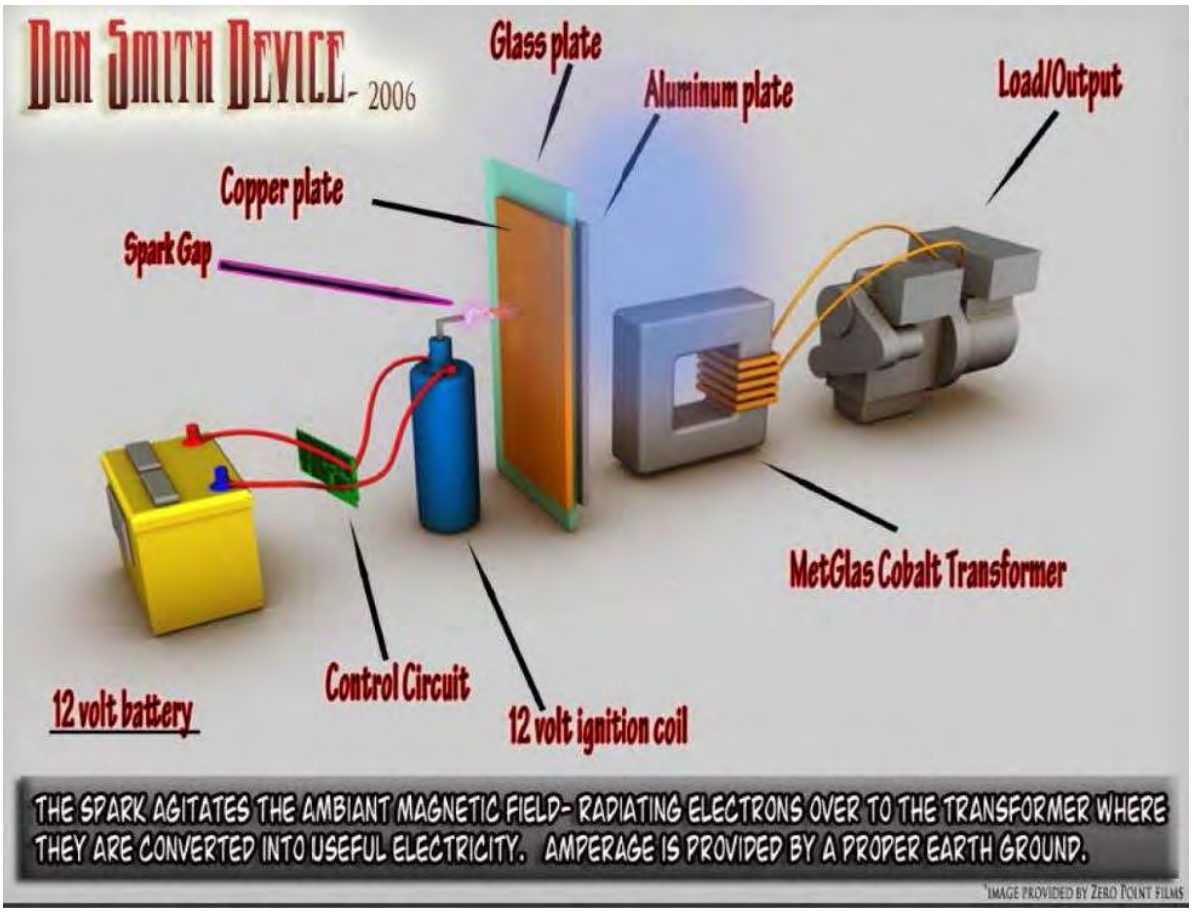
The first experiments with a ferrite core inside a capacitor were made in 1992 by Mislavskij (a 7th-year pupil of the Moscow school), and so it is known as “Mislavskij’s transformer”.

PROTOTYPE TRANSFORMER:

THE SAME APPROACH?

By Don Smith

In this arrangement, the capacitor is charged by sparks and powerful displacement current is produced. The transformer with the ferromagnetic core is collecting this current.



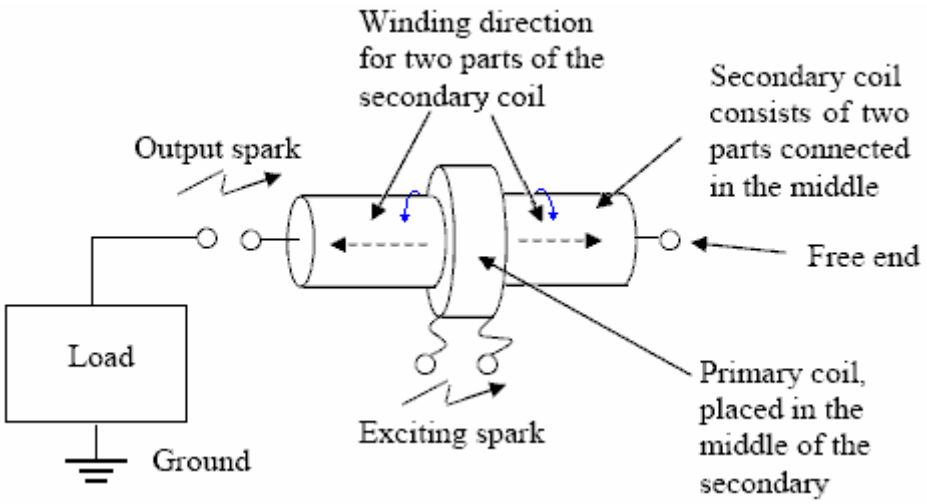
COMMENT: This schematic diagram is very rough, and lacking in details**.** It will not perform correctly without back-electromagnetic force suppression of some kind (see below).

SECRET 1.1

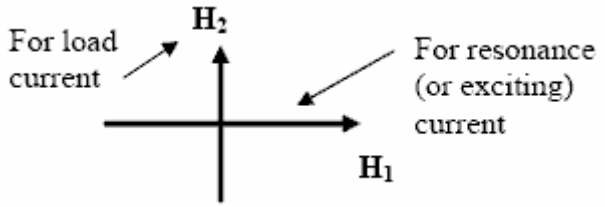
Back-EMF suppression in a resonating Tesla coil

Version 1

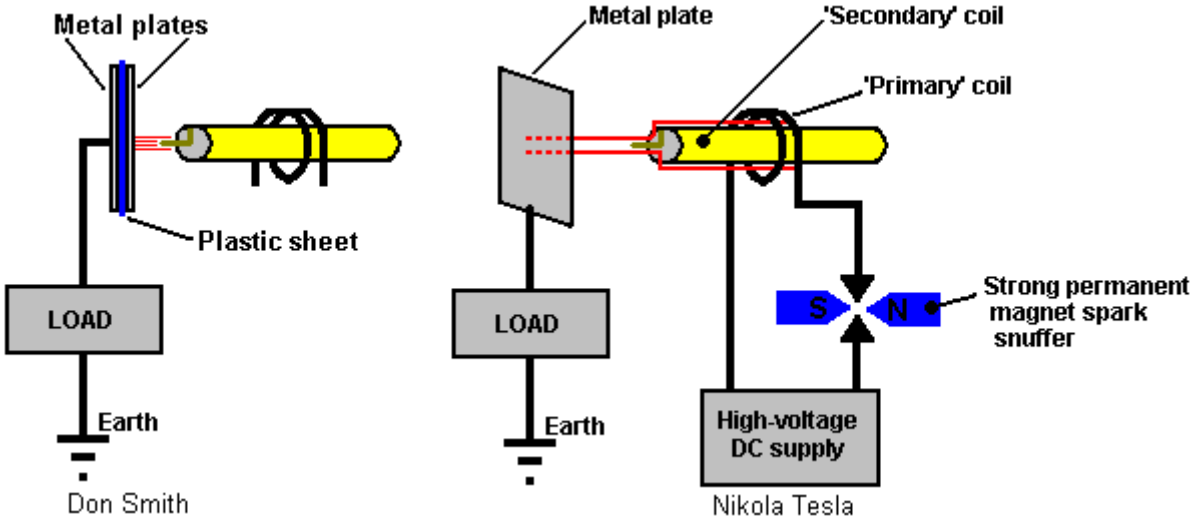
The primary and secondary coils, and the ground connection in this Tesla coil are arranged in special manner:



Explanation: The exciting (driving) current and the load current in an electromagnetic field, are perpendicular to each other as shown here:



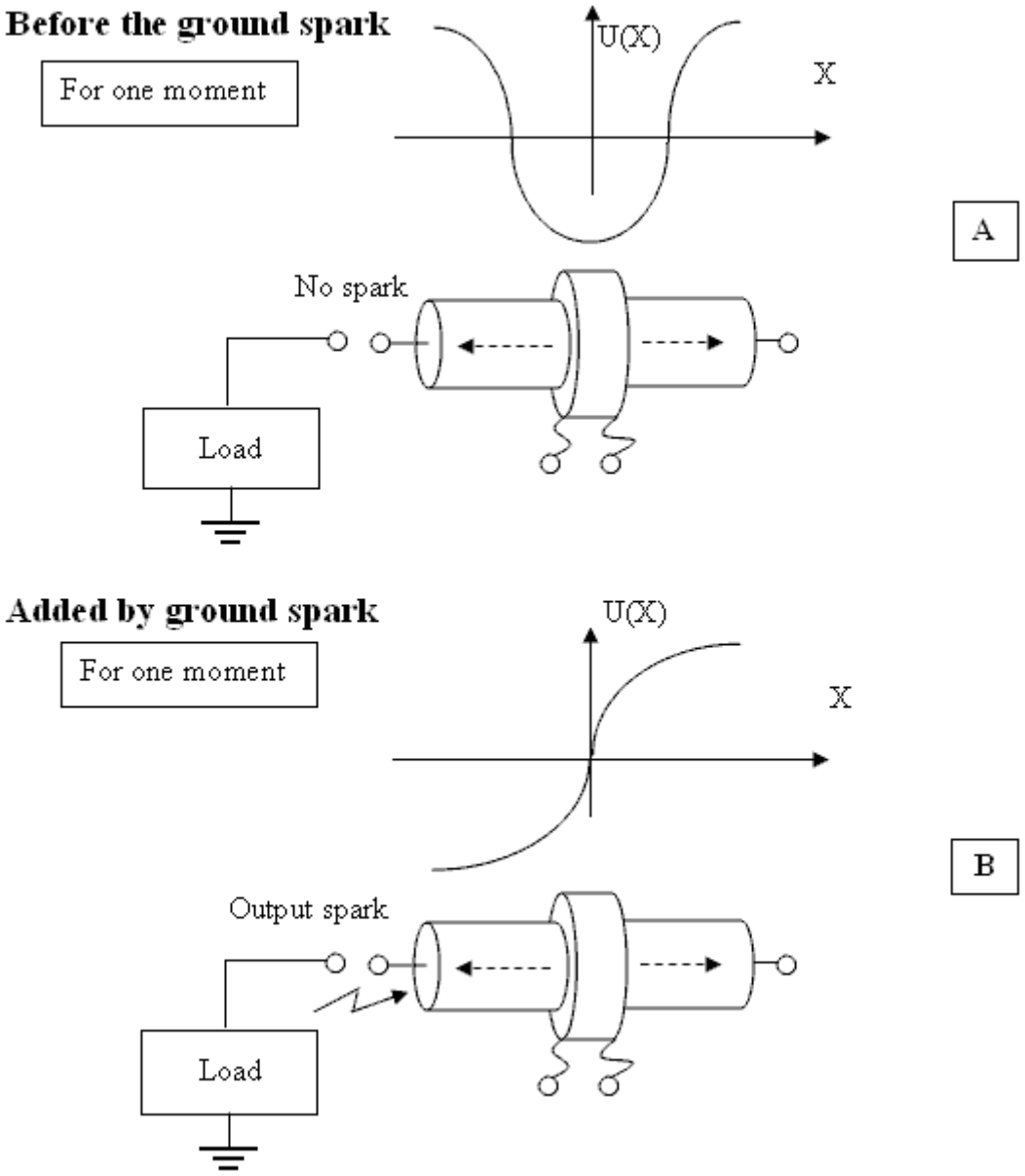
COMMENT: In order to get an energy gain, the frequency of excitation of the primary coil must be the resonant frequency of the secondary coil.



COMMENT: Excitation with just a single spark is possible.

COMMENT: In Mr. Tesla's terminology, this is pumping charges or charge funneling, the charge is coming from the ground (which is a source of energy).

POTENTIAL (VOLTAGE) DISTRIBUTION ON THE COIL



Prototype Coil

EXPLANATION The task of the oscillating circuit is to create a local electromagnetic field with a large electrical component. In theory, it would only be necessary to charge up the high voltage capacitor just once and then a lossless circuit would maintain the oscillations indefinitely without needing any further power input. In reality, there are some losses and so some additional power input is needed.

THESE OSCILLATIONS ACT AS A "BAIT", ATTRACTING CHARGE INFLOW FROM THE LOCAL ENVIRONMENT. Almost no energy is needed in order to create and maintain such a "bait"...

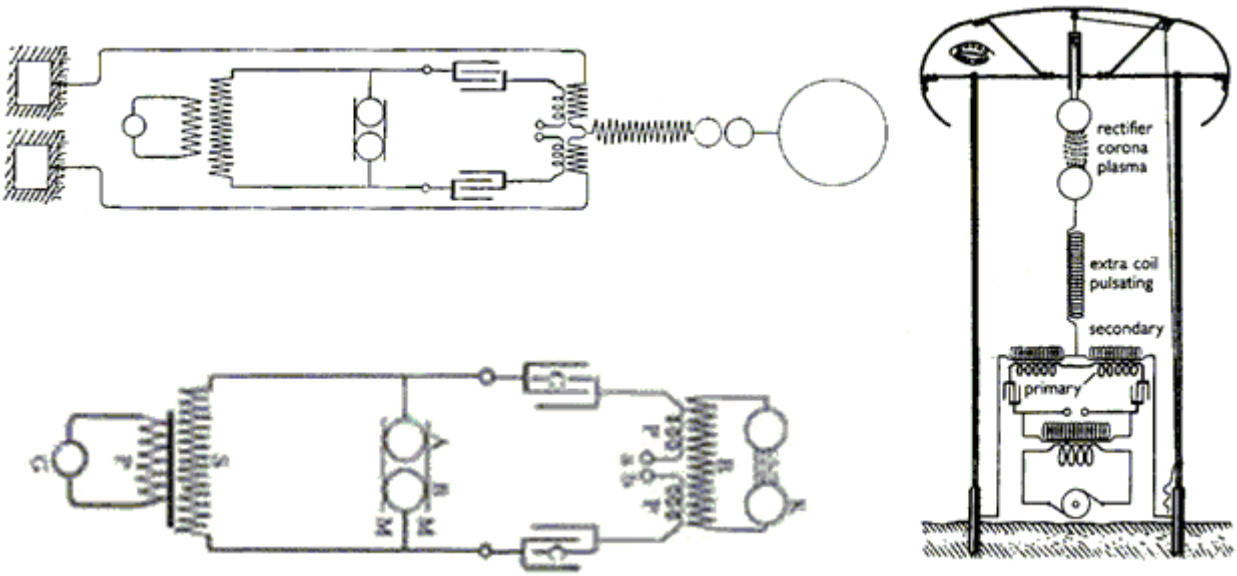
The next step is to move to this "bait" to one side of the circuit, close to the source of the charges which is the Ground. At this small separation, breakdown occurs and the inherent parasitic capacitance of the circuit will be instantly recharged with energy flowing into the circuit from outside.

At the ends of the circuit there will be a voltage difference, and so there will be spurious oscillations. The direction of this electromagnetic field is perpendicular to the original field of the "bait" and so it does not destroy it. This effect is due to the fact that the coil consists of two opposing halves. The parasitic oscillations gradually die out, and they do not destroy the "bait" field.

The process is repeated spark by spark for every spark which occurs. Consequently, the more often sparks occur, the greater the efficiency of the process will be. The energy in the "bait" experiences almost no dissipation, providing a much greater power output than the power needed to keep the device operating.

TESLA SCHEMATICS

COMMENT: Don Smith named this technology “Bird on the wire”. The bird is safe on the wire until a spark occurs.

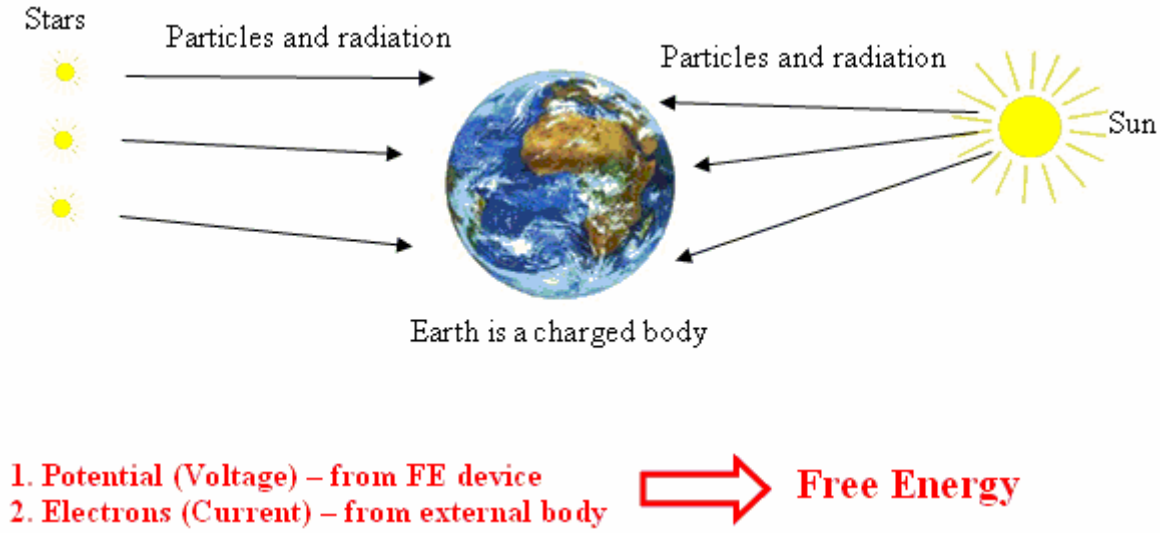


COMMENT: Mr. Tesla named this technology a “charge funnel” or “charge pump”

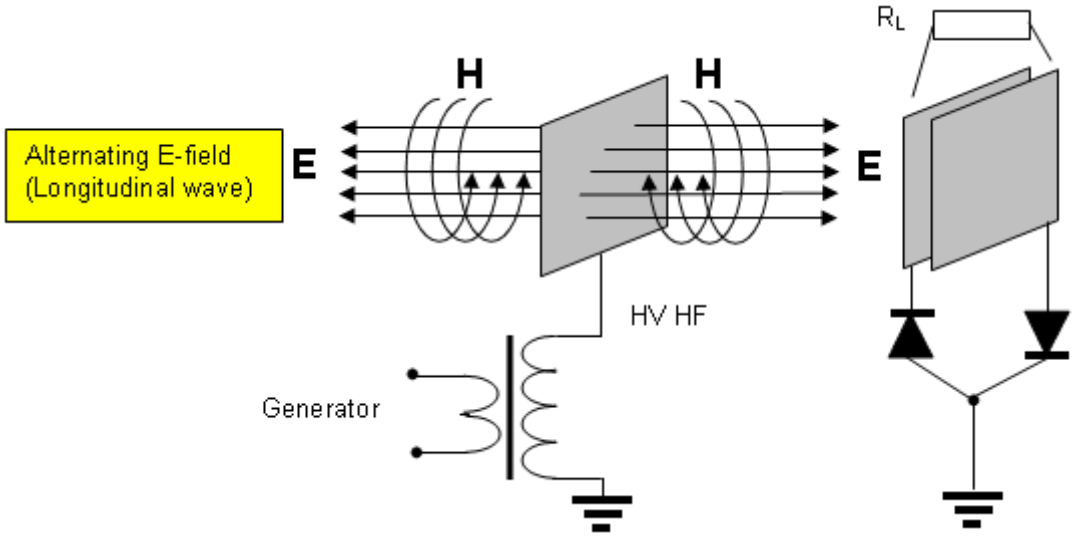
THE PRINCIPLE OF THE TECHNOLOGY

1. This Free-Energy device generates an AC electrical potential in ambient space (“bait” for electrons),
2. Electrons flowing through the load, flow in from the environment, attracted by this “bait” (pumped in)

NOT A SINGLE ELECTRON USED FOR EXCITING AMBIENT SPACE NEEDS TO FLOW THROUGH THE LOAD

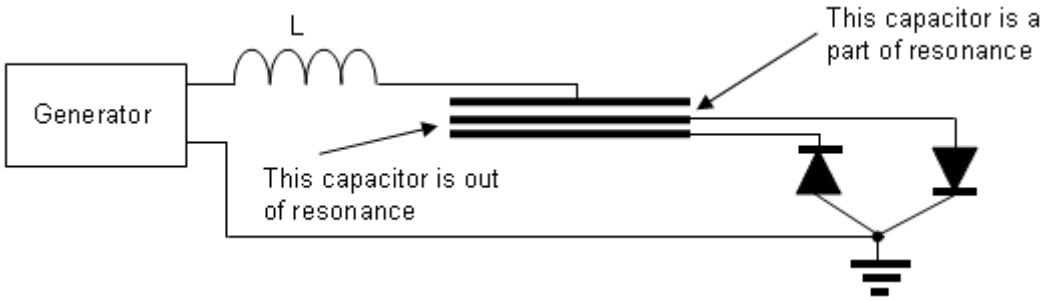


POSSIBLE DESIGN FOR THE “CHARGE PUMP” or “CHARGE FUNNEL”



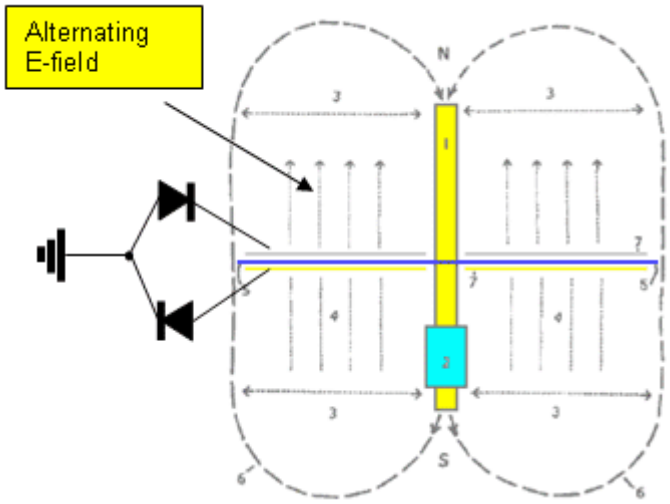
EXPLANATION: The charging system is unable to “see” the field inside a charging capacitor.

COMMON VIEW OF RESONANCE: Resonance is not destroyed if you short-circuit or open a “pumping” capacitor.



COMMENT: You can add an ordinary, very large capacitor in parallel with the “pumping” capacitor for more impressive results.

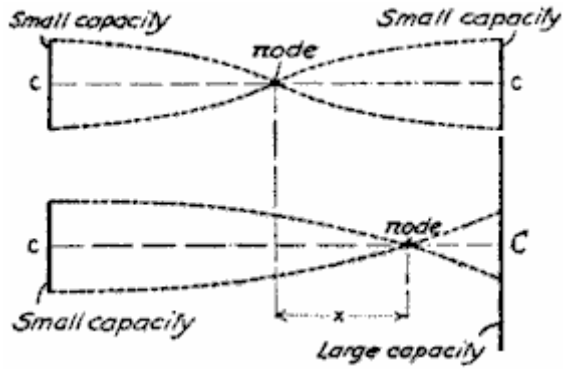
Don Smith illustration



COMMENTS: You have to use an alternating E-field, in order to charge the capacitor. But, Smith marked the North and South poles in his drawing. I think that this is true for only one instant. Diodes are not shown in his drawings, which indicates that his device as shown, is not complete.

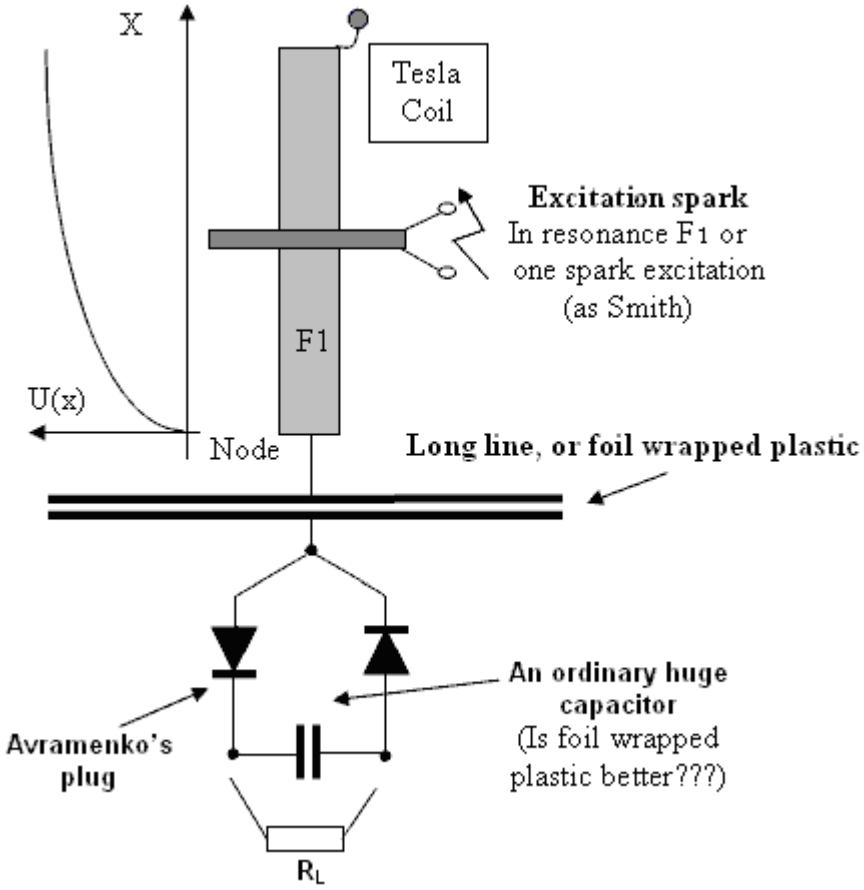
POSSIBLE DESIGN FOR THE "CHARGE PUMP" or "CHARGE FUNNEL"

COMMENT: This is based on Tesla's schematics



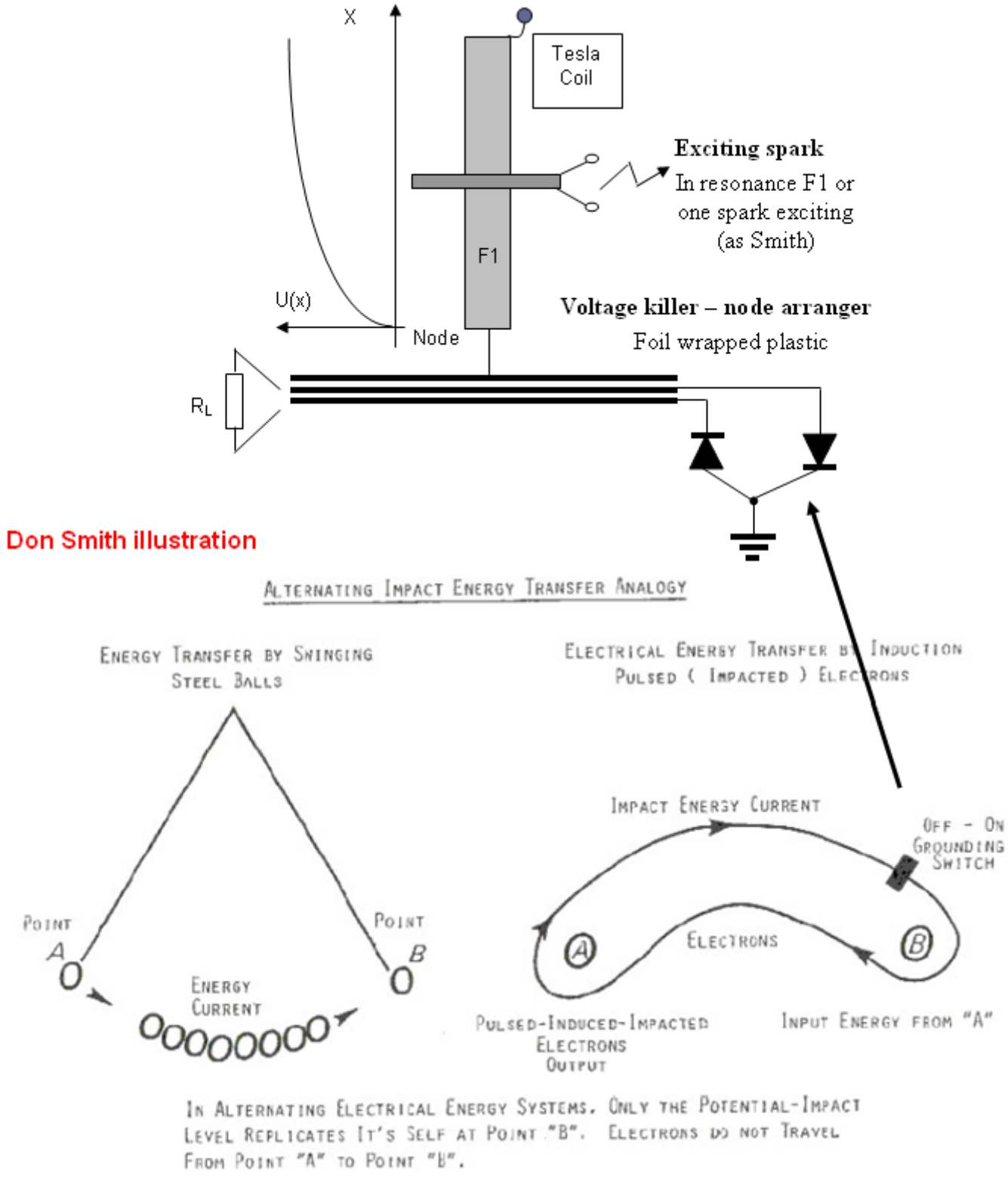
COMMENT: First, you need to arrange a "voltage killer" barrier on one side of the Tesla coil. This is to create a "BLIND" charging system which can't "see" the charge on the capacitor (see below for more detail on "blindness").

COMMENTS: 'Huge capacitor' means: as much ordinary capacitance as possible.
Effectiveness depends on voltage and coil frequency, and current in the node.
Effectiveness depends also on the frequency at which the excitation spark occurs.
It is very similar to Don Smith's devices.



COMMENT: For more details read part devoted to Avramenko's plug…

POSSIBLE DESIGN FOR THE “CHARGE PUMP” or “CHARGE FUNNEL”



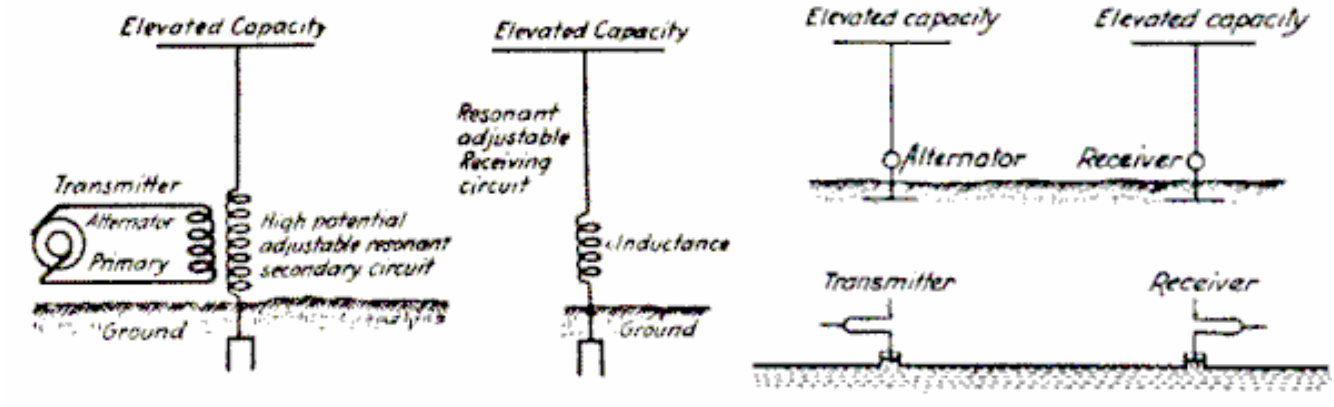
EXPLANATION: The charging system is unable to “see” the field inside the charging capacitor.

COMMENT: For more details read the part which is devoted to Avramenko’s plug…

COMMENT: An ordinary piece of wire can be used in some versions of this gadget, see below….

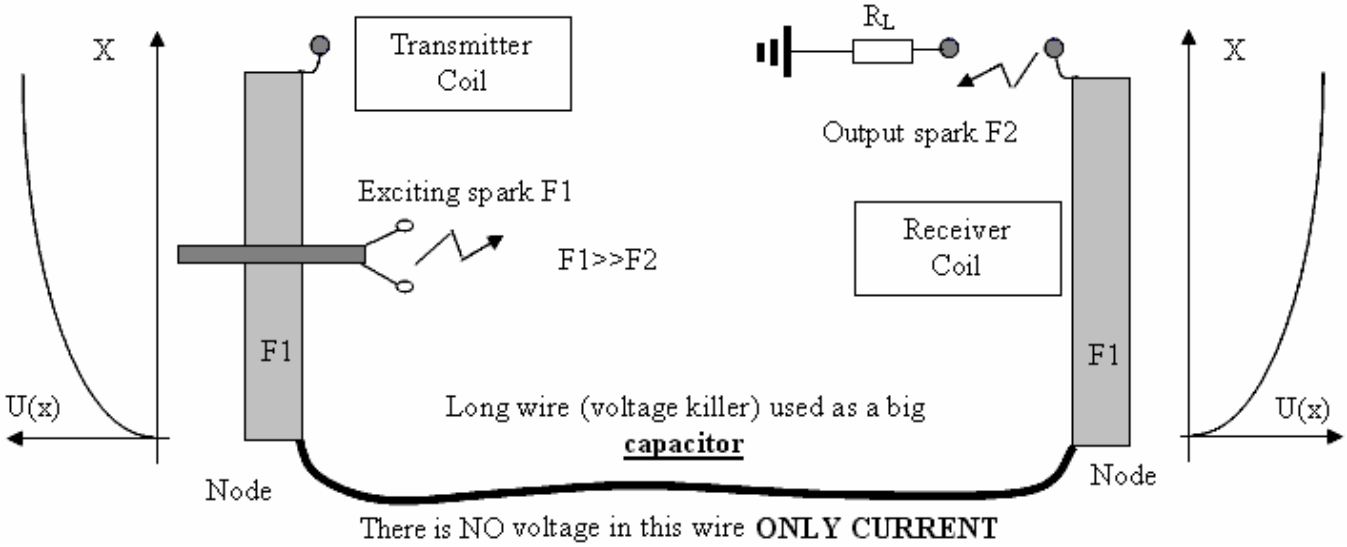
ENERGY REGENERATION BY
L/4 COIL

COMMENT: This system is based on wireless energy transmission through the ground

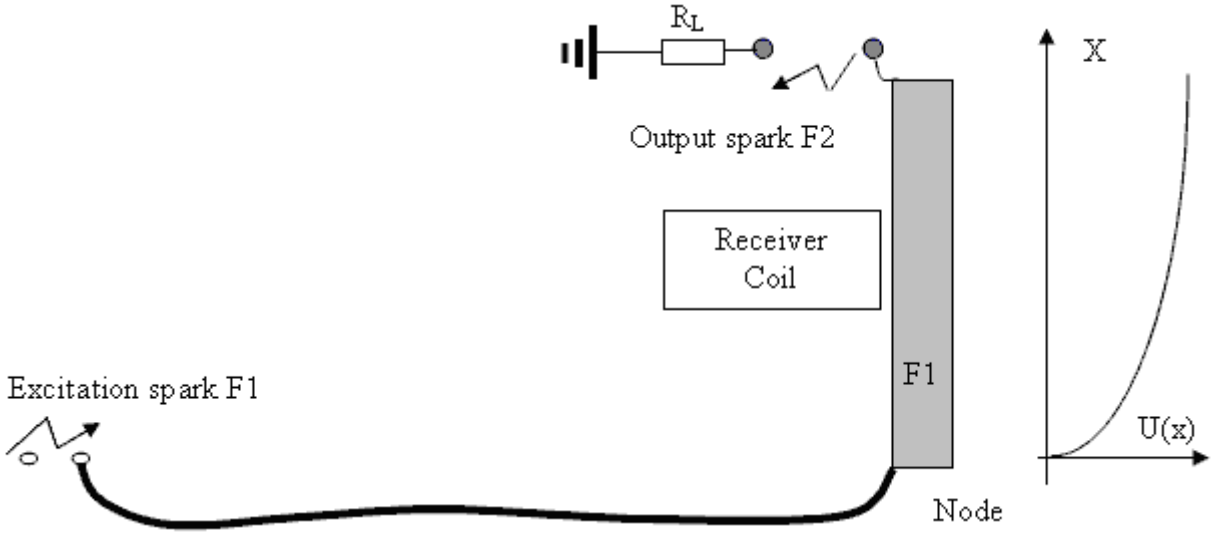


COMMENT: Energy radiated to ambient space lowers the efficiency of this process

COMMENT: The Receiver and Transmitter coils must have the same resonant frequency



COMMENT: Possible alternative arrangement:

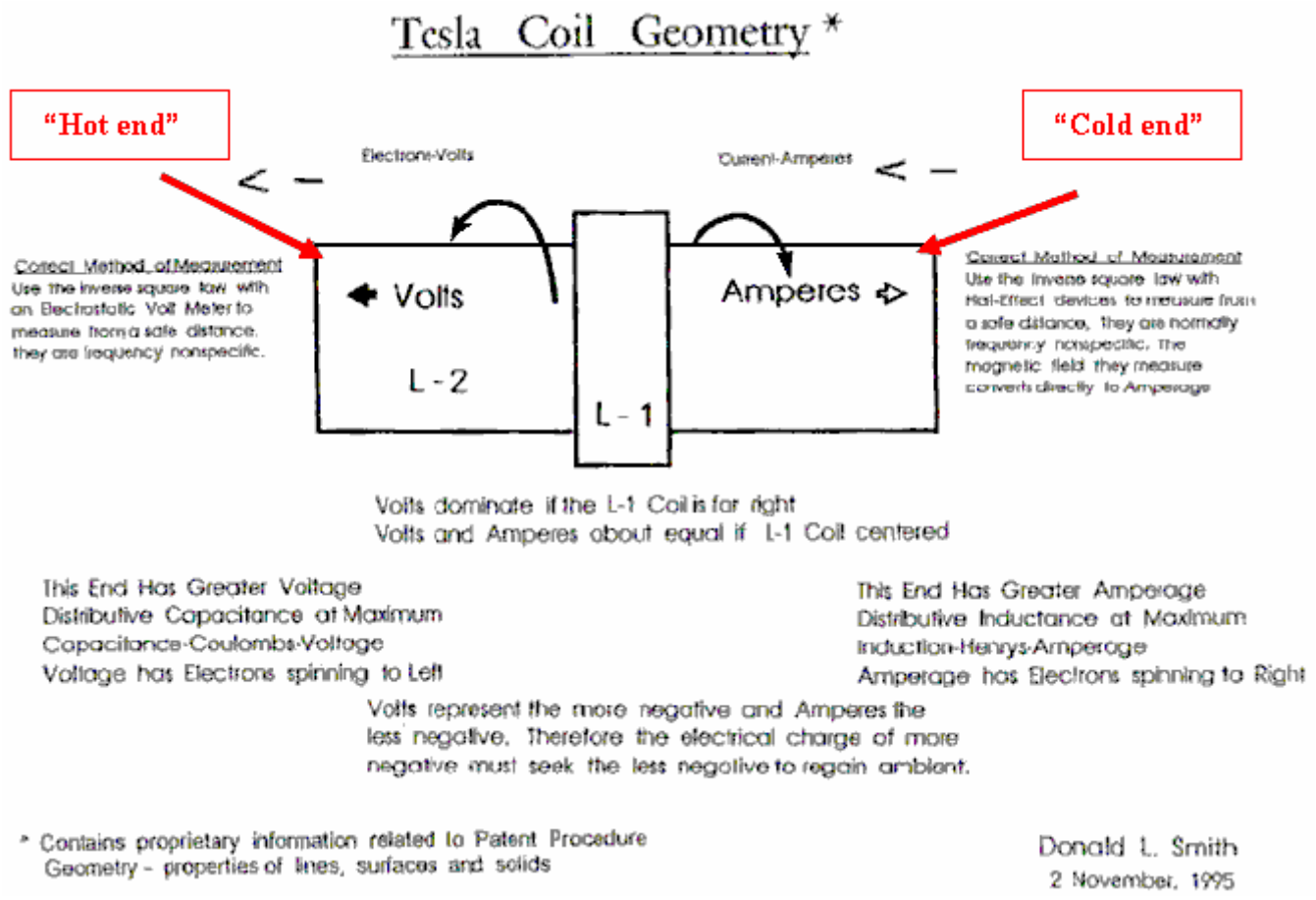


COMMENT: A metal sheet can be used instead of a long wire

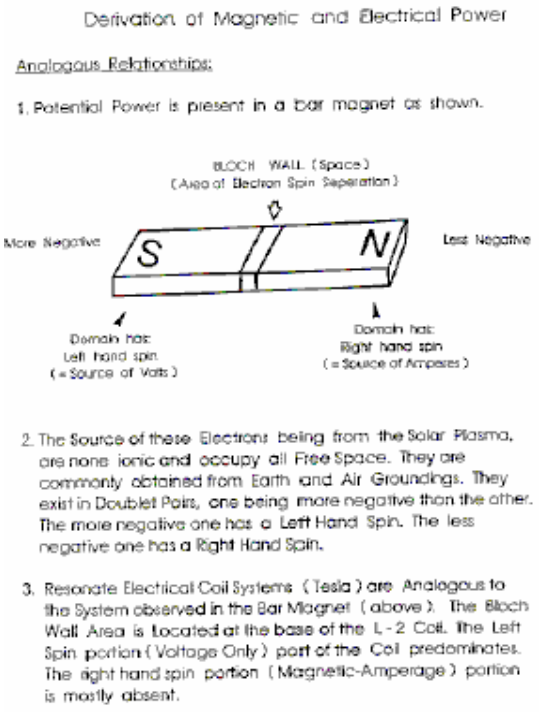
The "COLD" and "HOT" ends of a Tesla Coil

by Donald Smith

COMMENT: If the excitation coil L1 is positioned in the centre of coil L2, then the Tesla Coil will have a "cold" end and a "hot" end. **A spark gap can only be connected to the "hot" end**. You cannot get a good spark if the spark gap is connected to the "cold" end.

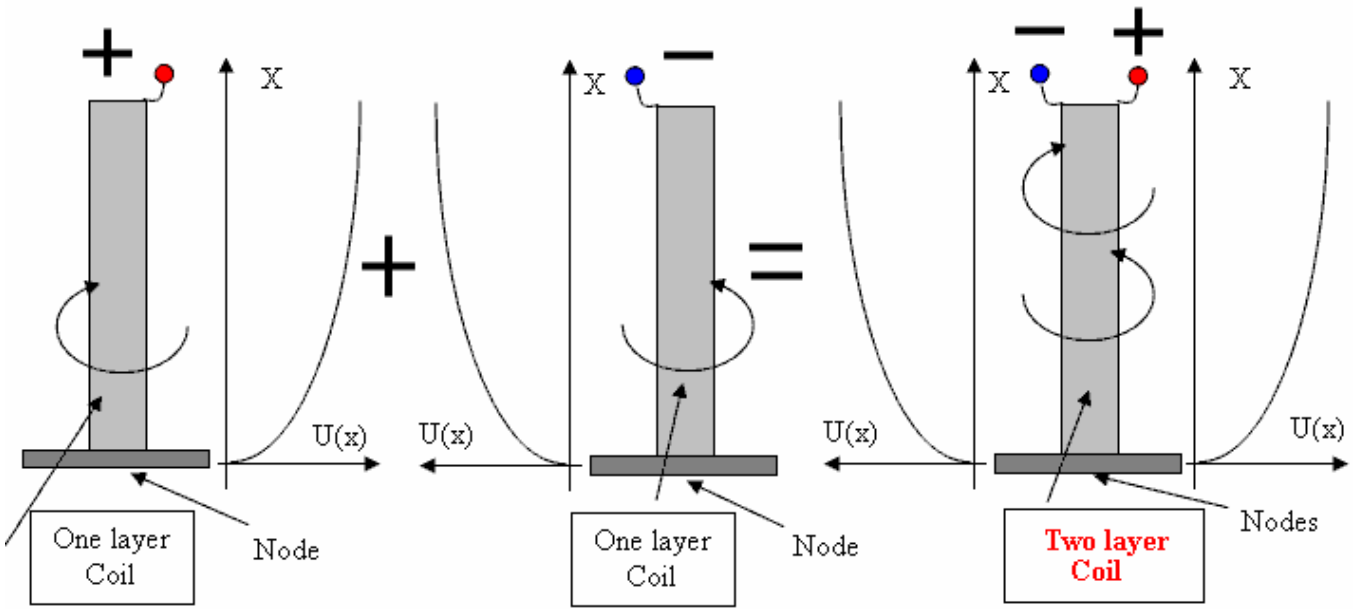


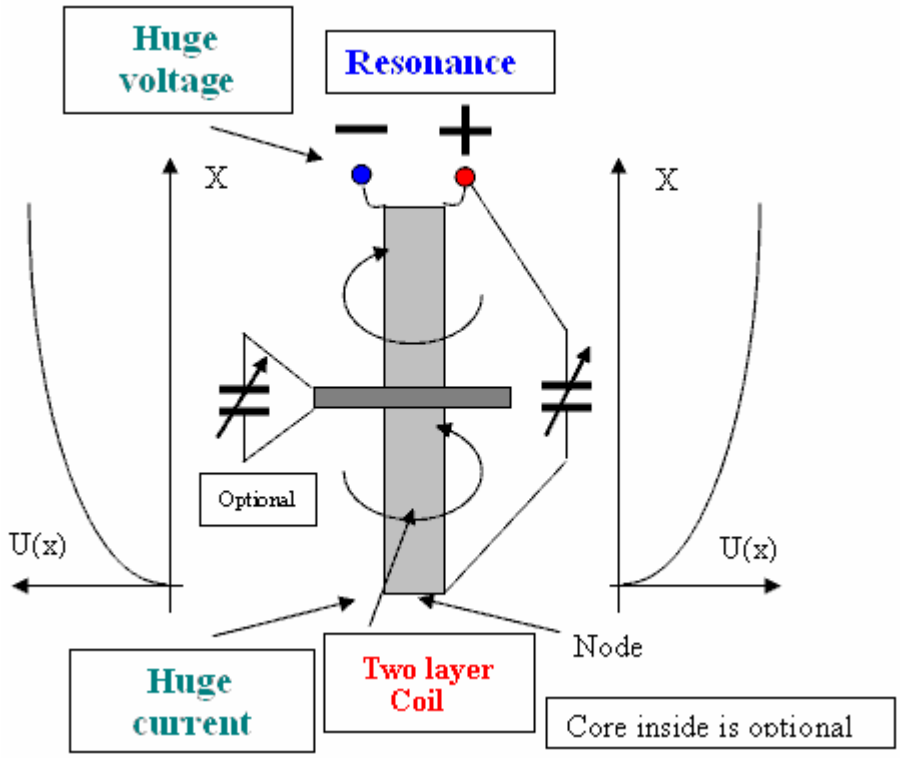
COMMENT: This is very important for practical applications, so read Don Smith's documents for more details.



COMMENT: It is easy to understand the "Hot" and "Cold" ends, if one end of Tesla Coil is grounded…

Possible simulation of the L/4 wave "Cold" and "Hot" ends

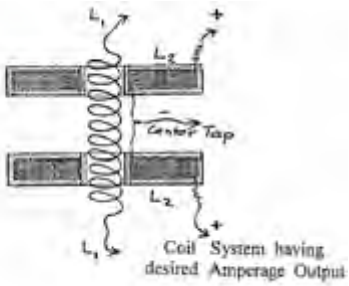




MODERN OPTIONS

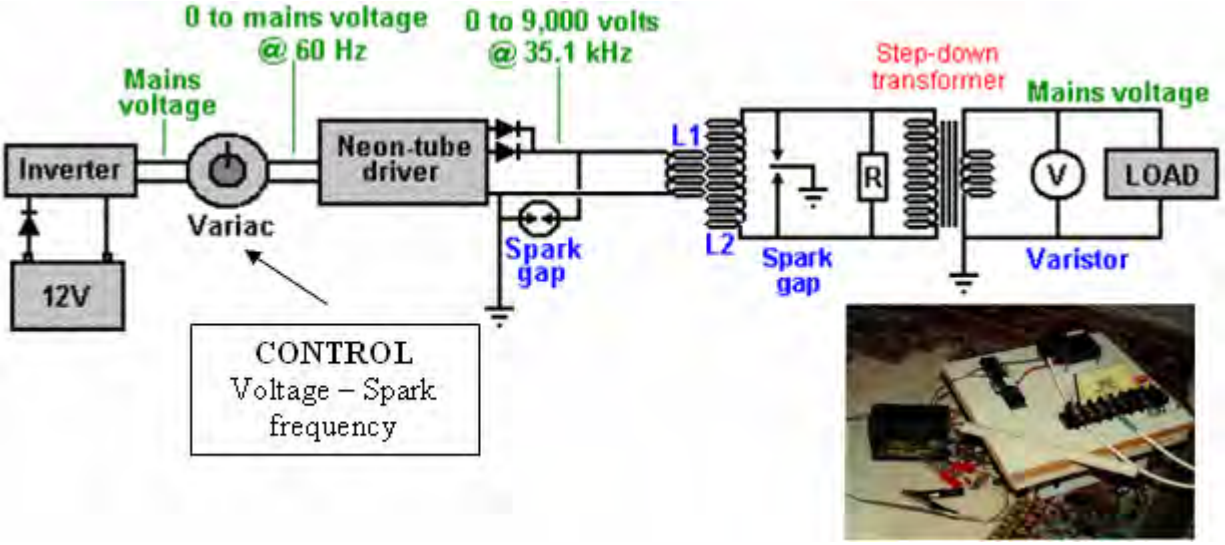
In back EMF suppression

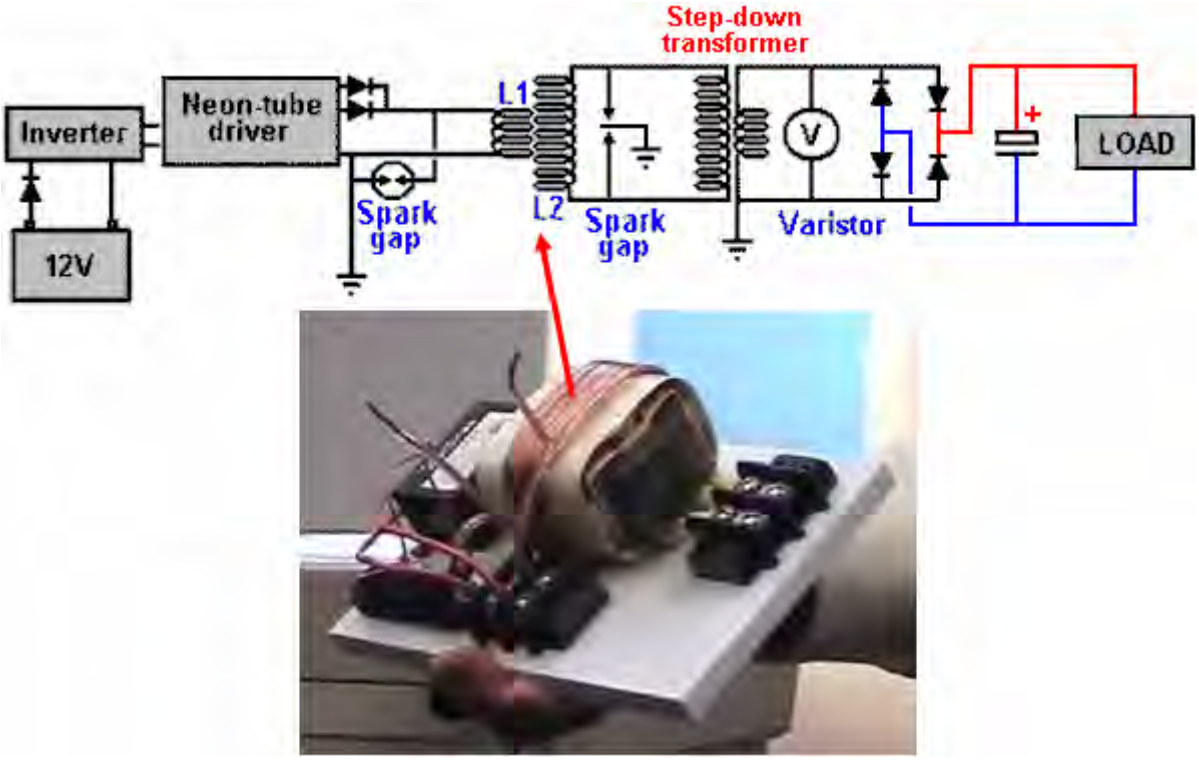
Version 1



SYMMETRICAL VERSION

By Don Smith





Explanation:

Instead of one side output, two outputs were used and connected to the step-down transformer.

1. Between sparks:

There is no current in the step-down transformer and so the two ends of L2 are at the same voltage.

2. During a spark:

Parasitic capacitors (not shown) of L2 (it's up and down parts) are discharged to the ground, and current is produced in the step-down transformer. One end of L2 is at ground potential. But, the magnetic field of this current in L2 is perpendicular to the resonating field and so has no influence on it. **As a result of this, you have power in the load, but the resonance is not destroyed.**

COMMENTS: In my opinion, these schematics have errors in the excitation section. Find those errors.

Excitation by a single spark is possible.

In the terminology of Mr. Tesla, this is a 'charge pump' or 'charge funnel'. The charges are coming from the Ground which is the source of the energy.

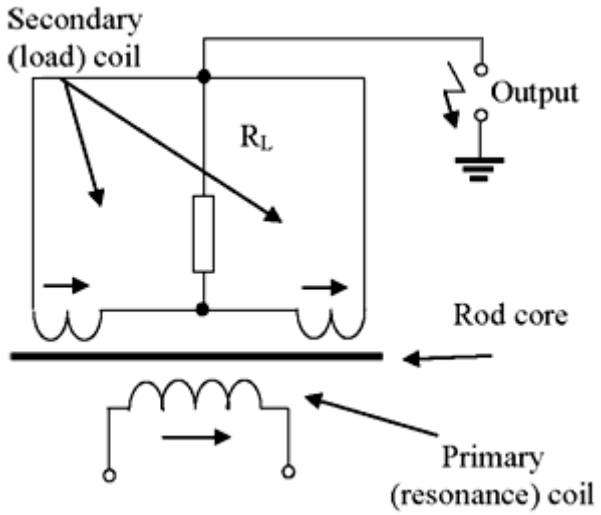
There are more secrets in the following parts.

SECRET 1.1

Back EMF suppression in a resonance coil

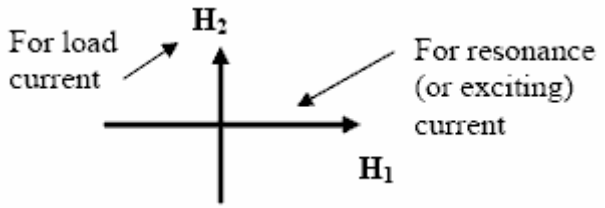
Version 2

Primary and secondary coils are placed on a rod core. All of the coils are arranged in special manner. The primary coil is placed in the middle of the core. The secondary coil is in two parts which are positioned at the ends of the rod. All of the coils are wound in the same direction.



Explanation:

The electromagnetic fields produced by the resonant (excitation) current and the load current are perpendicular to each other:



So, although you have power in the load, resonance is not destroyed by that output power.

Comments: The load must be chosen so as to get the maximum amount of power flowing into it. Very low loads and very high loads will both have close to zero energy flowing in them.

The secondary coil is shunting the primary coil, and so it has a current flowing in it even if no loads are connected.

The secondary coil can be adjusted for resonance too.

The "rod" material can be air, or other materials.

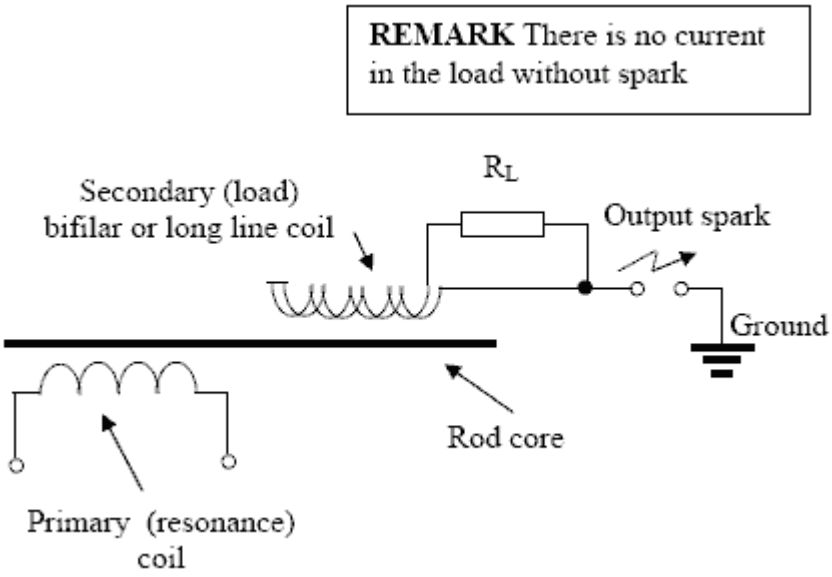
SECRET 1.1

Back EMF suppression in a resonance coil

Version 3

(long wire usage – bifilar usage)

EXPLANATION: It is very much like **Version 1**, but here, the two coils are combined into a single coil.



IT IS IMPOSSIBLE!

(Without back EMF suppression)

By Don Smith

Multi-coil system for energy multiplication

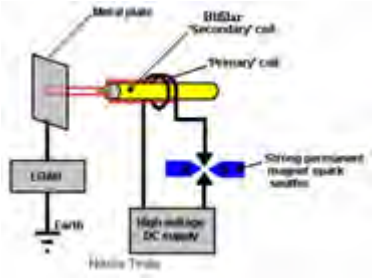
COMMENT : You decide how you think it was made. Maybe short-circuited coils will be useful…

Read the following parts to discover more secrets…

MODERN OPTIONS?

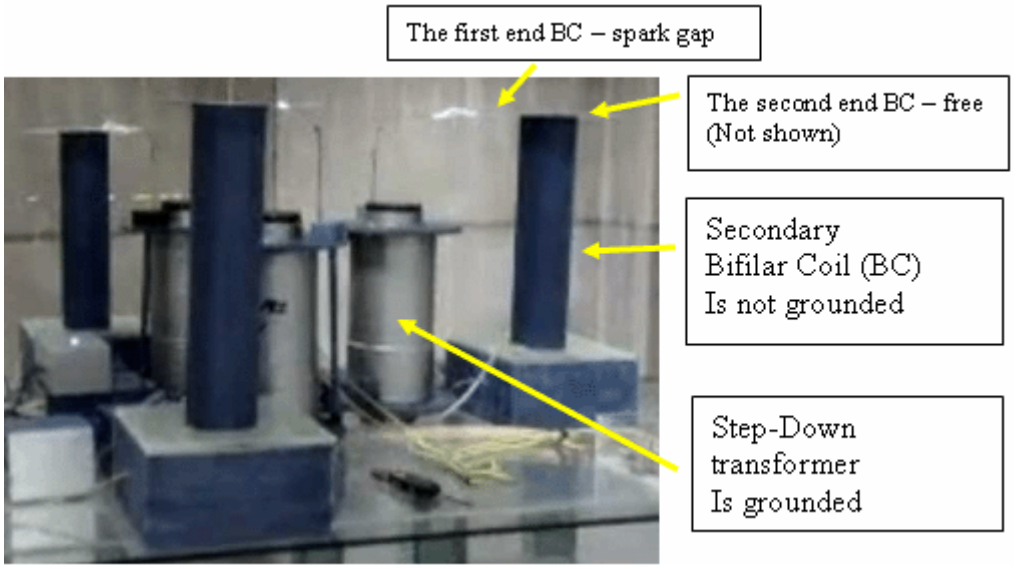
For Back EMF suppression

Version 3

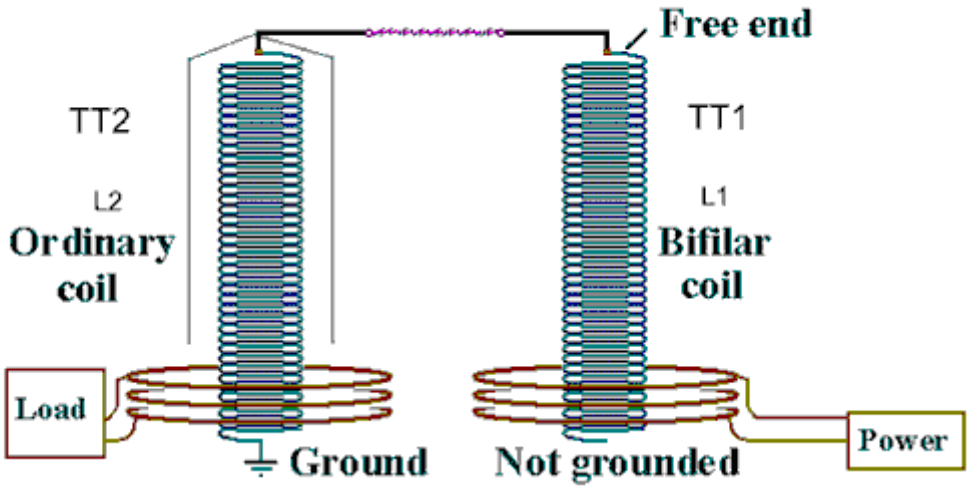


BI-FILAR USAGE

By Tariel Kapanadze



Possible schematics of the device



BIFILAR USAGE

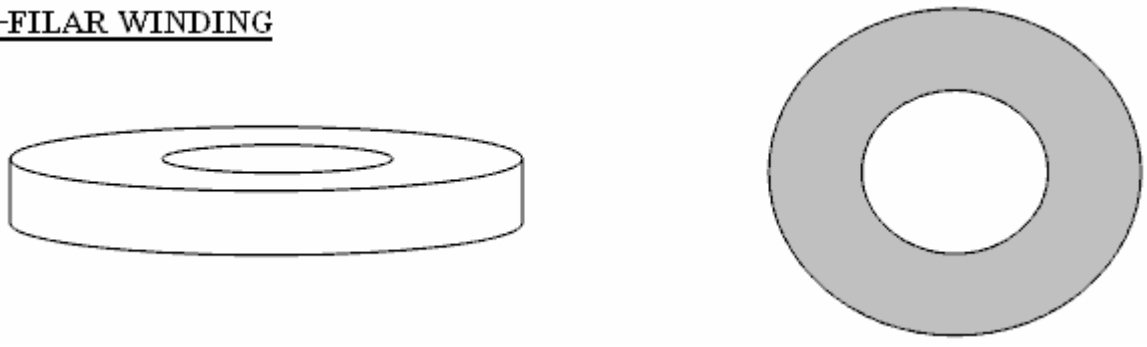
By Timothy Trapp

COMMENT: See Trapp's sites for more details

POSSIBLE CORE CONFIGURATION
For back EMF suppression

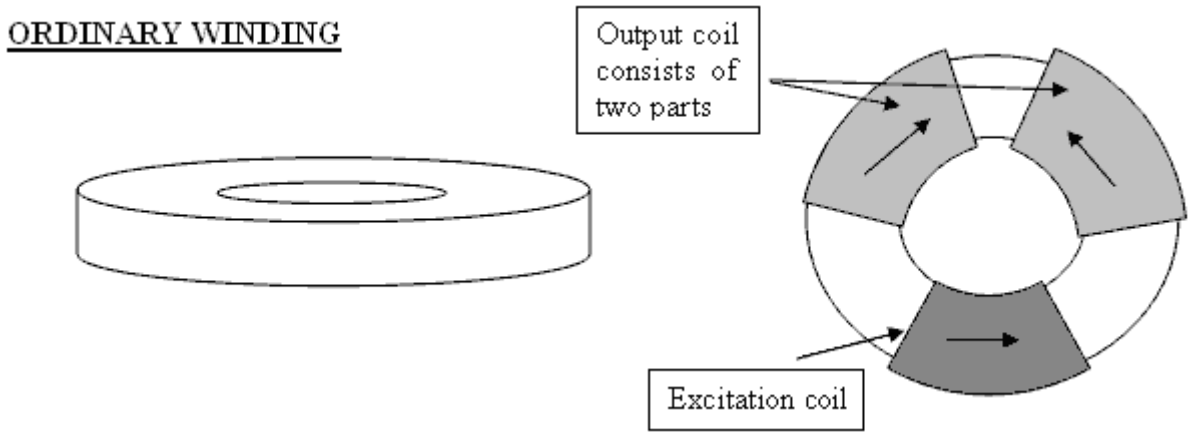
TOROIDAL CORE

BI-FILAR WINDING

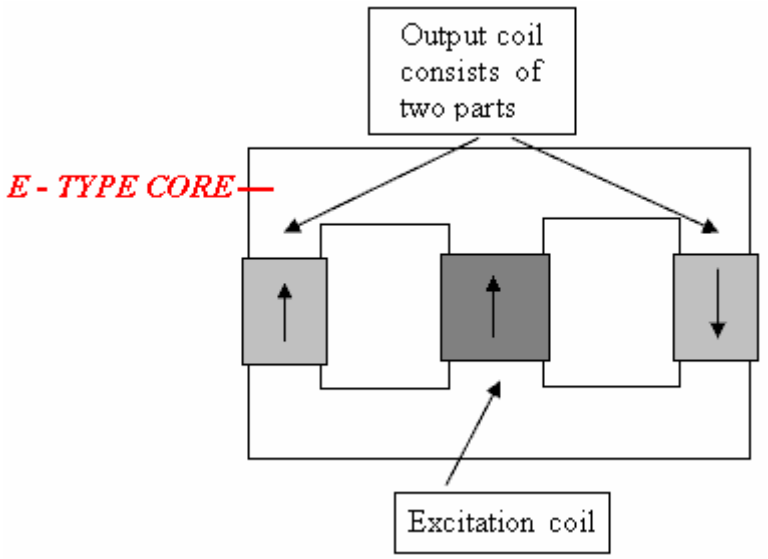


COMMENTS: An ordinary excitation winding is wound all of the way around a toroidal core.
A bi-filar output winding is wound around the whole of a toroidal core.
Remember about the “Hot” and “Cold” ends of a bi-filar coil.

ORDINARY WINDING



COMMENT: Remember about the “Hot” and “Cold” ends of the output coil



THE BASIS OF BACK EMF SUPPRESSION

(Tesla patent)

(No Model.) 2 Sheets—Sheet 1.

N. TESLA.

REGULATOR FOR DYNAMO ELECTRIC MACHINES.

No. 336,961. Patented Mar. 2, 1886.

Fig. 1.

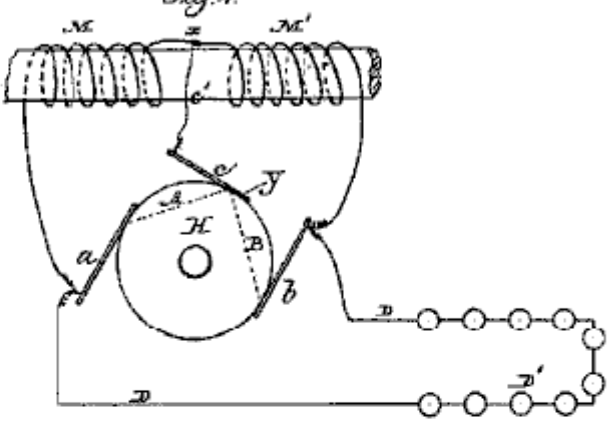


Fig. 2.

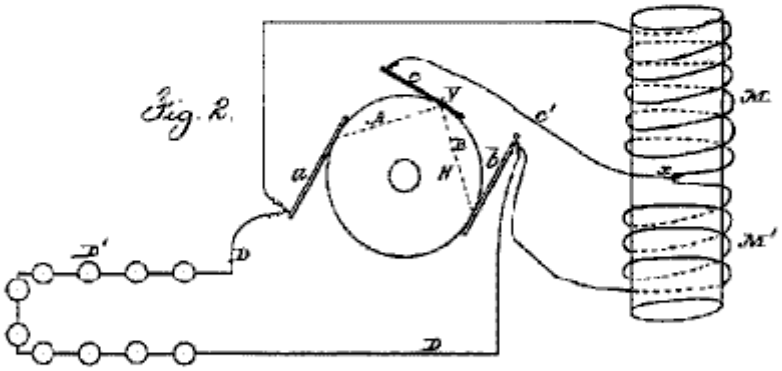
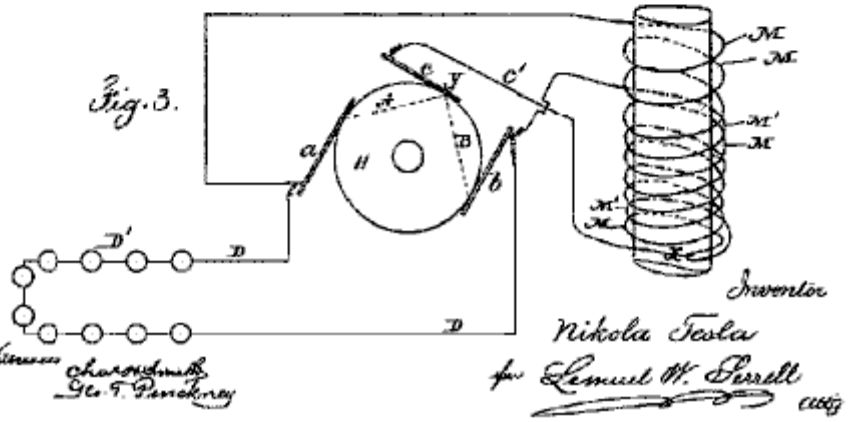


Fig. 3.



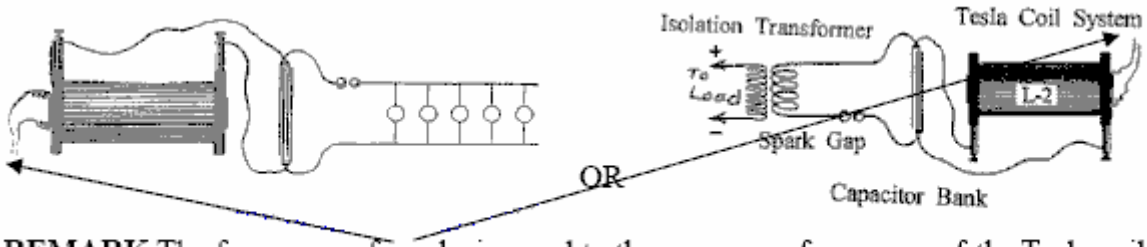
Witnesses
Charles Smith
Geo. T. Pinckney

Inventor
Nikola Tesla
per Lemuel W. Serrell
Atty

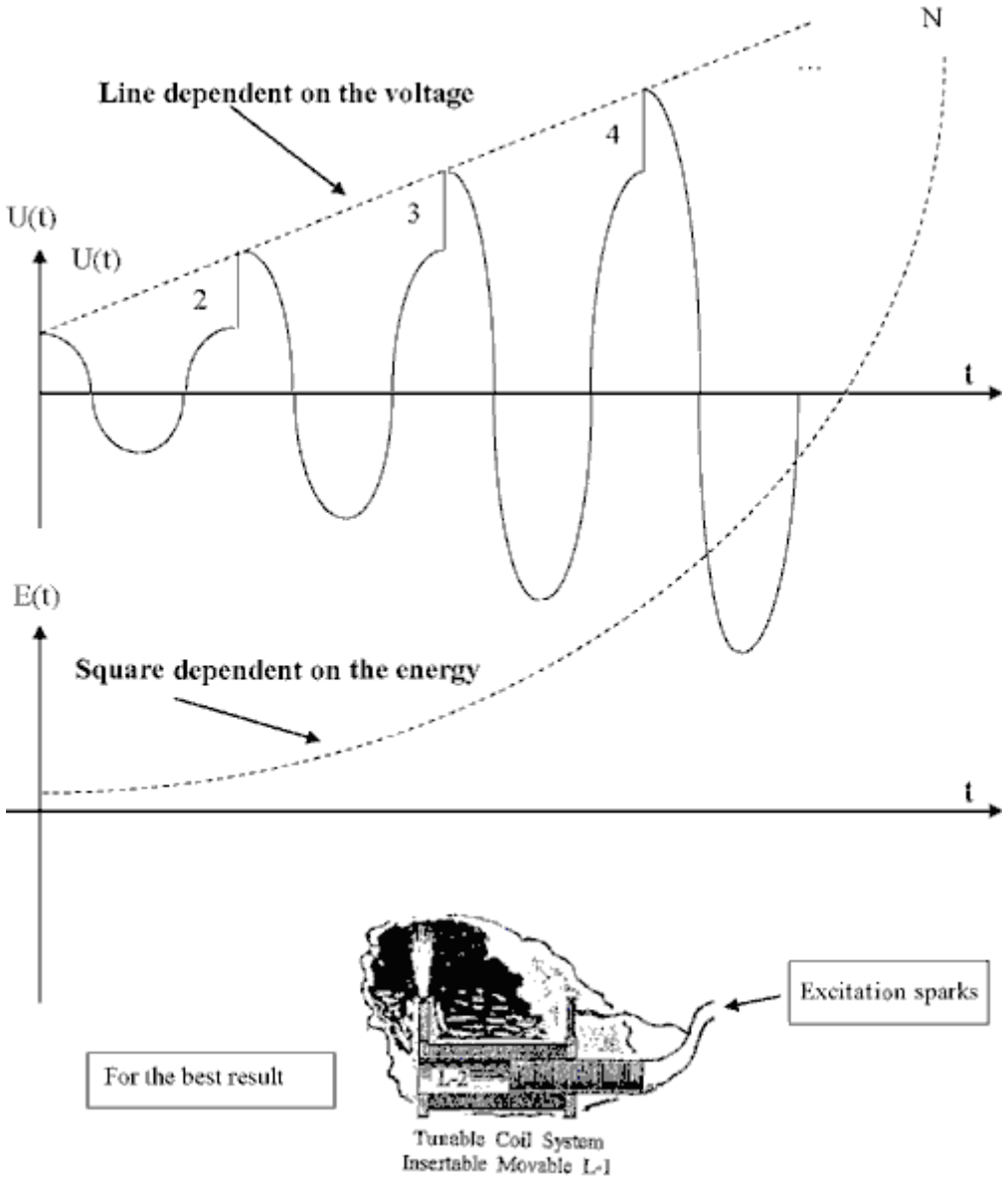
SECRET 1.2

The Spark-Exciting Generator ("SEG")

(Charge delivering to LC circuit)



REMARK The frequency of sparks is equal to the resonance frequency of the Tesla coil, and the moment of exciting corresponds to the maximum voltage on the Tesla coil.



EXPLANATION:

The spark delivers charge to the L-C circuit

The charge Q on a capacitor C with voltage U is: $Q = U \times C$ or $U = Q / C$

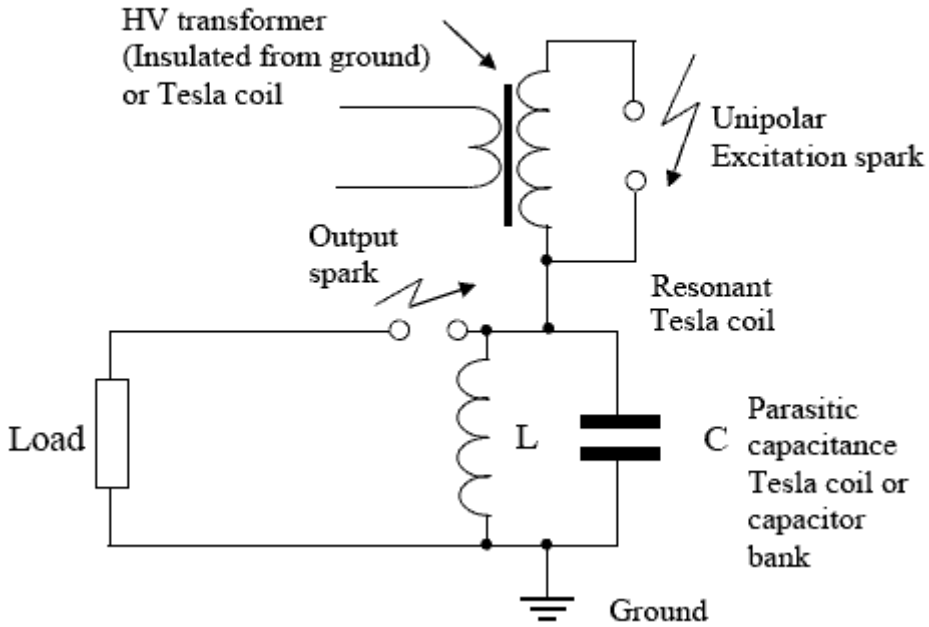
Where Q is a charge delivered by one spark.

During the excitation of the L-C circuit by the sparks, the capacitance C is constant.

After N excitations, the voltage Un on C will be Un = N x Q / C And, energy En will be raised as N^2.

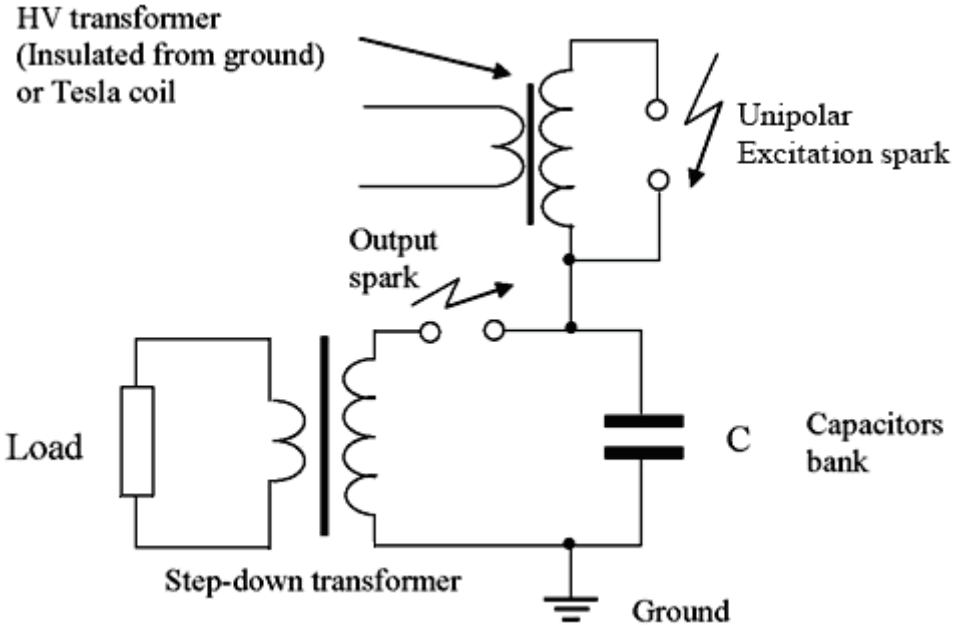
In other words, **If the L-C circuit is excited by charges, we have energy amplification**.

POSSIBLE MODIFICATION



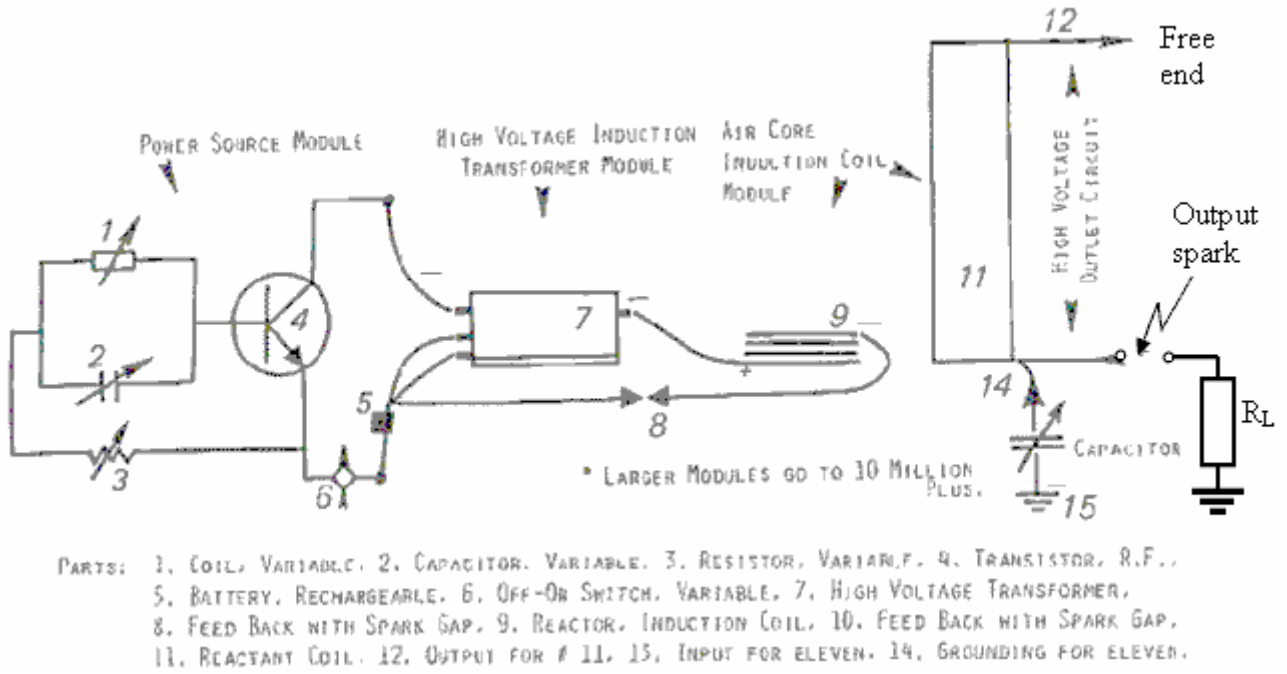
COMMENT: You need to understand that a feedback loop in the electromagnetic field is a changing voltage level in the L-C circuit capacitor, a high-voltage transformer is connected to collect the excess energy.

WITHOUT SYNCHRONISATION

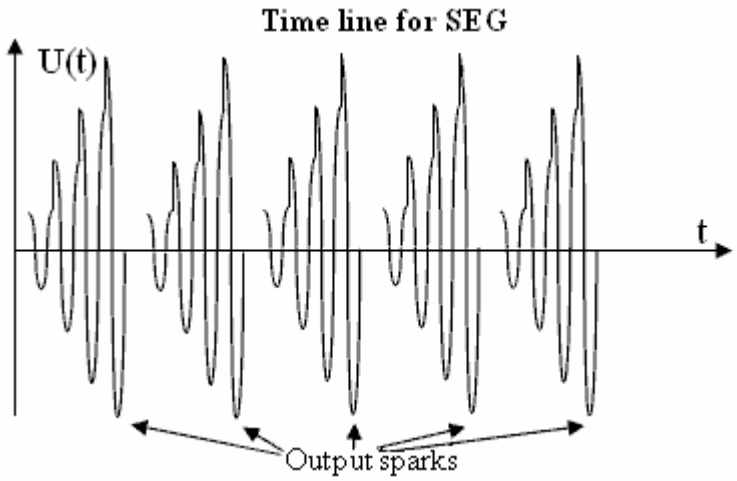


The Spark-Exciting Generator

From Don Smith



Parts: 1. Coil, Variable. 2. Capacitor, Variable. 3. Resistor, Variable. 4. Transistor, R.F., 5. Battery, Rechargeable. 6. Off-On Switch, Variable. 7. High Voltage Transformer, 8. Feed Back with Spark Gap. 9. Reactor, Induction Coil. 10. Feed Back with Spark Gap, 11. Reactant Coil. 12. Output for # 11. 15. Input for eleven. 14. Grounding for eleven.



MAINTAIN RESONANCE AND GET FREE-ENERGY !!

EXPLANATION: It appears that we need to charge the capacitor circuit to an energy level which is greater than that of the source energy itself. At first glance, this appears to be an impossible task, but the problem is actually solved quite simply.

The charging system is screened, or "blinded", to use the terminology of Mr. Tesla, so that it cannot “see” the presence of the charge in the capacitor. To accomplish this, one end of a capacitor is connected to the ground and the other end is connected to the high-energy coil, the second end of which is free. After connecting to this higher energy level from the energising coil, electrons from the ground can charge a capacitor to a very high level.

In this case, the charging system does not "see" what charge is already in a capacitor. Each pulse is treated as if it were the first pulse ever generated. Thus, the capacitor can reach a higher energy level than of the source itself.

After the accumulation of the energy, it is discharged to the load through the discharge spark gap. After that, the process is repeated again and again indefinitely ...

COMMENT: The frequency of the excitation sparks, must match the resonant frequency of the output coil. (capacitors 2 and 14 are used to achieve this goal). This is multi-spark excitation.

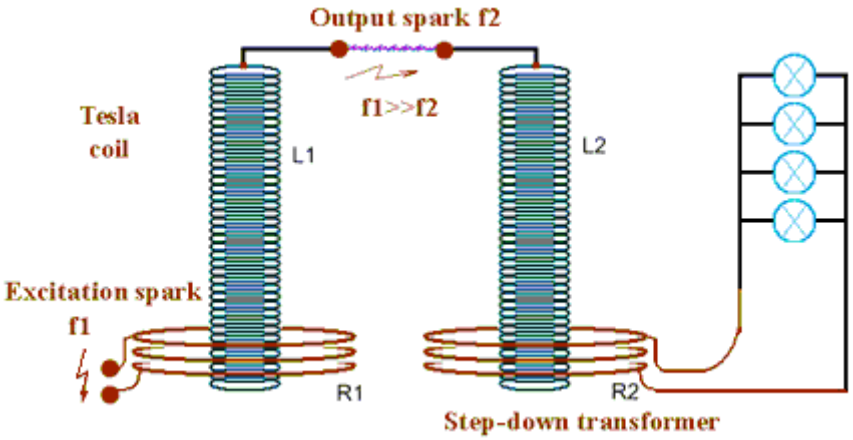
COMMENT: Charges are pumping from the ground to 11-15 circuit, this device extracts charge from ambient space. Because of this, it will not work properly without a ground connection.

If you need Mains frequency, or don't want use an output spark, then read the following parts…

Asymmetrical transformers can be used (read the following parts)

POSSIBLE SEG ARRANGEMENT

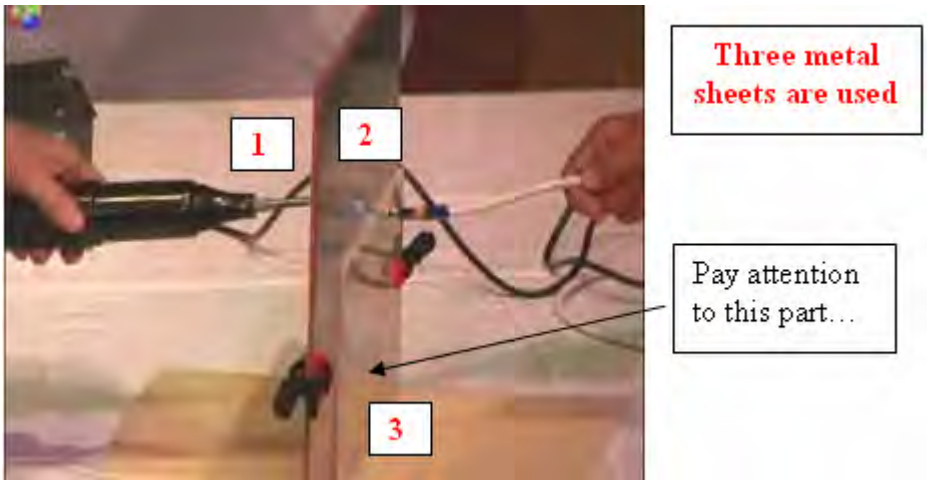
(From Russian forum)



COMMENT: The L1 Tesla coil shown above, is energised by spark f1. Resonant, step-down transformer L2 is connected to the L1 Tesla coil by output spark f2. The frequency of f1 is much higher than that of f2**.**

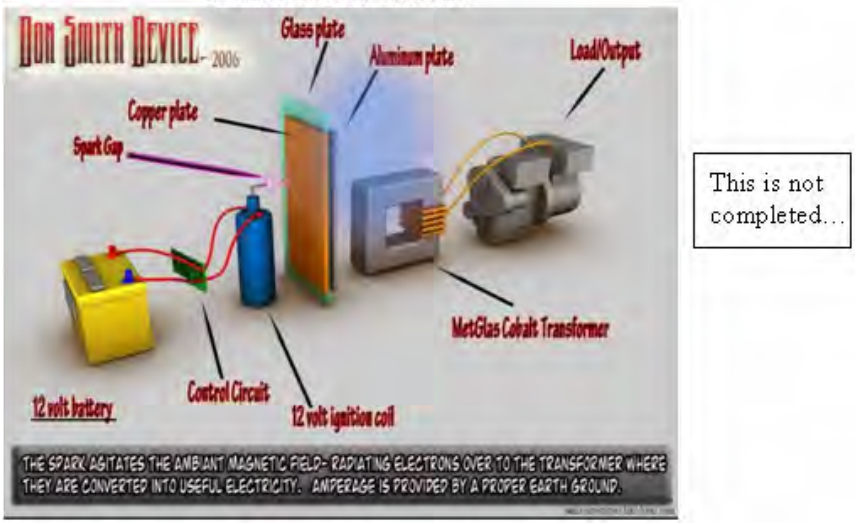
SEG WITHOUT SYNCHRONISATION

From Don Smith



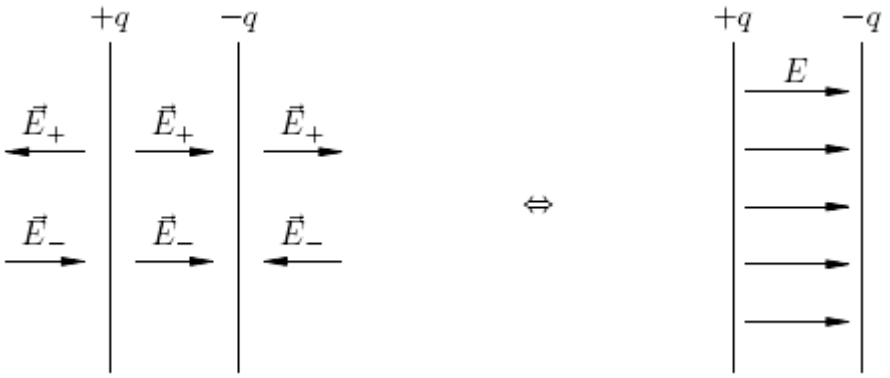
REMARK: It must be adjusted by dimensions, materials (???)

Possible schematics



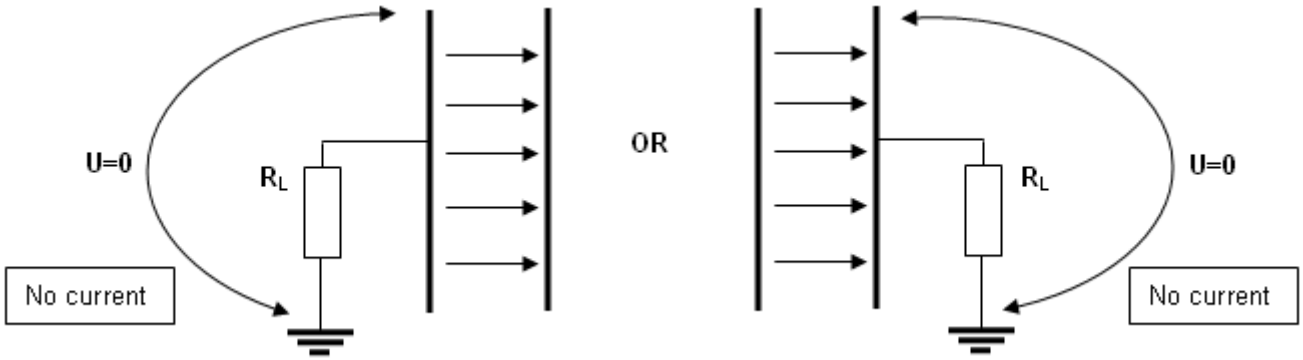
EXPLANATION

REMINDER: An ordinary capacitor is a device for separating charges on it's plates,
The total charge inside an ordinary capacitor is zero (read the textbooks).



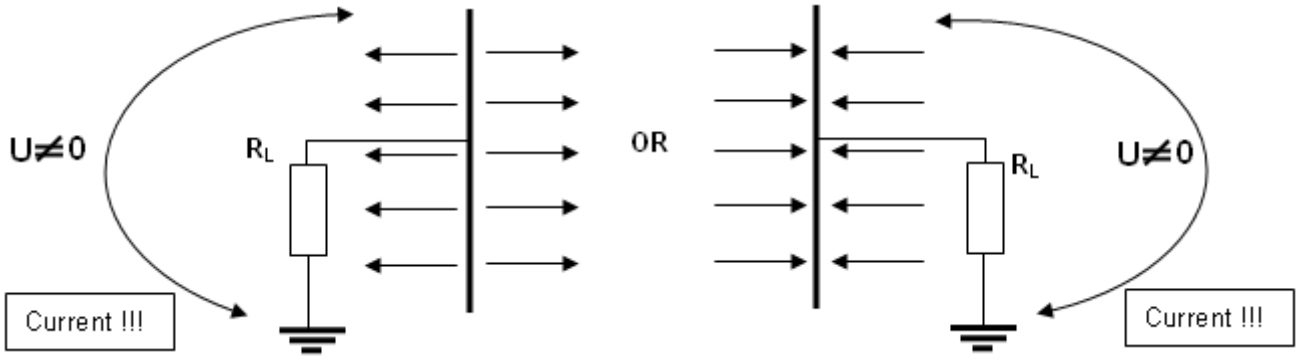
There is an electrical field only inside the capacitor. The electrical field outside the capacitor is zero (**because the fields cancel each other**).

So far, connecting one plate to the ground we will get no current flowing in this circuit:

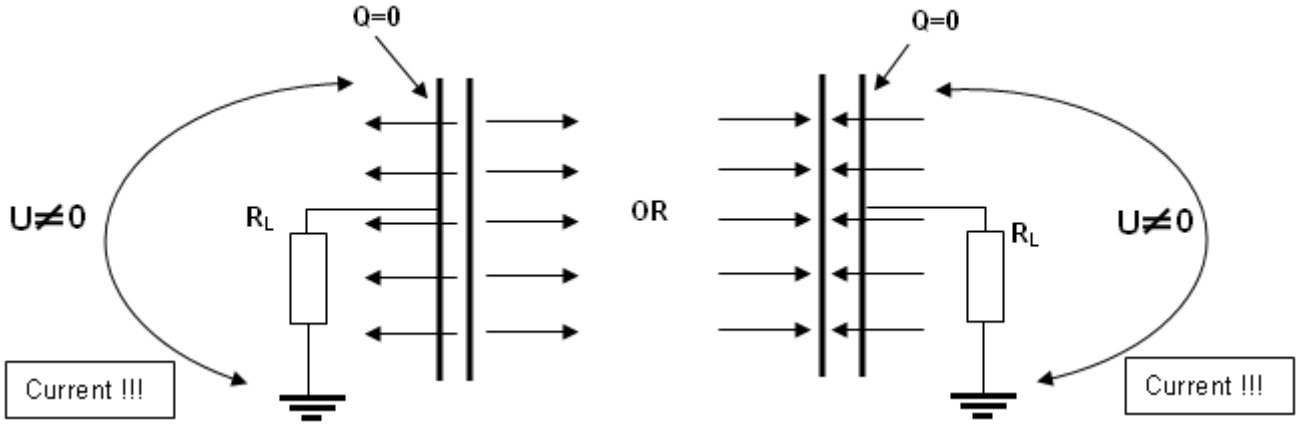


REMINDER: A separated capacitor is a device for accumulating charges on it's plates.

The total charge on a separated capacitor is NOT zero (read the textbooks). So far, by connecting one plate of the separated capacitor to the ground we will get a current flowing in this circuit (because there is an external field).



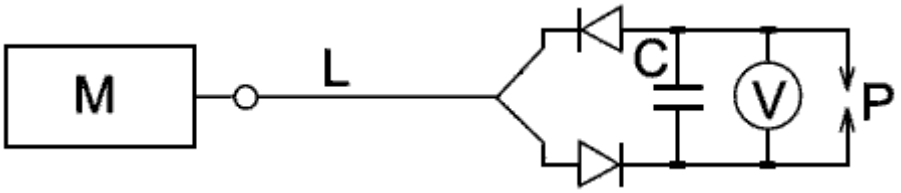
REMARK: We get the same situation, if only one plate of an ordinary capacitor is charged. So far, connecting an **uncharged plate** of an ordinary capacitor to the ground we get a current flowing in this circuit also (because there is an external field).



Alternately charging a capacitor's plates

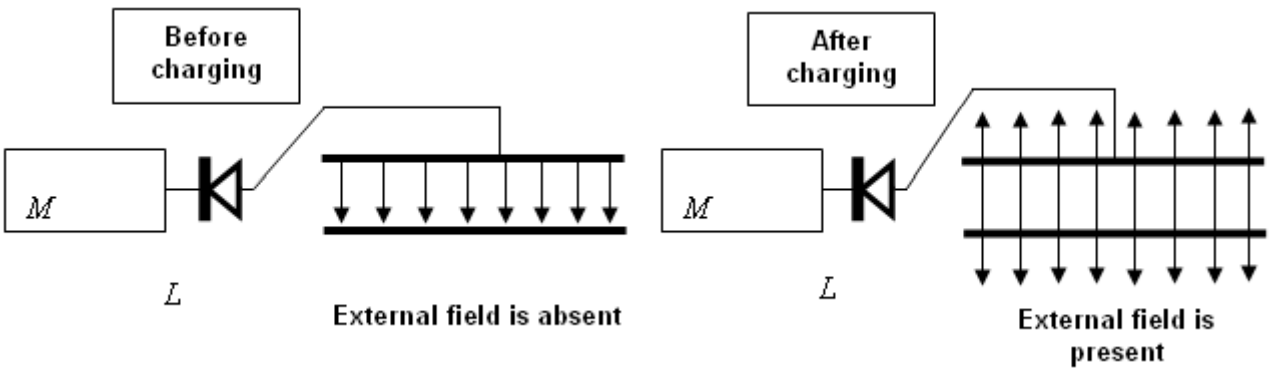
Avramenko's plug – is it a free energy device?

The principle: Each plate of a capacitor charges as a separated capacitor. Charging takes place in an alternating fashion, first one plate and then the other plate.

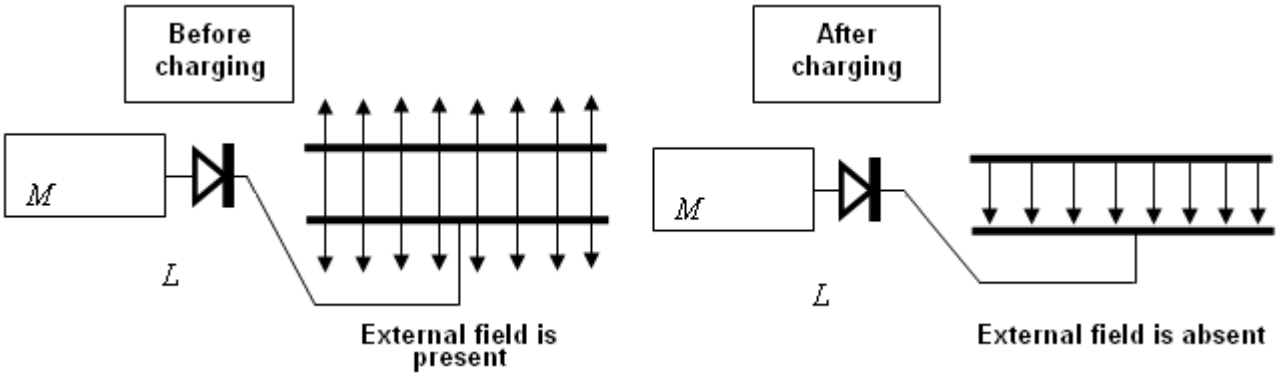


The result: The capacitor is charged to a voltage which is greater than that which the charging system delivers.

Explanation: The external field of an ordinary charged capacitor is equal to or near zero, as noted above. So, if you charge plates as a separated capacitor (upload or download charge), the charging system will not "see" the field which already exists inside the capacitor, and will charge the plates as if the field inside the capacitor is absent.



Once a plate has been charged, begin to charge another plate.

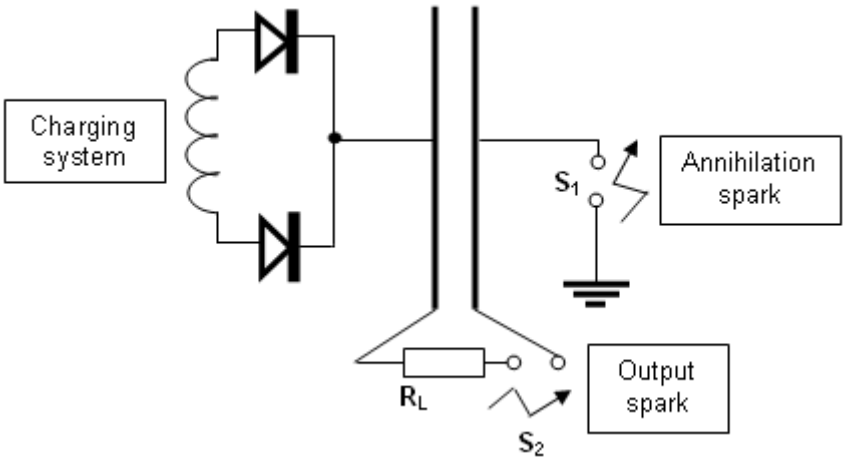


After the second plate of the capacitor has been charged, the external field becomes zero again. The charging system cannot "see" the field inside the capacitor once again and the process repeats again several times, raising the voltage until the spark gap connected to the output load discharges it.

REMARK: You will recall that an ordinary capacitor is a device for charge separation. The charging process of a capacitor causes electrons from on one plate to be "pumped" to another plate. After that, there is an excess of electrons on one plate, while the other one has deficit, and that creates a potential difference between them (read the textbooks). The total amount of charge inside the capacitor does not change. Thus **the task of the charging system is to move charge temporarily from one plate to another.**

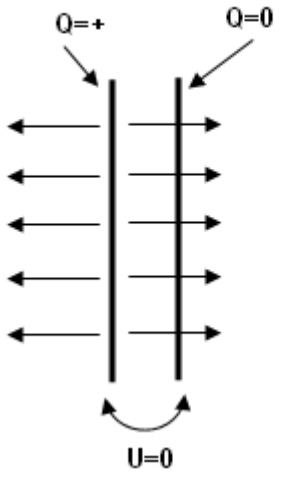
The simplest Free-Energy device (???)

REMARK: The capacitance of an ordinary capacitor is much greater than the capacitance of a separated plate capacitor (provided that it's plates are close to each other).

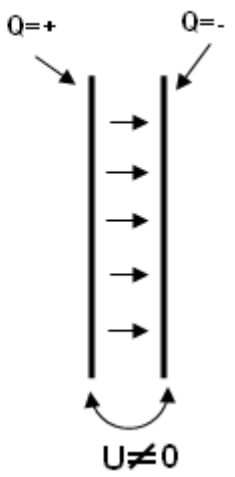


COMMENT: The time between S1 and S2 is very short.

FIELD BEFORE S1



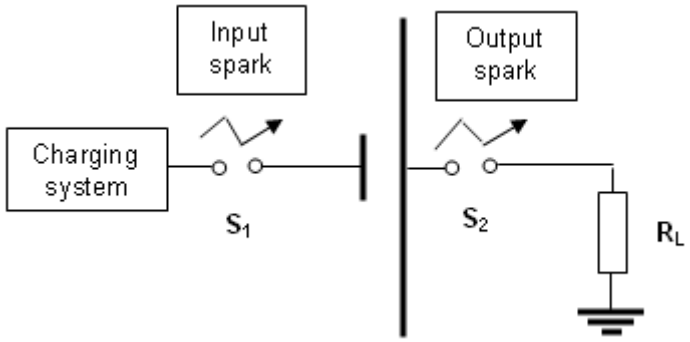
FIELD AFTER S1



REMARKS: This is an illustration of energy-dependence in a coordinated system.
This is an illustration of the so-called Zero-Point Energy.

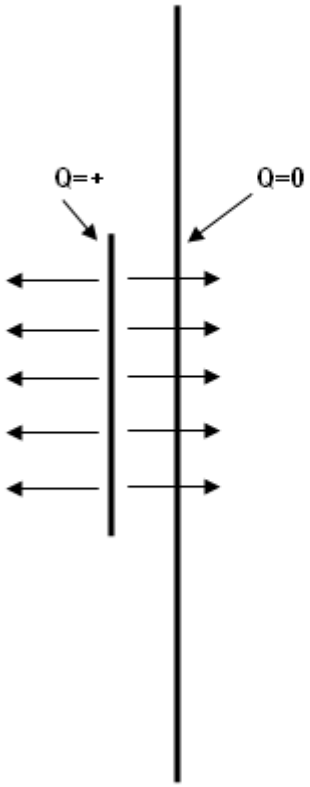
ASYMMETRICAL CAPACITOR

(Current amplification???)

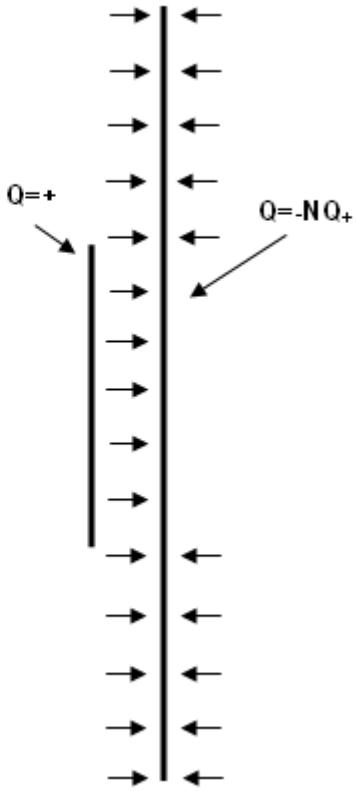


COMMENT: The capacitance (size) of the plate on the right is much greater than that of the plate on the left.

FIELD AFTER S1



FIELD AFTER S2

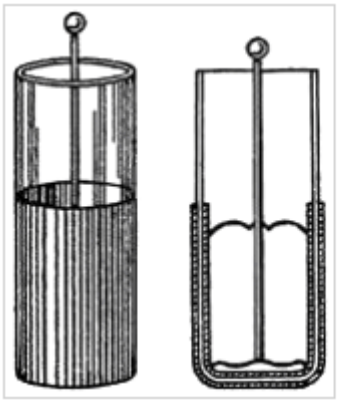


COMMENT: Charges from the ground will run on to the right hand plate **UNTIL** the moment when the external field drops to zero caused by the second spark ("S2"). It takes more charges flowing from the ground to annihilate the external field at the instant of the second spark, because the capacitance of the plate on the right is far greater. 'More charge' means 'more current', so you have achieved current amplification through this arrangement.

COMMENT: The field at the terminals of the plate on the right is not zero after both sparks have occurred, this is because a field remains due to the additional charges which have flowed in ('pumped') from the ground.

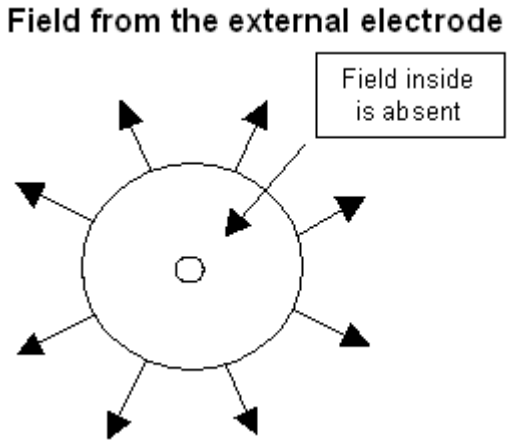
THE SIMPLEST ASYMMETRICAL CAPACITORS

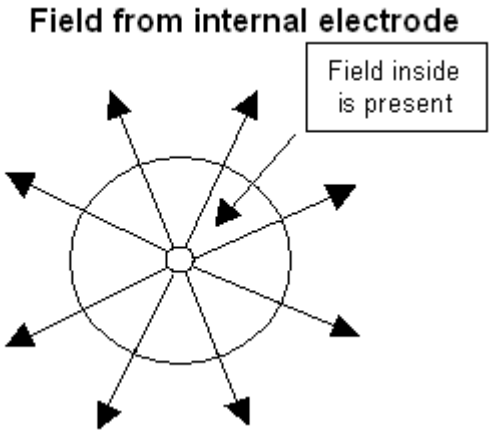
The most simple asymmetrical capacitors are the Leyden jar and the coaxial cable (also invented by Mr. Tesla).



Apart from the fact that the area (capacitance) of the plates of these capacitors is different, and they therefore are asymmetrical, they have another property:

The electrostatic field of the external electrode of these devices does not affect the internal electrode.



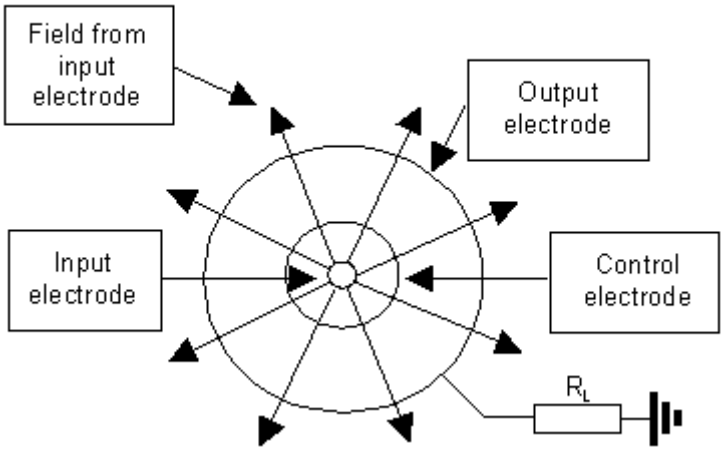


EXPLANATION: This is caused by the fact that the electrostatic field is absent inside the metal bodies (see textbooks).

REMARK: This is true provided that the plates are charged separately.

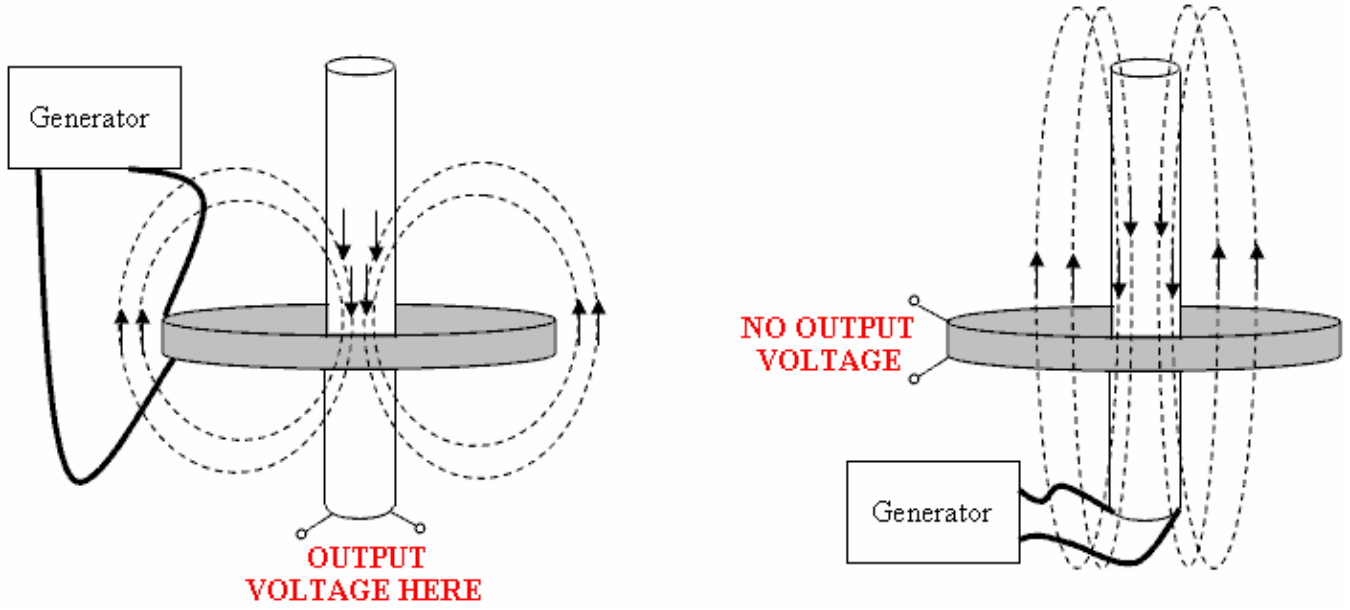
CAPACITOR - TRIODE

(The third electrode in an asymmetrical capacitor)



REMARK: Dr. Harold Aspden has pointed out the possibility of Energy Amplification when using this device.

THE PRINCIPLE OF THE "BLINDNESS" CHARGING SYSTEM IN THE SEG



EXPLANATION: The "short" coil is not able to see the oscillations in the "long" coil, because the total number of magnetic lines from the "long" coil which are passing through the "short" coil is close to zero (because one half is in one direction and the other half is in the opposite direction).

COMMENT: This a particular case of an asymmetrical transformer, for more details read the part about asymmetrical transformers.

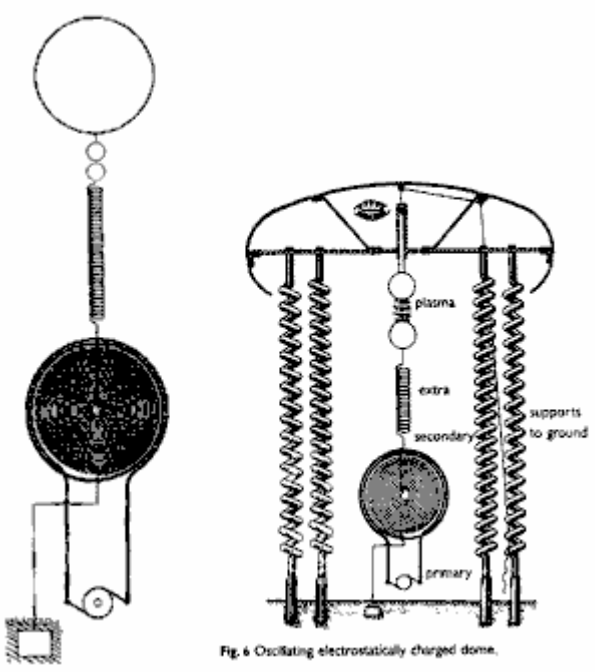
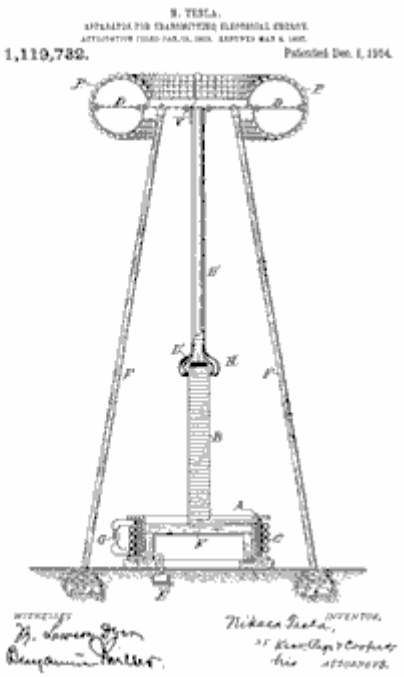
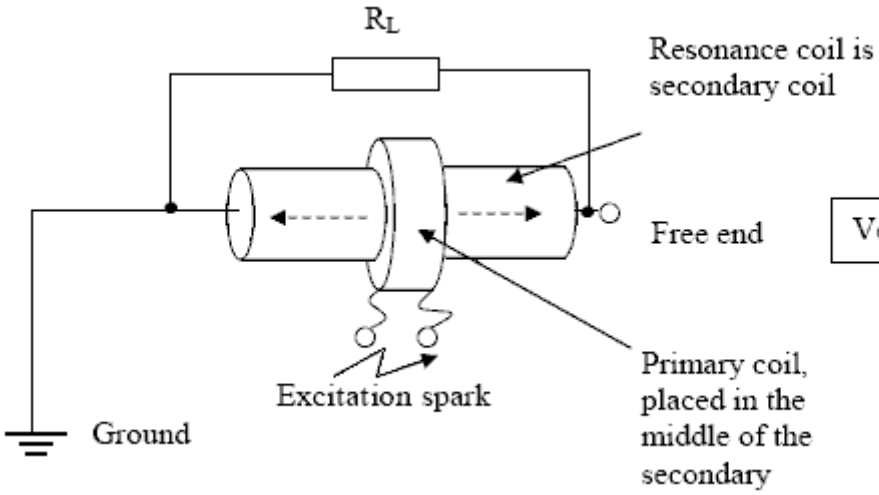


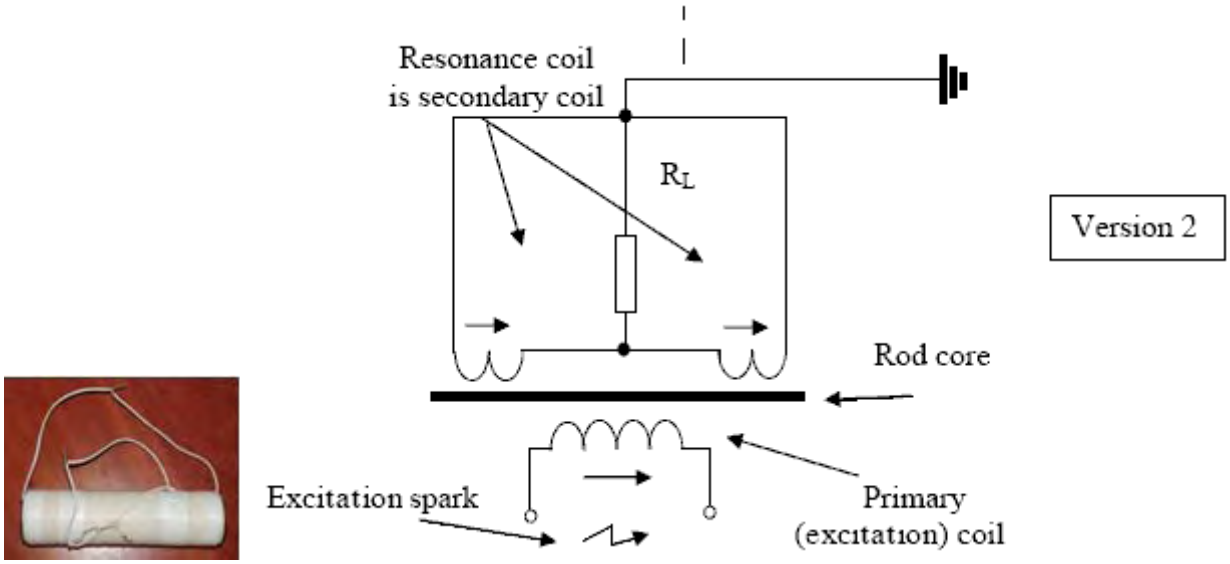
Fig. 6 Oscillating electrostatically charged dome.

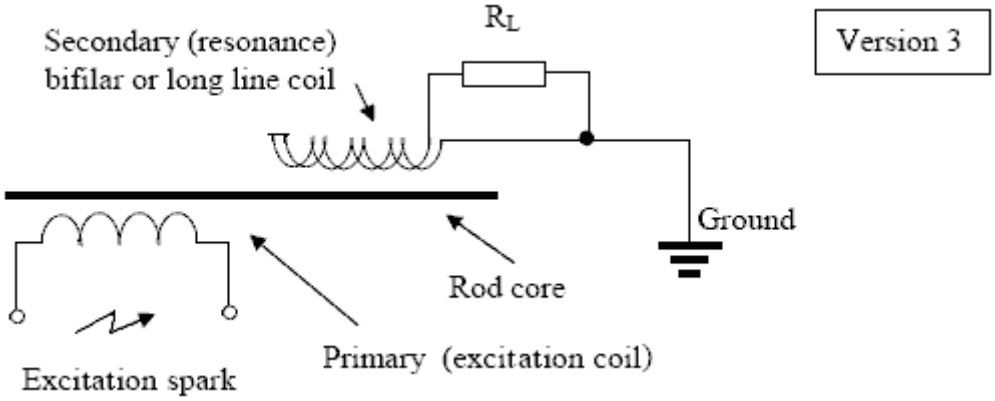


COMMENTS ABOUT THE SEG:

All Back EMF schematics can be used in SEG



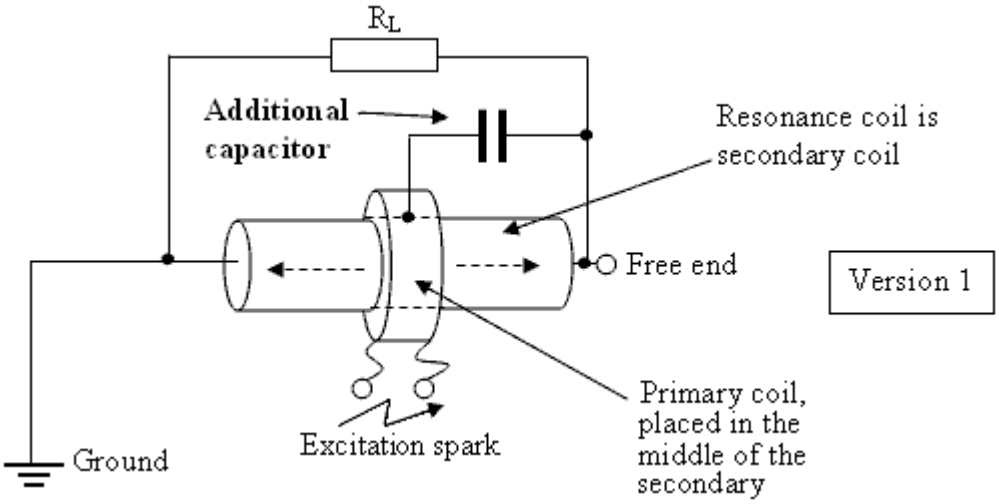




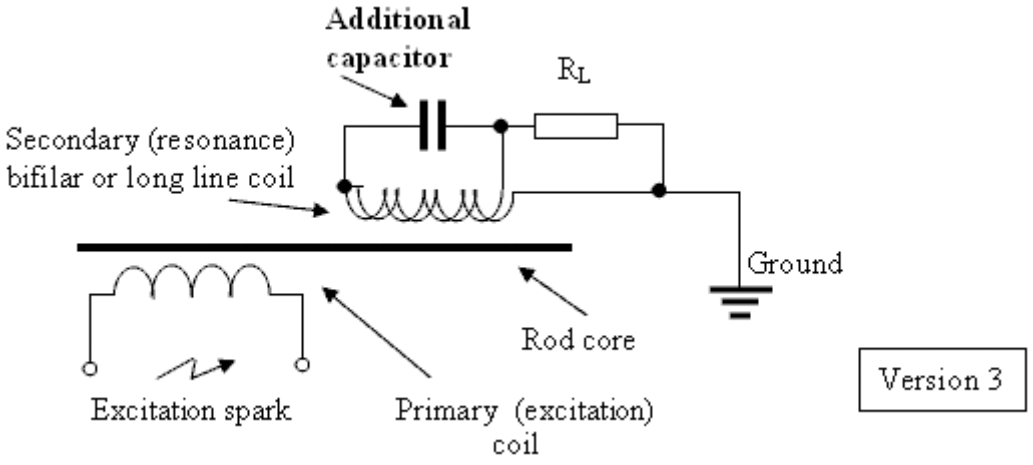
COMMENTS: No current will be produced in the load in any of these circuits, unless there is a ground connection. Is excitation possible with just a single spark (???)

FOR MORE ASYMMETRY IN SEG ?
FOR ONE SPARK EXCITING IN SEG ?

By Don Smith



Prototype coil

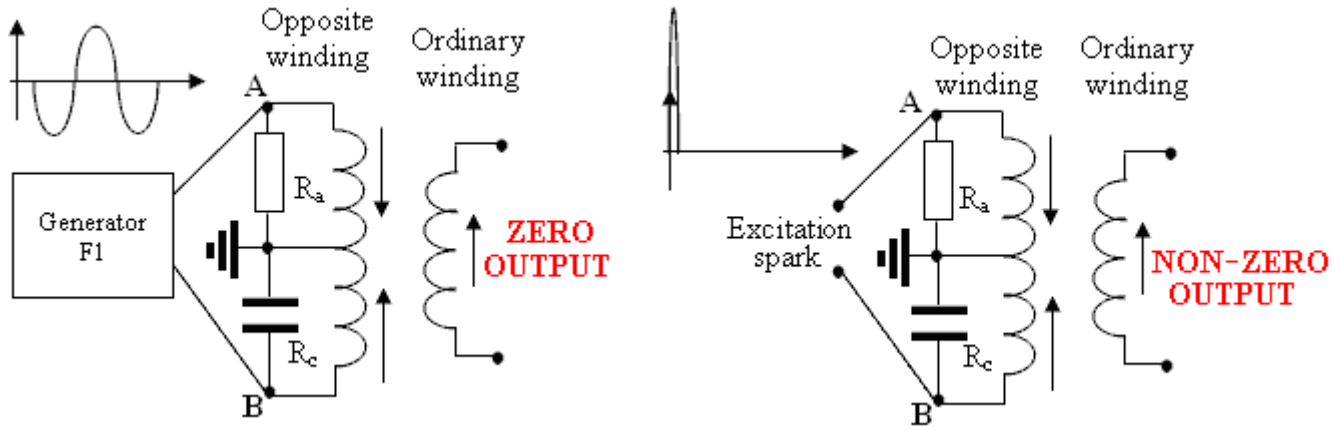


COMMENT: This arrangement becomes more asymmetrical after excitation

EXPLANATION

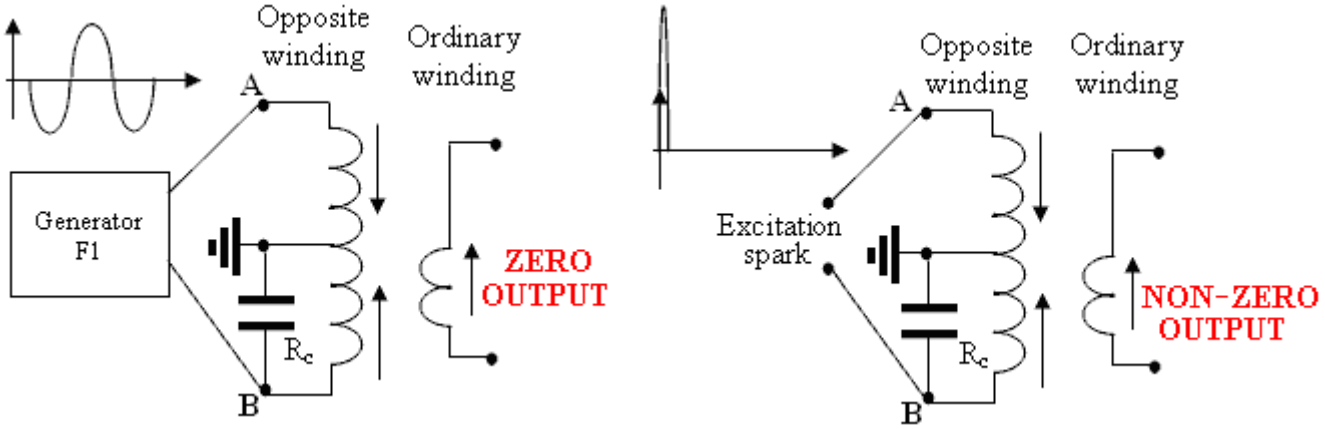
Symmetry is destroyed by a spark

If the impedances of Ra and Rc are the same at the frequency produced by signal generator F1, then the resulting voltage at points **A** and **B** will also be identical which means that there will be zero output.

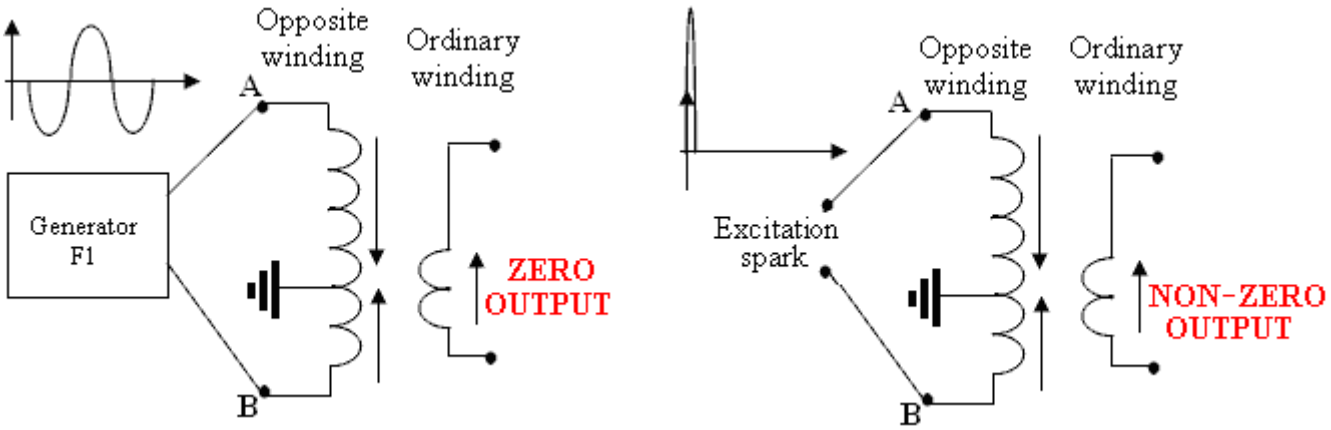


If the circuit is excited by the very sharp, positive-only, DC voltage spike produced by a spark, then the impedances of Ra and Rc are not the same and there is a non-zero output.

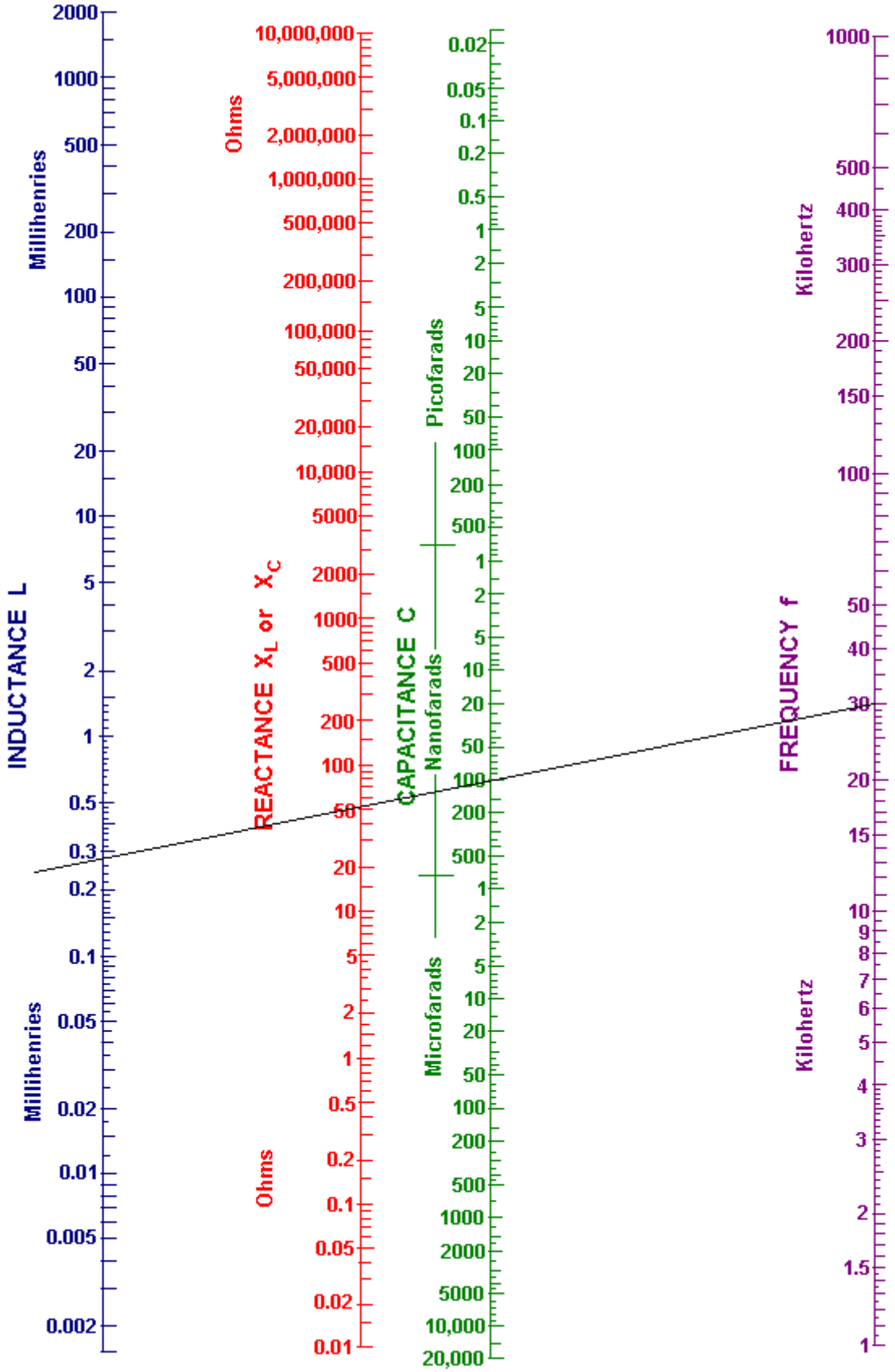
Here is a possible alternative. Please note that the position of the output coil must be adjusted, it's best position depending on value of resistor Rc and the frequency being produced by signal generator F1.



Here is another possible arrangement. Here, the position of the output coil depends on L1 and L2:



A NOMOGRAPH



Using a nomograph: Draw a straight line from your chosen 30 kHz frequency (purple line) through your chosen 100 nanofarad capacitor value and carry the line on as far as the (blue) inductance line as shown above.

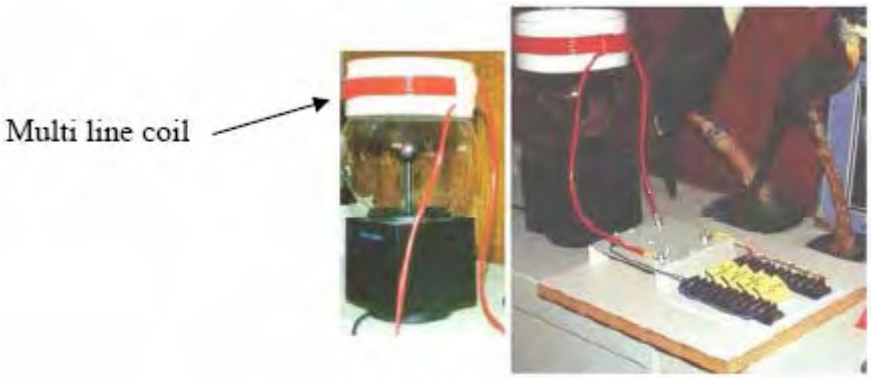
You can now read the reactance off the red line, which looks like 51 ohms to me. This means that when the circuit is running at a frequency of 30 kHz, then the current flow through your 100 nF capacitor will be the same as through a 51 ohm resistor. Reading off the blue "Inductance" line that same current flow at that frequency would occur with a coil which has an inductance of 0.28 millihenries.

MODERN OPTIONS IN SEG

Back EMF suppression in resonance coil

Version 3

By Don Smith



Globe device for energy generation

COMMENT: Please note that a long wire is used and one-spark excitation, where additional capacitors are used to create non-symmetry (???)

Version???

By Don Smith

Multi coil system for energy multiplication

Version???

By Tariel Kapanadze

No description, so read the following section…

KAPANADZE PROCESS

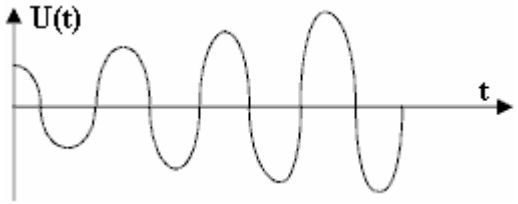
The process requires only 4 steps:

STEP 1

An L-C (coil-capacitor) circuit is pulsed and it's resonant frequency determined (possibly by feeding it power through a spark gap and adjusting a nearby coil for maximum power collection).

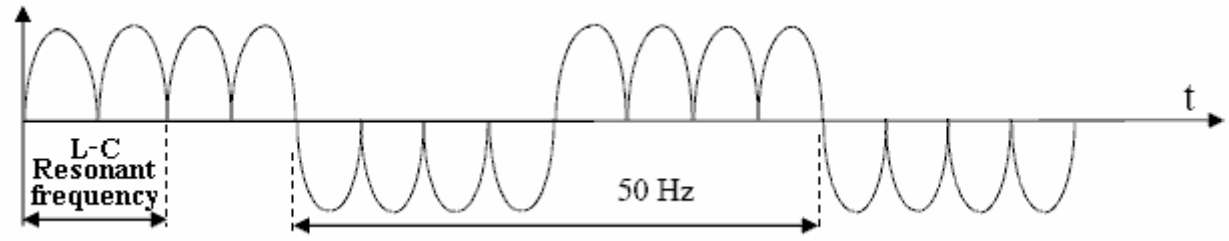
STEP 2

The SEG process causes the energy level in the L-C circuit to rise. Power is fed via a spark gap which produces a very sharp square wave signal which contains every frequency in it. The L-C circuit automatically resonates at it's own frequency in the same way that a bell always produces the same musical frequency when struck, no matter how it is struck.



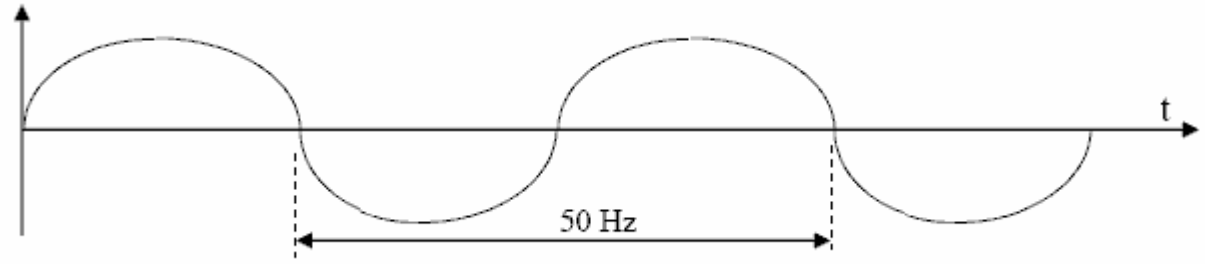
STEP 3

The output waveform from the L-C circuit is then manipulated to provide an output which oscillates at the frequency on the local mains supply (50 Hz or 60 Hz typically).



STEP 4

Finally, the oscillations are smoothed by filtering to provide mains-frequency output power.



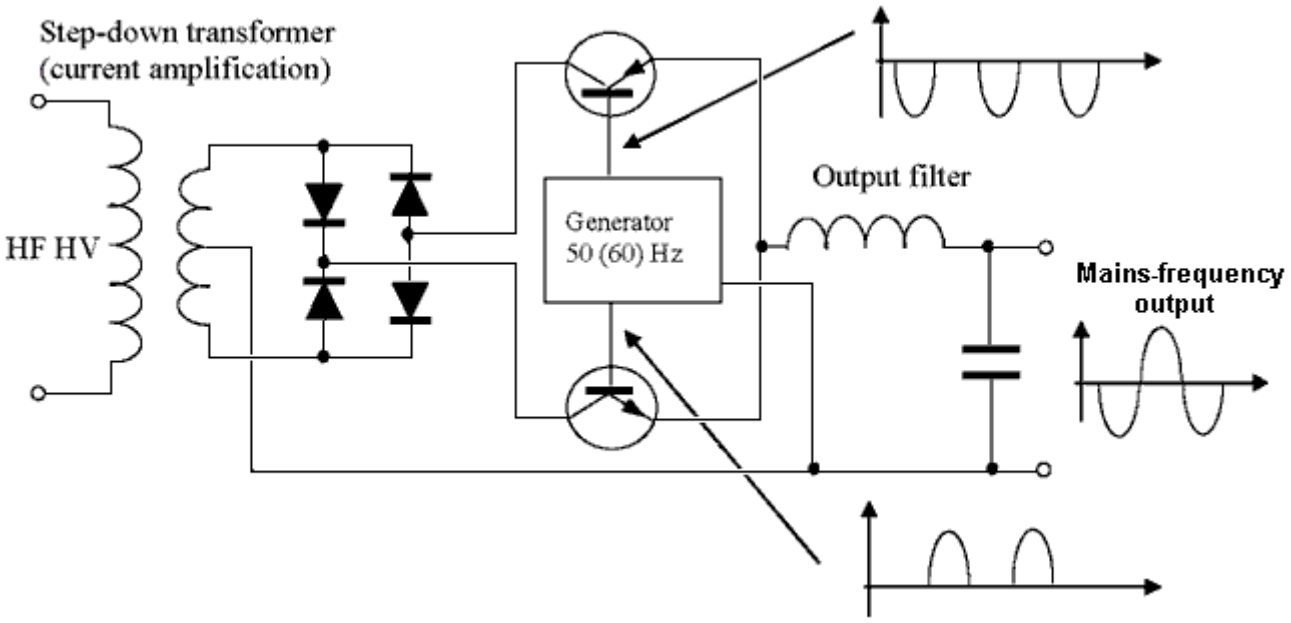
COMMENT: All of these processes are described in Kapanadze's patents and so, no state or private confidential information is shown here. Kapanadze's process is the SEG process.

COMMENT: As I see it, the main difference between the designs of Don Smith and Tariel Kapanadze is the inverter or modulator in the output circuit. At mains frequency you need a huge transformer core in a powerful inverter.

Read the following parts to discover more secrets…

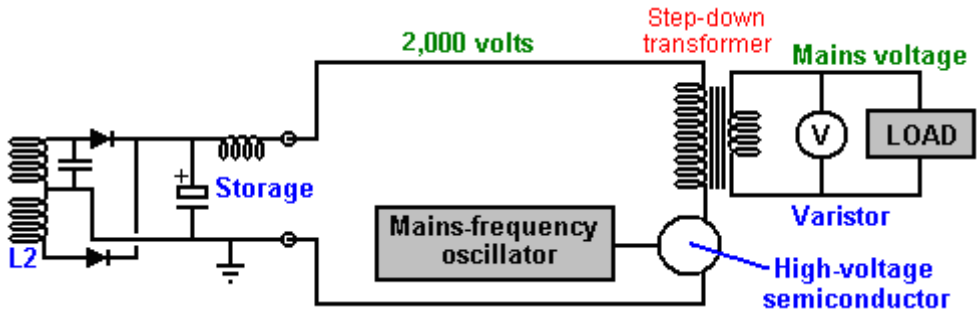
MODERN OPTION

Lowering the L-C frequency to mains frequency (Modulation)



COMMENTS: It is possible to use square waves instead of sine waves to ease the loading on the transistors. This is very similar to the output sections of Tariel Kapanadze's patents. This method does not require a powerful transformer with a huge core in order to provide 50 Hz or 60 Hz.

Don Smith's option (guessed at by Patrick Kelly)



COMMENT : There is no high-frequency high-voltage step-down transformer, but a step-down transformer is used for mains frequency which means that it will need a huge core.

FOR BOTH SCHEMATICS:

You must choose the load in order to get the maximum power output. Very low, and very high loads will give almost no energy in the load (because the current flowing in the output circuit is restricted by the current flowing in the resonant circuit).

ENERGY GAIN

(REMARKS on 1.1 and 1.2 SECRETS)

We must consider two options:
1. Back-EMF suppression . . . . . (1.1)
2. Excitation by a spark . . . . . (1.2).

THESE OPTIONS ARE DIFFERENT

However, in both cases, an increase of energy occurs due to the charges being pumped in from the ground. In the terminology of Mr. Tesla – "a charge funnel" or in modern terminology "a charge pump".

1. In the first case, the problem for the oscillating circuit is to "create" an electromagnetic field which has a high intensity electrical component in ambient space. (Ideally, it is only necessary for the high-voltage capacitor be fully charged once. After that, if the circuit is lossless, then oscillation will be maintained indefinitely without the need for any further input power).

THIS IS A "BAIT" TO ATTRACT CHARGES FROM THE AMBIENT SPACE.

Only a tiny amount of energy is needed to create such a "bait"...

Next, move the "bait" to one side of the circuit, the side which is the source of the charges (Ground). The separation between the "bait" and the charges is now so small that breakdown occurs. The inherent parasitic capacitance of the circuit will be instantly charged, creating a voltage difference at the opposite ends of the circuit, which in turn causes spurious oscillations. The energy contained in these oscillations is the energy gain which we want to capture and use. This energy powers the load. This very useful electromagnetic field containing our excess power oscillates in a direction which is perpendicular to the direction of oscillation of the "bait" field and because of this very important difference, the output power oscillations do not destroy it. This vital factor happens because the coil is wound with two opposing halves. The parasitic oscillations gradually die out, passing all of their energy to the load.

This energy-gaining process is repeated, spark by spark. The more often a spark occurs, the higher the excess power output will be. That is, the higher the spark frequency (caused by a higher voltage across the spark gap), the higher the power output and the greater the efficiency of the process. Hardly any additional "bait" energy is ever required.

2. In the second case we must charge the capacitor circuit to an energy level higher than that of the source energy itself. At first glance, this appears to be an impossible task, but the problem is solved quite easily.

The charging system is screened, or "blinded", to use the terminology of Mr. Tesla, so that it cannot "see" the presence of the charge in the capacitor. To accomplish this, one end of a capacitor is connected to the ground and the other end is connected to the high-energy coil, the second end of which is free. After connecting to this higher energy level from the energising coil, electrons from the ground can charge a capacitor to a very high level.

In this case, the charging system does not "see" what charge is already in a capacitor. Each pulse is treated as if it were the first pulse ever generated. Thus, the capacitor can reach a higher energy level than that of the source itself.

After the accumulation of the energy, it is discharged to the load through the discharge spark gap. After that, the process is repeated again and again indefinitely ...

THIS PROCESS DOES NOT REQUIRE THE SUPPRESSION OF BACK-EMF

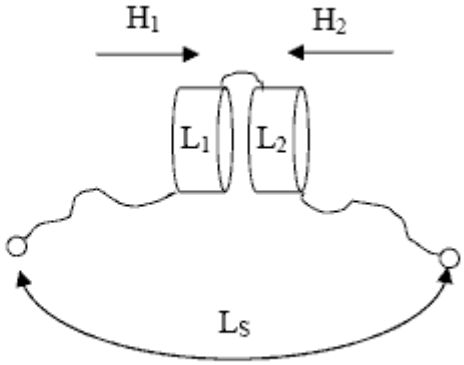
3. It should be noted, that option 1 and option 2 above could be combined.

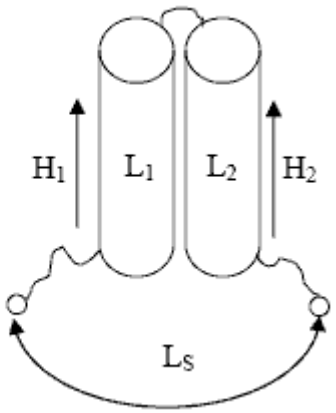
SECRET 2

SWITCHABLE INDUCTANCE

The inductance is comprised of two coils which are positioned close to each other. Their connections are shown in front.

1





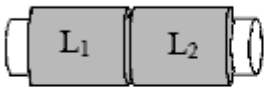
CONSTRUCTION: When constructing this arrangement there are many different options due to the various types of core which can be used for the coils:

1. Air-core

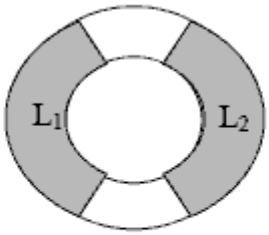
2. A ferromagnetic bar core

3. A ferromagnetic toroidal core

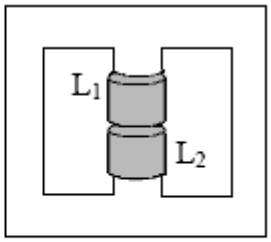
4. A transformer style ferromagnetic core.



2



3



4

PROPERTIES: (tested many times with a variety of cores)

The value of the total inductance L_S does not change if you short one of the inductors L_1 or L_2

(This may have been tested for the first time by Mr. Tesla back in the 19th century).

APPLICATION TECHNIQUE:

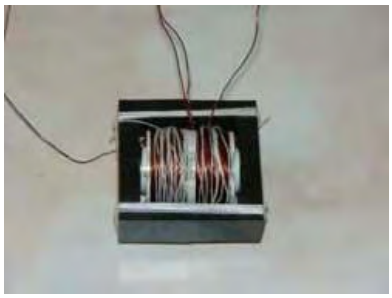
This energy generation is based on the asymmetrical process:

1. Feed the total inductance L_S with a current I
2. Then short-circuit one of the inductors (say, L1)
3. Drain the energy from inductor L2 into a capacitor
4. After draining L2, then remove the short-circuit from L1, short-circuit L2 and then drain the energy from L1 into a capacitor

QUESTION: Is it possible, using this method, to get twice the energy amount due to the asymmetry of the process, and if not, then what is wrong?

AN ANSWER: We need to start winding coils and performing tests.

EXAMPLES OF COILS ACTUALLY CONSTRUCTED



A coil was wound on a transformer ferromagnetic core (the size is not important) with permeability 2500 (not important) which was designed as a power-supply transformer. Each half-coil was 200 turns (not important), of 0.33 mm diameter wire (not important). The total inductance L_S is about 2 mH (not important).

A coil was wound on a toroidal ferromagnetic core with permeability 1000 (not important). Each half-coil was 200 turns (not important), of 0.33 mm diameter wire (not important). The total inductance L_S is about 4 mH (not important).

An ordinary laminated iron core transformer intended for 50-60 Hz power supply use (size is not important) was wound with a coil placed on each of it's two halves. The total inductance L_S is about 100 mH (not important).

THE OBJECTIVE OF THE TESTS

To make tests to confirm the properties of the coils, and then make measurements of the L_S inductance both with coil L2 short-circuited and coil L2 not short-circuited, and then compare the results.

COMMENT: All of the tests can be done with just the toroidal coil as the other coils have been shown to have the same properties. You can repeat these tests and confirm this for yourself.

OPTION 1

These simple inductance measurements can be carried out with the help of an ordinary RLC (Resistance / Inductance / Capacitance) meter, such as the one shown here:

The measurements taken:

The total coil inductance L_S was measured without short-circuited coils, the figure was recorded. The L2 coil was then short-circuited and the inductance L_S measured again and the result recorded. Then, the results of the two measurements were compared.

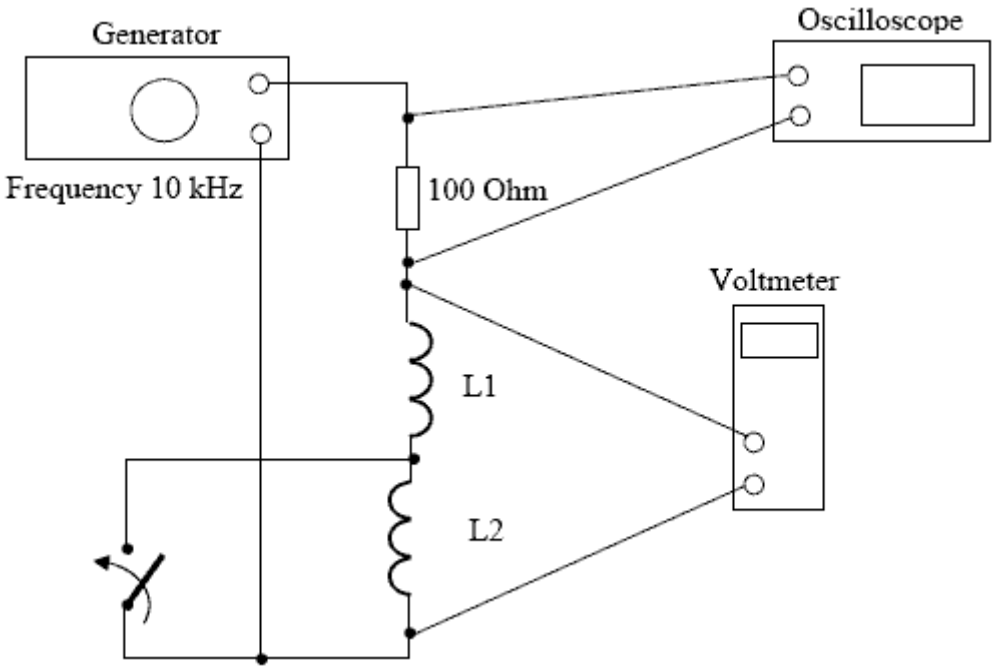
The result: The inductance L_S was unchanged (to an accuracy of about a one percent).

OPTION 2

A special set-up was used, consisting of an analogue oscilloscope, a digital voltmeter and a signal generator, to measure a voltage on the inductance L_S without L2 being short-circuited and then with L2 short-circuited.

After the measurements were made, all of the results were compared.

Schematic of the set-up:



The order in which the measurements were taken

The voltage on the resistor was measured using the oscilloscope and the voltage on the inductor was measured using the voltmeter. Readings were taken before and after short-circuiting L2.

The result: The voltages remained unchanged (to an accuracy of about one percent).

Additional measurements

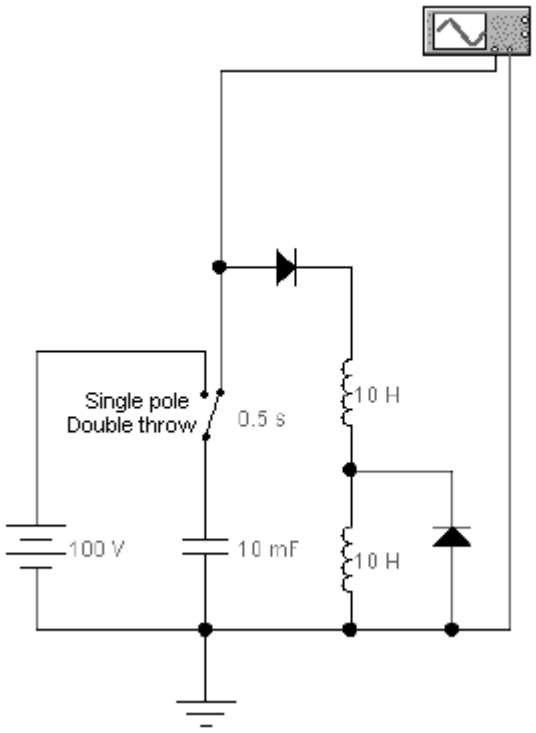
Before the above measurements were taken, the voltages across L1 and L2 were measured. The voltage on both halves was a half of the voltage on the total inductor L_S.

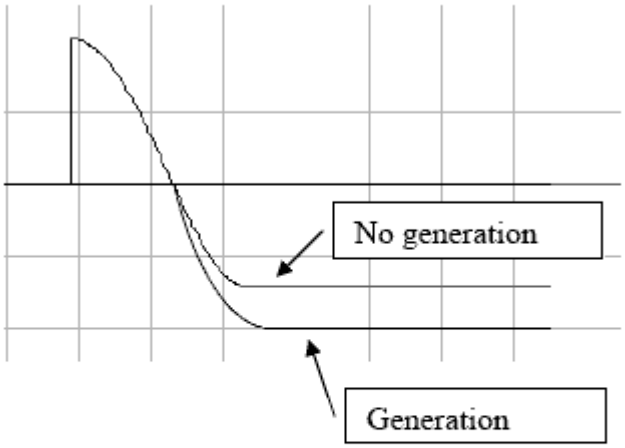
COMMENT: The frequency of about 10 kHz was chosen because the coil did not have parasitic resonances at this frequency or at low frequencies. All measurements were repeated using a coil with a ferromagnetic E-shaped transformer core. All of the results were the same.

OPTION 3

Capacitor recharging.

The objective was to match voltages on a capacitor, both before and after it being recharged by interaction with an inductor which could be connected into the circuit via a switch.



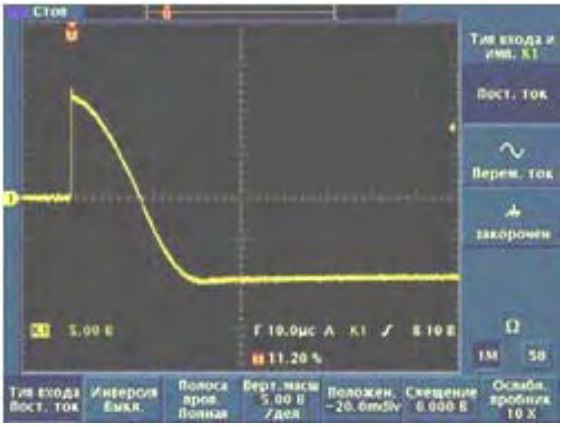


The experiment conditions

A capacitor is charged from a battery and is connected to the inductor through the first diode (included to give protection against oscillations). At the moment of feedback, half of the inductor is shunted by the second diode (due to it's polarity), while the inductance must remain unchanged. If after recharging the capacitor the capacitor voltage is the same (but with reversed polarity), then generation will have taken place (because a half of the energy remains in the shunted half of the inductor).

In theory, it is impossible, for an ordinary inductor consisting of two coils to do this.

The result :



The result confirms the prediction – the remaining energy is more than the capacitor gives to the coil (with an accuracy of 20%).

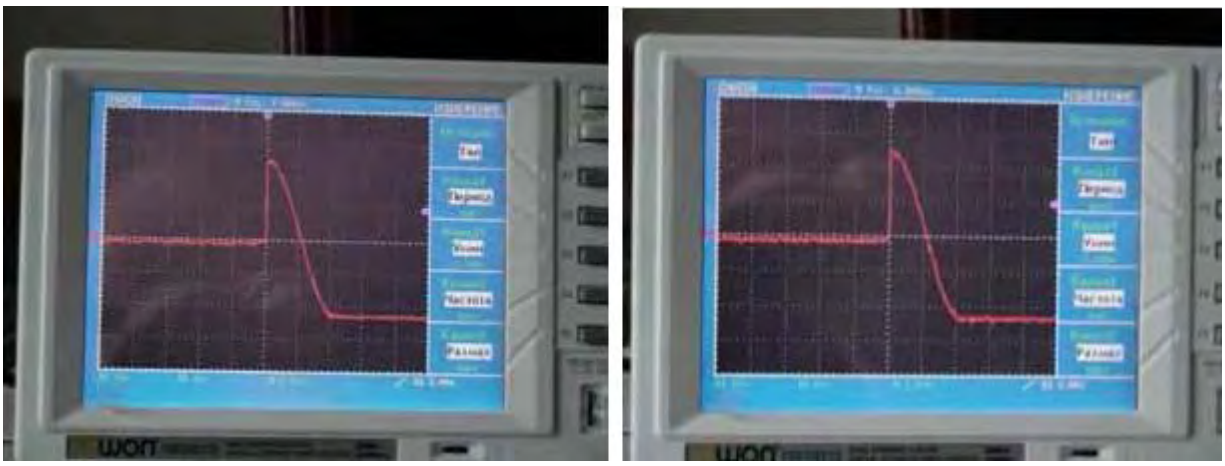
Test components: Capacitor 47 nano Farads, inductor LS is about 2 mH , Shotky silicon diodes BAT42, voltage used: 12 V.

THE RESULT VERIFICATION FOR OPTION 3

For verification of these results and in order to improve the accuracy, all measurements were repeated using alternative components.

Test components: Capacitor: 1.5 nano Farads; total inductance: 1.6 mH, germanium diodes: (Russian) D311, charging voltage: 5V.

The result: Confirmation of the previous measurements (a) shown below:

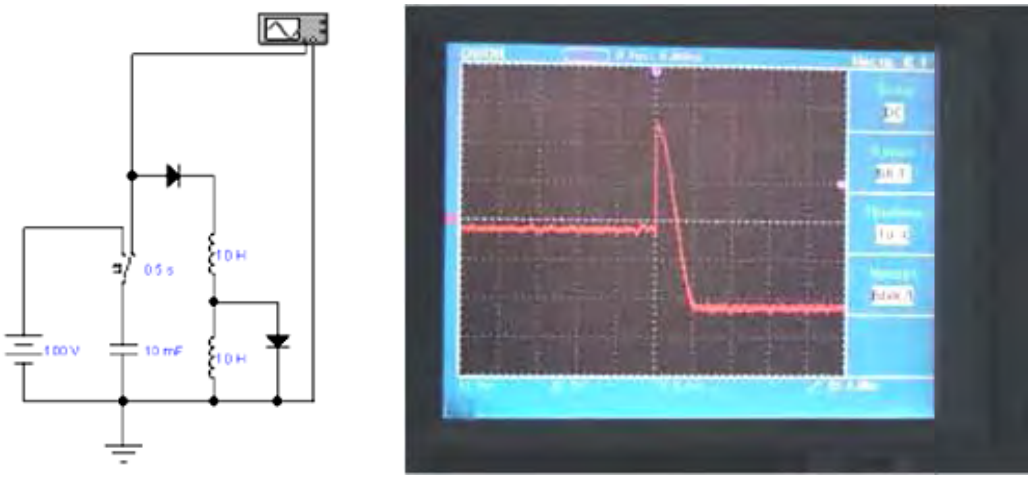


(a) (b)

The recharging accuracy was improved to 10 percent. Also, a check measurement was made **without the second diode**. The result was essentially the same as the measurement which used the shunting diode. The missing 10 percent of the voltage can be explained as losses due to the spread capacitor's inductance and in it's resistance.

CONTINUED TESTING

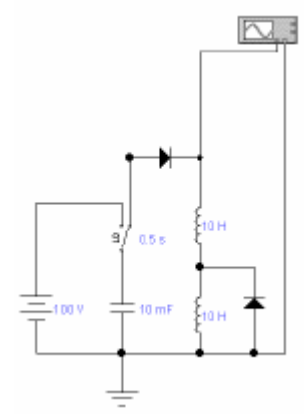
The shunting diode was reversed and the test performed again:

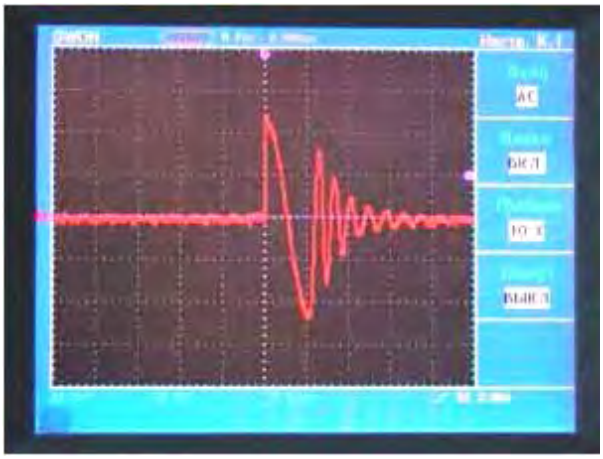


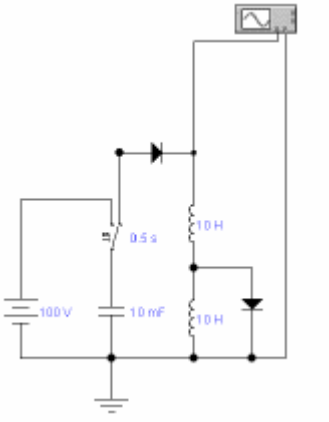
The result: It seems that the charge is spot on…

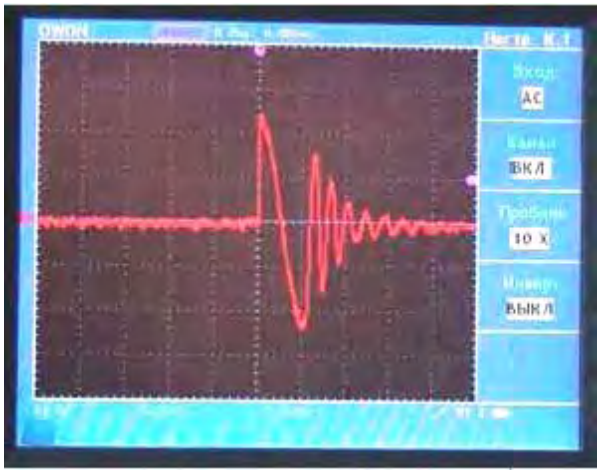
Further testing

An oscilloscope was connected to the coil instead of to the capacitor, in order to avoid influence of the first diode so the oscillations viewed were based on the inductance of the spread capacitors.





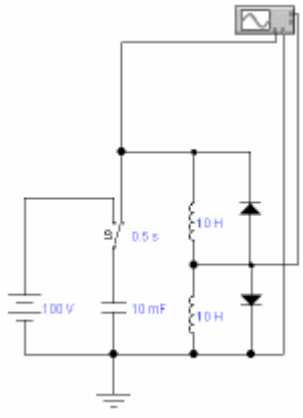


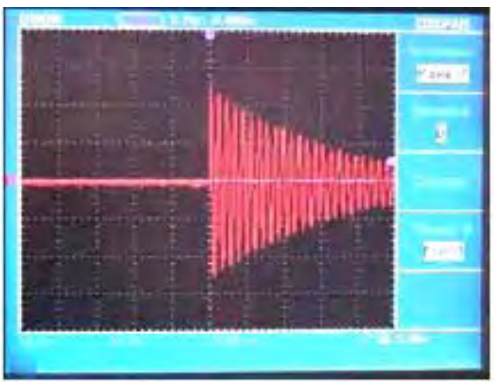


The result: The accuracy of capacitor recharging was improved to 5 percent (due to the removal of the influence of the first diode)**.** After the main capacitor was switched off (by the diode), you can see oscillations caused by the spread capacitance of the inductors. Based on the frequency of the oscillations which were 4 to 5 times higher than that of the main capacitor, one can estimate the spread capacitance as being 16 to 25 times lower than the main capacitor.

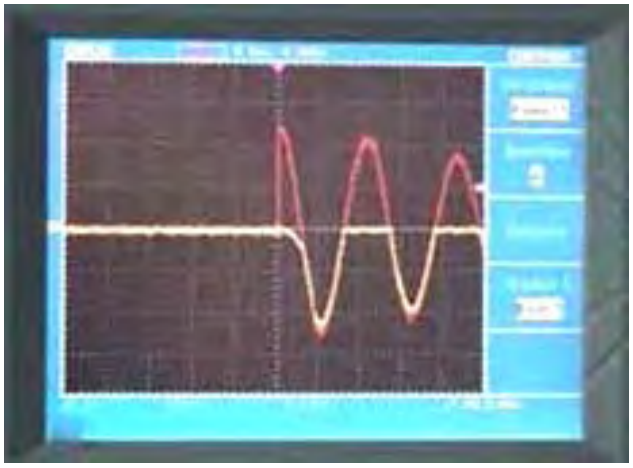
Still further testing

Testing of the oscillation circuit shunting, with the two cases combined (and without the first diode):



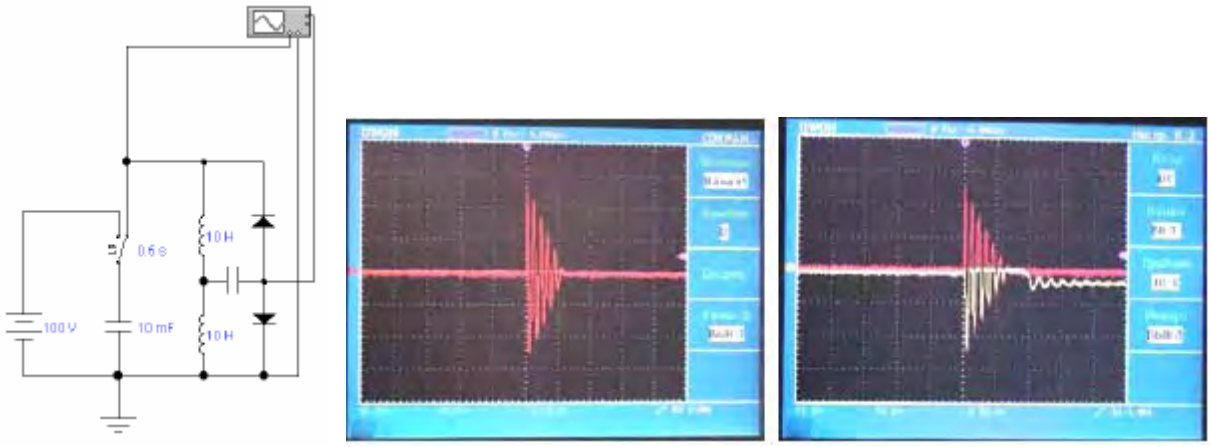


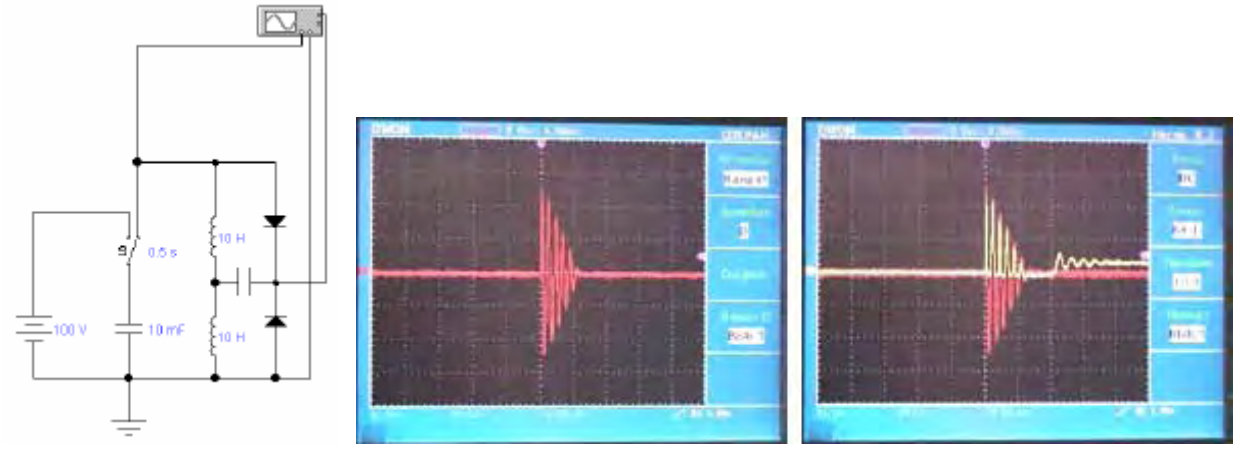
The result: A contour (oscillation circuit) is not destroyed, but it is shunted a lot. One can explain it by considering the moments when both diodes are conducting and so, shunt the circuit. As an addition, the voltage on the down diode is shown (the time scale is stretched). The negative voltage is close to maximum.



Still further testing

Charging a capacitor by shunting current in oscillation mode.





Conditions: The addition of a charging capacitor of 47 nano Farads.

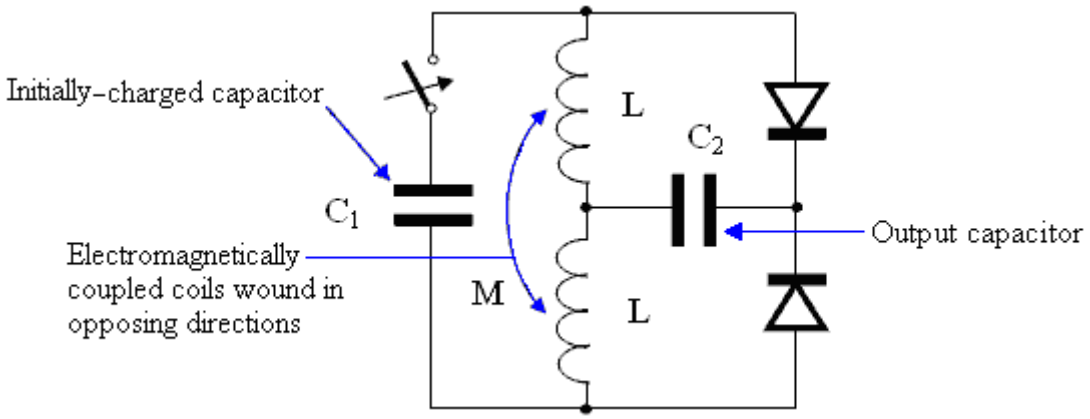
The result: A capacitor is charging without shunting the circuit. The final voltage on it is 0.8 V, and rises an falls of the voltage depend on the value of the capacitor.

THE OVERALL RESULTS OF THE TESTS (OPTIONS 1, 2 and 3)

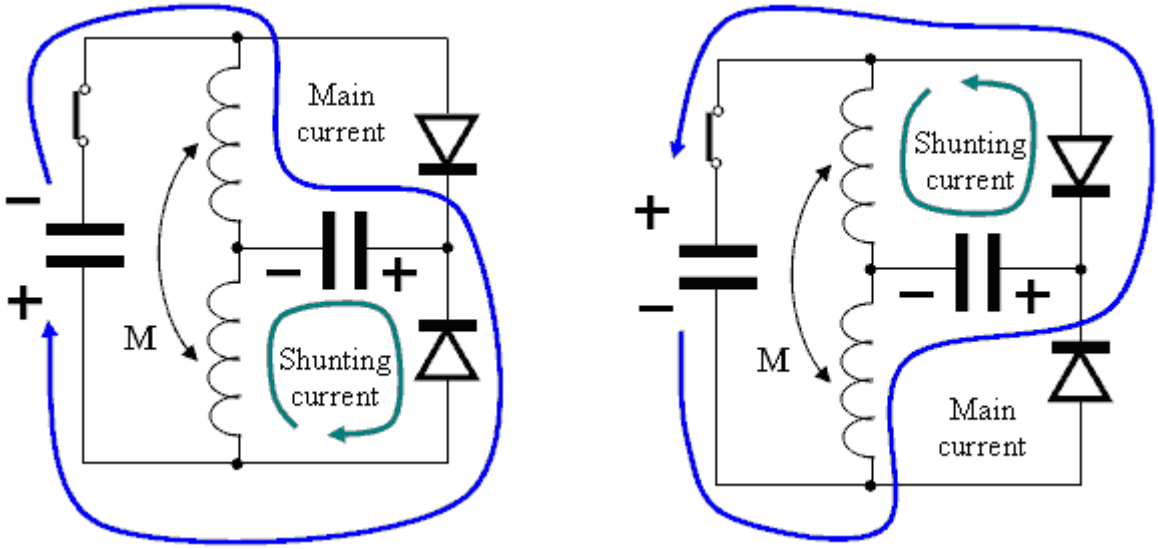
The symmetry of interaction in systems with electromagnetic field feedback (as with switched inductance) appears to be violated, and this implies that this arrangement could be used to generate energy.

COMMENT: You need to choose the load in order to get the maximum power output. **Very low, and very high loads, will send almost no energy to the load.**

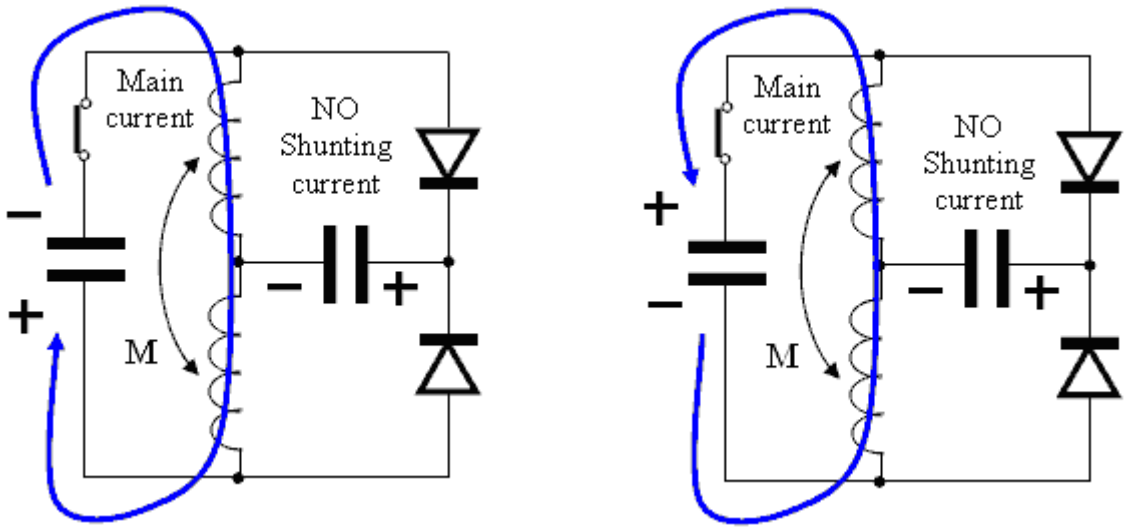
ILLUSTRATION FOR SWITCHABLE INDUCTANCE



EXPLANATION: The circuit has two kinds of currents: the main current and the shunting current.



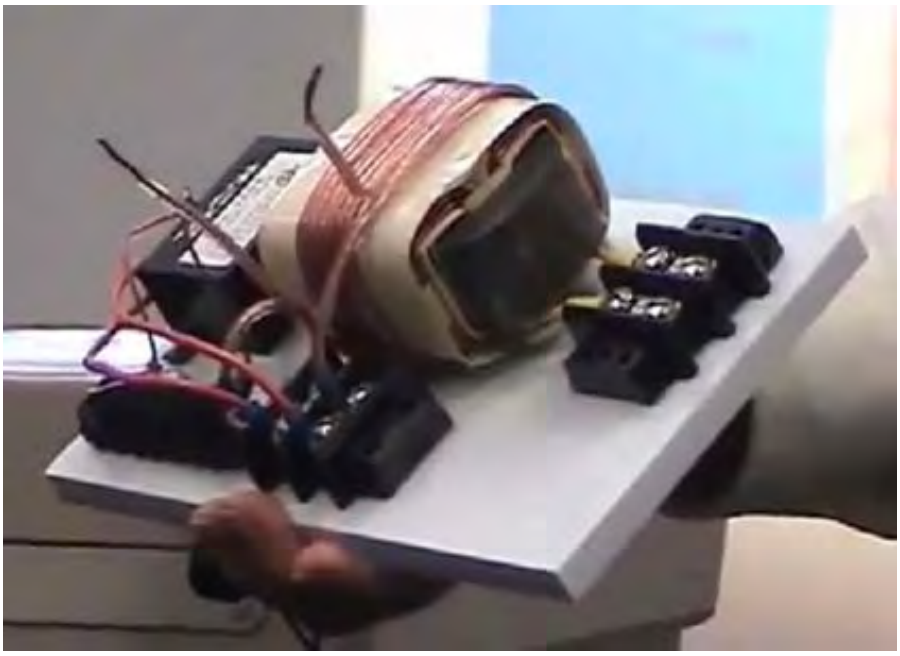
The main and the shunting currents run through the same output capacitor in one direction, if the output capacitor is discharged.



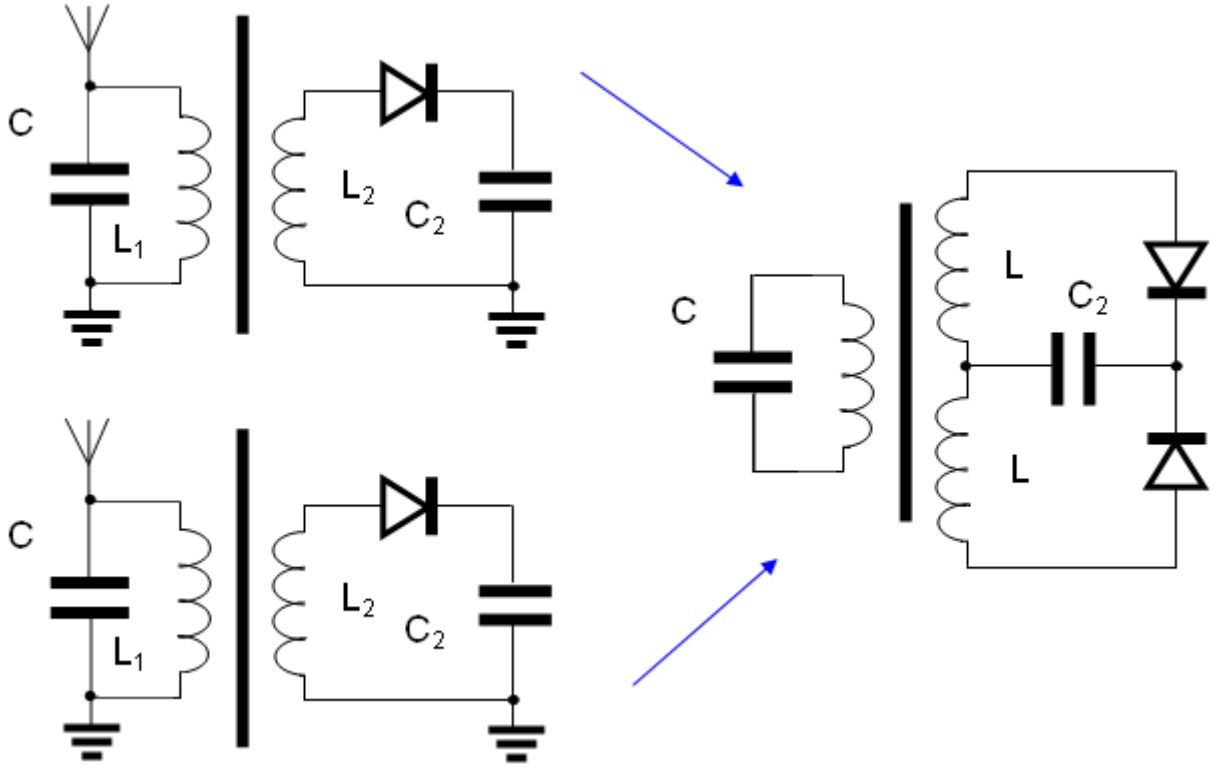
There is no shunting current, if the output capacitor is charged.

ILLUSTRATION FOR SWITCHABLE INDUCTANCE

From Don Smith



EXPLANATION As Don Smith said, two detector receivers were combined, and one FE device was constructed.



COMMENT Don Smith produced this explanation as a PDF file; maybe you'll be able to find it on the internet.

COMMENT The resistance of the load must be chosen so as to get the maximum possible power in it.

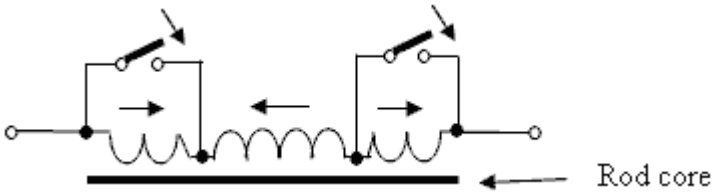
COMMENT The "board" does not contain an output circuit, because a couple of spark gaps and one step-down transformer can be used instead of diodes and a capacitor (this was pointed out before, so read the part which describes the suppression of back EMF).

MODERN OPTIONS?

In switchable inductance

Version 1

A coil has more inductance when some of it's parts are short-circuited:

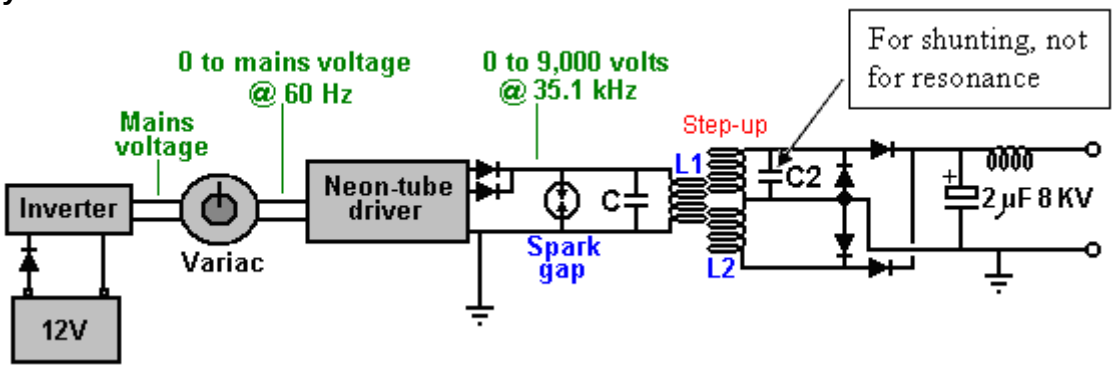


EXPLANATION: The central section of the coil and it's two end sections are wound in opposite directions.

COMMENT: The coil shown in the picture above has **twice the inductance**, when it's end sections are short-circuited (measurements made with the Chinese-built RLC test meter shown here):

Version 2

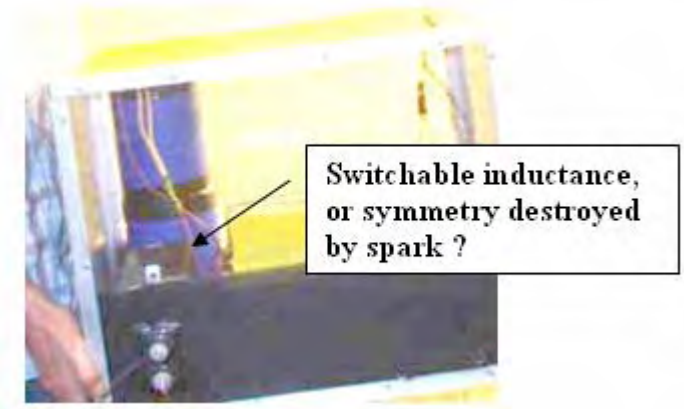
By Don Smith



But, this looks like resonance in an asymmetrical transformer **?????**

Version 3

By Tariel Kapanadze



No description …**???**

Read on for further details….

THE BASIS OF SWITCHABLE INDUCTANCES

(Tesla patent)

(No Model.) 2 Sheets—Sheet 1.

N. TESLA.

REGULATOR FOR DYNAMO ELECTRIC MACHINES.

No. 336,961. Patented Mar. 2, 1886.

Fig. 1.

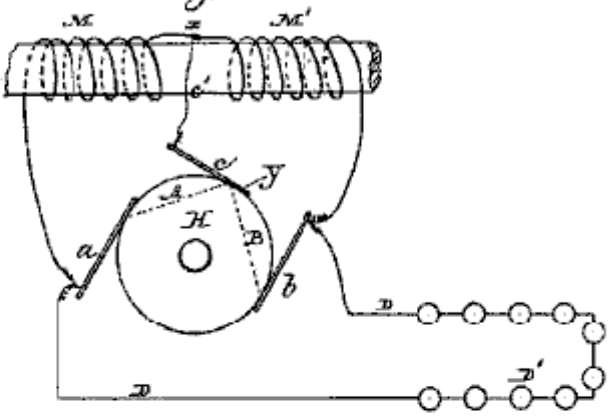


Fig. 2.

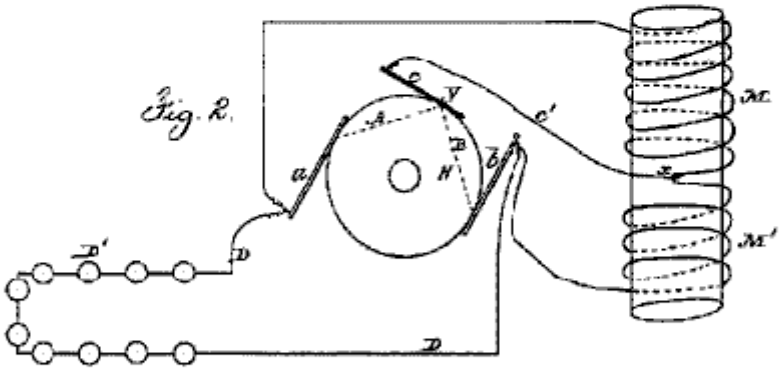
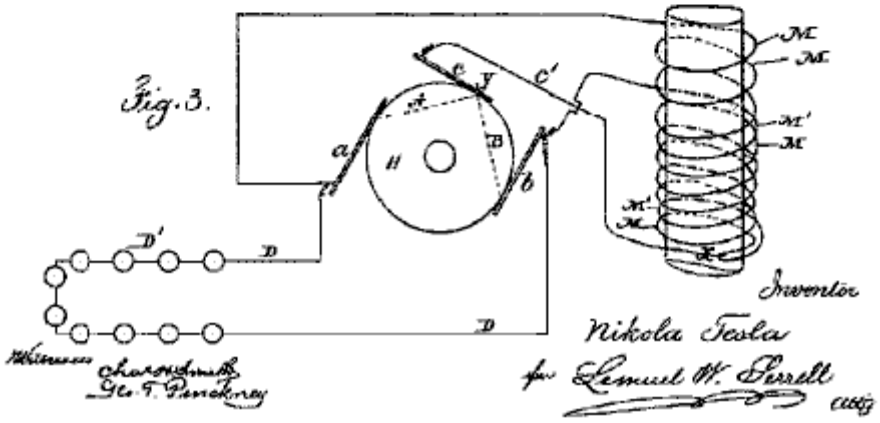


Fig. 3.



Witnesses
Chas. D. Smith
Geo. T. Pinckney

Inventor
Nikola Tesla
for Lemuel W. Serrell
Atty

SECRET 3

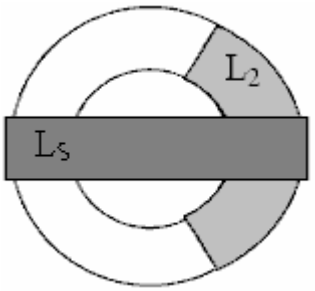
THE ASYMMETRICAL TRANSFORMER

With a magnetic field feedback loop (evolution of the 2nd secret)

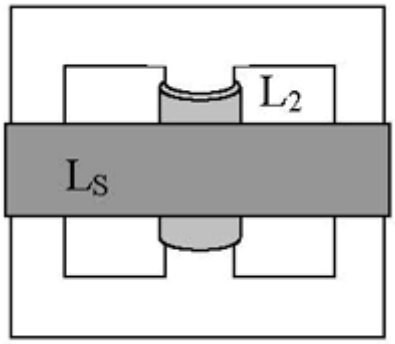
LENZ LAW IS VIOLATED IN AN ASYMMETRICAL TRANSFORMER

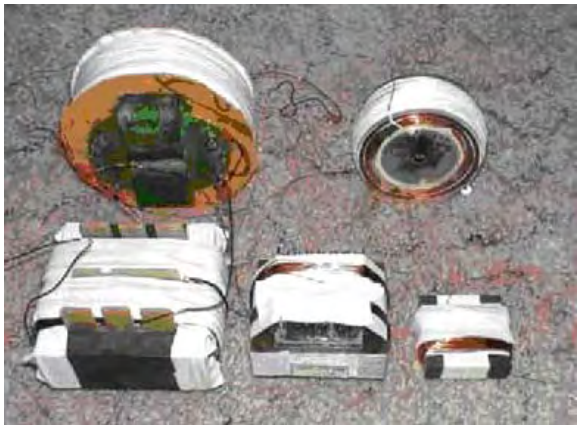
(Therefore it is not possible to use it as an ordinary transformer)

An asymmetrical transformer can have two coils: L_2 and L_S. Coil L_2 is wound on one side of the toroidal core while L_S is wound so that it encloses both the toroid and the coil L_2 as shown here:

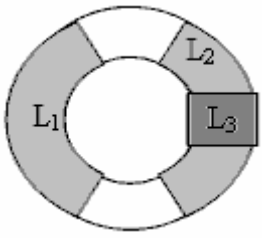


Optionally, this arrangement can be implemented with a wide range of styles of transformer core:





One option is to use the above (switched inductor) arrangement and add one more coil:



Now that you understand the operational principles of this system, you can use any configuration which you need. For example:

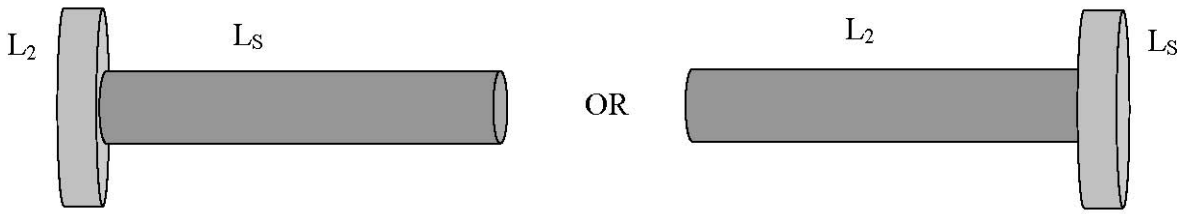
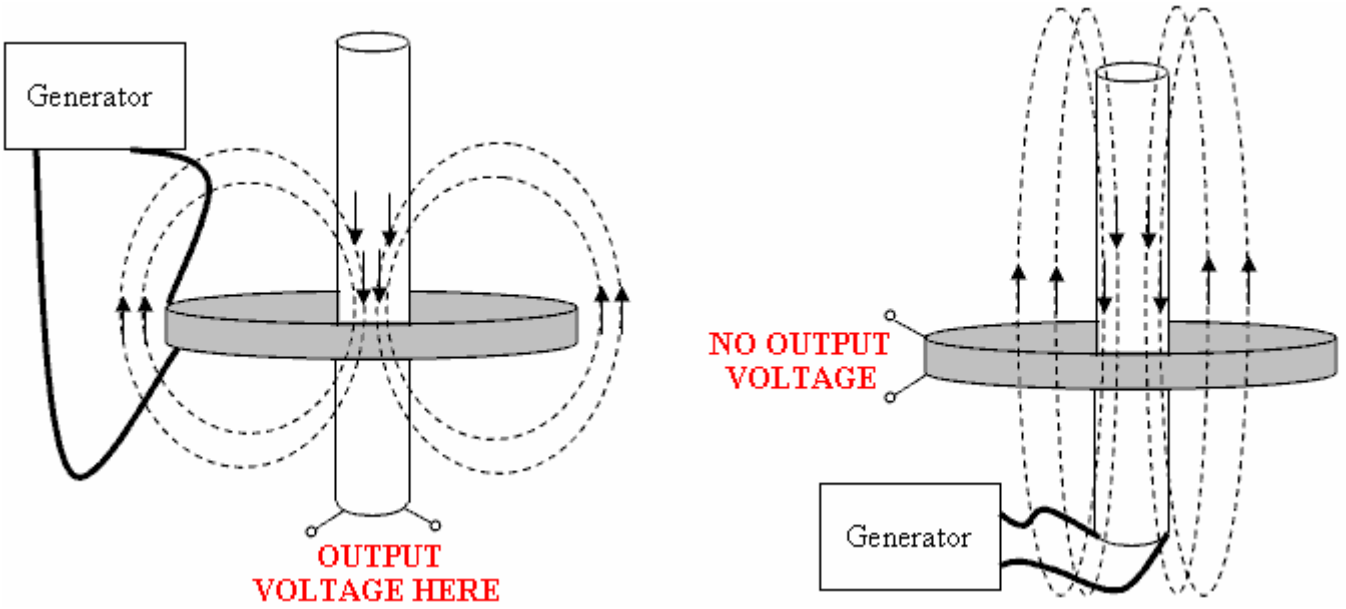


ILLUSTRATION FOR AN ASYMMETRICAL TRANSFORMER OF SOME KIND



THE MECHANICAL EQUIVALENT OF AN ASYMMETRICAL TRANSFORMER

This example shows an ordinary transformer, wound on an E-core plus an external excitation magnet:

The magnet orientation may be different

The magnet orientation may be different

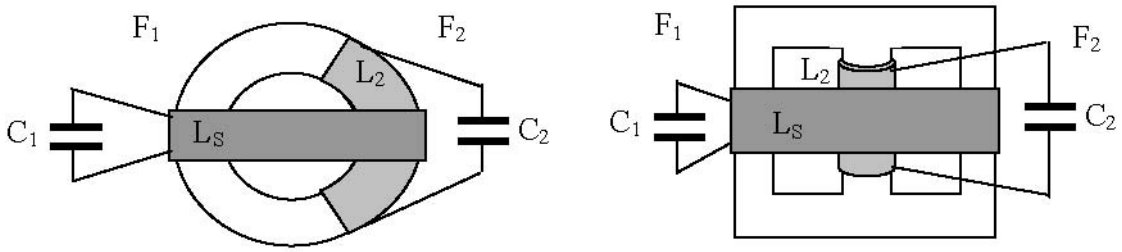
In other words: L2 is still used, but instead of L_S the exciting magnet is used.

The result:

1. The voltage developed across coil L2 depends on the number of turns in L2, but **the short-circuit current through L2 does NOT depend on the number of turns in coil L2.**
2. You need to choose the load connected to L2 in order to get the maximum power output. **Very low, and very high loads, will give almost no power output**.

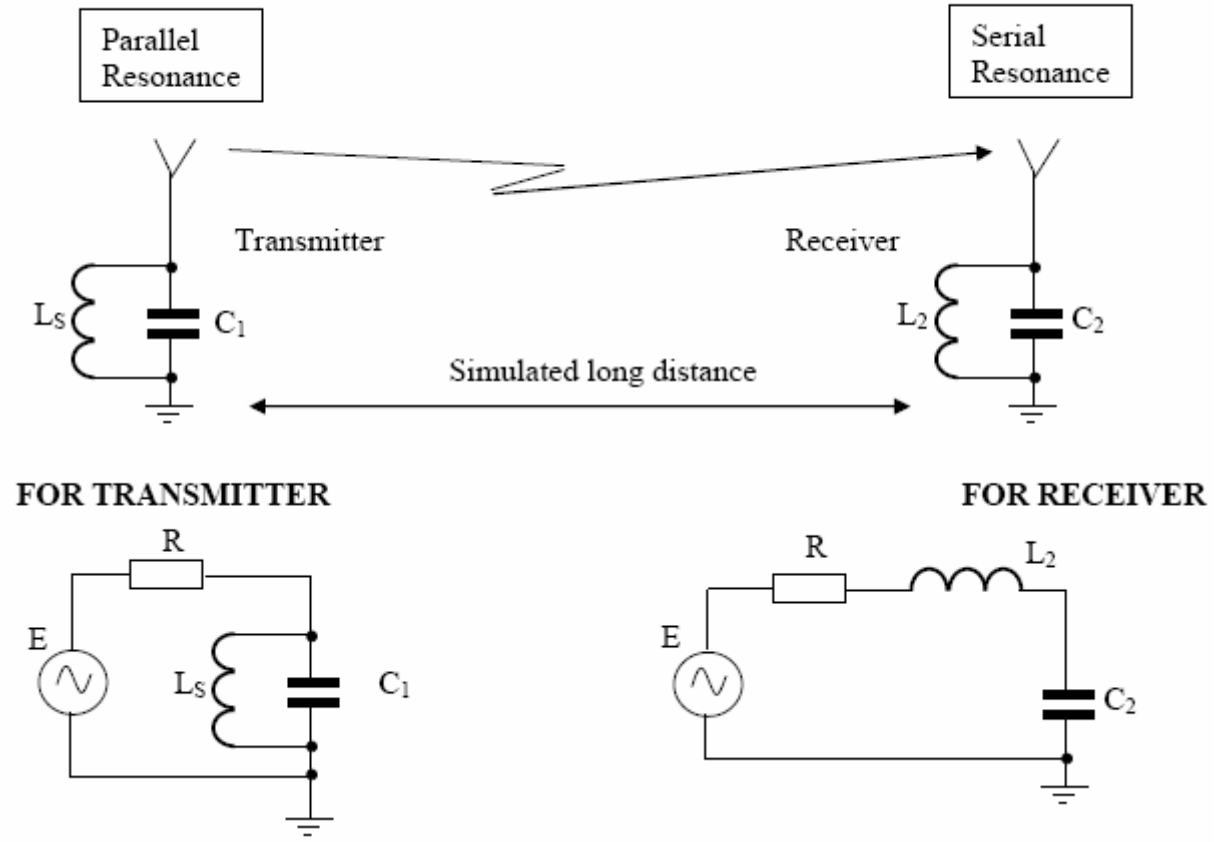
RESONANCE IN AN ASYMMETRICAL TRANSFORMER

The first coil is used as a transmitter of energy, and the second coil as a receiver of energy.



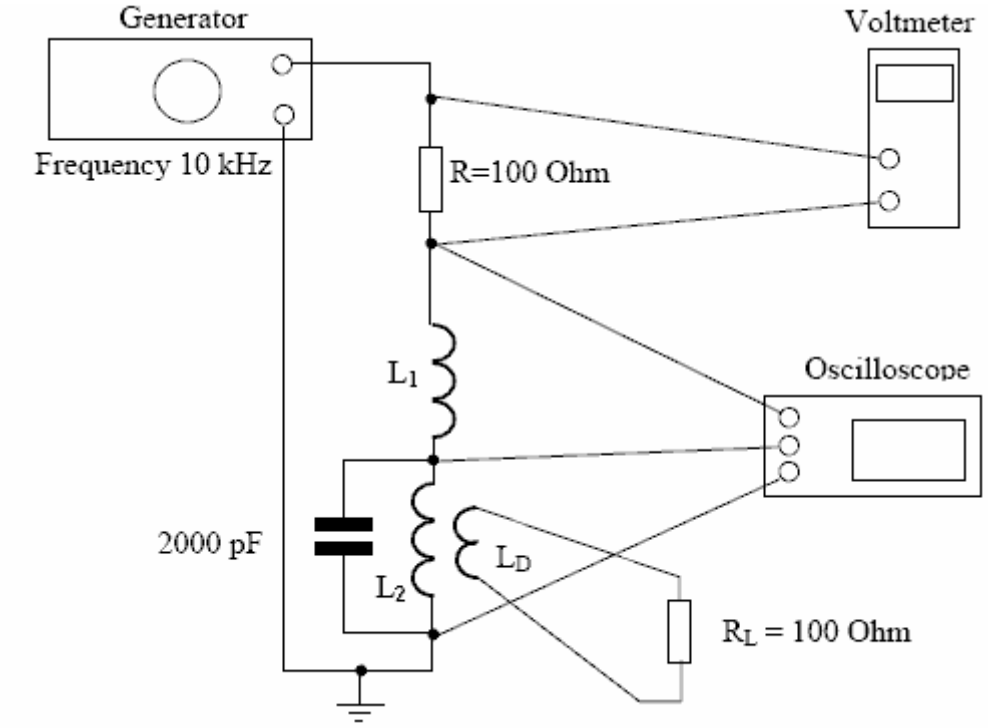
It is very like radio broadcasting, where the receiver is located far away from the transmitter, and has no feedback. The first coil works in **parallel resonance** and the second coil in **serial resonance** (although the two schematic diagrams look alike).

EQUIVALENT SCHEMATICS



CONSEQUENTLY: You can get much more voltage on L_2 than on L_S

An experiment:



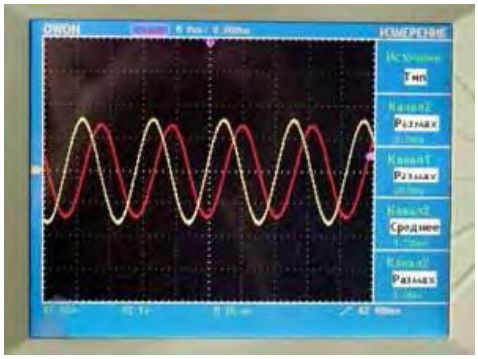
Conditions:

The resonance frequency is about 10 kHz. The total inductance L_S is 2.2 mH, the L_2 inductance (same as the L1 inductance) is 100 mH, the ratio L_S:L_2 is 1:45 with an E-shape core, permeability is 2500.

The result:

At the resonance frequency, there can be a voltage which is **<u>50 times more</u>** on any parts (L1 or L2) matched with the total coil LS, and voltage changes on R are **<u>no more than 15 percent</u>.**

The phase shift in voltage is about 90 degrees between LS and L2.



(The amplitudes were equalised)

Further

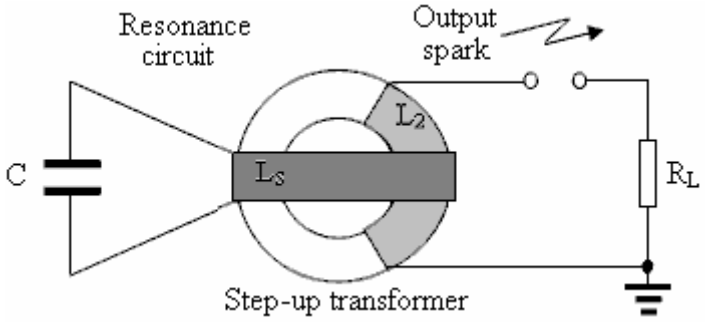
An additional step-down coil L_D was wound around L_2, turns ratio 50:1 (matched with L_2), and the load resistor R_L = 100 Ohms was connected to it.

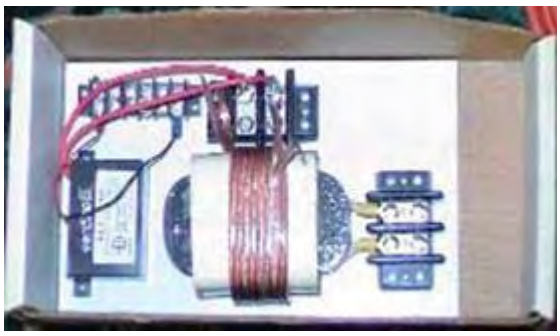
The result

Changes in current consumption (estimated by measuring the voltage across R) are no more 15 percent.

MODERN OPTIONS IN USAGE OF AN
Asymmetrical transformer
By Don Smith

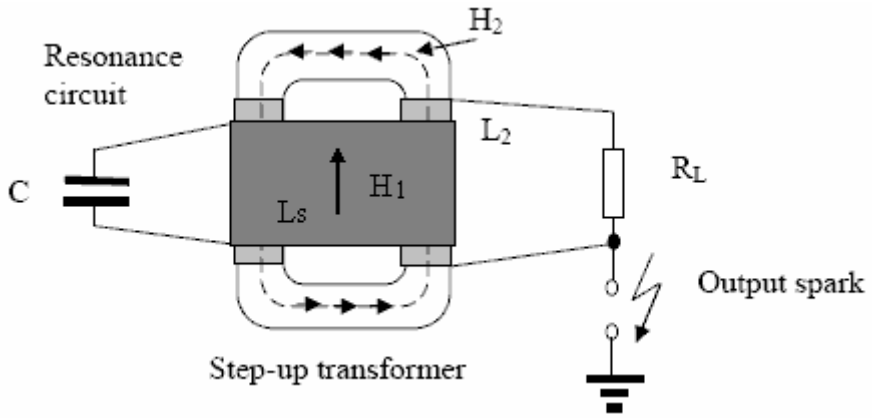
The schematic is like this:





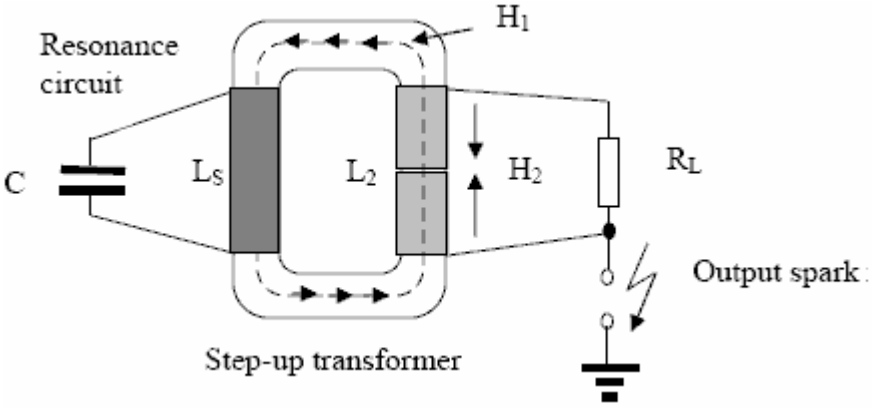
COMMENTS: Between sparks, L_2 has a voltage on it's ends. If R_L is connected directly to L_2 then there will be no output current without resonance and there will be no output current without a spark.

MORE ACCURATE:



COMMENTS: L_2 has no voltage on it's ends (without a spark). This is ordinary back-EMF suppression, invented by Nikola Tesla.

MORE USEFUL



COMMENT: L_2 has no voltage on it's ends (without a spark).

Secret 3.1

THE ASYMMETRICAL TRANSFORMER BASED ON THE SHORT-CIRCUITED COIL

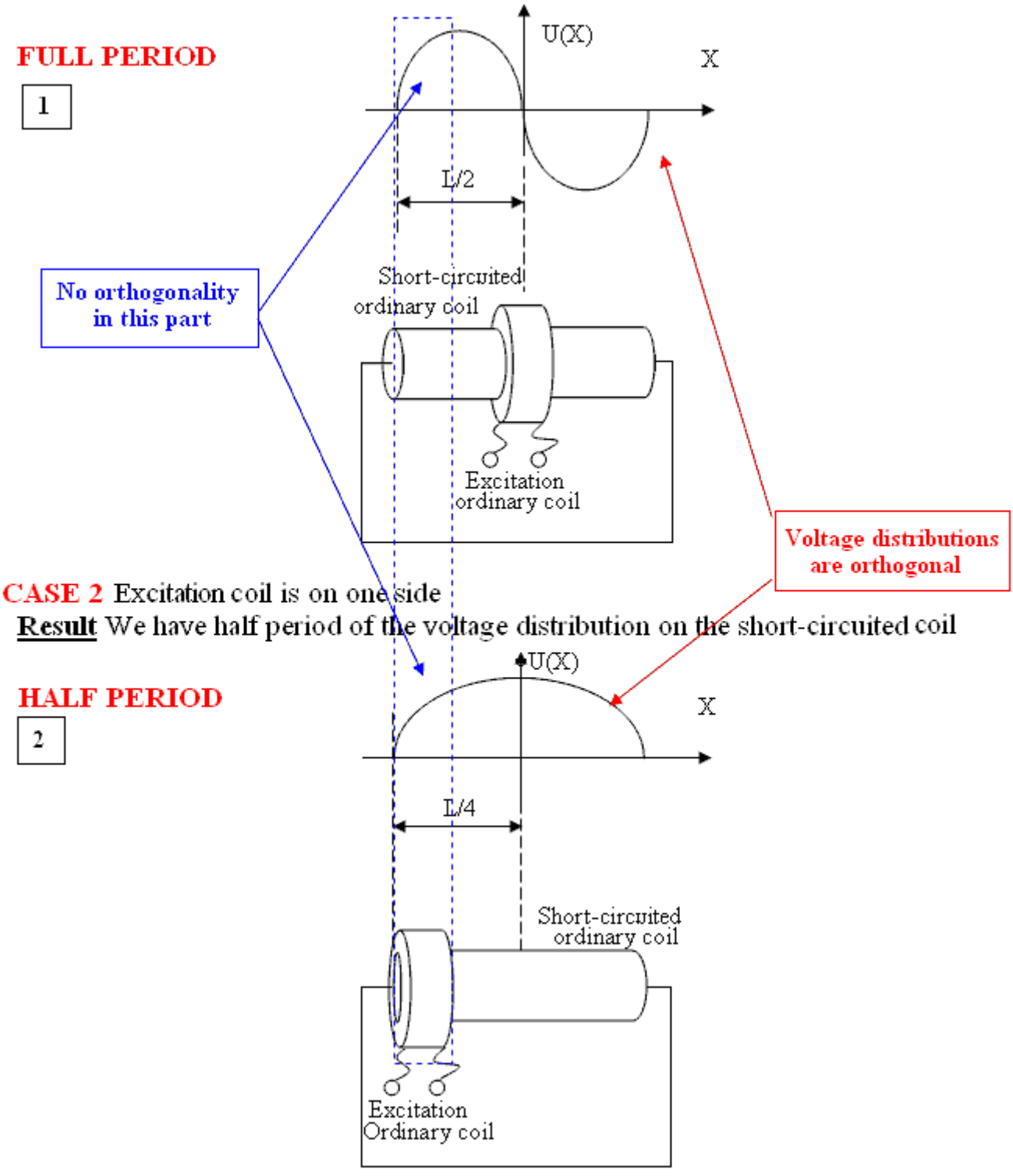
INTRODUCTION

Remark: Voltage distribution on the shorted coil depends on the position of the exciting coil.

DESCRIPTION

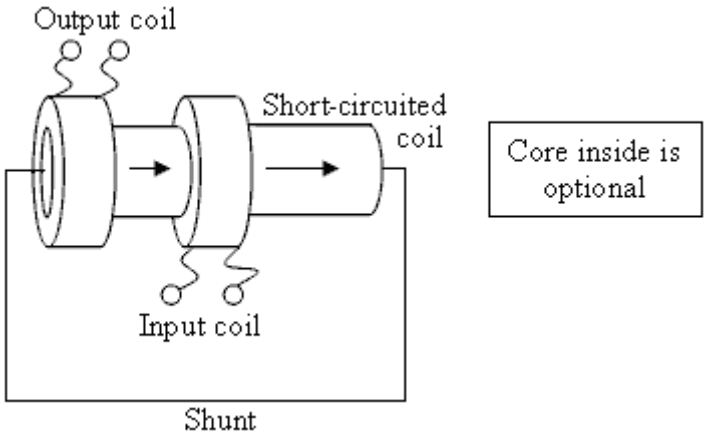
CASE 1 The excitation coil is centered:

Result: We have the full period of the voltage distribution on the short-circuited coil



CONSTRUCTION OF THE ASYMMETRICAL TRANSFORMER
based on the short-circuited coil

CASE 1 The short-circuited coil is wound in one direction

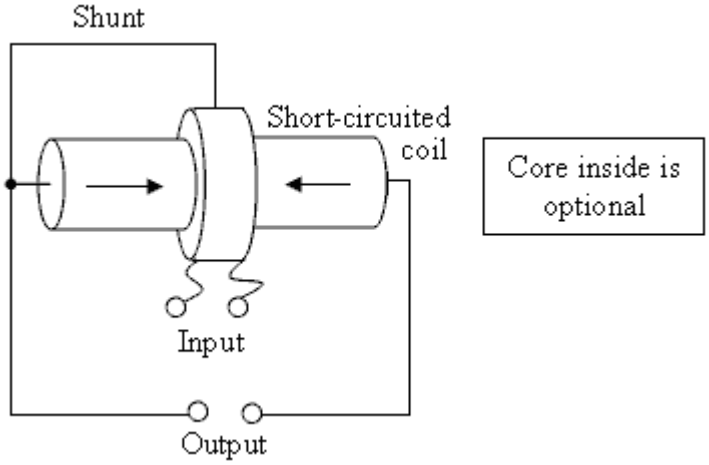


Result: The output does not influence the input in any way.

Explanation: The signal from the output coil generates zero voltage difference on the input coil.

Remark: The position of the coils should be adjusted in order to give the best result.

CASE 2: The short-circuited coil is wound in opposite directions from the centre outwards, and only half of the coil is short-circuited:



Result: The output has no influence on the input coil

Explanation: The signal from the output coil generates zero voltage difference on the input coil.

Remark: The position of the input coil needs to be adjusted to get the best result.

Remark: The coil's position depends on permeability of the core. More permeability means more alike with distribution pointed at the beginning.

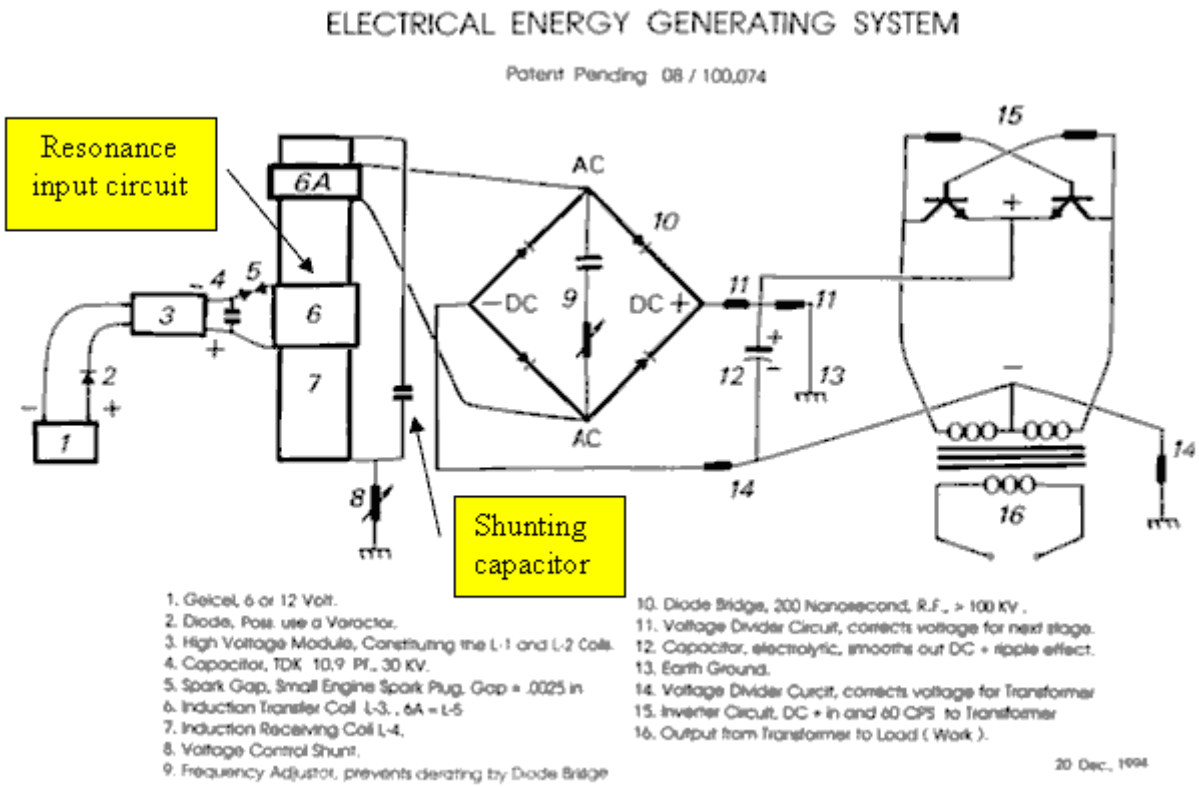
Best Position: To find the best coil position, connect the signal generator to the output, and then find the coil position which shows zero at the input terminals. Alternatively, use an RLC meter connected to the input terminals and then find the coil position which gives no change in reading when the output terminals are short-circuited **(for both case 1 and case 2)**.

Comment: The length of the wire, the total length of the coil, and the diameter of the coil are not important. The number of turns in the input and output coils plays the same role as in an ordinary transformer, **for both case 1 and case 2.**

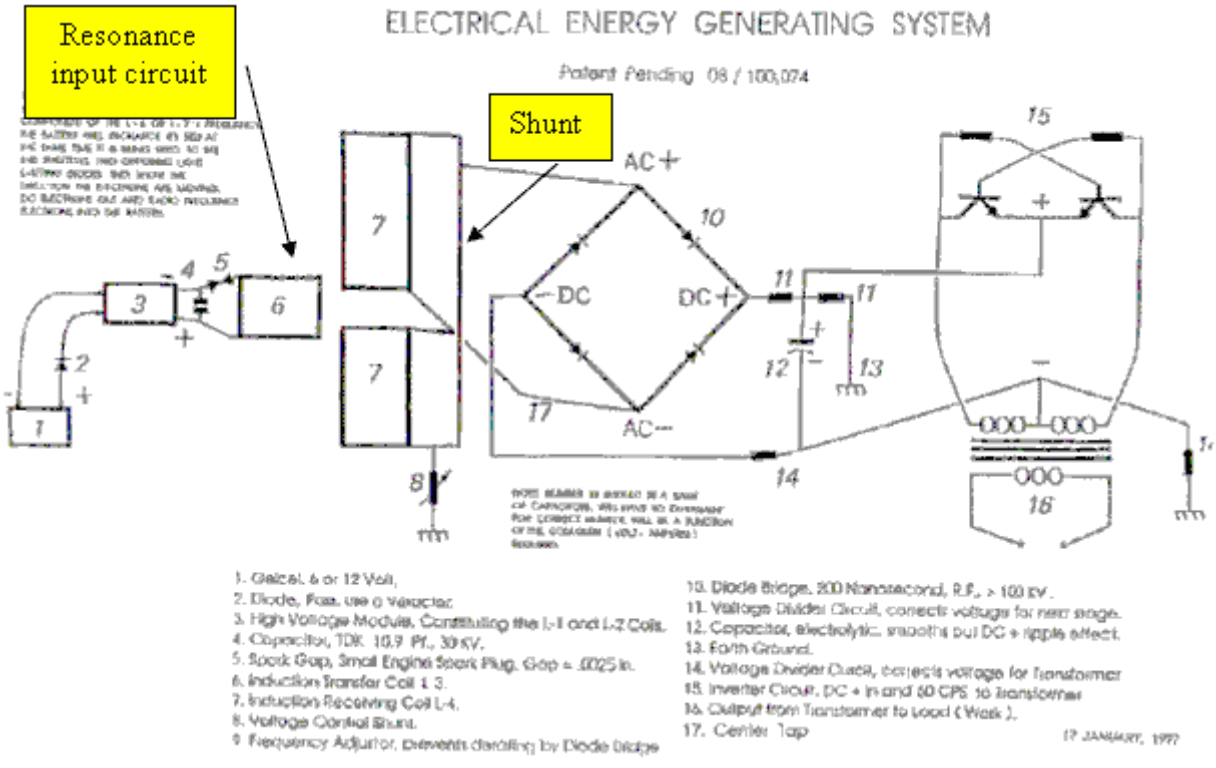
MODERN APPLICATIONS FOR SHORT-CIRCUITED COILS

By Don Smith

CASE 1



CASE 2

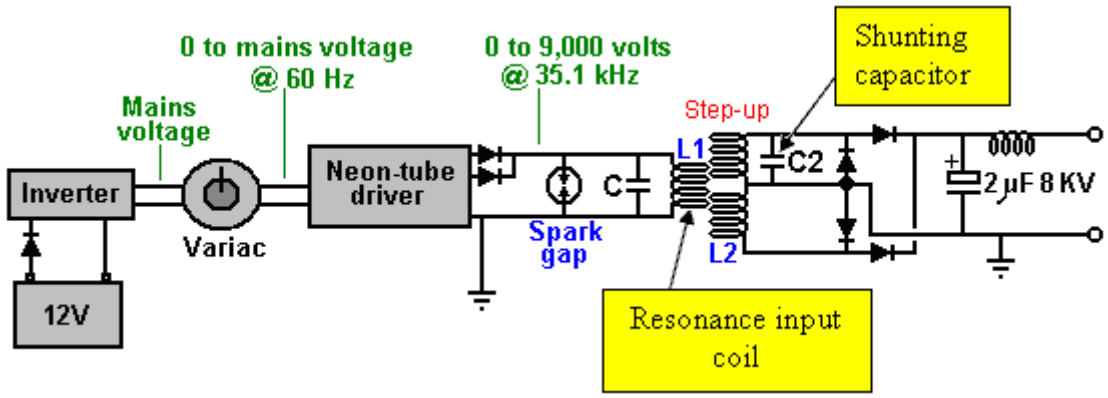


REMARK: The position of the coils must be adjusted until the output has zero influence on the input.

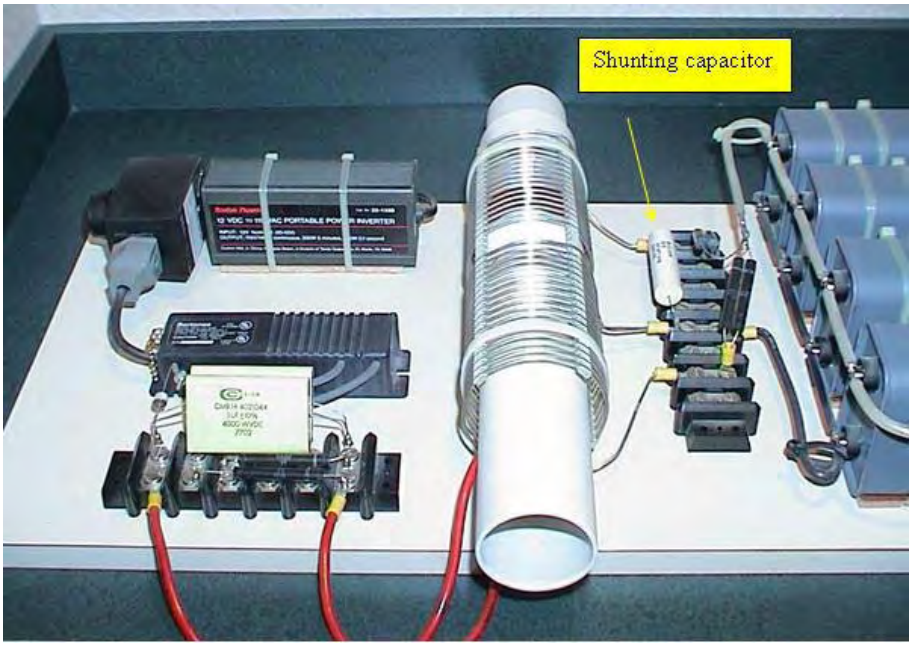
REMEMBER: None of the (input) energy used for exciting ambient space should appear in the load.

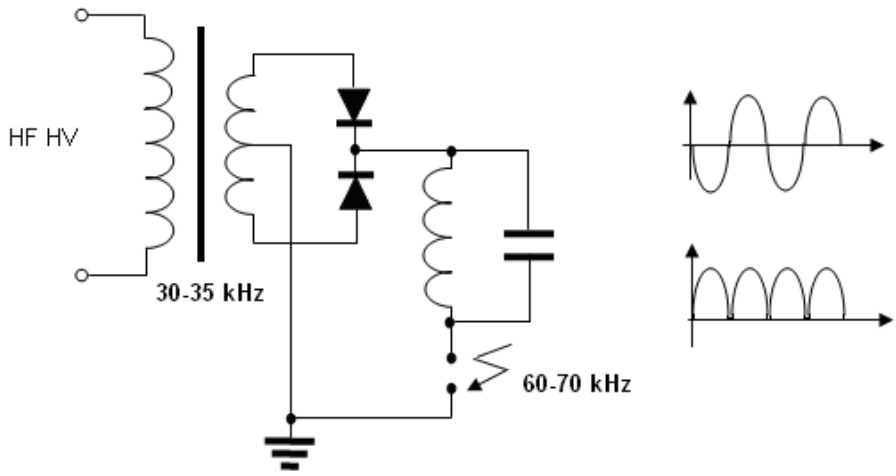
AN EXAMPLE OF CASE 2

By Don Smith



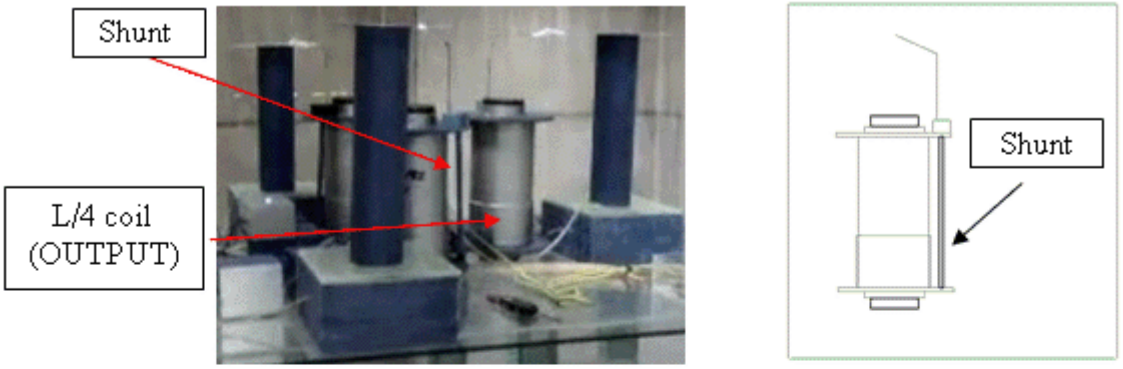
COMMENTS: The output coil can be adjusted to resonate with the input coil, but this is not important for understanding the principle. Excitation with just one spark is possible (not in resonance), but the frequency of the sparks influences the output power directly.

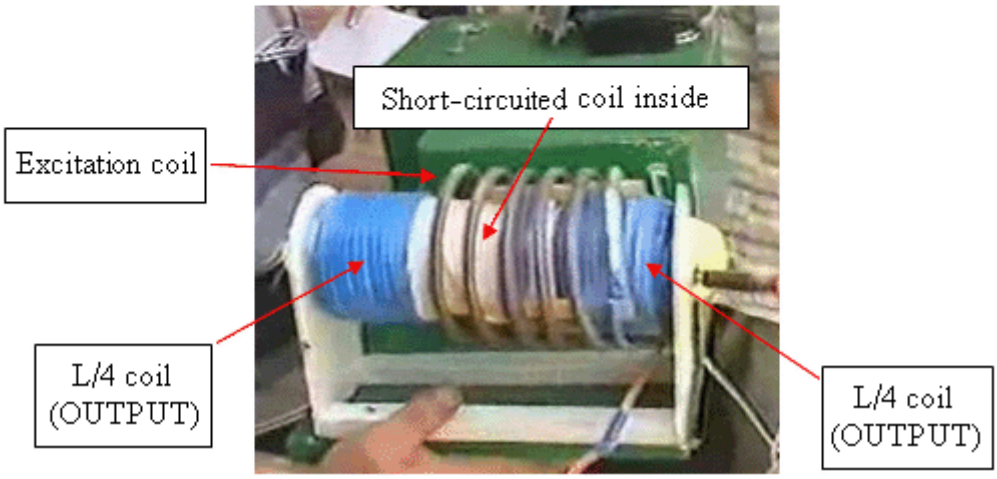


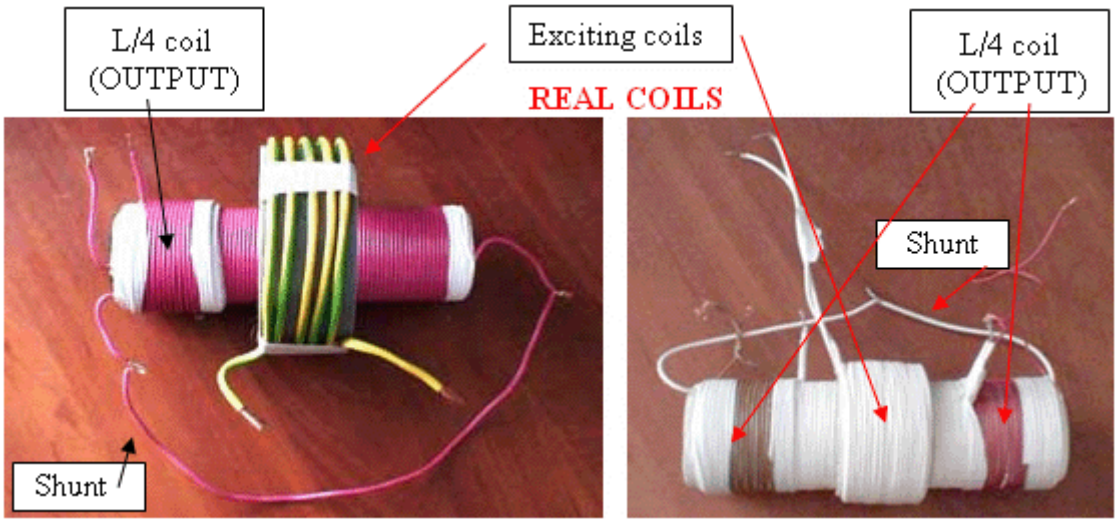


AN EXAMPLE OF CASE 1

By Tariel Kapanadze







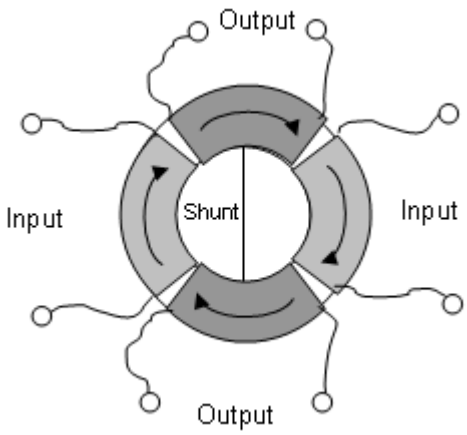
COMMENT: Adjust the positions of the coils to get the best result.

AN EXAMPLE OF CASE 1

By Steven Mark

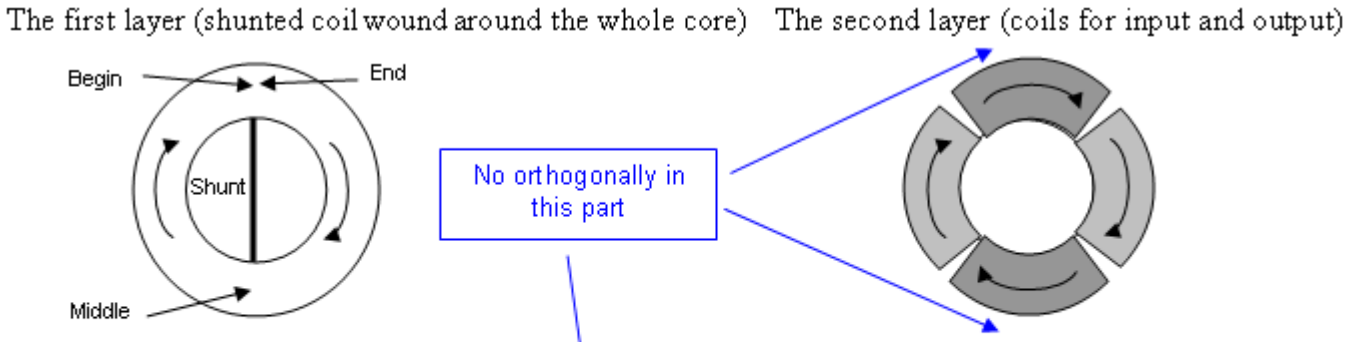
TPU

REMARK: An idea – an asymmetrical transformer based on the shorted-circuited coil:

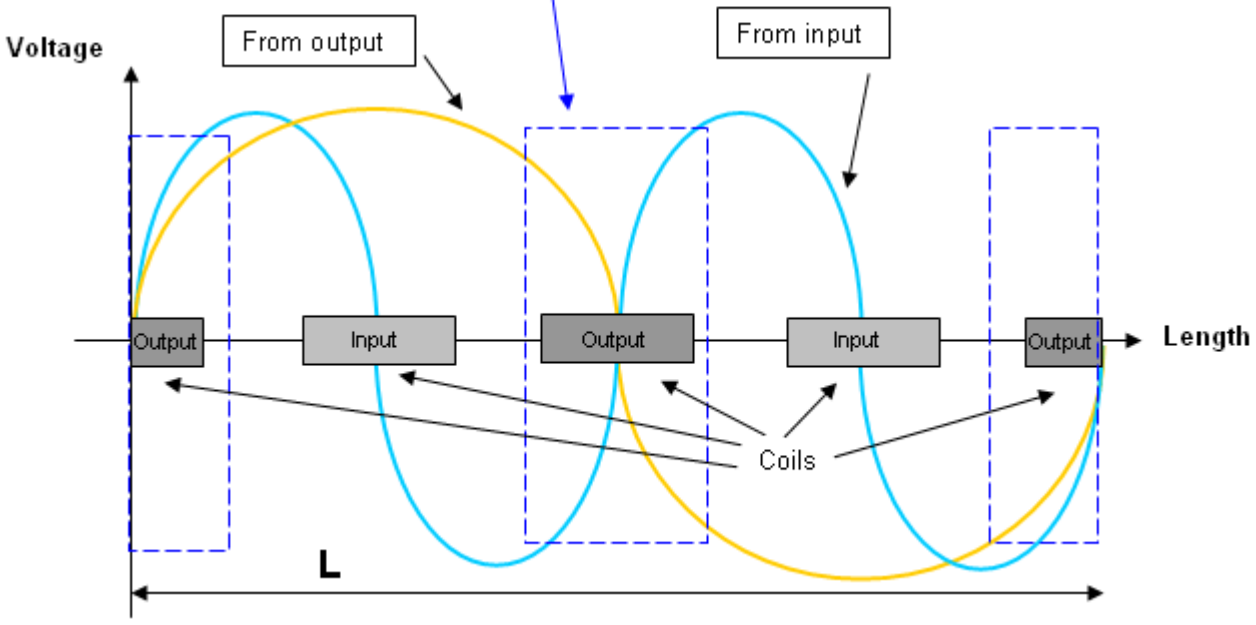


REMARK: The positions of the coils must be properly adjusted, in order to have no transmission feedback from the output to the input. To understand this better, read the part which is devoted to switchable inductance.

EXPLANATION:

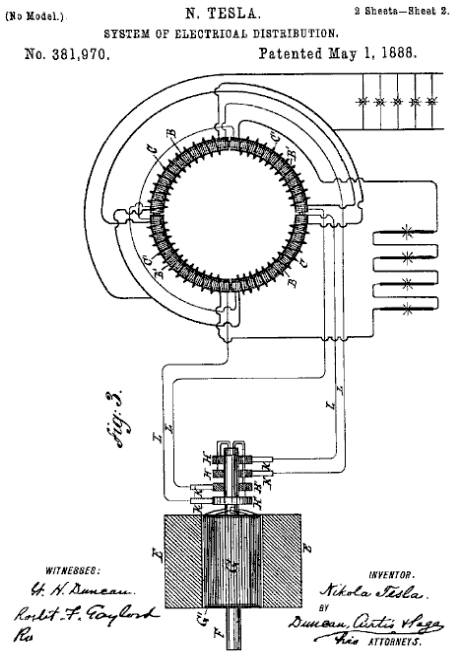


VOLTAGE DISTRIBUTION



THE BASIS OF THE TPU

(Tesla Patent)


(No Model.) N. TESLA. 2 Sheets—Sheet 2.

SYSTEM OF ELECTRICAL DISTRIBUTION.

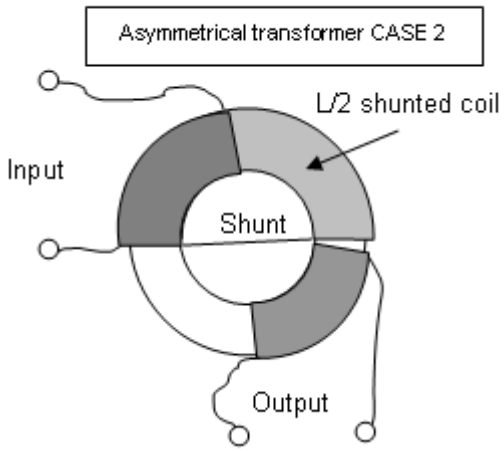
No. 381,970. Patented May 1, 1888.

Fig. 3.

WITNESSES: G. H. Duncan. Robt. F. Gaylord

INVENTOR. Nikola Tesla. BY Duncan, Curtis & Page ATTORNEYS.

ACTUAL TPU



REMEMBER:

The position of the coils must be adjusted.

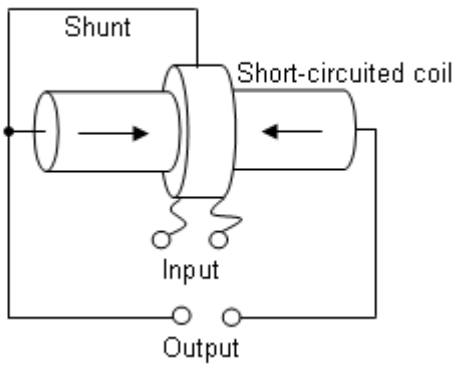
The easiest way to do this is to add or remove turns at the ends of the coils.

AN EXAMPLE OF CASE 2

By Tariel Kapanadze

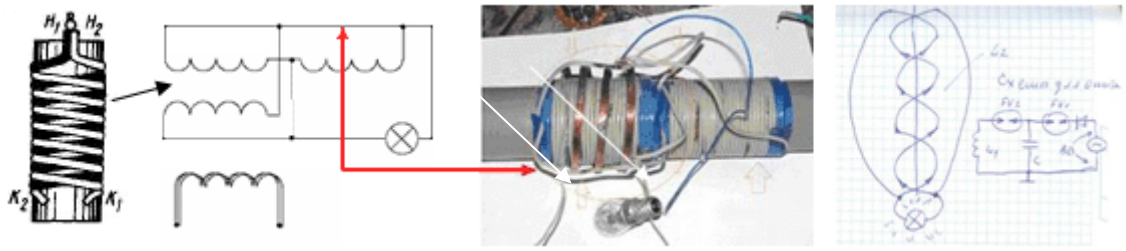
Mechanical device

?????



MODERN USE OF SHORT-CIRCUITED COILS

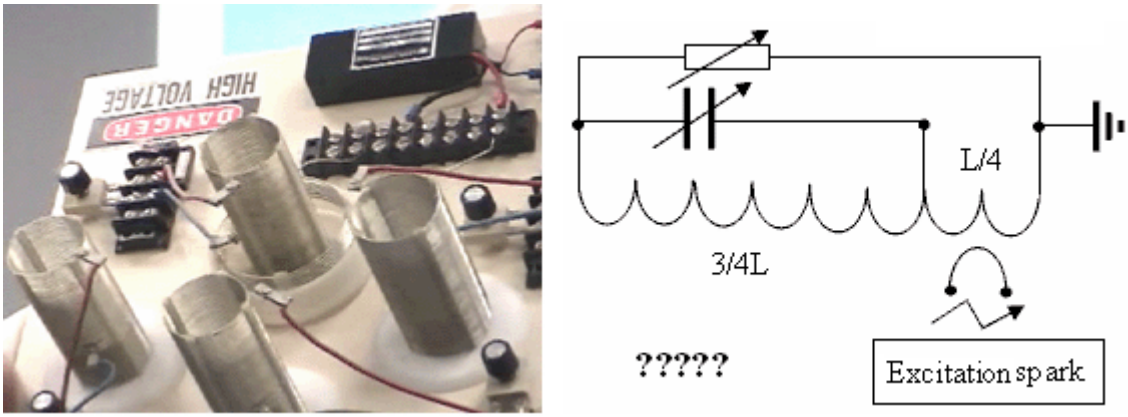
by Cherepanov Valera ('SR193' in Russian forum)



COMMENT: This arrangement can be used for back-EMF suppression in resonance (spark excited) mode to get a laser effect (very exciting summation effects).

COMMENT: This was copied from this device of Tariel Kapanadze (???).

Don Smith

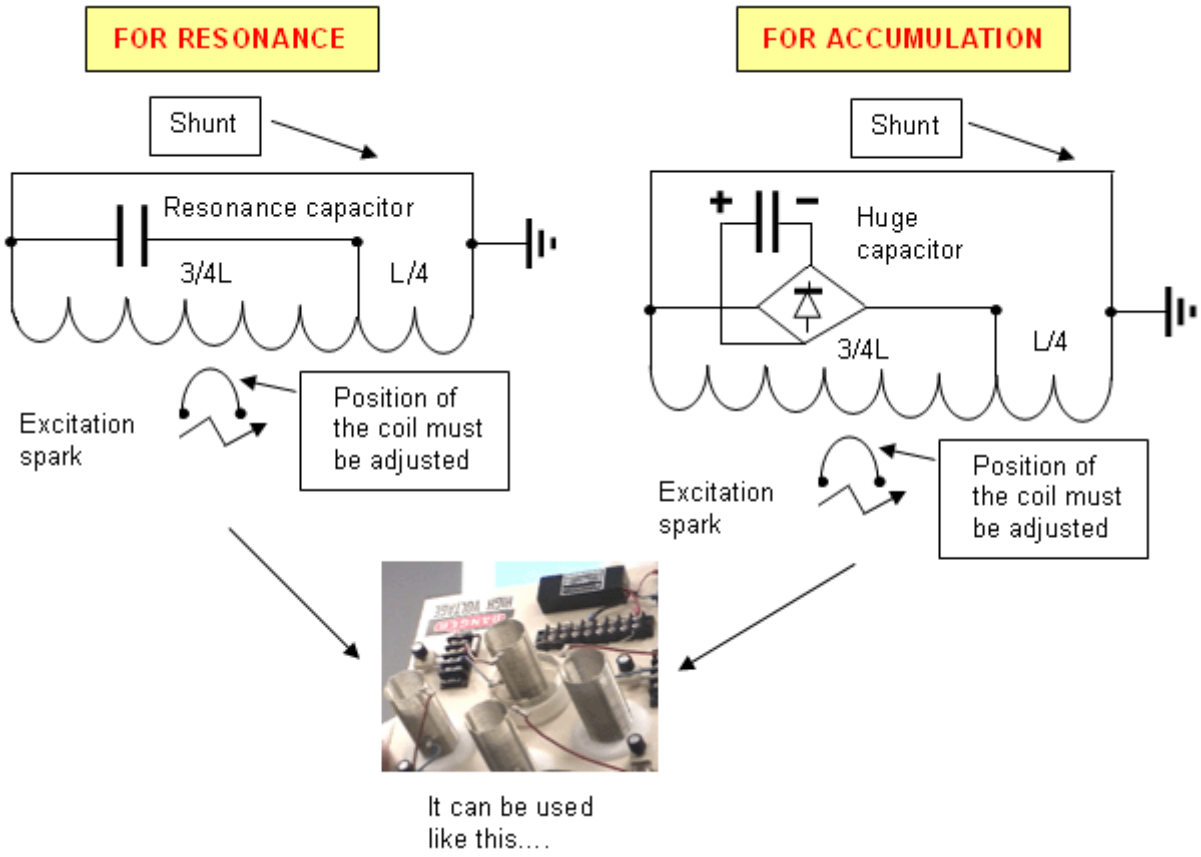


COMMENT: Mr. Tesla said: "The optimum relation for the main and additional coil is 3/4L and L/4". Is that ratio used here?

COMMENT: If you don't understand this schematic, look at simplest version of the coil.

THE SIMPLEST VERSION

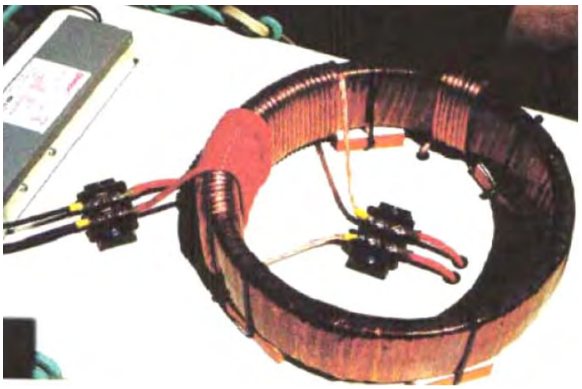
where the output has zero influence on the input

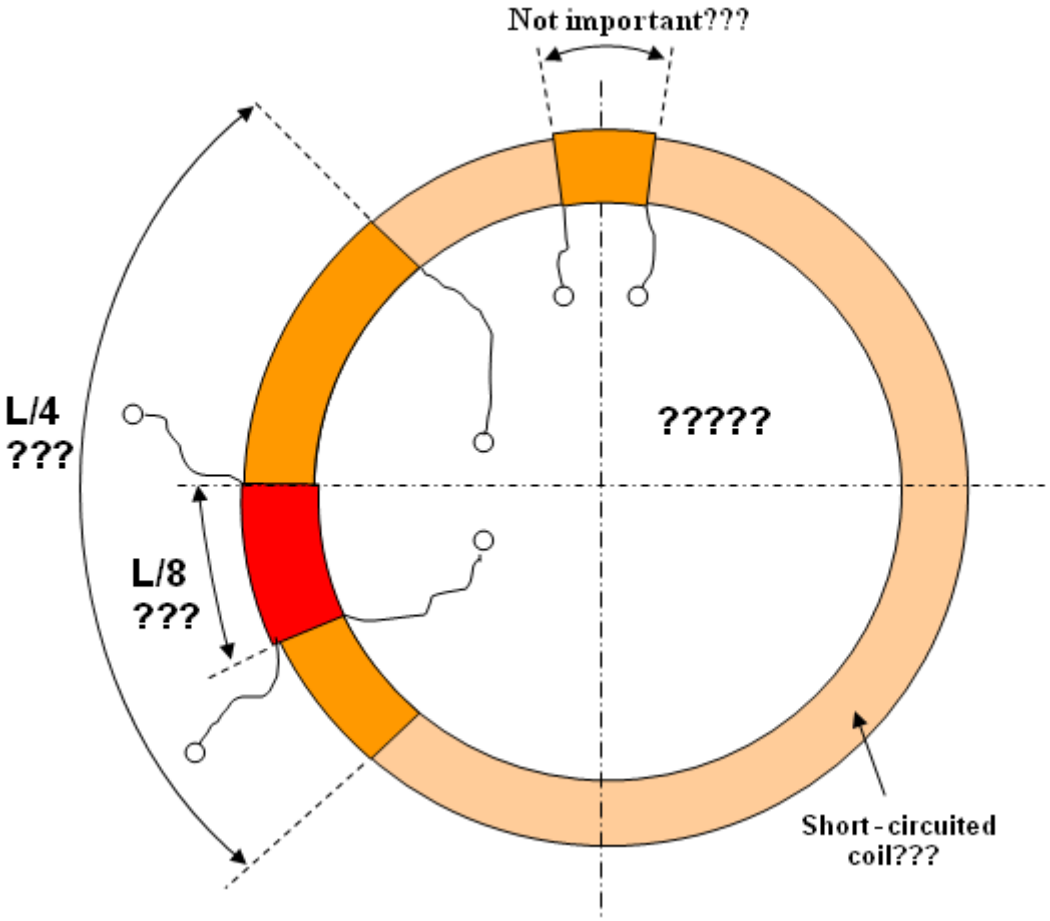


Comment: This is an instance of case 1 where the output coil was removed, and some of the turns from the short-circuited coil were used instead.

THE ASYMMETRICAL TRANSFORMER (BASED ON A SHORT-CIRCUITED COIL) COMBINED WITH A STEP-DOWN TRANSFORMER?

Don Smith





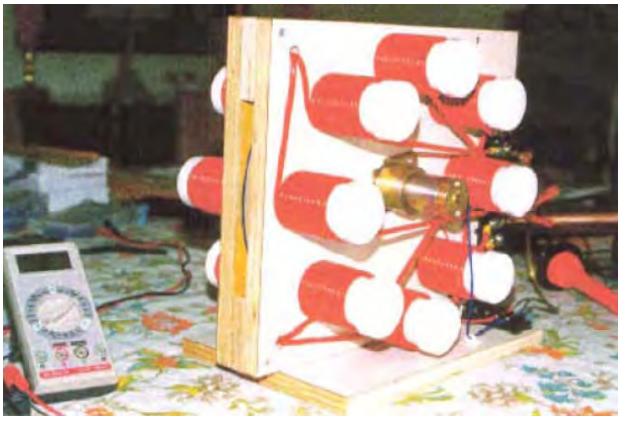
THE RELATIONSHIPS of Don Smith's TPU size and position are important.

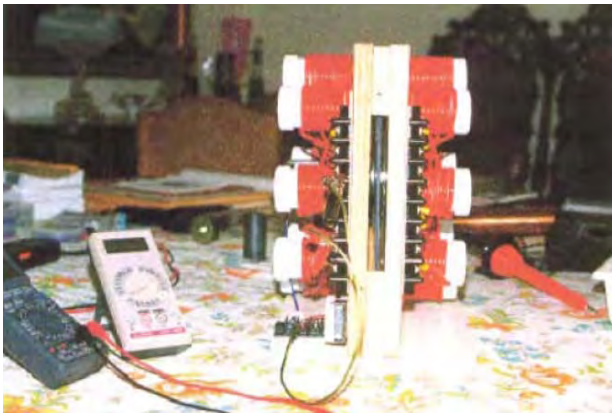
REMARK: Those relationships are used to produce an asymmetrical transformer

MECHANICAL ANALOGUE OF THE ASYMMETRICAL TRANSFORMER

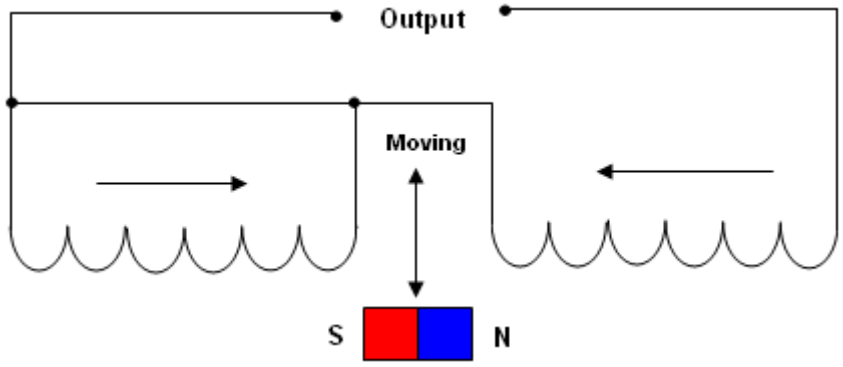
CASE 2

By Don Smith





Schematic:



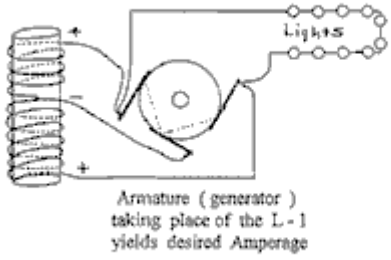
REMEMBER: Any asymmetrical transformer must be adjusted.

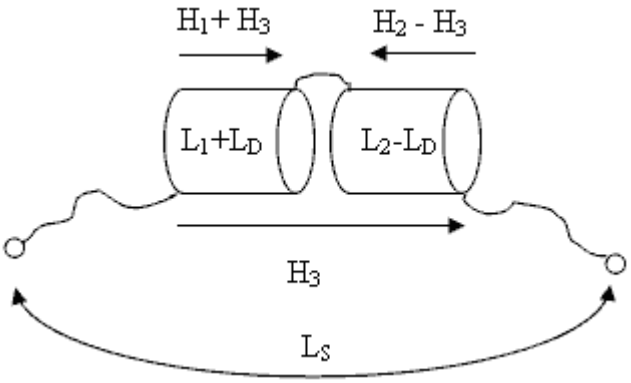
REMARK: Don Smith placed magnets inside the coils, but that is not important for understanding the process as his device does not match the schematic.

SOME REMARKS ON ASYMMETRICAL IN-FRONT CONNECTION

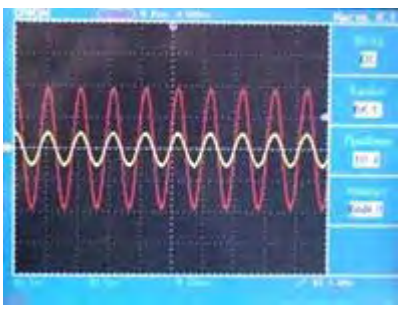
(Useful remarks)

Some turns were added on one half of the coil, and some turns were removed from the other half. An additional magnetic field H_3 was created, with inductance - L_D.





RESULT: A large part of the total inductance acts as an inductor, and a small part acts as a capacitor. **<u>This is a well known fact (read books).</u>** The total voltage on the coil is less than on it's halves.



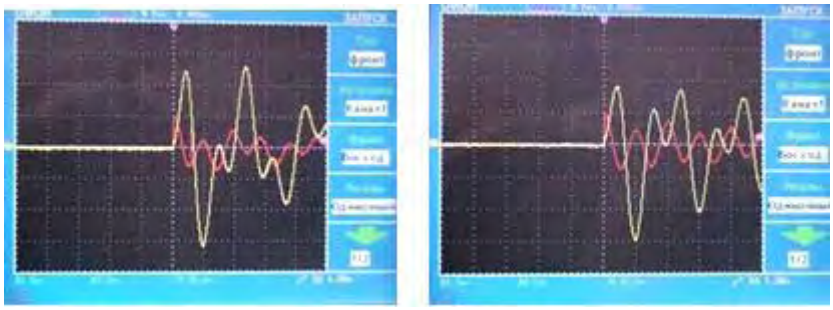
Yellow – The voltage on the total coil

Red – The voltage on the large section of that coil

RESULT: <u>The voltage on it's halves is 4 times the voltage on the total coil</u>

The measurements were made in the frequency band 10 kHz to 100 kHz.

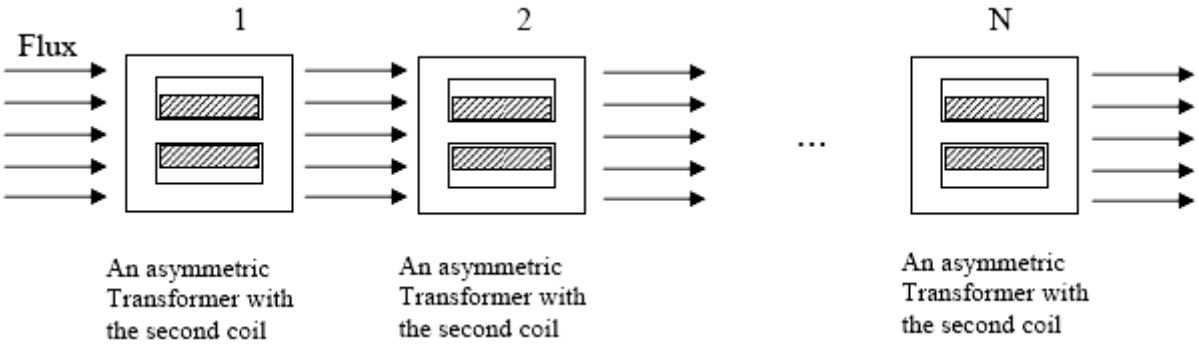
Here is the result of a capacitor discharging into this coil:

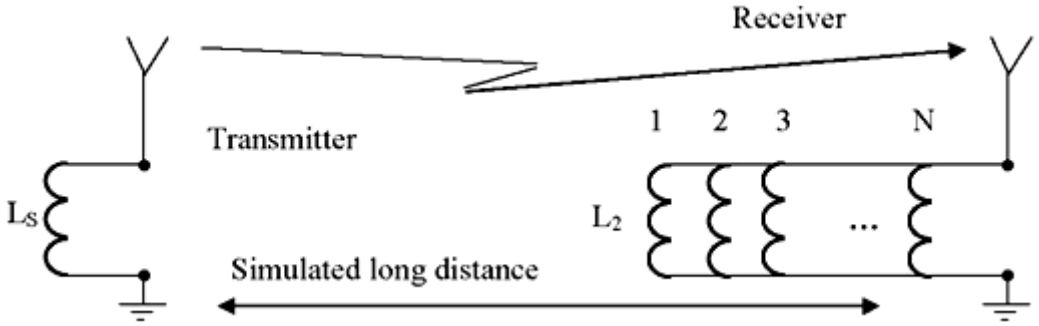


SECRET 4

CURRENT AMPLIFICATION

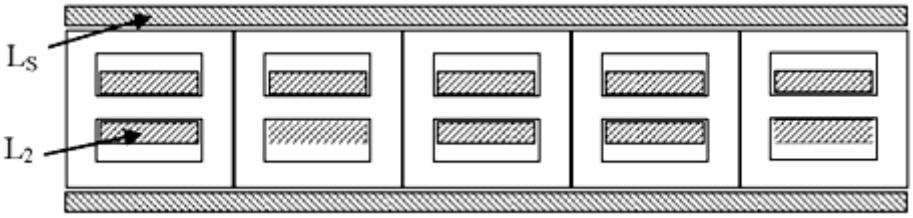
If a lot of asymmetric transformers are placed with a common flux flow through them, they will have no influence on this flux flow, as any one asymmetric transformer does not have any influence on the flux flow. If the secondary L2 transformer coils are then connected in parallel, this produces current amplification.



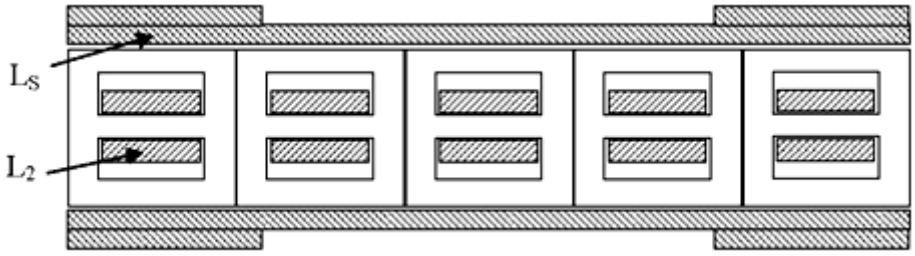


AS A RESULT

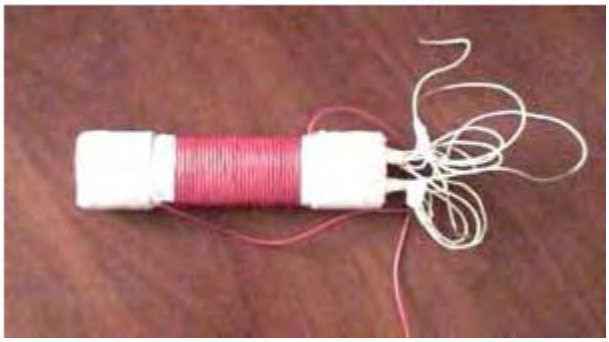
You have an asymmetric transformer arranged in a stack:



For flat (uniform) field inside of LS, it can be arranged with additional turns at it's ends.



EXAMPLES OF COILS WHICH WERE ACTUALLY CONSTRUCTED



The coils are constructed from 5 sections, made from E-type ferrite core with a permeability of 2500, and wound using plastic-covered wire. The central sections L2 have 25 turns, and edge sections have 36 turns (to equalise the voltage on them). All sections are connected in parallel. The coil LS has field-flattening turns at it's ends, and a single-layer winding LS was used, the number of turns depending on the diameter of the wire used.

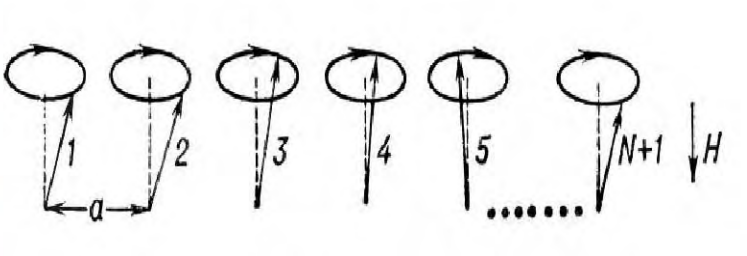
The current amplification for these particular coils is 4 times.

Changing LS inductance is 3% (if L2 is short-circuited)

SECRET 5

The power source in Nikola Tesla car "Red arrow" is

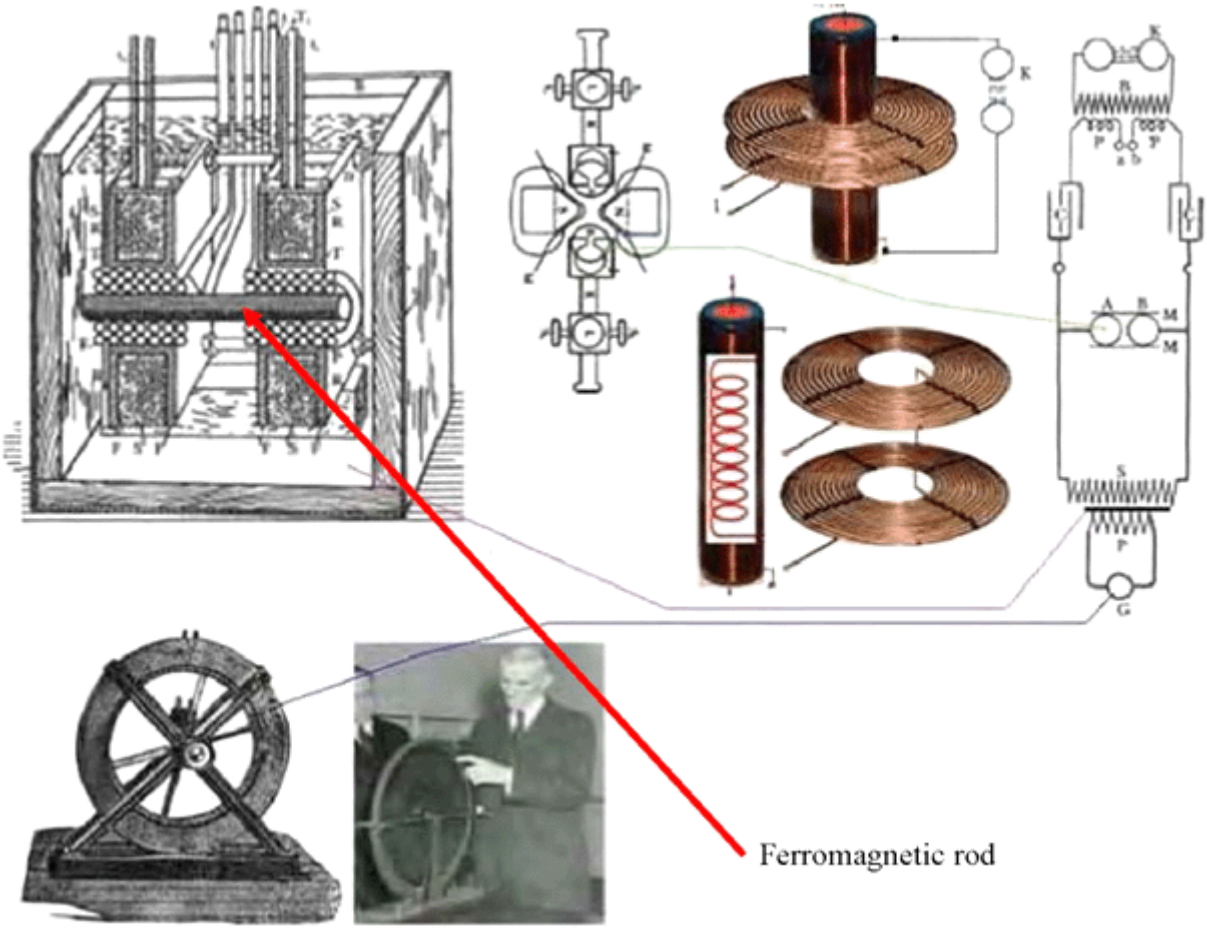
FERROMAGNETIC RESONANCE



COMMENT: To understand electromagnetic feedback, you must consider the action to be like that of domains which have a group behaviour, or alternatively, spin waves (like a row of standing dominos falling over where each one is toppled by the previous one hitting it).

THE BASIS OF FERROMAGNETIC RESONANCE

When a ferromagnetic material is placed in a magnetic field, it can absorb external electromagnetic radiation in a direction perpendicular to the direction of the magnetic field, which will cause ferromagnetic resonance at the correct frequency.



This is an energy-amplifying transformer invented by Mr. Tesla.

QUESTION: What use is a ferromagnetic rod in Free-Energy devices?

AN ANSWER: It can change magnetisation of the material along magnetic field direction without the need for a powerful external force.

QUESTION: Is it true that the resonant frequencies for ferromagnetics are in the tens of Gigahertz range?

AN ANSWER: Yes, it is true, and the frequency of ferromagnetic resonance depends on the external magnetic field (a strong magnetic field produces a high frequency). But with ferromagnetics it is possible to get resonance without applying any external magnetic field, this is the so-called “natural ferromagnetic resonance”. In this case, the magnetic field is defined by the local magnetisation of the sample. Here, the absorption frequencies occur in a wide band, due to the large variations possible in the conditions of magnetisation, and so you must use a wide band of frequencies to get ferromagnetic resonance

A POSSIBLE PROCESS FOR ACQUIRING FREE-ENERGY

1. Subjecting a ferromagnetic to a short electromagnetic pulse even without an external magnetic field, causes the acquisition of spin precession (domains will have group behaviour, and so ferromagnetics can easily be magnetised).

2. Magnetisation of ferromagnetics can be by an external magnetic field.

3. Energy acquisition can be as a result of strong sample magnetisation caused by an external magnetic field of lesser strength.

COMMENT: You must use synchronisation for processes of irradiation and magnetisation of the sample.

USEFUL COMMENT: A ferromagnetic shield will not destroy the inductance of any coil placed inside it, provided that the ends of that coil are positioned on one side of the coil.

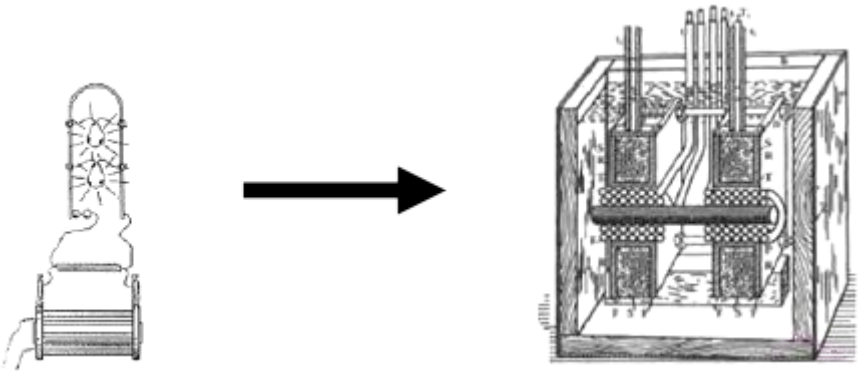
But, this coil can magnetise the ferromagnetic shield.

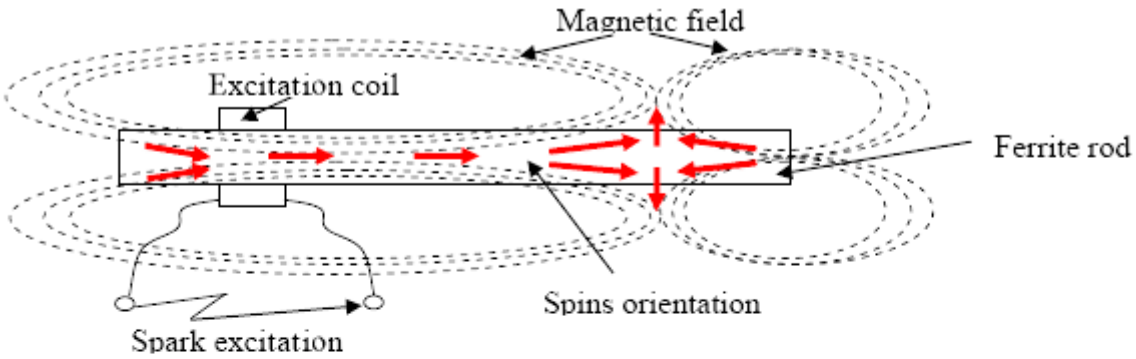
SECRET 5 CONTINUATION …

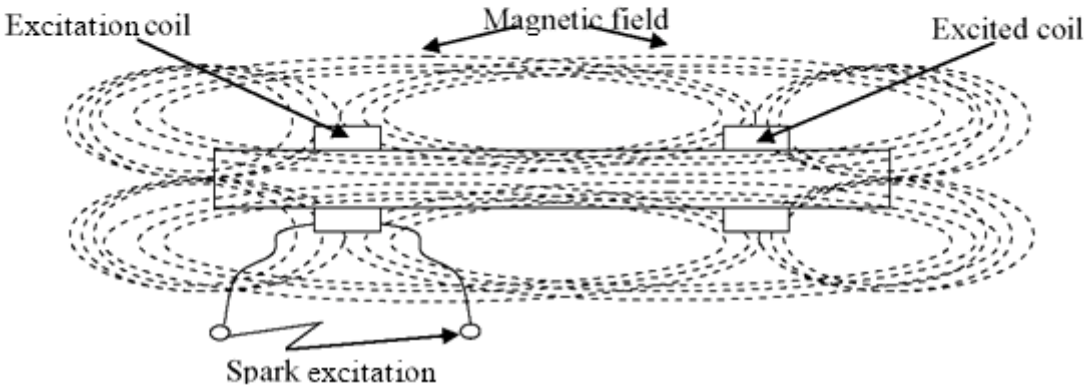
TWO PERPENDICULAR COILS ON A COMMON AXIS

(Standing waves, spin waves, domino effect, laser effect, open resonator, etc…)

EXPLANATION: Standing waves can be excited not only in Tesla's "horseshoe" magnet, but also in Tesla's ferromagnetic transformer (excited by sparks…)







COMMENT: Excitation can be arranged in different ways, by coils connection. The frequencies of oscillations in a coil depends on the number of turns in it (a big variation is possible due to this factor).

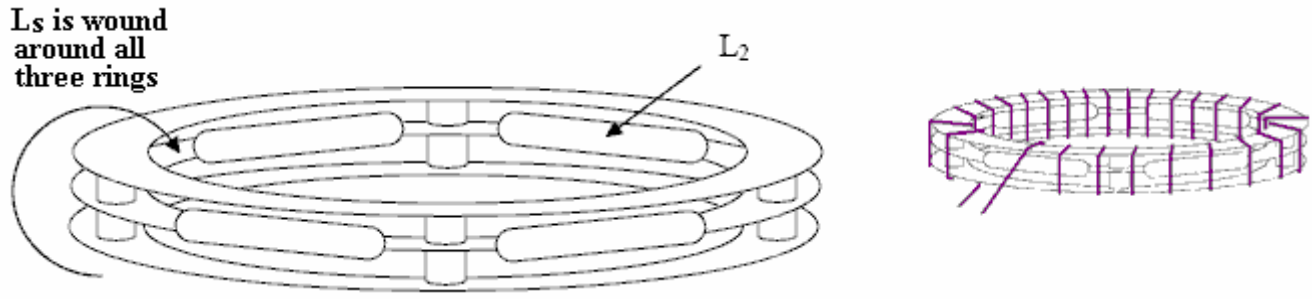
ACTUAL COILS

COMMENT: The positions of the coils on the rods depends on whatever ferromagnetic material is being used, and on it's size. The optimum arrangement has to be determined through experimentation.

A transformer can have two pairs of coils: exciting (tubes), resonance or load (inside) – see Tesla's picture

TOROIDAL VERSION OF AN ASYMMETRIC STACKED TRANSFORMER

An inductor L2 is placed on the central ring between the short-circuits of the core, and the coil L_S (not shown) is wound around all three rings, covering the whole of the toroid - this is an ordinary toroidal coil.



The number of short-circuits depends on your requirements, and influences on the current amplification.

THAT IS ALL, GOOD LUCK …

CONCLUSIONS

1. The Energy-Conservation Law is a result (not reason) of symmetrical interaction.
2. The simplest way to destroy symmetrical interaction is by using electromagnetic field feedback.
3. All asymmetrical systems are outside the area covered by the Energy-Conservation Law.

THE ENERGY CONSERVATION LAW CANNOT BE VIOLATED

(The field covered by this law is only symmetrical interactions)

No Private or State secrets are contained in this document.

There are no ready-to-use schematics in this document, as all diagrams are only provided as an aid to understanding the principles involved.