

# FREE ENERGY

## NIKOLA TESLA SECRETS FOR EVERYBODY

by Vladimir Utkin [u.v@bk.ru](mailto:u.v@bk.ru)

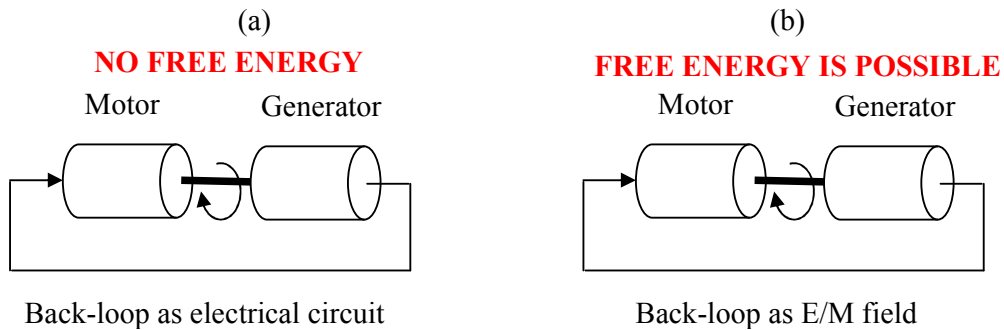


### SECRET 0

All Tesla's secrets based on  
**BACK – LOOP IN E/M FIELD**

#### EXPLANATION

An ordinary energetic system consists from generator and motor (common view), and can be completed with a back-loop such as electrical circuit (a)



In this case (a), the system pushed ones will stop because of friction, resistance and so on. And Mr. Tesla decided to arrange back loop as a loop in electro magnetic field (b), and said

### BACK-LOOP IN E/M FIELD DESTROYS INTERACTION SYMMETRY

This means: action is not equal reaction

In this case (b), the system pushed ones will accelerate itself in spite of the friction, resistance and so on (if the phase of e/m interaction is positive and has enough energy).

In order to have e/m field in motor it must has a consumption of energy, and Tesla said:

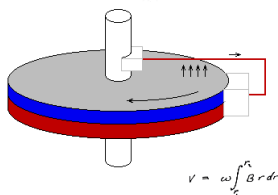
### ENERGY GENERATION BY ITS CONSUMPTION

#### QUESTION

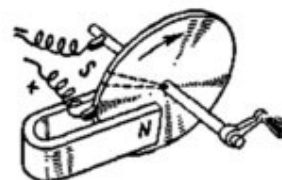
How can one arrange positive back – loop in e/m field?

#### AN ANSWER

The simplest and well-known example is Michael Faraday's unipolar motor, modified by Nikola Tesla.



(a)



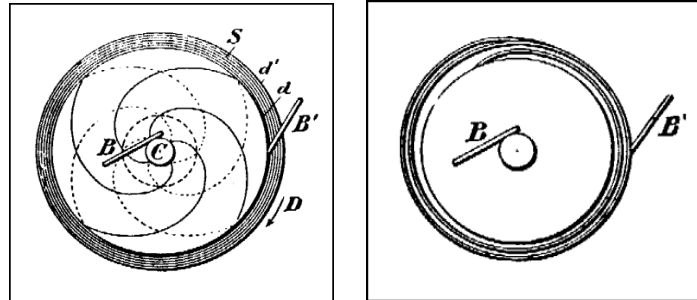
(b)

An ordinary unipolar motor consists from a magnet disk, and a voltage applied to the axis and a peripheral point (a).

But also, an ordinary unipolar motor can consists from an external magnet and a metal disk with voltage applied to the axis and a peripheral point (b) of the disk. This option of the unipolar motor Mr. Tesla decided to modify.

He cuts the metal disk in helical parts. In this case, consumption current arranges an additional magnetic field along the axis of the disk.

When wires are tilted in one direction, there field is additional to the main external magnetic field, when wires are tilted in the other direction, there field is subtractational to the main external magnetic field.

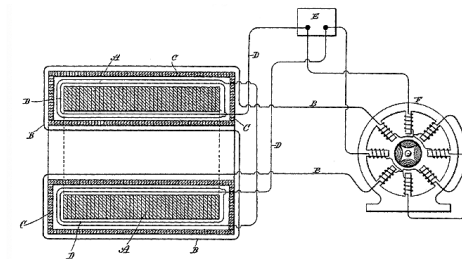


So, consumption of the energy can amplify or decay the external magnetic field of the unipolar motor.

**Amplification is not possible without consumption.**

But, if it is possible to arrange a back – loop in magnetic field for mechanical devices, it is probably possible to arrange it for solid-state devices like coils and capacitors.

The others parts of this article are devoted to the devices based on coils and capacitors. All materials of this article are for understanding only. And it would be usefully for understanding to mention about the shielding of the second coil in the transformer by ferromagnetic shield, invented by Nikola Tesla



In this case, the ferromagnetic shield separates the first and the second coils in the transformer, and can be used as a back-loop for magnetic field.

This information can be useful for understanding the final part of this article.

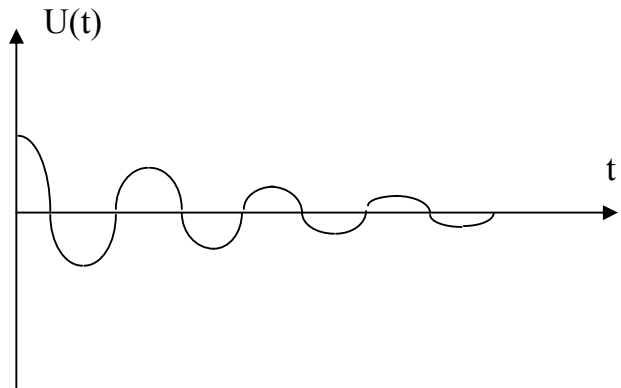
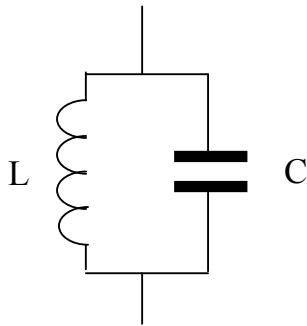
Now we start from the first secret.

## SECRET 1

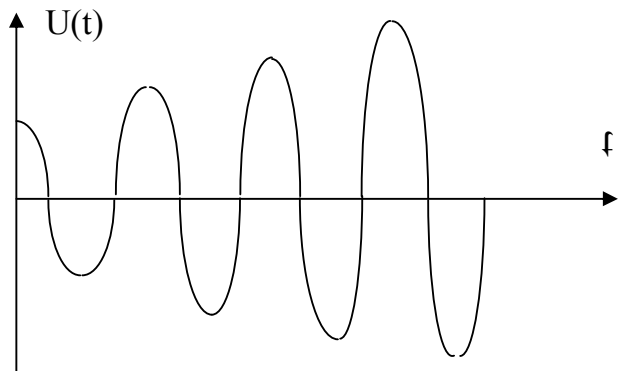
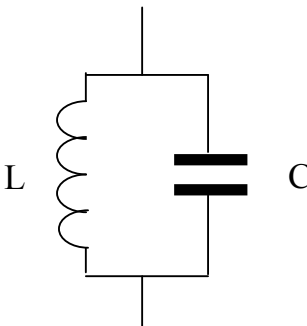
The power source in Nikola Tesla free energy device like amplifying transformer is  
**SELF POWERED LC CIRCUIT**

### EXPLANATIONS

An ordinary LC circuit – with decay



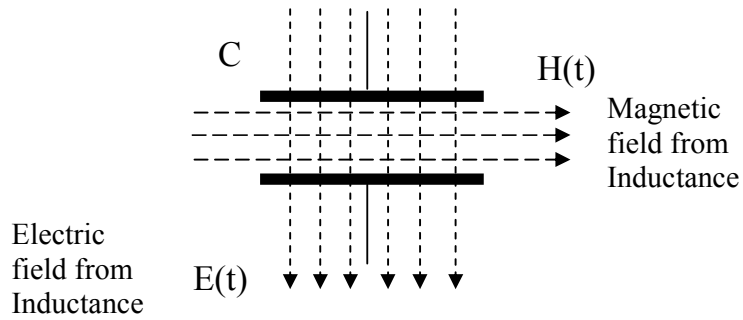
Nikola Tesla LC circuit – with amplification



## HOW TO GET THIS RESULT?

### AN ANSWER

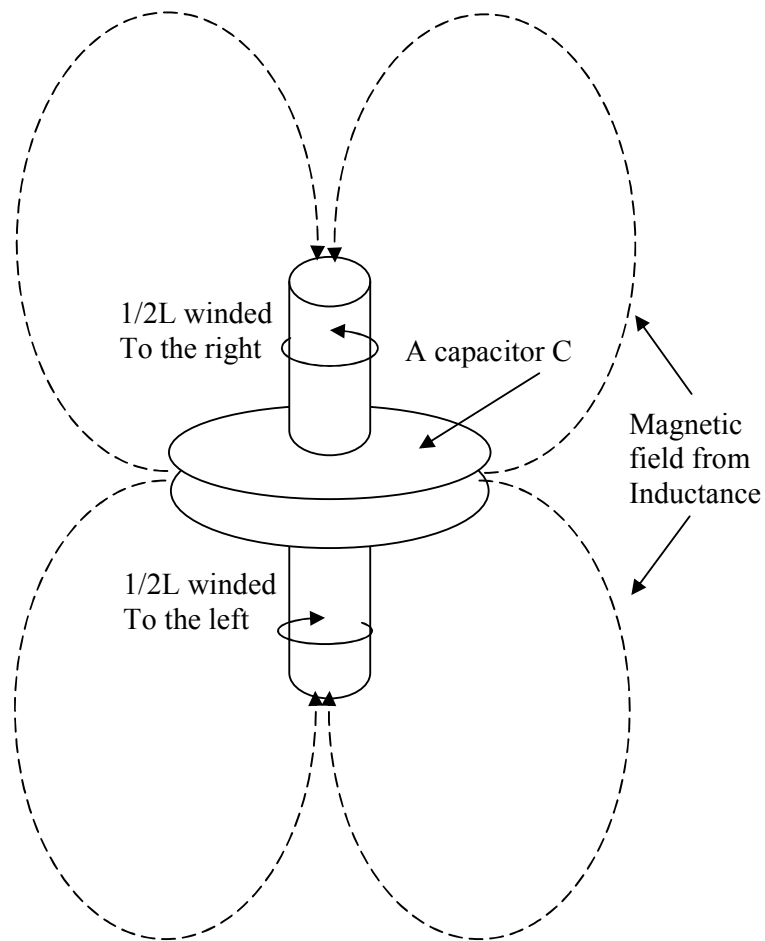
You need to charge capacitor by the electric component of E/M field of the inductance (use displacement current of Maxwell's equations)



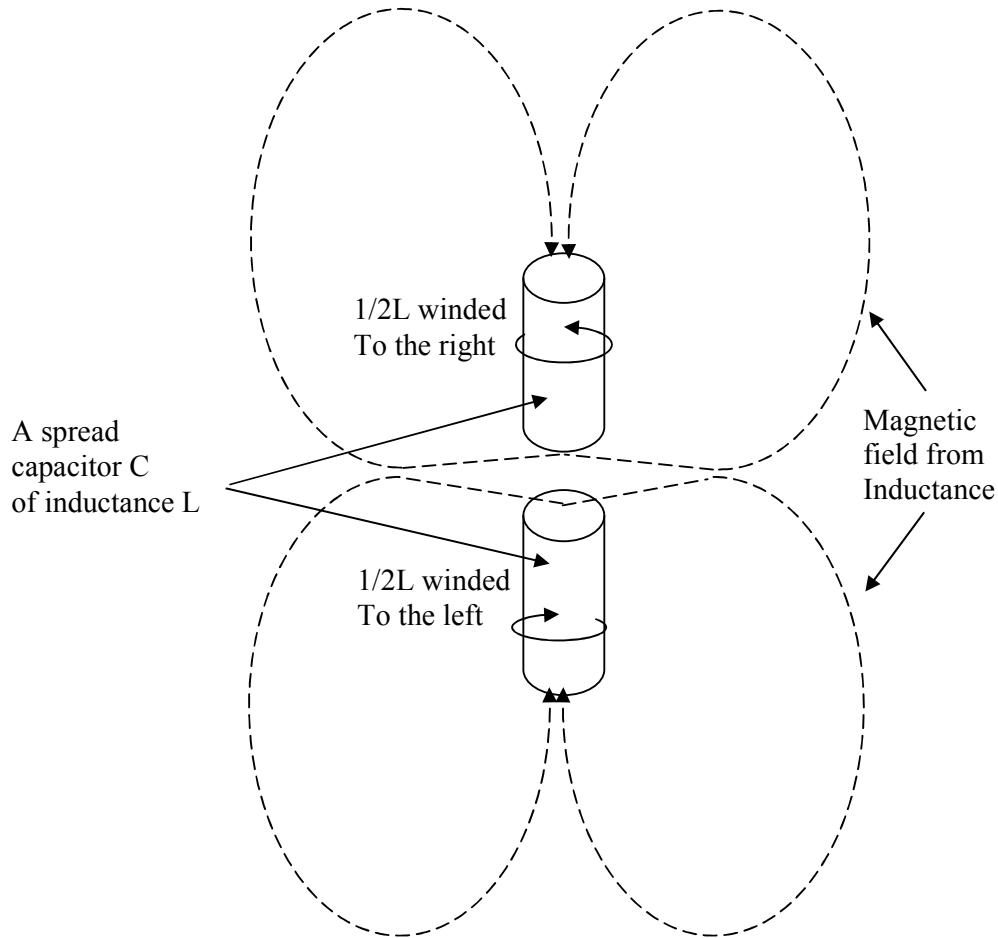
**EXPLANATION**

When electric field in capacitor C is decaying, because of feeding inductance (not shown) with electrical current, external electric field from inductance tries to charge this capacitor by displacement current. As a result, capacitor pumps energy from E/M field, and voltage is rising circle by circle.

**REALIZATION A** – an apartheid capacitor is used



## REALIZATION B – no capacitors are used



In this case instead of capacitor used spread capacitors between winded coils of inductance L.

## HOW TO START THE PROCESS?

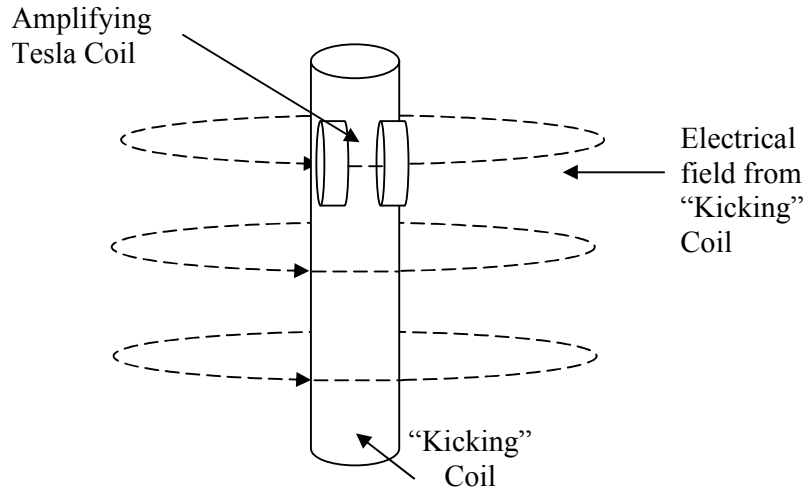
1. In realization A you must charge the capacitor before the process and connect it to the inductance.
2. In realization B you must use additional “kicking” coil, witch can start the process by “kicking” it in the electrical field or in the magnetic field (you’ll see it late).

## HOW TO STOP THE PROCESS?

The process of pumping energy has unlimited characteristics. Do not worry; use the spark gap device to stop the process. Connect spark gap device to the inductance L.

## “KICKING” PROCESS IN ELECTRIC FIELD

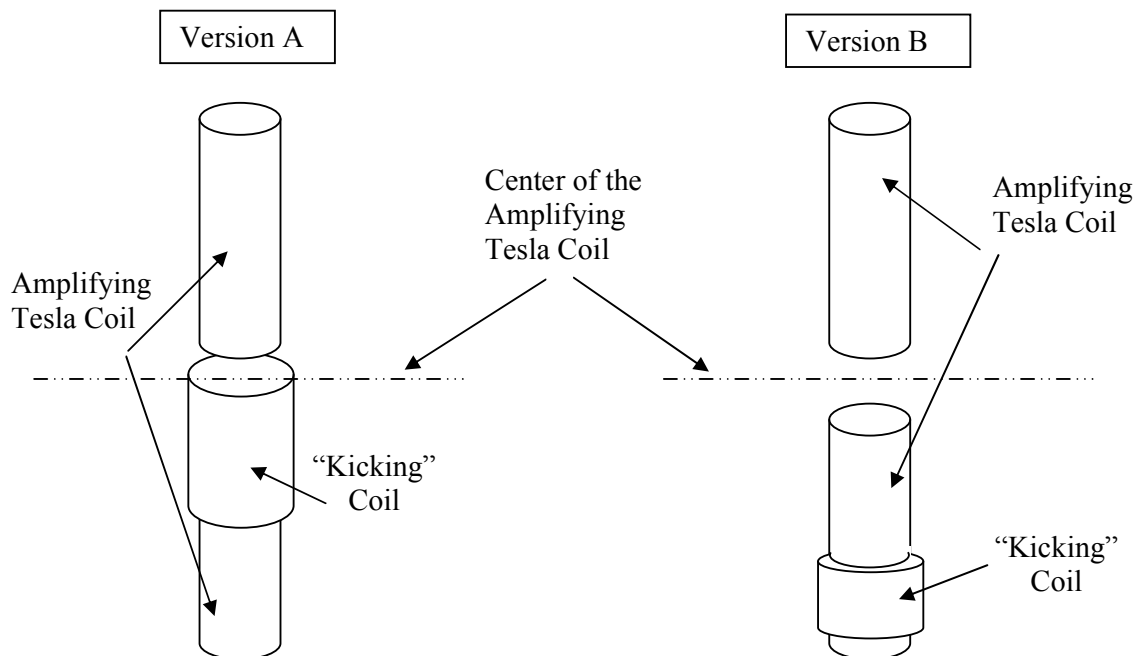
Use additional special “kicking” coil, which can generate short powerful magnetic pulses, and install amplifying Tesla coil along the electrical vector of the E/M field of this coil.



Electrical field of “kicking” coil will charge the spread capacitors of inductance, and process will be started. Use in “kicking” coil as short pulses as possible, because displacement current depends on the speed changes of the magnetic field.

## “KICKING” PROCESS IN MAGNETIC FIELD

You are unable to “kick” the process by displacement of the amplifying Tesla coil in the uniform changing magnetic field of “kicking” coil, because outcome voltage on the ends of the Tesla amplifying coil will be equal to zero in this case. So, you must use not uniform magnetic field. For that you must install “kicking” coil not in the center of amplifying Tesla coil, but shifted from the center.



## IS THAT ALL TRUE, OR THE BEST DECISION?

No, it is not!

Nikola Tesla found more delicate and more powerful decision – it was bifilar pancake coil!

## BIFILAR PANCAKE COIL – MAY BE THE BEST DECISION

The voltage between neighboring coils in ordinary inductances are very low, and they can generate energy additionally not good.

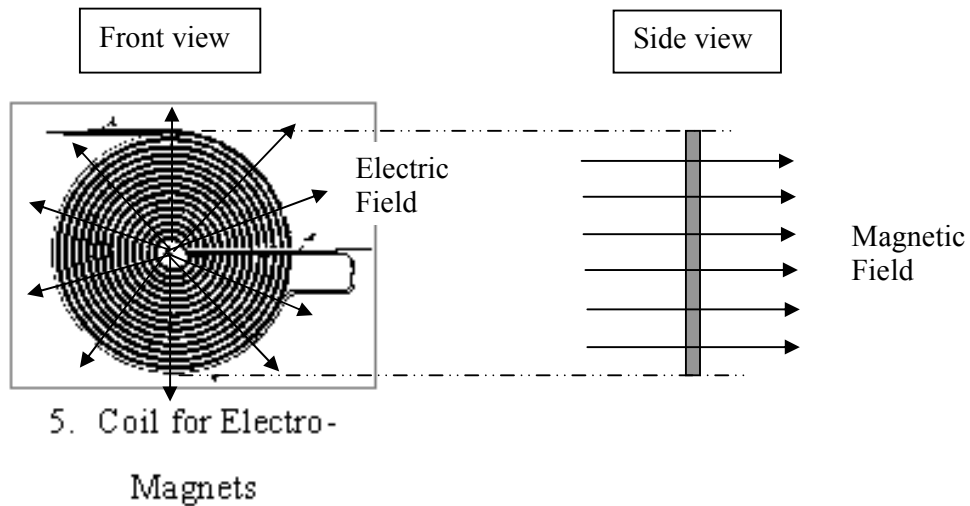
You need to raise the voltage between neighboring coils in the inductance.

**Decision:** divide the inductance into parts, and coils of the first part displace between coils of the second part, and the end of the first coil connects to the beginning of the second coil.

**In this case voltage between neighboring coils will be the same as at the ends of the all coil!!!**

Next step – arrange magnetic and electric field, as it needs for amplifying energy (see point “AN ANSWER” of this article). And decision was found – flat pancake coil.

**In this case magnetic and electric fields are arranged in the way it needs for energy amplifying!!!**

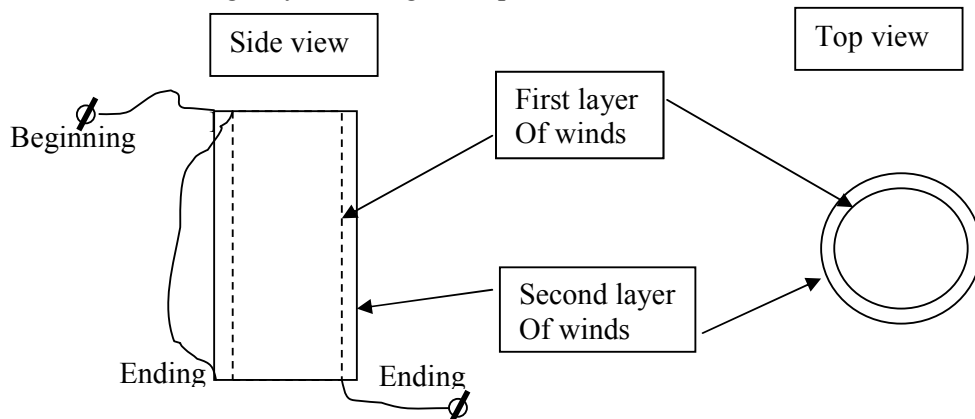


**Now, it is clear why Tesla said always: bifilar pancake coil is energy amplifying coil!!!**

**REMARK** for the best charging the parasitic capacitance of the coil, you have to use as short as possible electric pulses, because displacement current in Maxwell equation depends on the speed of the magnetic field changes.

## BIFILAR PENCIL COIL

Bifilar coil winding may be arranged for pencil coil too.

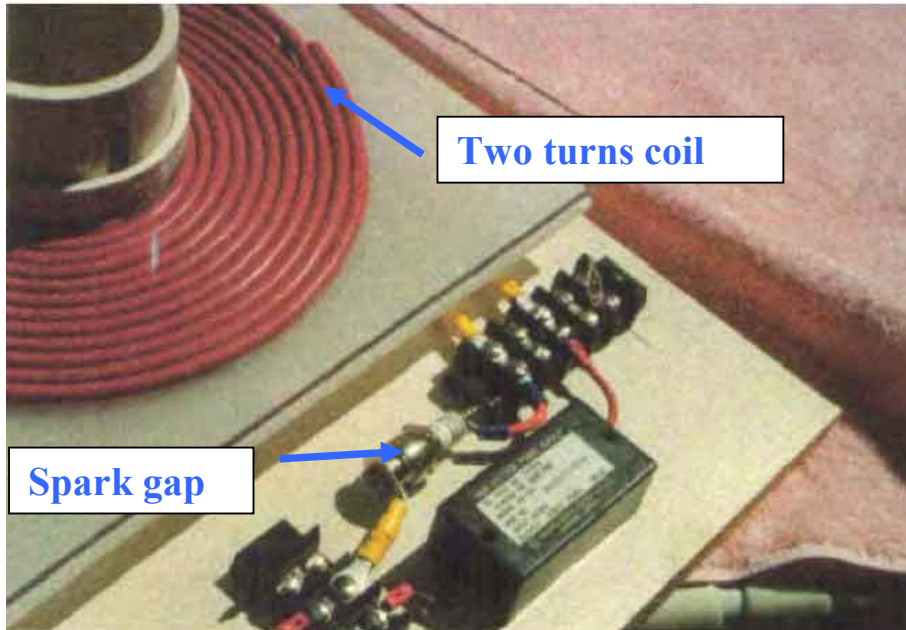


**MODERN OPTIONS**  
in self powered LC circuits

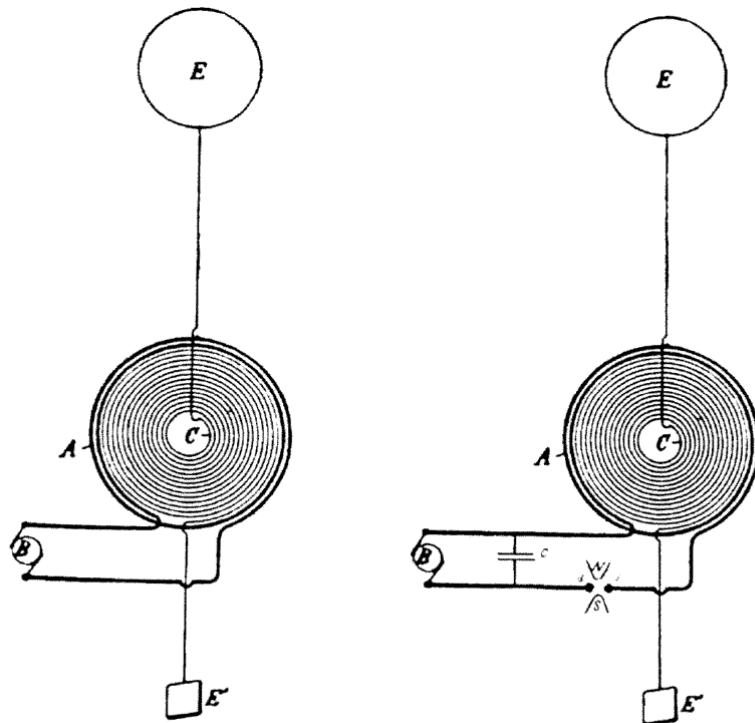
**OPTION 1**

**Usage two turns coil as primary coil in resonance Tesla transformer**

By Don Smith




**Explanation** Two turns primary coil is used for energy amplification, and excited by spark. This is a “long” capacitor that has e/m field’s orientations we need.

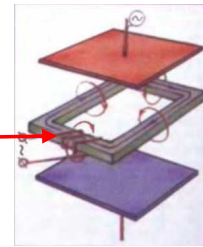


Tesla's Magnifying Transmitter

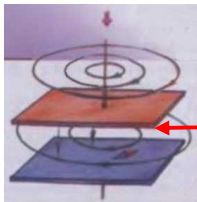
## OPTION 2

By Mislavskij

Consists from a capacitor boards and a ferrite ring core with turns on it, placed inside a capacitor. 

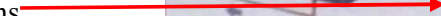


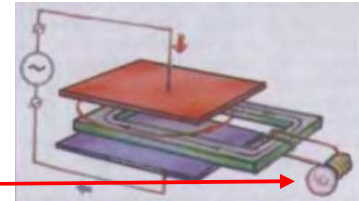
## EXPLANATION




### The technology based on displacement current.

When a capacitor is charging (or discharging), the displacement current generates magnetic field in the vacuum in a circle form (Maxwell's equations).

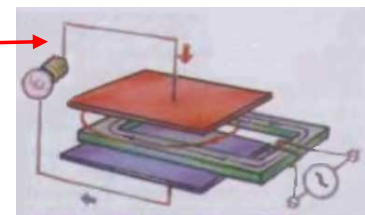
If a ferrite core is placed inside of it, the real voltage is generating on ends of the turns. 



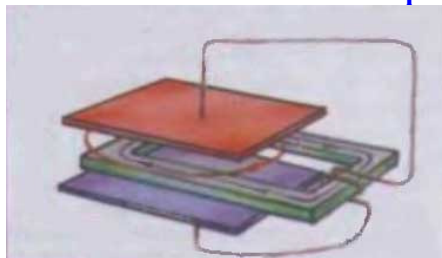
And, vice versa, if a generator is applied to the inductance, the voltage is generating on a capacitor. 

If an inductance and a capacitor are combined in LC circuit, we'll have two cases inside such an LC circuit:

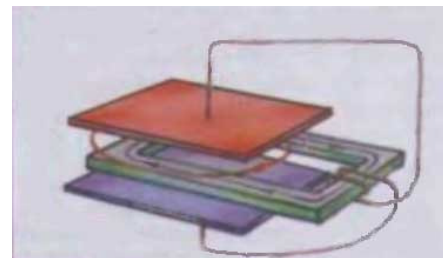
a) energy amplification and b) energy destruction



### The case depends on connection L and C



Energy generation



Energy destruction

**REMARK:** if change direction of the winding on the core, connection must be changed too.

**REMARK:** the first experiments with ferrite core inside a capacitor were maiden in 1992 by Mislavskij (the pupil of the 7-th class Moscow school), so named "Mislavskij's transformer".

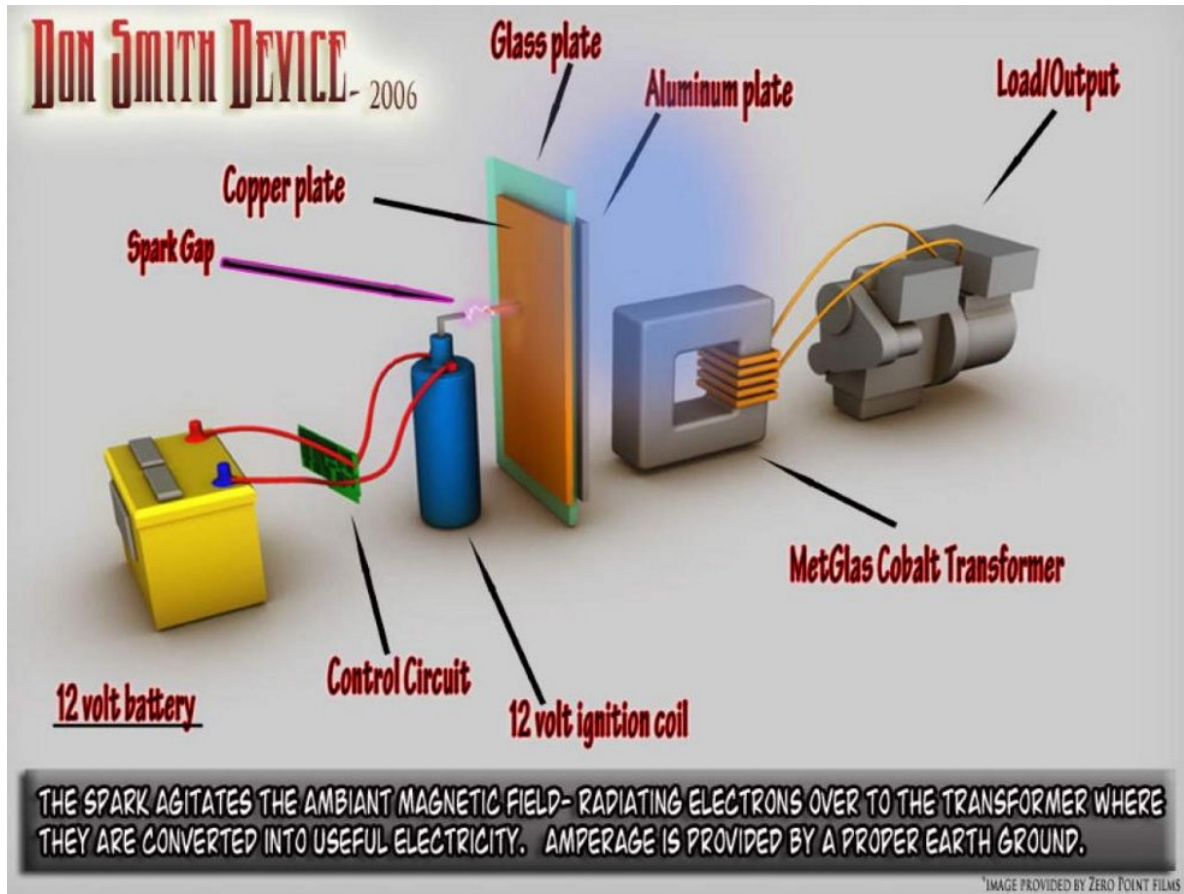
## REAL TRANSFORMER



## THE SAME APPROACH?

By Don Smith

The capacitor is charging by spark. The powerful displacement current is around. The transformer with ferromagnetic core is catching this current.



**REMARK** This schematic is very rough, and is out of details.

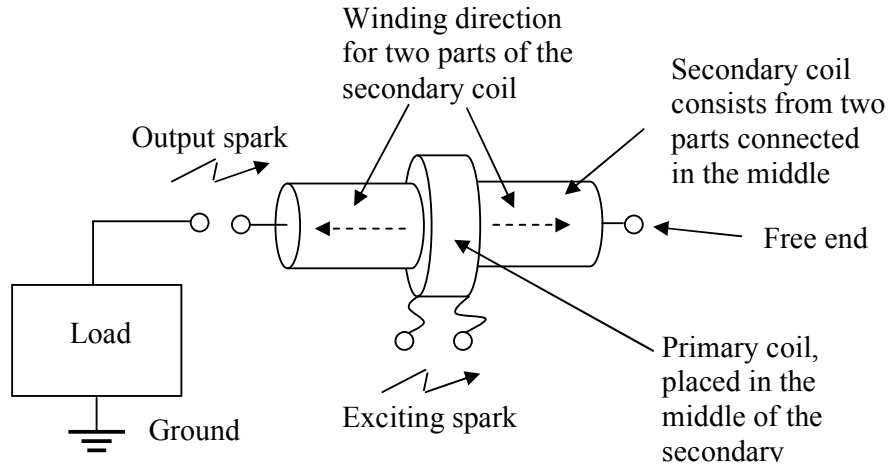
**REMARK** It is impossible without back EMF suppression of some kind (read next parts)

## SECRET 1.1

### Back EMF suppression in resonance Tesla coil

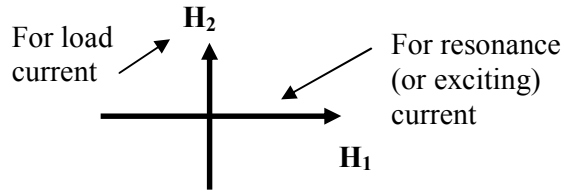
#### Version 1

Primary and secondary coils and ground connection in Tesla coil are arranged in special manner

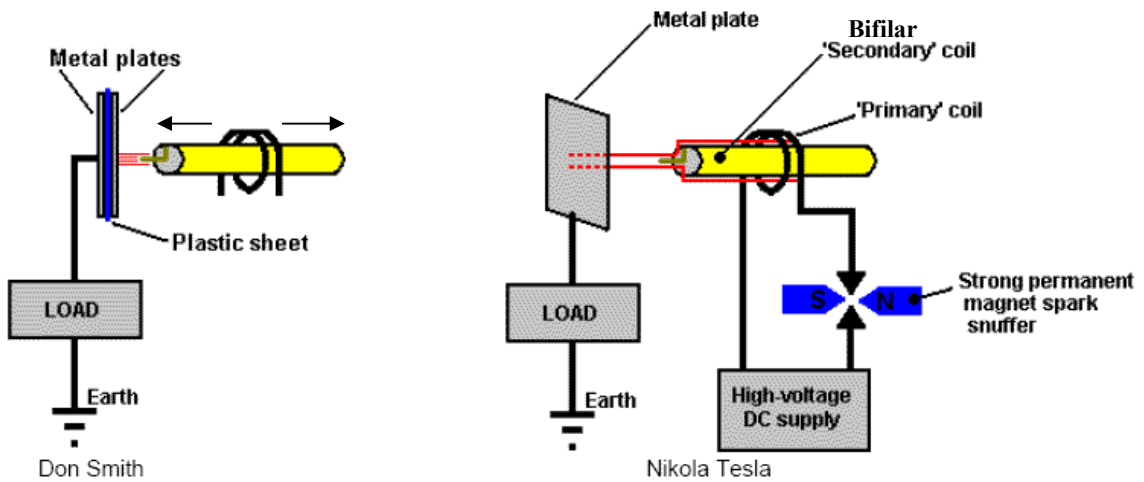


#### Explanation

Electromagnetic fields are orthogonal for exciting current and for load current



**REMARK** The frequency of excitation is equal to resonance frequency (to get gain in energy).



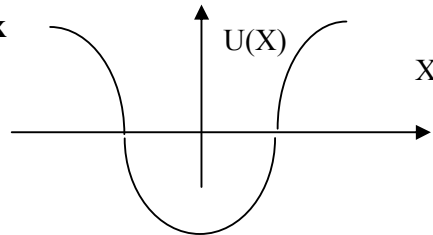
**REMARK** One spark exciting is possible.

**REMARK** This is charges pump or charges funnel in terminology of Mr. Tesla, the charges are coming from the ground (this is a source of the energy).

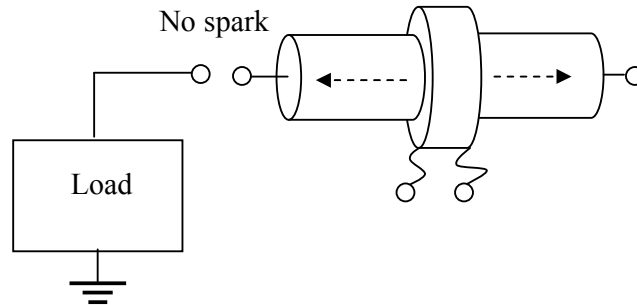
## POTENTIAL (VOLTAGE) DISTRIBUTION ON THE COIL

**Before the ground spark**

For one moment



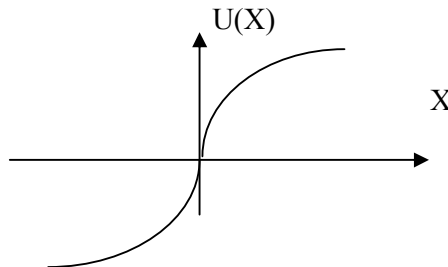
A



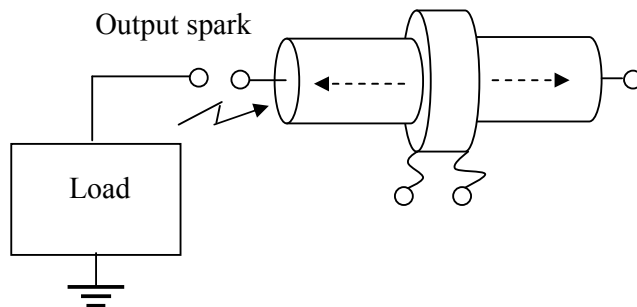
Real Coil

**Added by ground spark**

For one moment



B



**EXPLANATION** The task of oscillating circuit is "make"  $e/m$  field with high intensity of electrical component in ambient space. (Ideally, it takes only one stock up energy in the high voltage capacitor. If the circuit is lossless, then oscillation will be maintained indefinitely without power consumption).

**THIS IS A "BAIT" FOR CHARGES FROM THE AMBIENT SPACE.**

There is almost do not need energy to create such a "bait"...

Next, move to the "bait" (to one side of the circuit), the source of the charges (Ground).

It'll be so close that the breakdown occurs. Parasitic capacitance of the circuit will be instantly recharged.

At the ends of the circuit will be potential difference, and there'll be spurious oscillations.

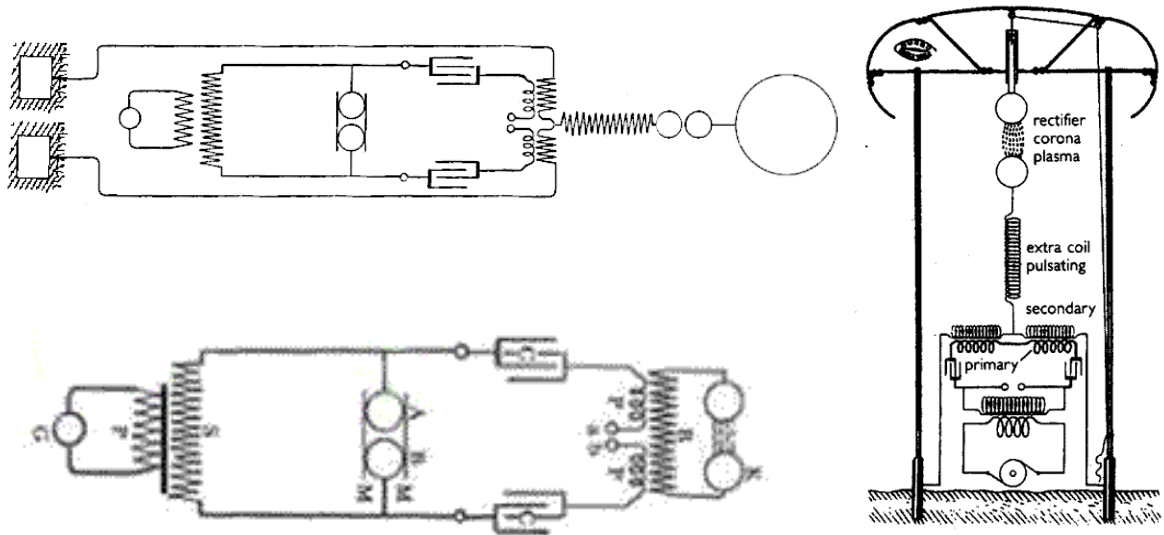
Direction of this  $e/m$  field is perpendicular to the "bait" original field and not destroys it, it happens because of the fact that the coil consists from two opposing halves.

Parasitic oscillations gradually die out, and don't destroy "bait" field.

The process is repeated, the spark by the spark. The more often sparks means the higher efficiency of the process. Energy of the "bait" is almost not consumed.

## TESLA SCHEMATICS

**REMARK** Don Smith named this technology “Bird on the wire”. The bird is safety on the wire till any spark happens.

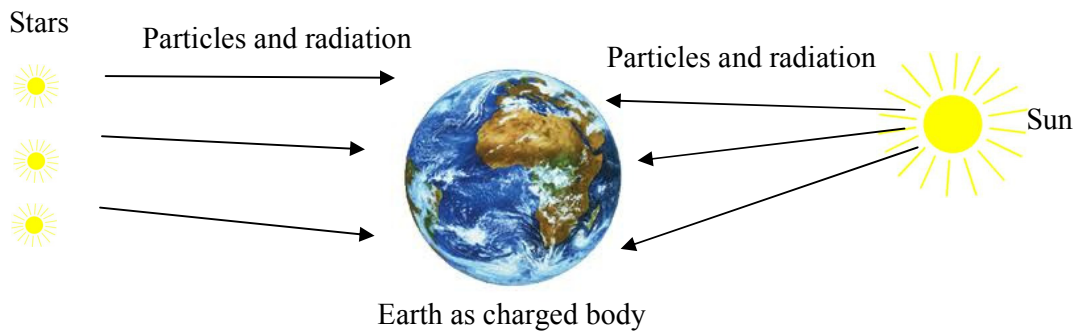


**REMARK** Mr. Tesla named this technology “charges funnel” or “charges pump”

### THE PRINCIPLE OF THE TECHNOLOGY

1. The FE device generates a/c electrical potential in ambient space (“bait” for electrons),
2. Electrons in the load are attracted from external body by this “bait” (pumped)

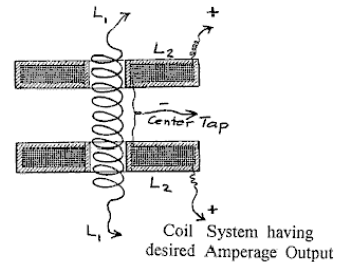
**NO ONE ELECTRON USED FOR EXCITING AMBIENT SPACE MUST BE IN THE LOAD**



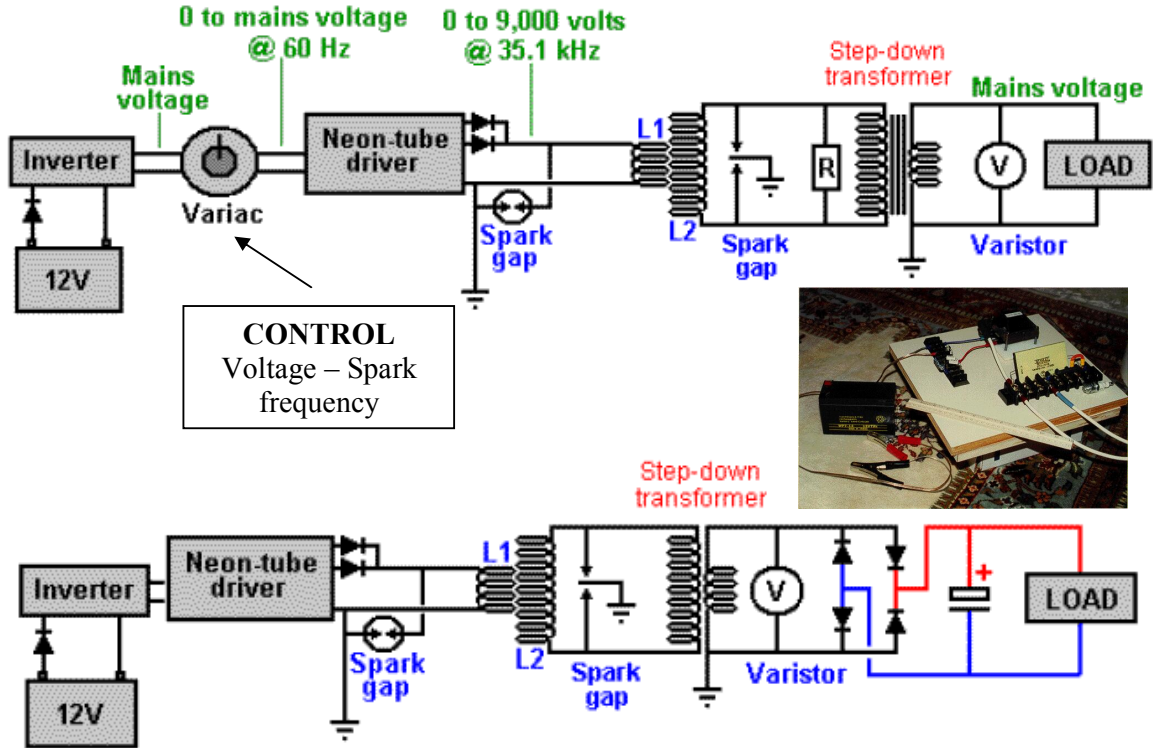
1. Potential (Voltage) – from FE device
  2. Electrons (Current) – from external body
- ⇒ Free Energy**



## 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. When spark is off

No current in step-down transformer. Two ends of L2 have the same potential.

#### 2. When spark is on

Parasitic capacitors (not shown) of L2 (its up and down parts) are discharged to the ground, and the current is produced in step-down transformer. One end of L2 has ground potential. But, magnetic field of this current in L2 is orthogonal to the resonance field and makes no influence on it.

**So, you have power in load, but resonance is not destroyed.**

**REMARK** These schematics have errors in exciting part (to my mind) find it out

**REMARK** One spark exciting is possible.

**REMARK** This is charges pump or charges funnel in terminology of Mr. Tesla, the charges are coming from the ground (this is a source of the energy).

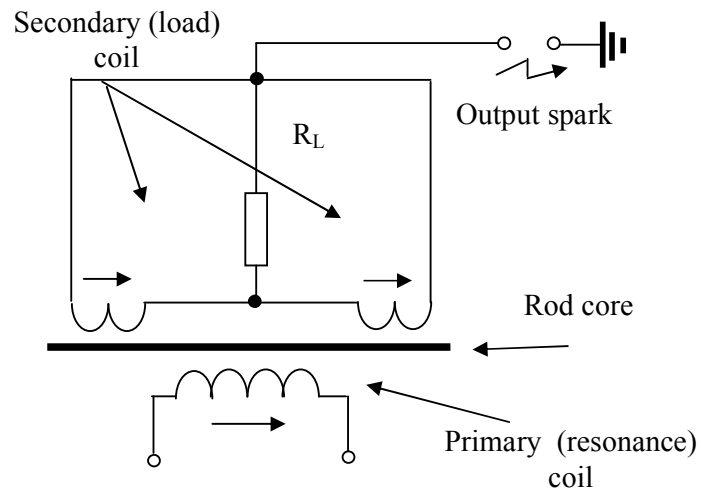
More secrets are in next parts.

## SECRET 1.1

### Back EMF suppression in resonance coil

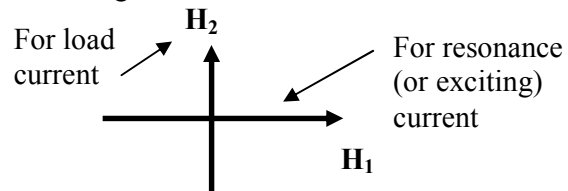
#### Version 2

Primary and secondary coils are placed on the rod core. All coils are arranged in special manner. The primary coil is placed in the middle of the core. The secondary coil consists from two parts, placed at the edges of the rod. Winding direction for all coils is the same.



#### Explanation

Electromagnetic fields are orthogonal for resonance current and for load current



**So, you have power in load, but resonance is not destroyed.**

**Remark** One must choose the load to get maximal power in it, very low and very high loads will give close to zero energy in the load.

**Remark** The secondary coil is shunting the primary one, and has a current in it without any loads.

**Remark** The secondary coil can be adjusted for resonance too.

**Remark** Air can be used as a rod material (and other materials too).

**SECRET 1.1**

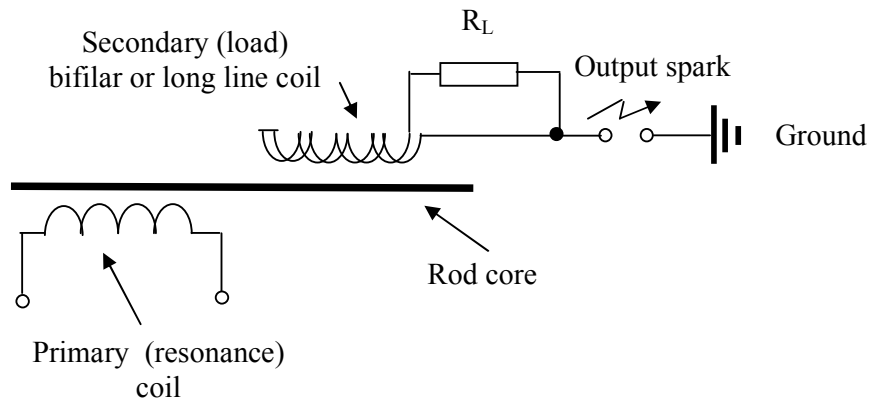
**Back EMF suppression in resonance coil**

**Version 3**

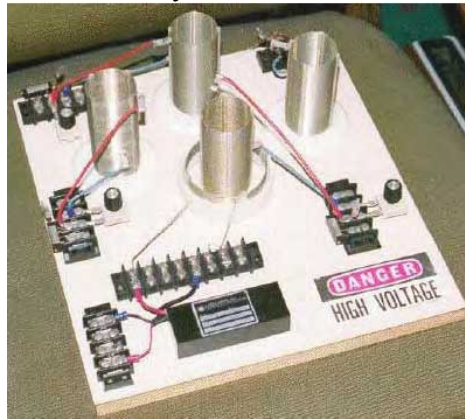
(long line usage – bifilar usage)

**EXPLANATION** It is very alike with **Version 1**, but two coils are combined as one

**REMARK** There is no current in the load without spark



**IT IS IMPOSSIBLE!**  
(Without back EMF suppression)  
By Don Smith



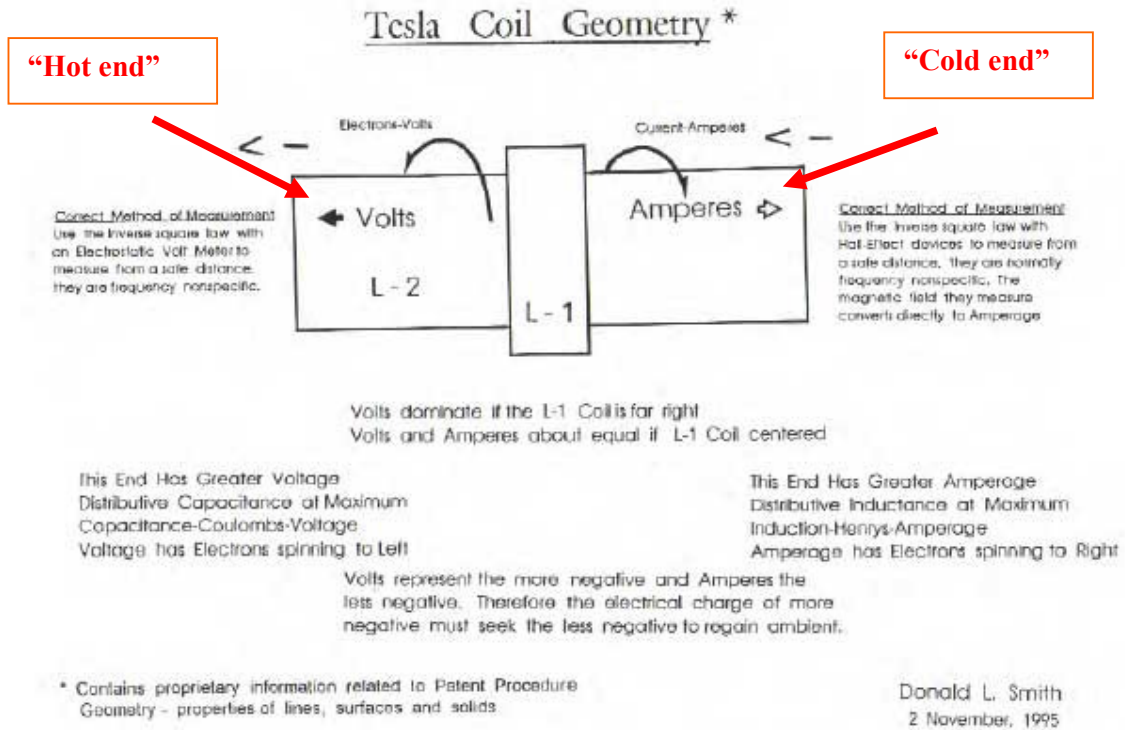
Multi coil system for energy multiplication

**REMARK** Make your decision about it, and how it was made.

Read next parts for more secrets...

## “COLD” and “HOT” ends of the Tesla Coil by Donald Smith

**REMARK** If exciting coil is centered, Tesla Coil has “cold” and “hot” ends. Spark gap can be arranged on “hot” end only. You’ll not get good spark on “cold” end.  
(between the end the external body)

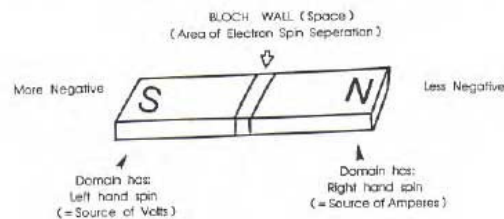


**REMARK** It is very important for practical applications.  
**REMARK** Read Don Smith documents for more details.

### Derivation of Magnetic and Electrical Power

#### Analogous Relationships:

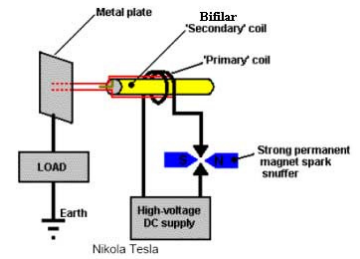
1. Potential Power is present in a bar magnet as shown.



2. The Source of these Electrons being from the Solar Plasma, are none ionic and occupy all Free Space. They are commonly obtained from Earth and Air Groundings. They exist in Doublet Pairs, one being more negative than the other. The more negative one has a Left Hand Spin. The less negative one has a Right Hand Spin.

3. Resonate Electrical Coil Systems (Tesla) are Analogous to the System observed in the Bar Magnet (above). The Bloch Wall Area is Located at the base of the L-2 Coil. The Left Spin portion (Voltage Only) part of the Coil predominates. The right hand spin portion (Magnetic-Amperage) portion is mostly absent.

**MODERN OPTIONS?**  
**In back EMF suppression**  
**Version 3**



**BIFILAR USAGE**  
 By Tatial Kapanadze

The first end BC – spark gap

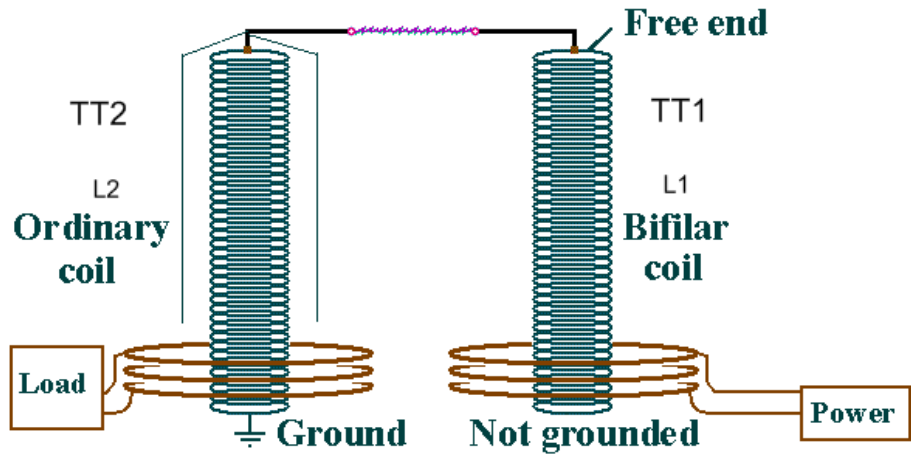


The second end BC – free (Not shown)

Secondary Bifilar Coil (BC) Is not grounded

Step-Down transformer Is grounded

Possible schematics of the device



**EXPLANATION** The spark is “sniffing” charges in parasitic capacitance of the TT1 L1, and charging parasitic capacitance of the TT2 L2 from the ground, without any back EMF on TT1.

**BIFILAR USAGE**  
 By Timothy Trapp

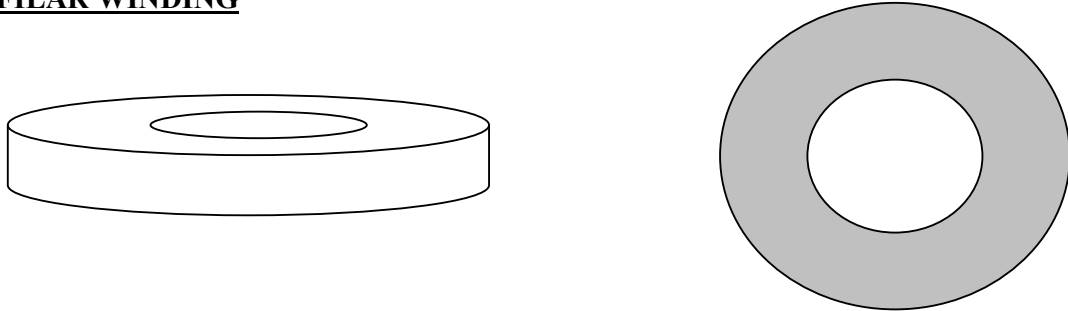


**REMARK** Read Trapp’s sites for more details

# POSSIBLE CORE CONFIGURATION For back EMF suppression

## TOROIDAL CORE

### BIFILAR WINDING

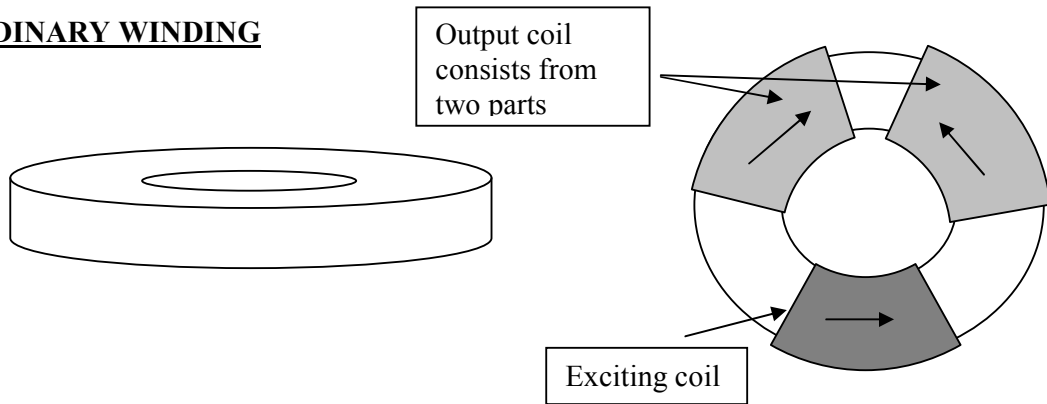


**REMARK** Exciting an ordinary winding is around total core.

**REMARK** Bifilar output winding is around total core.

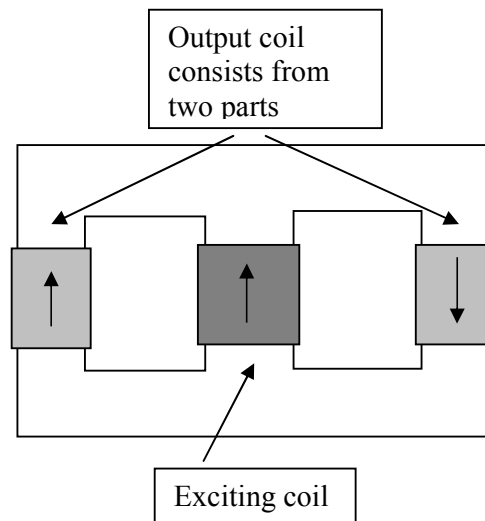
**REMARK** Remember about “Hot” and “Cold” ends of the bifilar coil.

### ORDINARY WINDING



**REMARK** Remember about “Hot” and “Cold” ends of the output coil.

## E - TYPE CORE



**REMARK** Remember about “Hot” and “Cold” ends of the output coil.

# THE BASIS OF BACK EMF SUPPRESSION

(Tesla patent)

(No Model.)

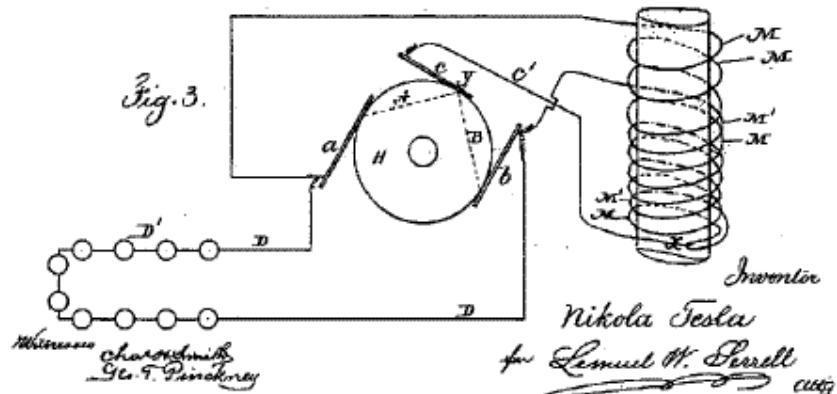
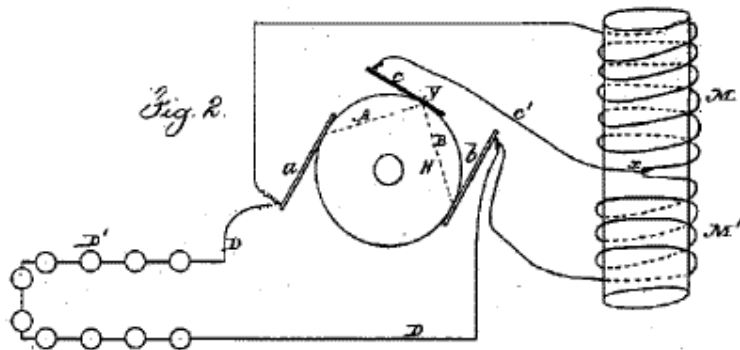
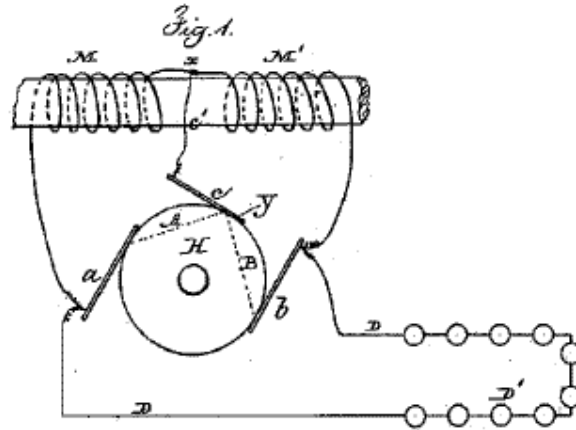
2 Sheets—Sheet 1.

N. TESLA.

REGULATOR FOR DYNAMO ELECTRIC MACHINES.

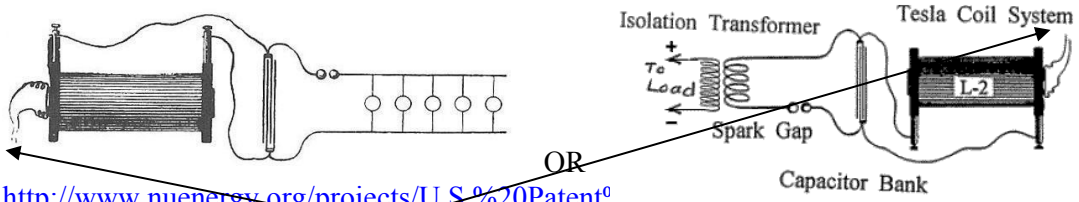
No. 336,961.

Patented Mar. 2, 1886.

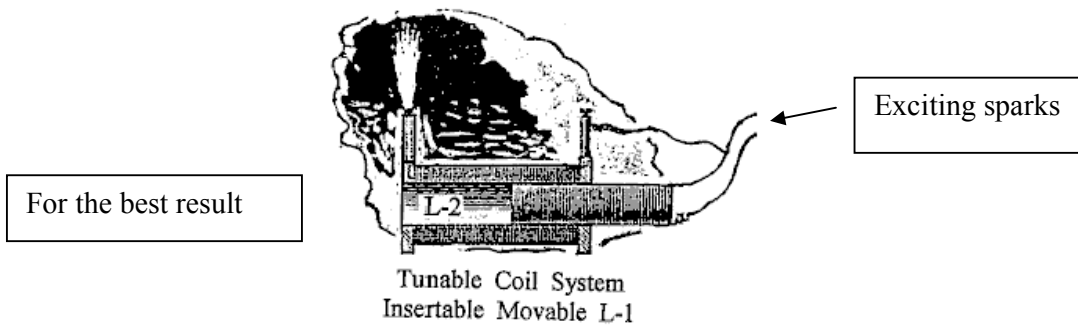
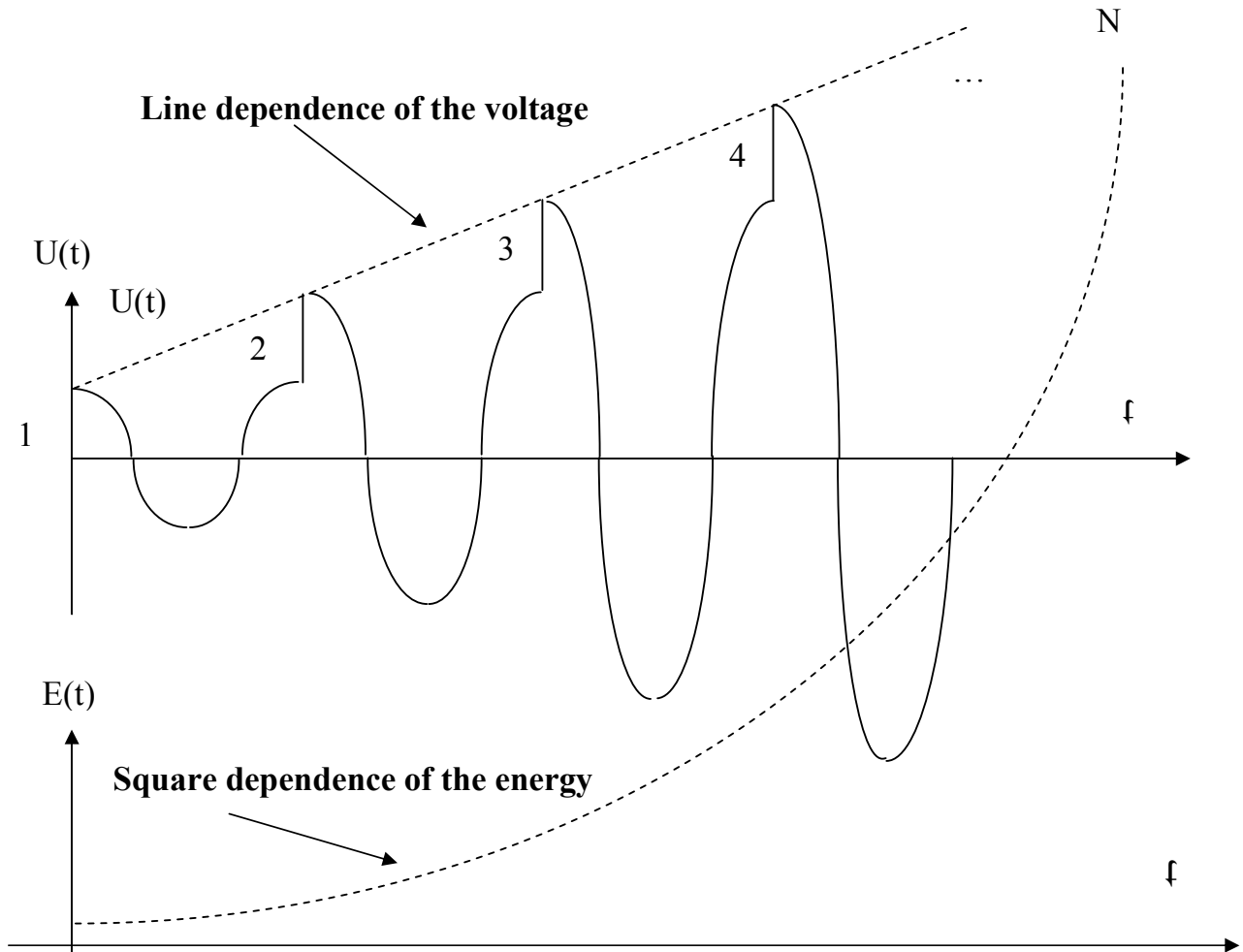


## SECRET 1.2

### Spark exciting generator (SEG) (Charge delivering to LC circuit)



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



**EXPLANATION**

The spark is delivering charge to the LC circuit

The charge Q on a capacitor C with voltage U is equal

$$Q=U*C \quad \text{or} \quad U=Q/C$$

Where Q is a charge delivered by one spark.

During the LC circuit excitation by sparks the capacitance C is constant.

After N excitations the voltage  $U_n$  on C will be

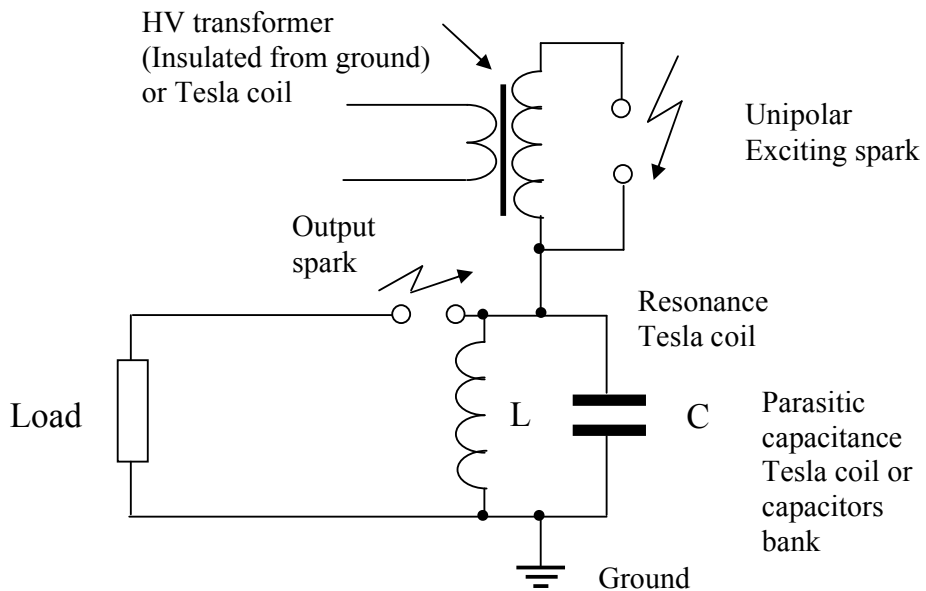
$$U_n=N*Q/C$$

And, energy  $E_n$  will be raised as  $N**2$ .

In other words,

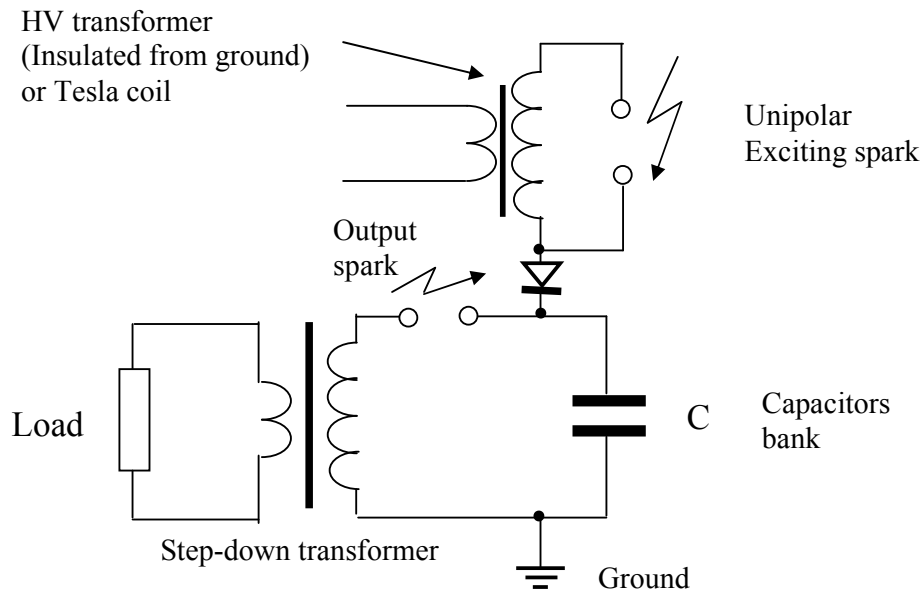
**If LC circuit is exciting by chargers, we have energy amplification.**

**POSSIBLE MODIFICATION**



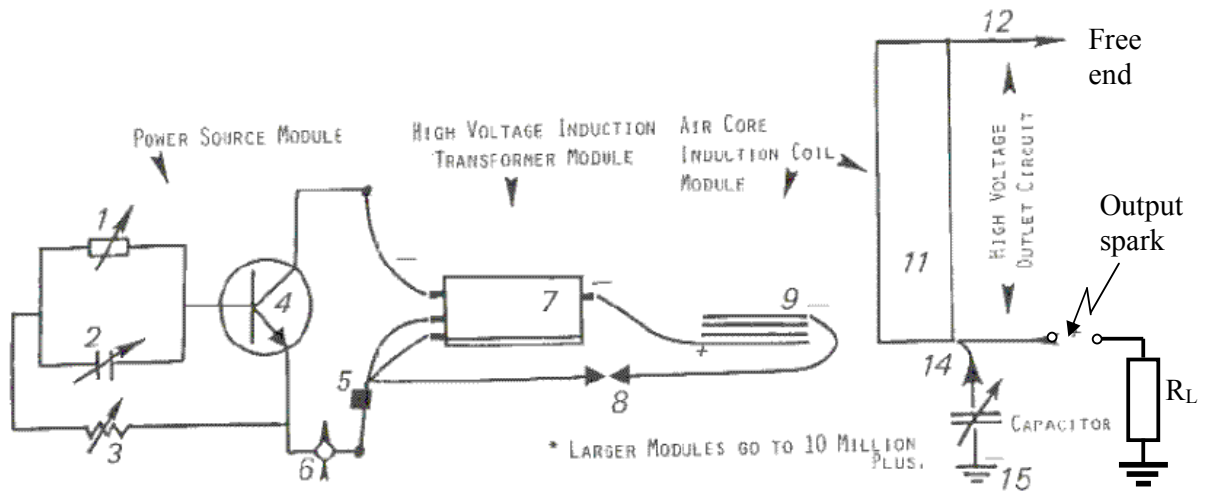
**REMARK** One must understand that back loop in e/m field as shifting level in LC circuit capacitor potential, HV transformer is connected.

**WITHOUT SYNCHRONIZATION**

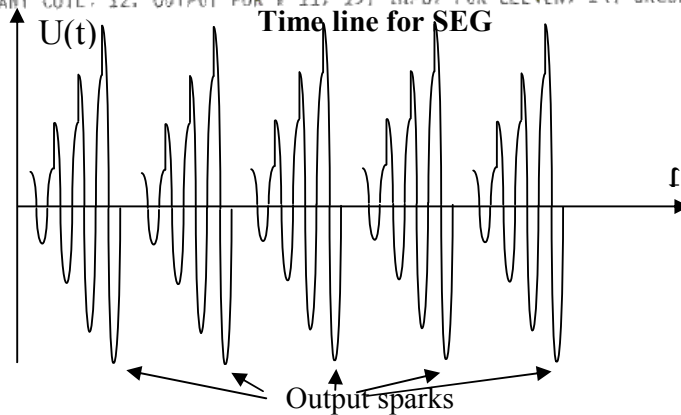


# SEG

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. 13. INPUT FOR ELEVEN, 14. GROUNDING FOR ELEVEN.



## KEEP RESONANCE AND GET FE!

**EXPLANATION** We must charge the capacitor circuit to the energy higher than allows the source energy itself. This is undoable task, at the first look; but the problem is solved quite simply. Charging system is "blinded" in the terminology of Mr. Tesla and does not "see" the presence of the charges in the capacitor. For this goal a capacitor is connected to the ground with one end, and with the second end to the high-energizing coil, the second end of which is free. After jump of the potential for energizing coil, electrons from the ground charge a capacitor.

In this case charging system does not "see" what the charge is already in a capacitor. Everything happens as for the first time. Thus, the capacitor has more energy than a source can give, because a capacitor each time is added to the same charge.

After accumulation the energy, it is discharged to the load through the spark gap discharger. Then, the process will be repeated again and again ...

**REMARK** The exciting sparks frequency must be in resonance with output coil (capacitors 2 and 14 are used for this goal). It is multi sparks exciting.

**REMARK** Chargers are pumping from the ground to 11-15 circuit, this device is a pump for charges from ambient space. It does not work properly without ground.

**REMARK** If you need Mains frequency, or don't want use output spark – read next parts...

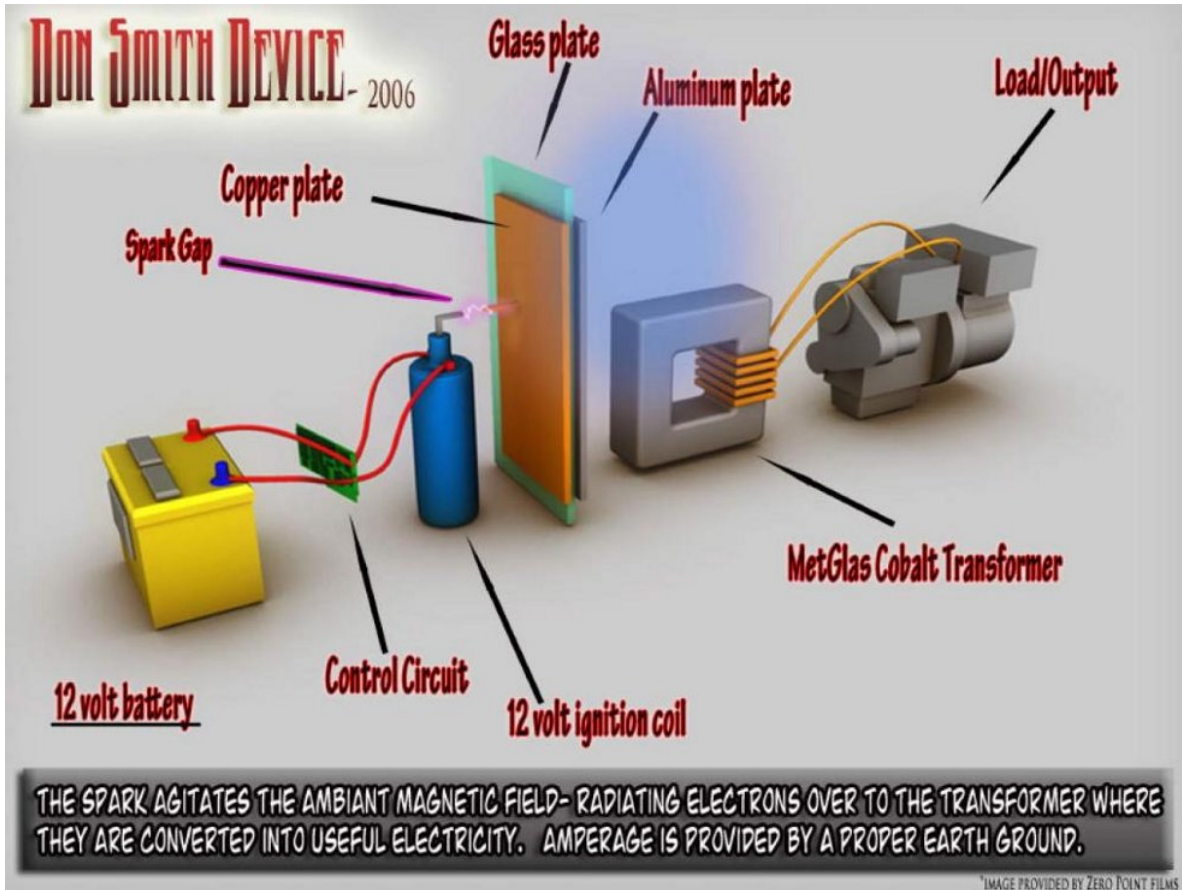
**REMARK** Asymmetrical transformer is used (read next parts)

# SEG WITHOUT SYNCHRONIZATION

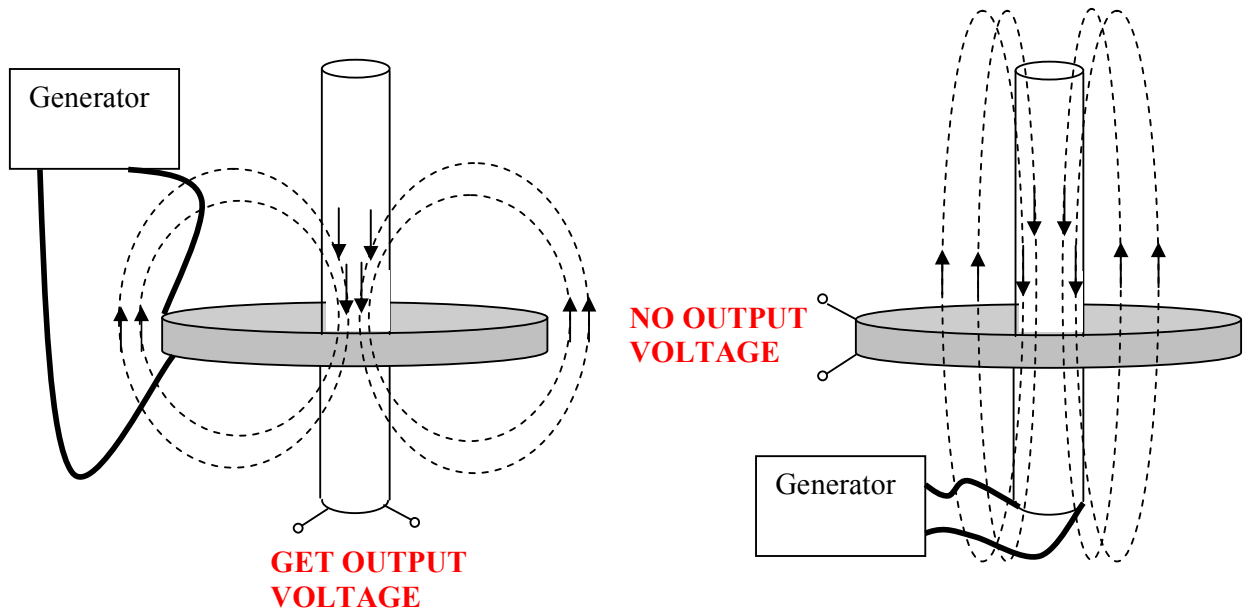
From Don Smith



## Possible schematics



## THE PRINCIPLE OF “BLINDNESS” CHARGING SYSTEM IN SEG



**EXPLANATION** A “short” coil is not able to see oscillations in “long” coil, because the total number of magnetic lines from “long” coil through “short” coil is close to zero (one half is in one direction and one half is in opposite direction).

**REMARK** This a private case of asymmetrical transformer, for more details read part devoted to asymmetrical transformers.

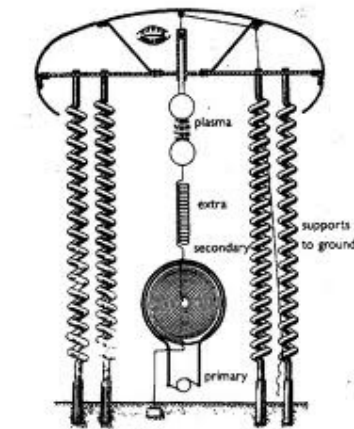
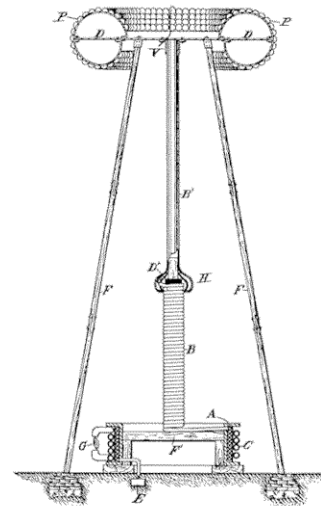


Fig. 4 Oscillating electrostatically charged dome.

N. TESLA.  
APPARATUS FOR TRANSMITTING ELECTRICAL ENERGY.  
APPLICATION FILED JAN. 10, 1910. RENEWED MAY 4, 1907.  
1,119,732. Patented Dec. 1, 1914.

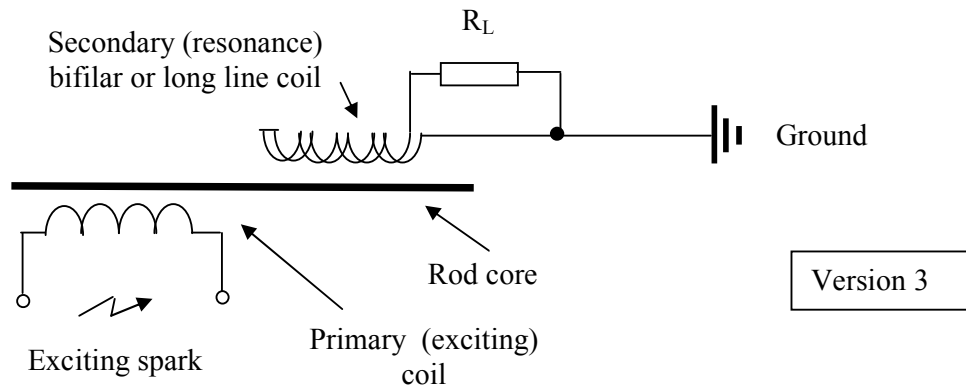
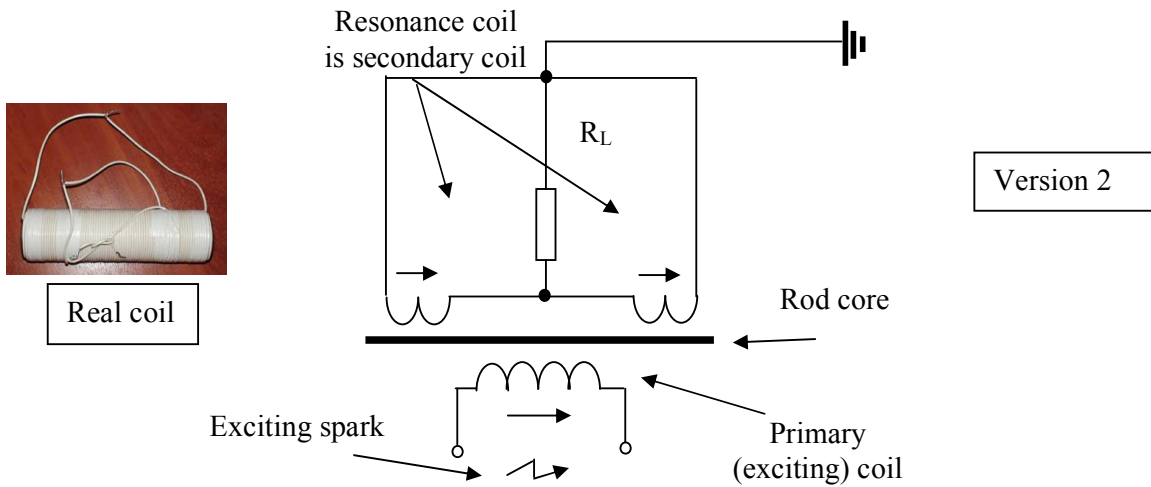
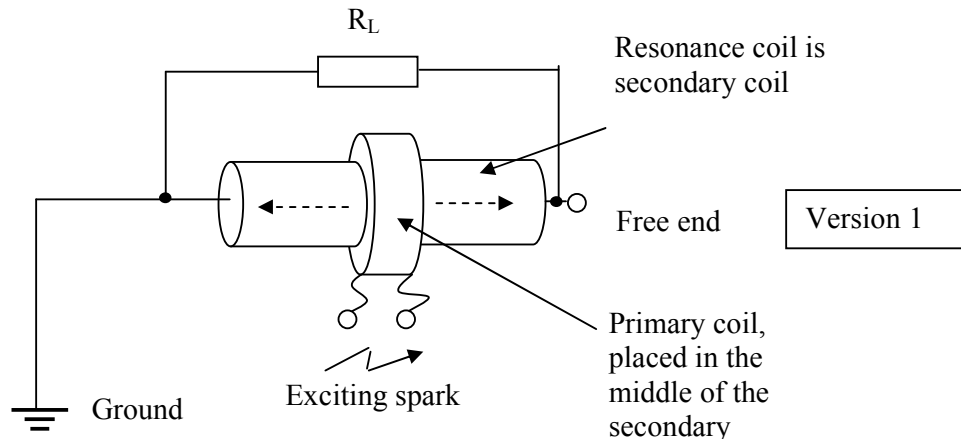


WITNESSES:  
*M. Sawyer*  
*Benjamin Miller*

INVENTOR,  
*Nikola Tesla*  
BY *Wm. R. Cooper*  
*his* ATTORNEYS.

**REMARKS FOR SEG:**

**All Back EMF schematics can be used in SEG**

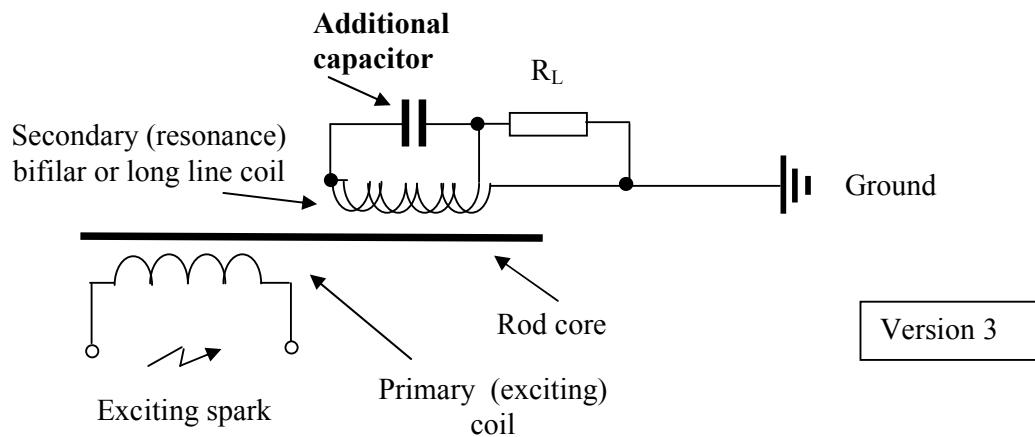
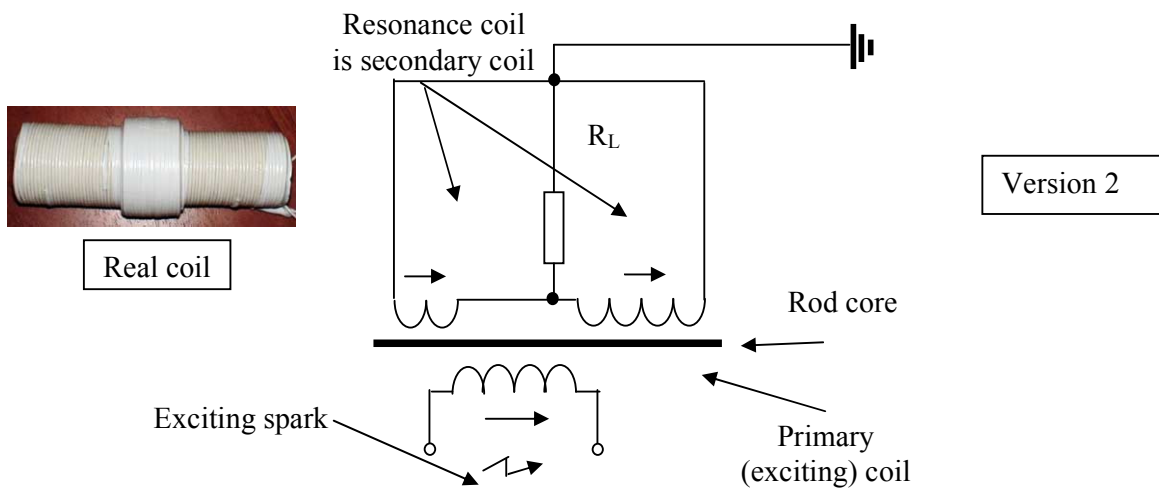
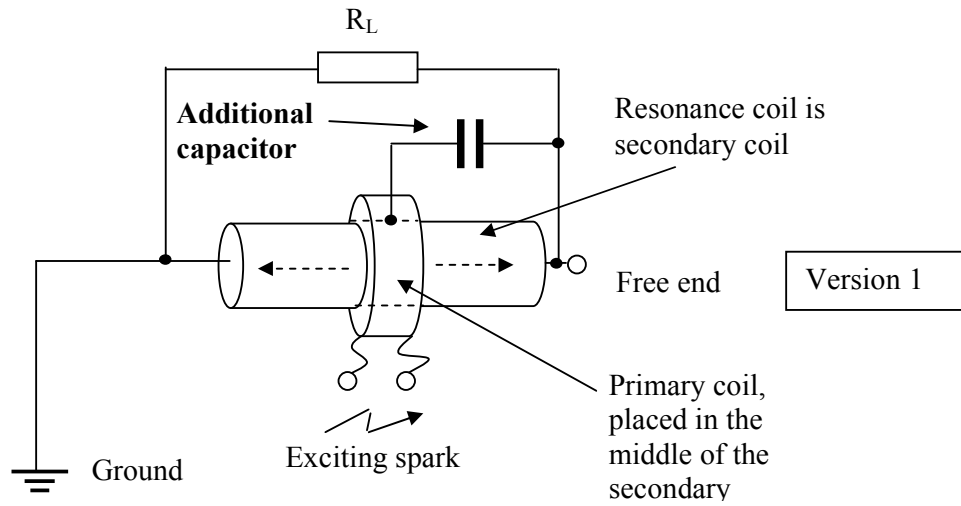


**REMARK** There is no current in the load without ground for all schematics.

**REMARK** One spark exciting is possible (???)

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

By Don Smith

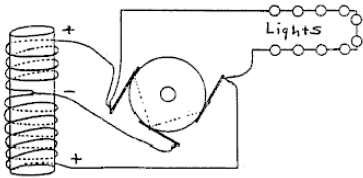


**REMARK** It is more asymmetrical after exciting.

# MODERN OPTIONS IN SEG

## Back EMF suppression in resonance coil

**Version 2**  
By Don Smith

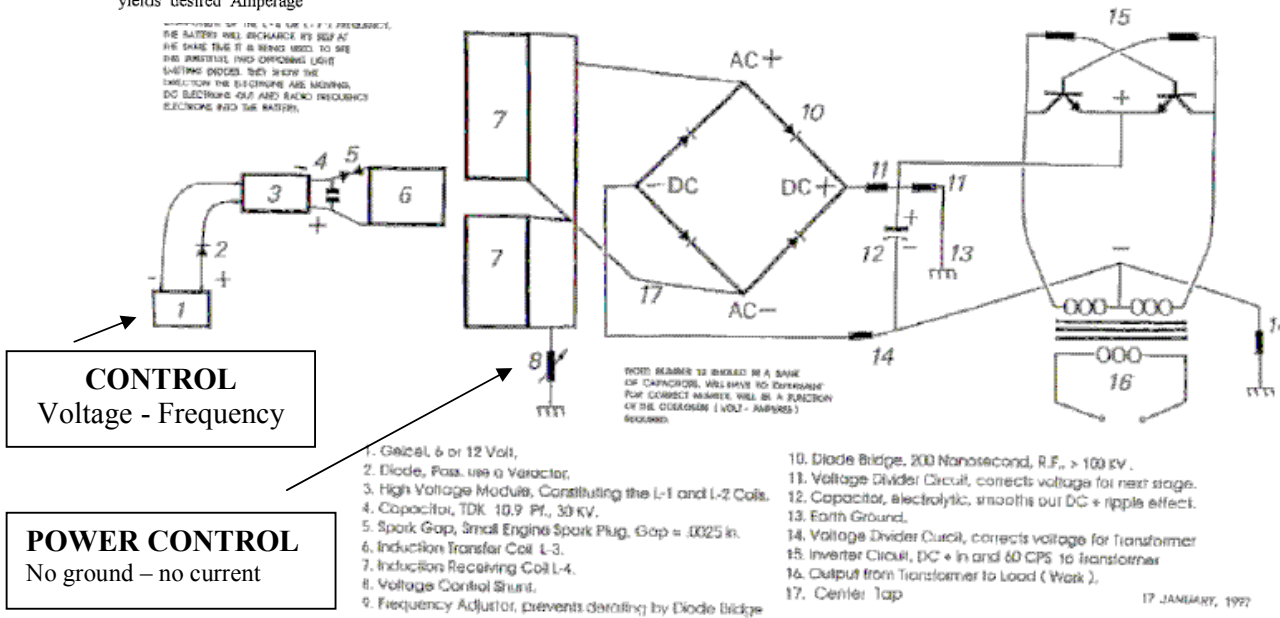


Armature ( generator )  
taking place of the L - 1  
yields desired Amperage

--- CURRENT OF THE L-1 AND L-2 IS FREQUENCY.  
THE SPLIT RING COMMUTATOR BY HELP AS  
THE SHAFT TURNS IT IS BEING USED TO USE  
THE CURRENT INTO TWO COMPONENT LIGHT  
SHEDTING SPACES. THIS SHOWS THE  
DIRECTION OF ELECTRICITY AND INDICATES  
DC ELECTRICITY OUT AND BACK DISCHARGE  
ELECTRICITY INTO THE BATTERY.

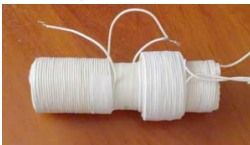
### ELECTRICAL ENERGY GENERATING SYSTEM

Patent Pending 08 / 100,074



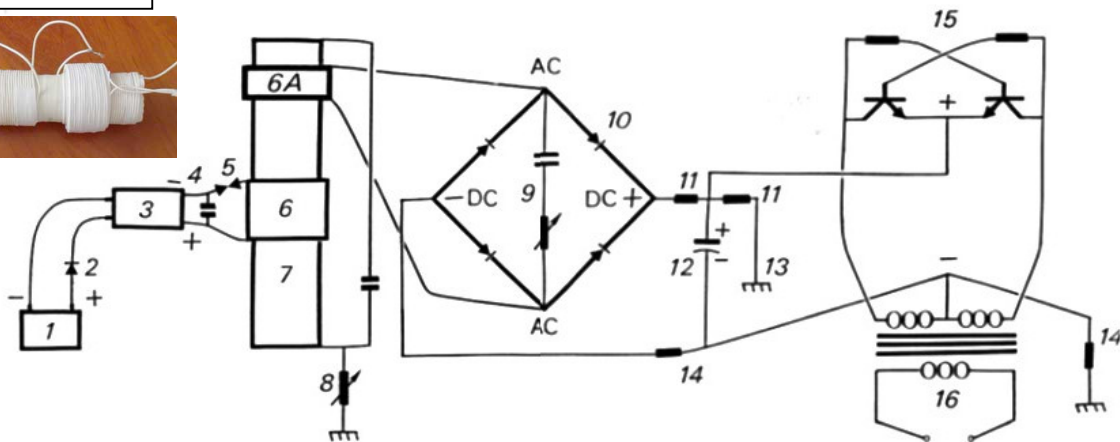
### Version??? (read asymmetrical transformer in next parts)

**Real coil**  
(without 6)



### ELECTRICAL ENERGY GENERATING SYSTEM

Patent Pending 08 / 100,074



1. Gelcel, 6 or 12 Volt.  
2. Diode, Poss. use a Varactor.  
3. High Voltage Module, Constituting the L-1 and L-2 Coils.  
4. Capacitor, TDK 10.9 Pf., 30 KV.  
5. Spark Gap, Small Engine Spark Plug, Gap = .0025 in  
6. Induction Transfer Coil L-3, .6A = L-5  
7. Induction Receiving Coil L-4.  
8. Voltage Control Shunt.  
9. Frequency Adjustor, prevents derating by Diode Bridge

10. Diode Bridge, 200 Nanosecond, R.F., > 100 KV.  
11. Voltage Divider Circuit, corrects voltage for next stage.  
12. Capacitor, electrolytic, smooths out DC + ripple effect.  
13. Earth Ground.  
14. Voltage Divider Circuit, corrects voltage for Transformer  
15. Inverter Circuit, DC + in and 60 CPS to Transformer  
16. Output from Transformer to Load ( Work ).

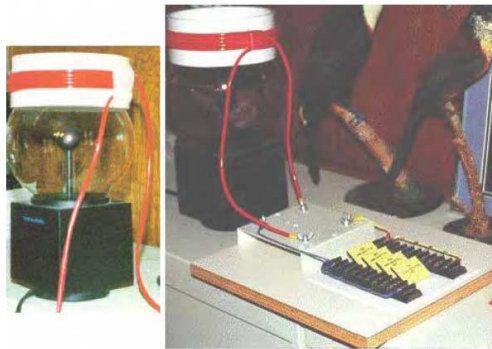
20 Dec., 1994

## MODERN OPTIONS IN SEG Back EMF suppression in resonance coil

### Version 3

By Don Smith

Multi line coil



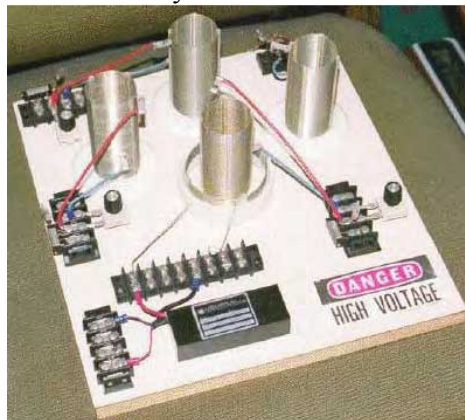
Globe device for energy generation

**REMARK** Pay attention: long line is used.

**REMARK** One spark exciting, additional capacitors are used (???)

### Version???

By Don Smith



Multi coil system for energy multiplication (one spark exciting???)

### Version???

By Tariel Kapanadze



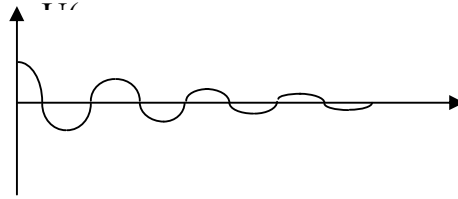
No description, read next...

## KAPANADZE PROCESS

All the process consists from 4 steps

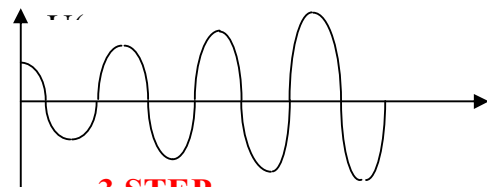
### 1 STEP

There is an excitation of LC circuit and determination its resonance frequency.  
( by HV spark, and frequency by coils placed aside, for example)



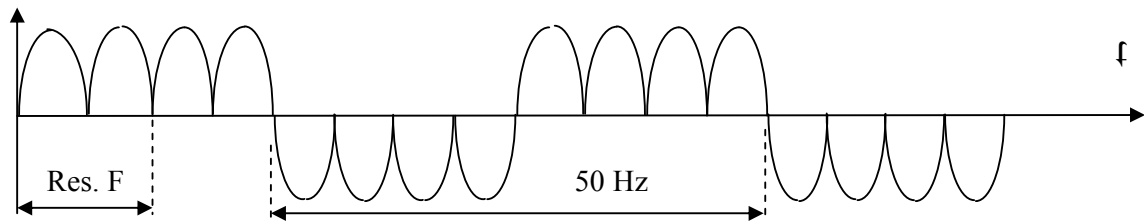
### 2 STEP

Energy rising in LC circuit on resonance frequency (SEG process)  
(by HV spark on resonance frequency)



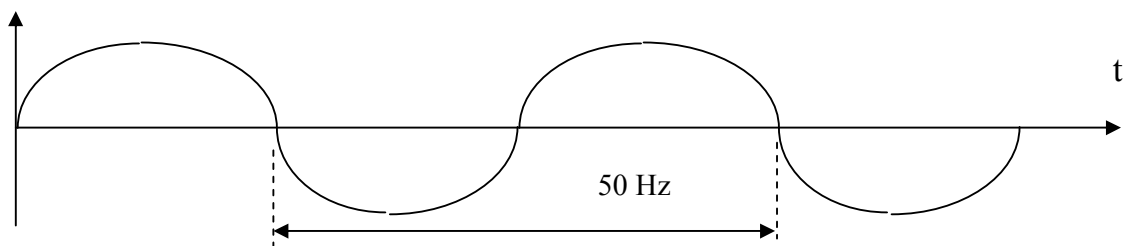
### 3 STEP

Manipulation (modulation) output voltage by the mains frequency.  
(Output power must contain powerful 50(60) HZ oscillations, for example)



### 4 STEP

Oscillations filtering 50(60) Hz and delivering them to the mains

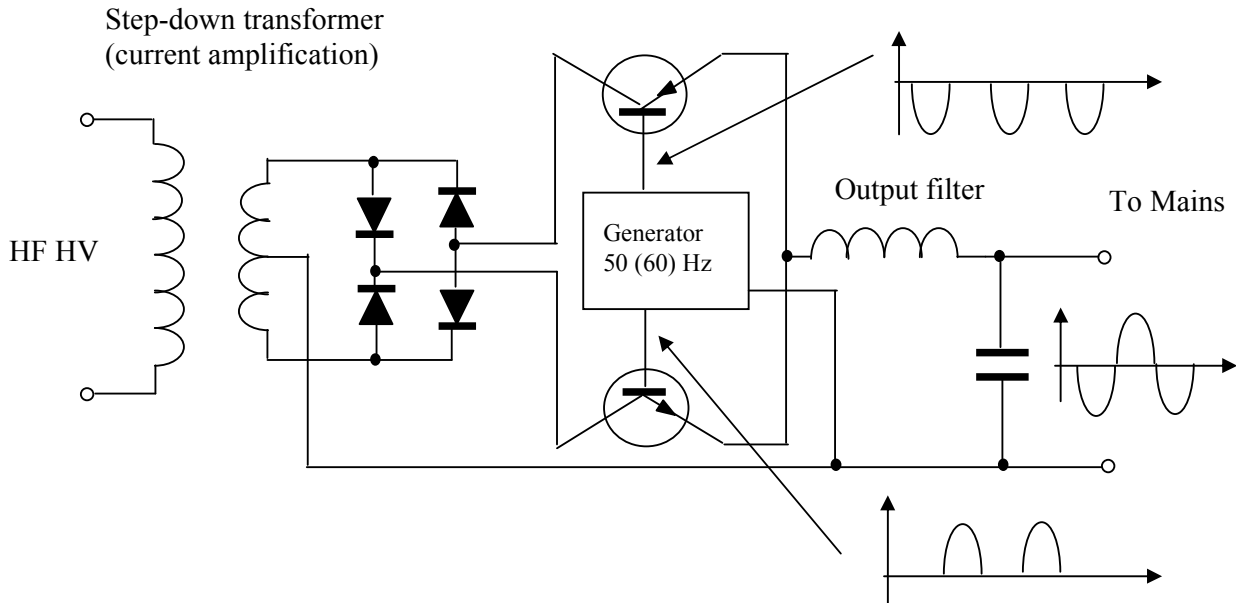


**REMARK** All the process is described in Kapanadze's patents; no state or private secrets were used. So, Kapanadze's process is SEG process.

**REMARK** The main difference between Smith and Kapanadze is inverter or modulator in output circuit (maybe, to my mind). You need huge core for powerful inverter 50(60) Hz.

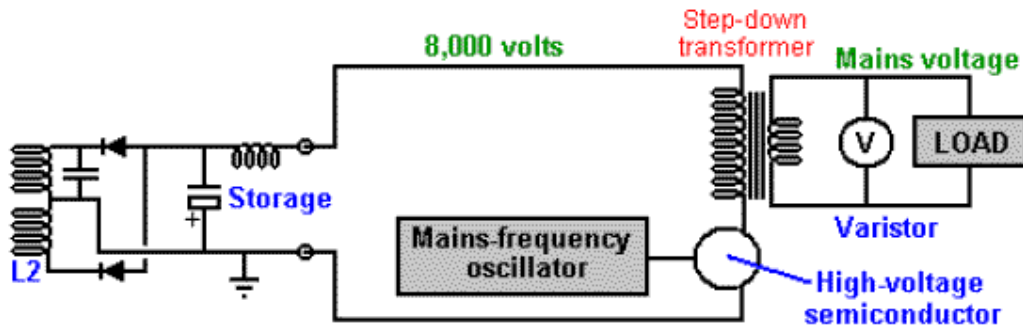
Read next parts for more secrets...

**MODERN OPTION**  
**In Mains frequency formation**  
**(Modulation)**



- REMARK** It is possible to use square waves instead of sinusoidal for more transistors safety.
- REMARK** It is very alike with Kapanadze's patents output part.
- REMARK** There is no powerful transformer with huge core for 50 (60) Hz, as inverter has.

Don Smith's option



- REMARK** There is no HF HV step-down transformer, but step-down transformer is used for mains frequency (huge core).

**FOR BOTH SCHEMATICS:**

**You must chose the load to get maximal power in it, very low and very high loads will give close to zero energy in the load (the current output circuit is restricted by the current in resonance circuit).**

## **ENERGY GAIN**

**(REMAKS on 1.1 and 1.2 SECRETS)**

**We must consider two options:**

1. Back EMF suppression (1.1).
2. Excitation by spark (1.2).

**THESE OPTIONS ARE DIFFERENT**

**However, in both cases, an increase of energy occurs due to the charges pumping from the ground. In the terminology of Mr. Tesla - charges funnel or in modern terminology - charges pump.**

1. In the first case, the problem of oscillating circuit is "make"  $e / m$  field with high intensity of electrical component in ambient space. (Ideally, it takes only one stock up energy in the high voltage capacitor. If the circuit is lossless, then oscillation will be maintained indefinitely without power consumption).

**THIS IS A "BAIT" FOR CHARGES FROM THE AMBIENT SPACE.**

There is almost do not need energy to create such a "bait"...

Next, move to the "bait" (to one side of the circuit), the source of the charges (Ground). It'll be so close that the breakdown occurs. Parasitic capacitance of the circuit will be instantly recharged.

At the ends of the circuit will be potential difference, and there'll be spurious oscillations. The energy of these oscillations is our desired energy gain. This energy serves the load. Arising of this  $e / m$  field is perpendicular to the "bait" original field and not destroys it, it happens because of the fact that the coil consists from two opposing halves. Parasitic oscillations gradually die out, giving all the energy to the load.

The process is repeated, the spark by the spark. The more often sparks means the higher efficiency of the process. Energy "bait" is almost not consumed.

2. In the second case we must charge the capacitor circuit to the energy higher than allows the source energy itself. This is undoable task, at the first look; but the problem is solved quite simply.

Charging system is "blinded" in the terminology of Mr. Tesla and does not "see" the presence of the charges in the capacitor. For this goal a capacitor is connected to the ground with one end, and with the second end to the high-energizing coil, the second end of which is free. Roll of the potential for energizing coil, electrons from the ground charge a capacitor.

In this case charging system does not "see" what the charge is already in a capacitor. Everything happens as for the first time.

Thus, the capacitor has more energy than a source can give, because a capacitor each time is added to the same charge.

After accumulation the energy, it is discharged to the load through the spark gap discharger. Then, the process will be repeated again and again ...

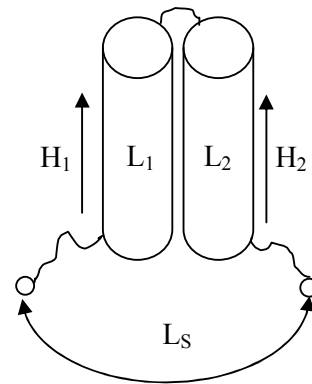
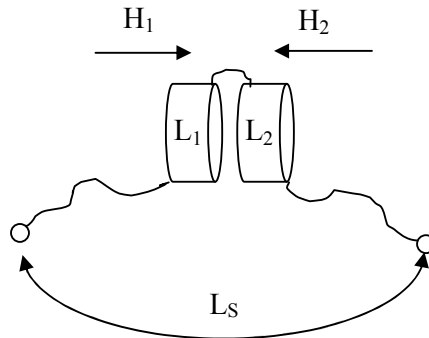
**SUPPRESSION BACK EMF IN THIS PROCESS DOES NOT REQUIRE**

3. It should be noted, that the process 1 and 2 could be combined.

## SECRET 2 SWITCHABLE INDUCTANCE

The inductance consists from two coils (close to each other), connected in front.

1



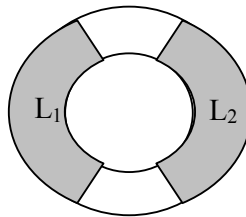
### REALISATION

There are a lot of options in realization depends on core

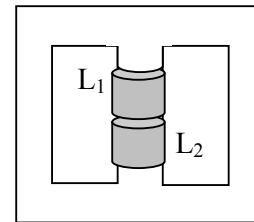
1. on air (vacuum)
2. on bar ferromagnetic core
3. on toroid ferromagnetic core
4. on transformer ferromagnetic core



2



3



4

**PROPERTIES** (tested a lot of times for variety of cores)

**The value of the total inductance  $L_S$  does not change if to short one of the inductance components  $L_1$  or  $L_2$**  (perhaps, the first time tested by Mr. Tesla in the 19<sup>th</sup> century).

### APPLICATION

Energy generation based on asymmetrical process

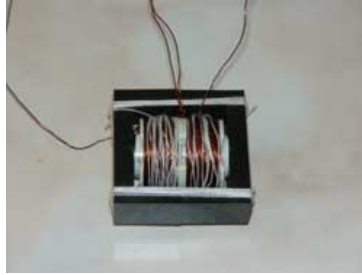
1. Feed the total inductance  $L_S$  by current  $I$
2. To short one part of the inductance (for example,  $L_1$ )
3. Drain off energy from  $L_2$  in a capacitor
4. After draining  $L_2$ , to short it and drain energy from  $L_1$  in a capacitor

### QUESTION

Is it possible in such a way to get dual energy on the basis of asymmetry of the process, and if not, what is wrong?

**AN ANSWER** we need tests, and start from manufacturing the coils.

## THE EXAMPLES OF THE REAL COILS



A coil is wound on transformer ferromagnetic core (size is not important) with permeability 2500 (not important) for power supply transformers. Each half-coil consists from 200 turns (not important), wire is 0.33 mm in diameter (not important). The total inductance  $L_S$  is about 2 mHn (not important).



A coil is wound on toroidal ferromagnetic core with permeability 1000 (not important). Each half-coil consists from 200 turns (not important), wire is 0.33 mm in diameter (not important). The total inductance  $L_S$  is about 4 mHn (not important).



An ordinary transformer (based on iron core) for 50-60 Hz power supply (size is not important) with coils placed on its halves, the total inductance  $L_S$  is about 100 mHn (not important).

## THE TASK OF THE TESTS

To make tests confirmed with coils properties, make measurements of the  $L_S$  inductance without shorted coil  $L_2$  and with shorted coil  $L_2$  and match results.

**Remark** all test will be done with toroidal coil (the other coils have the same properties), you can repeat tests and prove it by yourself.

## OPTION 1

The simplest inductance measurements with the help of an ordinary RLC – meter



### An order of measurements

The total coil inductance  $L_S$  was measured without shorted coils, the figures were stored. The  $L_2$  coil was shorted and inductance  $L_S$  was measured, the figures were stored. After that, the figures of two measurements were matched.

### The result

The inductance  $L_S$  has no changes with accuracy about a percent.

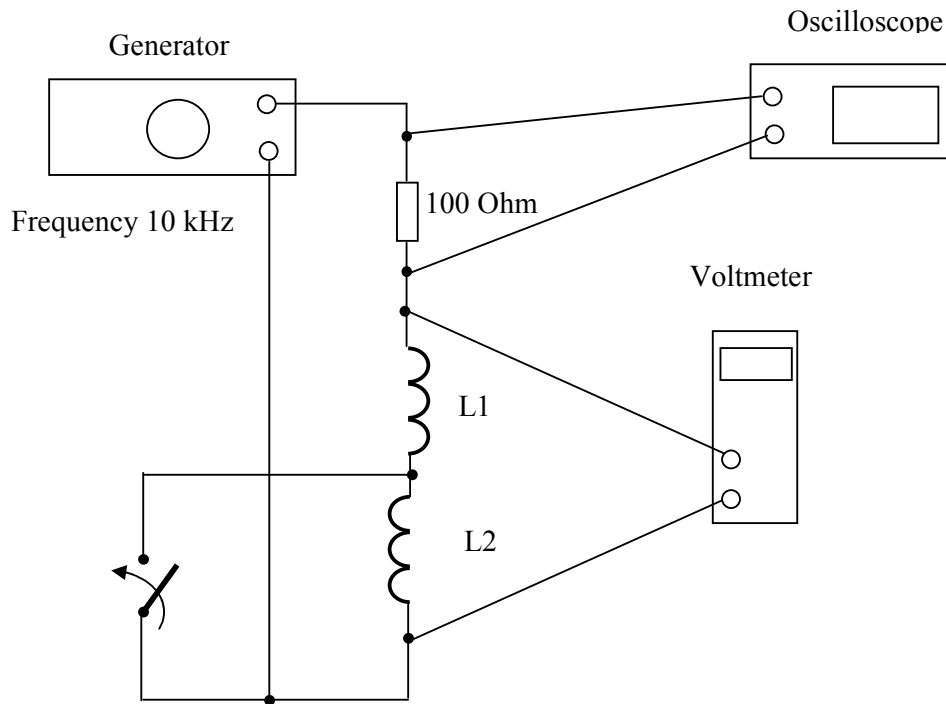
## OPTION 2

A special sep up was used, consisted from an analogical oscilloscope, digital voltmeter and generator to measure a voltage on the inductance  $L_S$  without shorted  $L_2$  and with shorted  $L_2$ .



After measurements all results were matched.

## Schematics of the setup



### An order of measurements

Voltage on resistor by oscilloscope was measured, and voltage on inductance by voltmeter was measured before and after shorting L2

### The result

The voltages have no changes with occurrence about a percent.

### Additional measurements

Before the measurements, the voltage on L1 and L2 were measured. The voltage on both halves was a half of the voltage on the total inductance LS.

### Remark

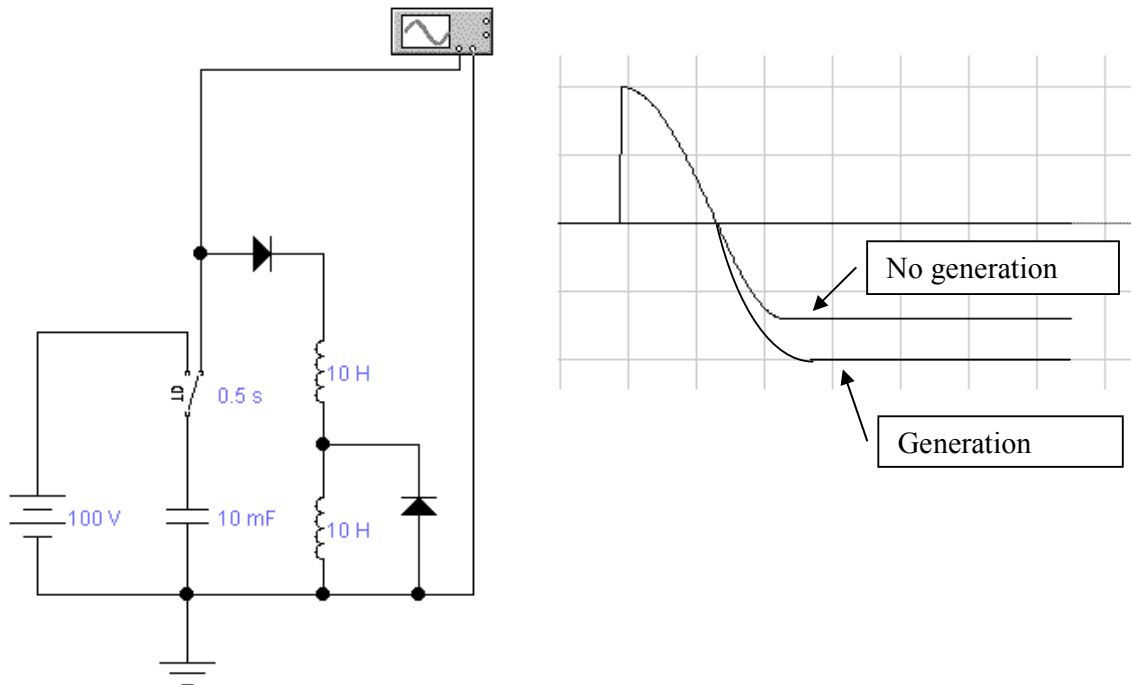
The frequency about 10 kHz was chosen because a coil did not have parasitic resonances at this frequency and for low frequencies.

All measurements were repeated for coil with ferromagnetic transformer E - core. All results were the same.

### OPTION 3

Capacitor recharge.

The task was to match voltages on capacitor before and after its recharging by interaction with switchable inductance.



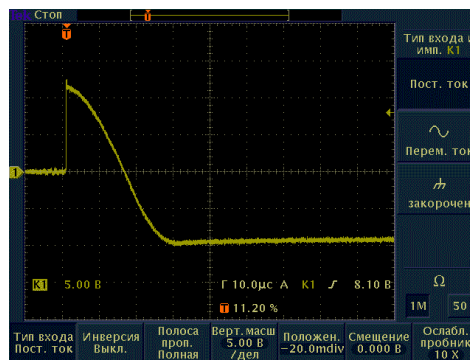
#### The experiment conditions

A capacitor is charged from a battery and is connected to the inductance through the first diode (protection against oscillations). In time of back flip a half of inductance is shunted by the second diode (by fact of its polarity), and inductance must have no changes.

If after recharging the voltage on capacitor is the same (but the other polarity), then generation will take place (because a half of energy will stay in the shunted half).

**It is impossible in principle for an ordinary inductance consisted from two coils.**

#### The result



**The result is conformed to the prediction** – energy is more than a capacitor gives to the coil (with accuracy 20%).

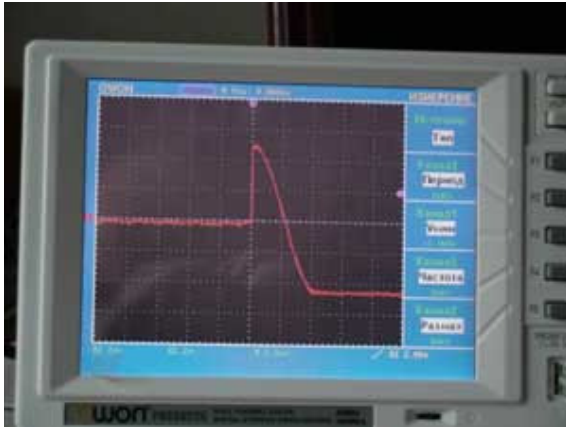
**Conditions:** capacitor 47 nano Farads, inductance  $L_S$  is about 2 mHn , Shotky silicon diodes BAT42, voltage is 12 V.

### THE RESULT VERIFICATION FOR OPTION 3

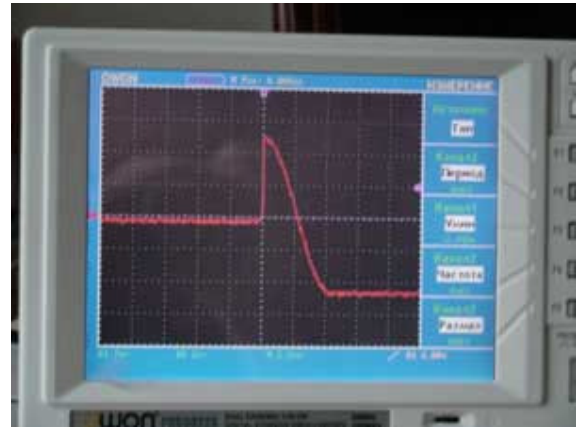
For verification of the results and accuracy improvement, all measurements were fulfilled under the other conditions and with the help of the other devices.

**Conditions:** A capacitor is 1.5 nano Farads; total inductance is 1.6 mHn, germanium diodes (Russians) D311, voltage for charging is 5V.

**The result:** Confirms previous measurements (a).



(a)



(b)

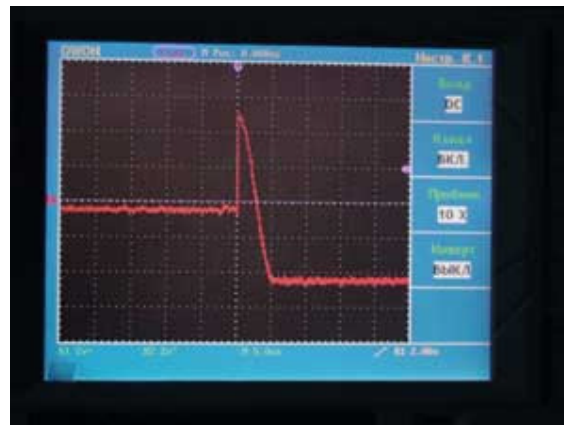
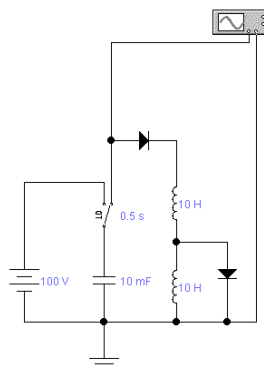
An accuracy of recharging was raised to 10 percents.

Moreover, the checking measurement **without the second diode** was fulfilled. The results were alike to the shunting diode.

The missing 10 percent of the voltage can be explained as looses in spread capacitors inductance and in its resistance.

### CONTINUED TESTING

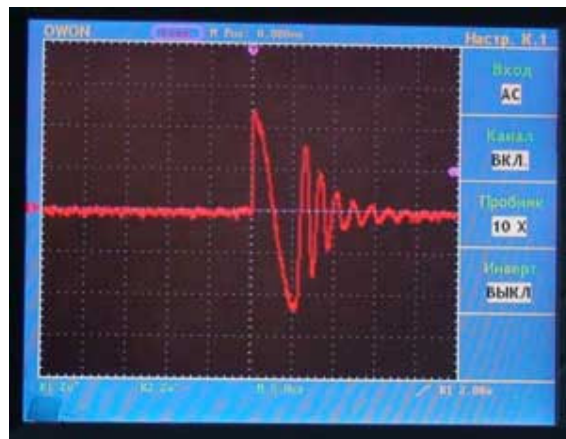
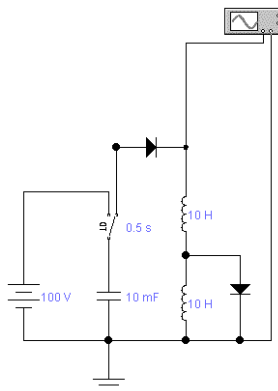
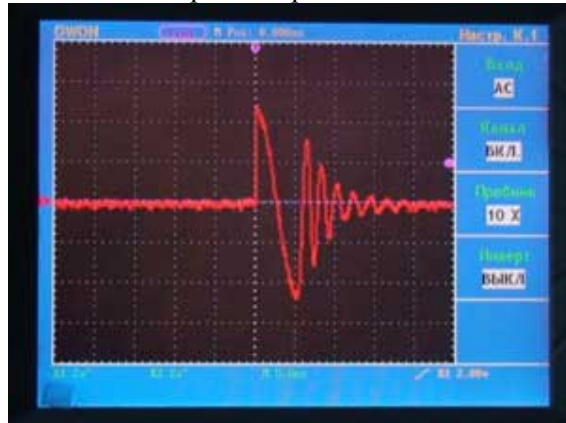
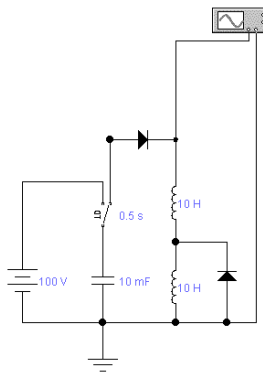
The polarity of shunting diode was changed.



**The result:** It seems, the charge is on spot...

## Onwards

An oscilloscope is connected to the coil instead of capacitor, in order to avoid influence of the first diode, and watched oscillations based on spread capacitors of the inductance.

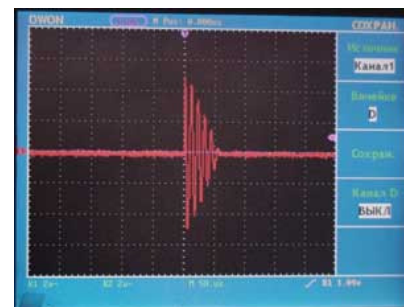
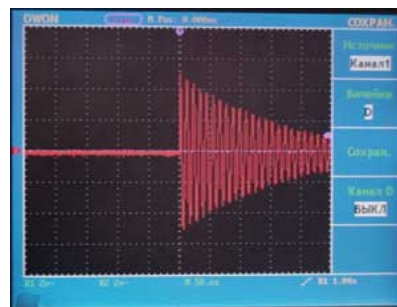
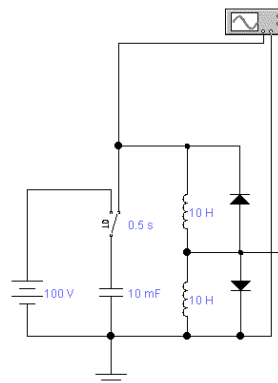


**The result:** The accuracy of capacitor recharging was raised up to 5 percent (influence of the first diode is not in account). After the main capacitor was switched off (by the diode), one can see oscillations based on spread capacitors of inductance.

Based on oscillations frequency (4 – 5 times high of the main) one can estimate spread capacitors as 16 – 25 times low then main capacitor.

## Onwards

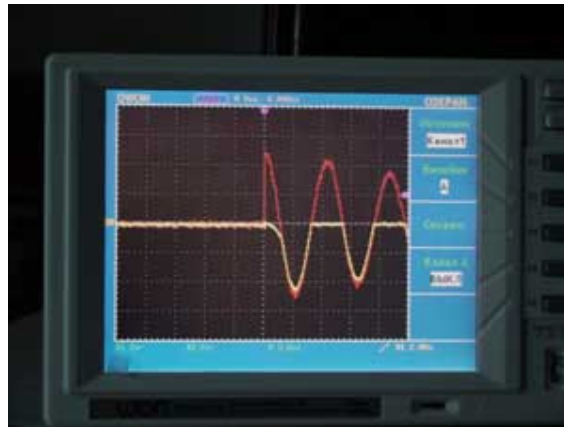
Testing of the oscillation circuit shunting, on conditions of two cases combination (without the first diode)



**The result:** A contour (oscillation circuit) is not destroyed, but is shunted a lot.

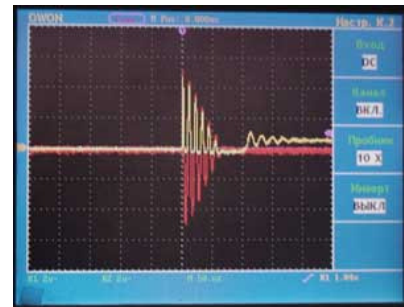
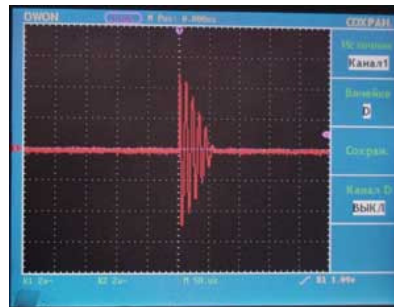
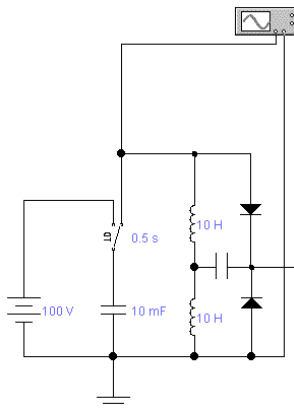
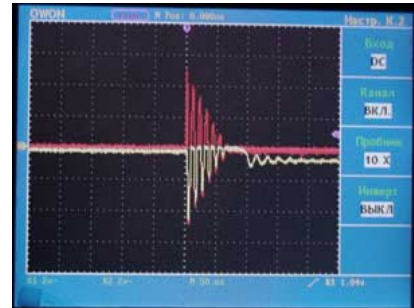
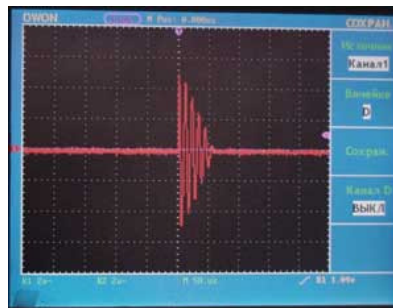
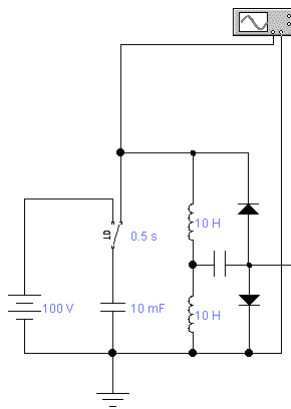
One can explain it by the moments when the diodes are opened both and shunt the circuit.

As an addition, the voltage on the down diode is shown (the time scale is stretched). The negative voltage is close to full.



## Onwards

Charging a capacitor by shunting current in oscillation mode.



**Conditions:** An additional chargeable capacitor is 47 nano Farads.

**The result:** A capacitor is charging without shunting a circuit.

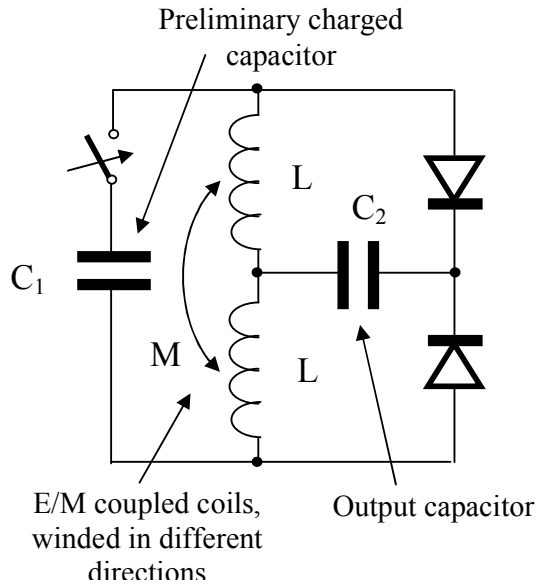
The final voltage on it is 0.8 V, and raises or falls depends of capacitance.

## THE TOTAL RESULT OF THE TESTS (OPTIONS 1,2 and 3)

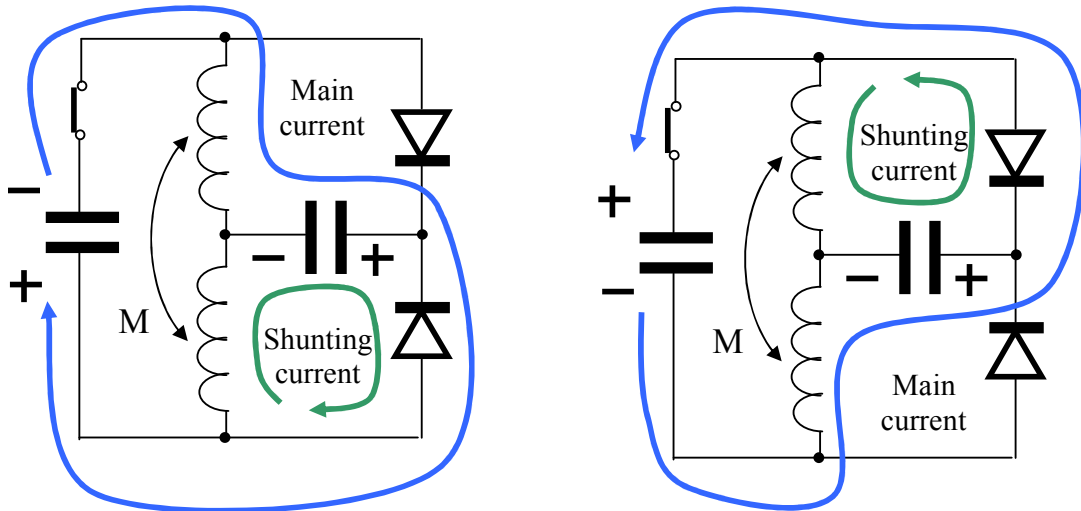
The symmetry of interaction in systems with back – loop in e/m field (like switchable inductance) seems to be violated, and they can be used for energy generation.

**Remark** One must chose the load to get maximal power in it, **very low and very high loads will give close to zero energy in load.**

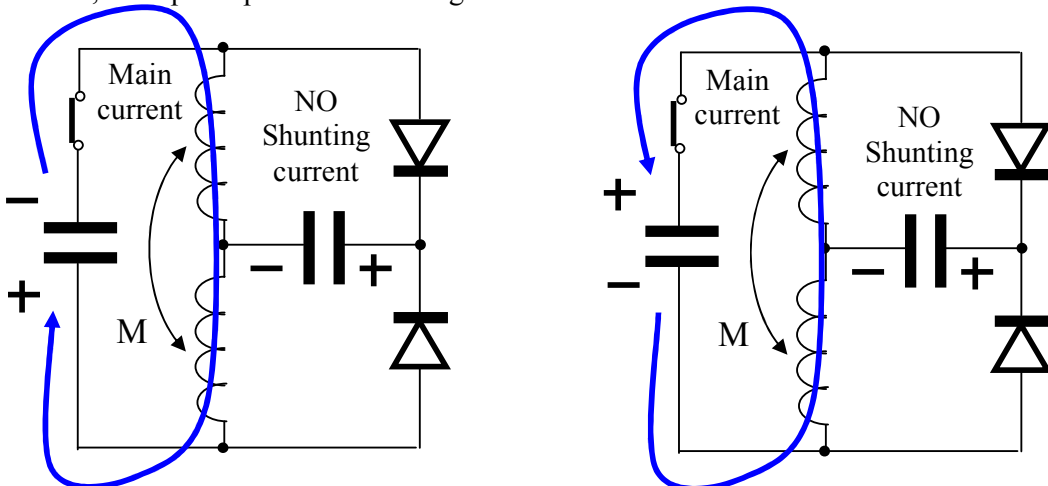
## ILLUSTRATION FOR SWITCHABLE INDUCTANCE



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



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



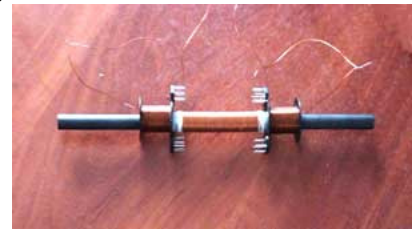
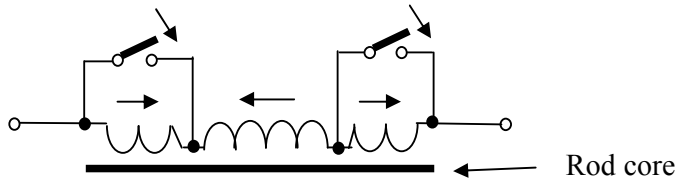
There is no shunting current, if output capacitor is charged.

## MODERN OPTIONS?

In switchable inductance

### Version 1

Coil has more inductance when some its parts are shorted.



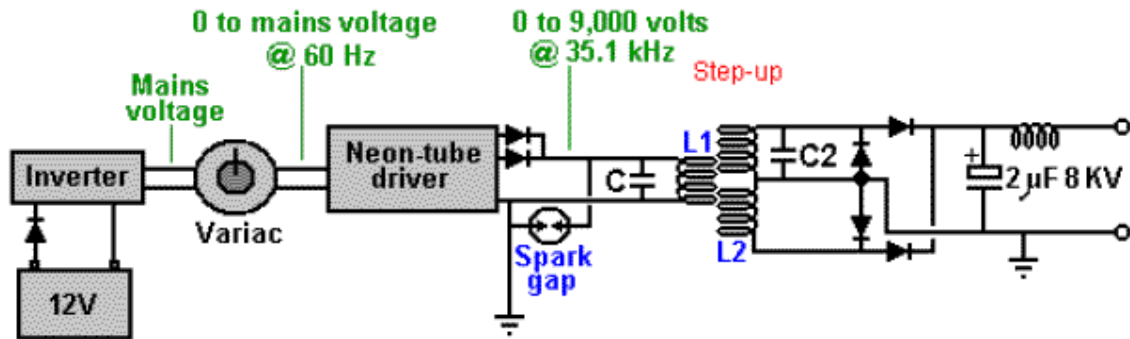
Real coil

**EXPLANATION** The central part and edge parts are wound in different directions.

**REMARK** The shown in the picture coil has **two times more inductance**, when its parts are shorted.

### Version 2

By Don Smith



But, looks like as resonance in asymmetrical transformer (read next part).

?????

### Version 3

By Tariel Kapanadze



No description ...???

**THE BASIS OF SWITCHABLE INDUCTANCES**  
(Tesla patent)

(No Model.)

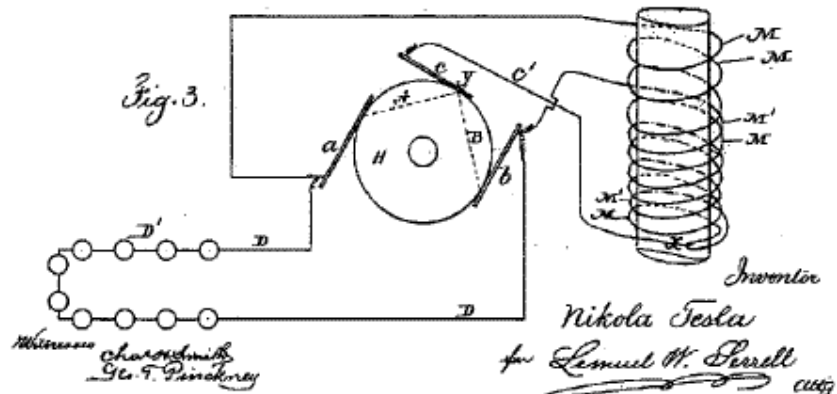
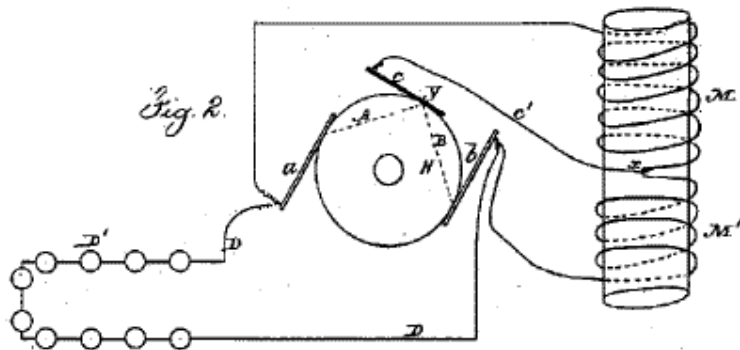
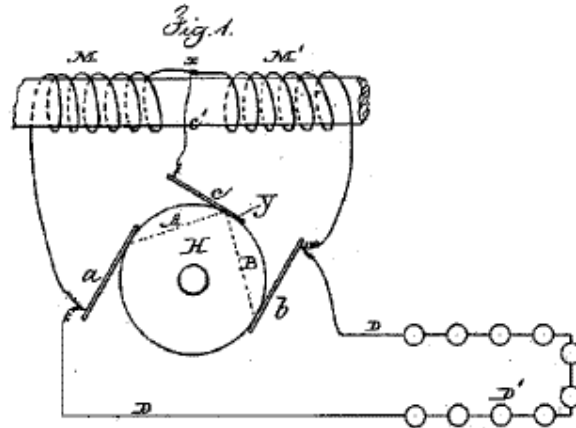
2 Sheets—Sheet 1.

N. TESLA.

REGULATOR FOR DYNAMO ELECTRIC MACHINES.

No. 336,961.

Patented Mar. 2, 1886.



### SECRET 3

#### ASYMMETRICAL TRANSFORMER

with the loop in magnetic field

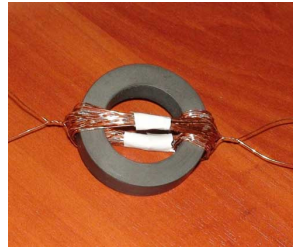
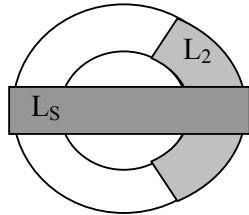
(evolution of the 2nd secret)

#### LENZ LAW IS VIOLATED IN ASYMMETRICAL TRANSFORMER

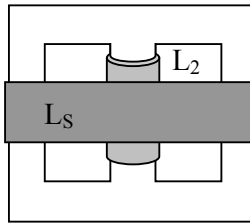
(is not possible to be used as an ordinary transformer)

Consists from two coils:  $L_S$  and  $L_2$ .

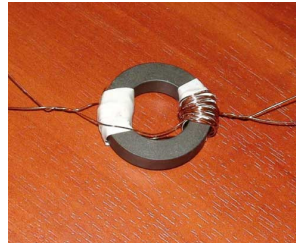
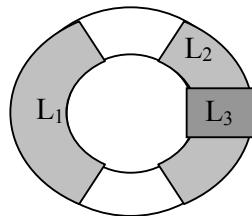
But  $L_S$  is presented as a single coil placed around a core, and  $L_2$  is placed on one kern of the looped core.



As an option of its realization is a usage of transformer core in variety of constructive.

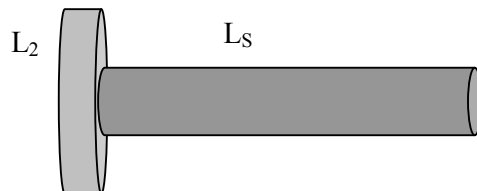


As an option, one can use an old two coils realization (switchable inductance) and add one more coil.

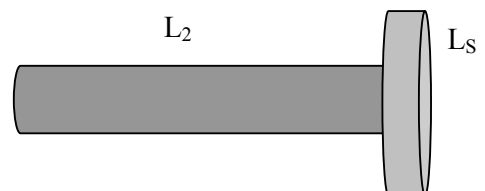


As an option, you can use the configuration you need, because you know the idea.

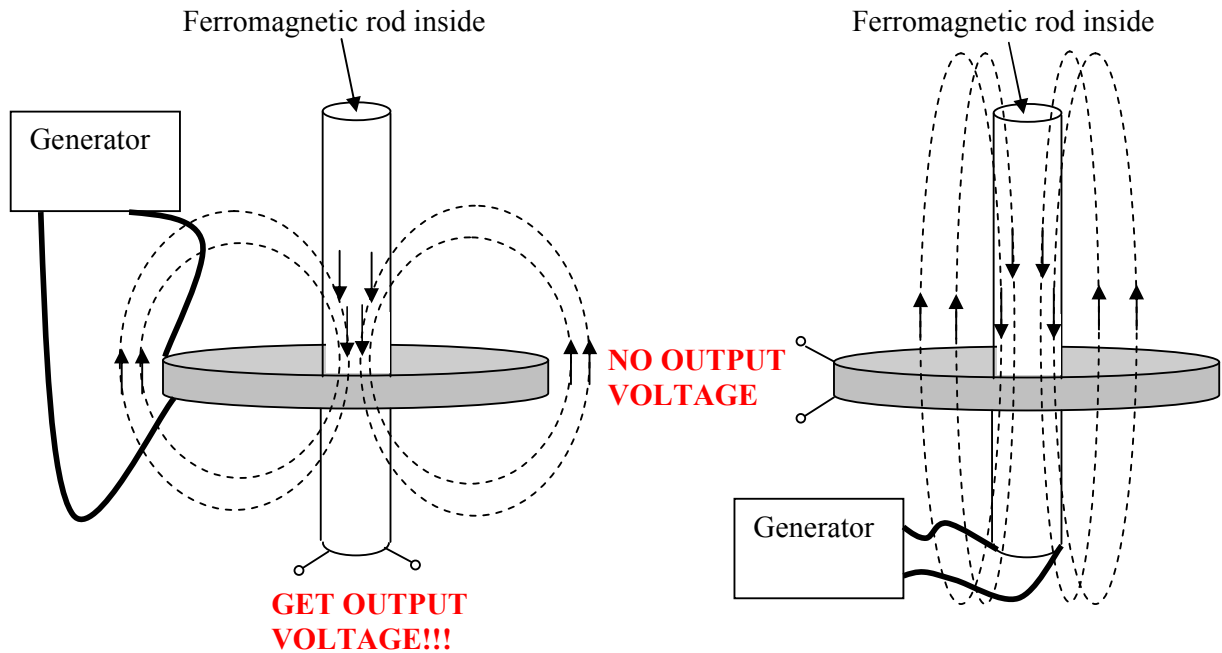
Like this, for example (Tesla's resonance transformer):



OR

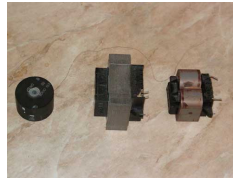


## ILLUSTRATION FOR ASYMMETRICAL TRANSFORMER OF SOME KIND

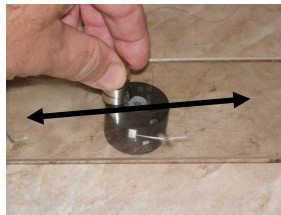


### MECHANICAL EQUIVALENT OF ASYMMETRICAL TRANSFORMER

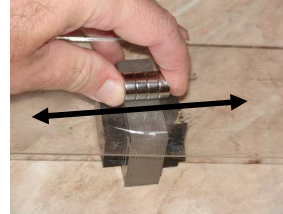
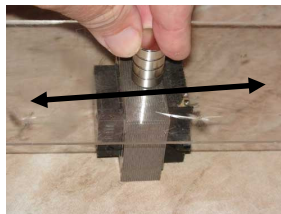
Consists from some kind of an ordinary transformer, based on E-core and external exiting magnet



The magnet orientation may be different



The magnet orientation may be different



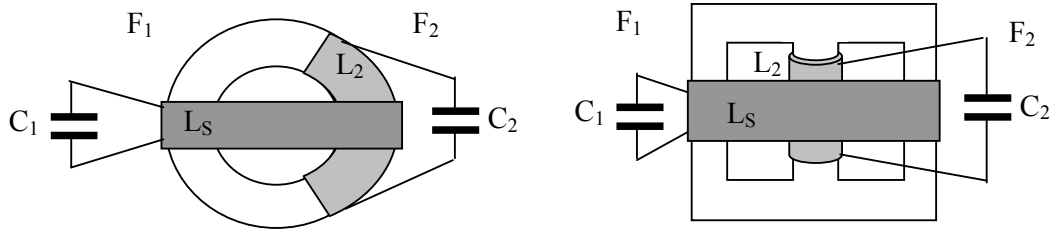
In other words:  $L_2$  is used, but instead of  $L_S$  the exiting magnet is used.

#### The result:

1. The voltage on  $L_2$  depends on number of turns for  $L_2$ , but **shorted current through  $L_2$  does not depend on the number of the turns.**
2. One must chose the load for  $L_2$  to get maximal power in it, very low and very high loads will give close to zero energy in load.

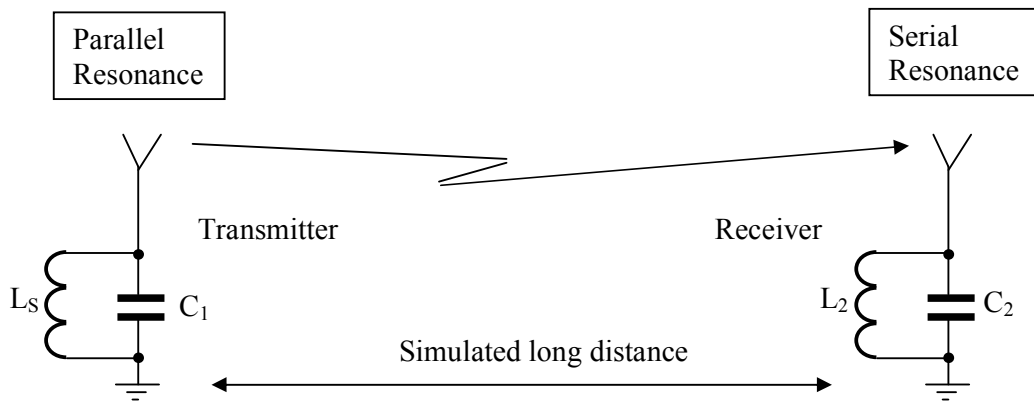
## RESONANCE IN ASYMMETRICAL TRANSFORMER

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

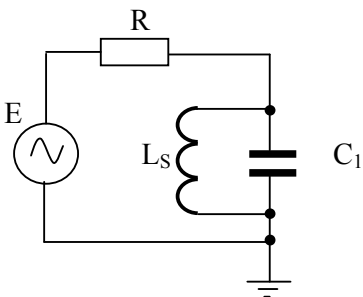


It is very alike as broadcasting, when receiver is far from transmitter, and has no back force on it. So, the first coil works in condition of **parallel resonance** and the second coil in condition of **serial resonance** (but schematically looks alike).

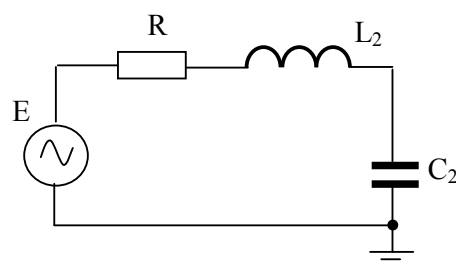
### EQUIVALENT SCHEMATICS



### FOR TRANSMITTER



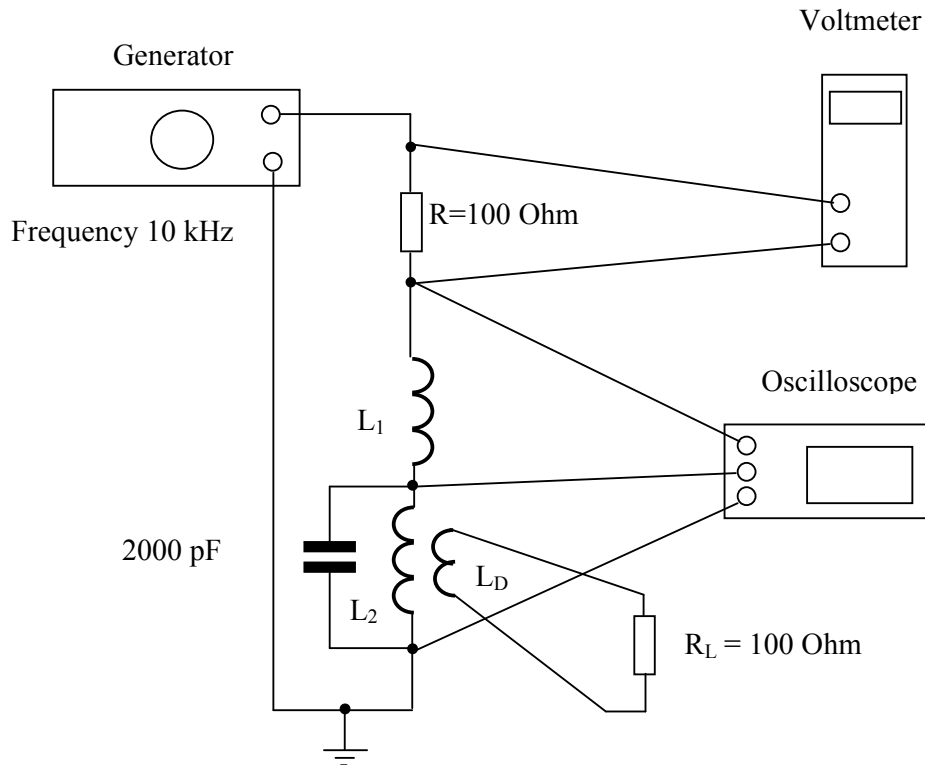
### FOR RECEIVER



### AS A RESULT

One can get much more voltage on  $L_2$  then on  $L_s$

## AN EXPERIMENT



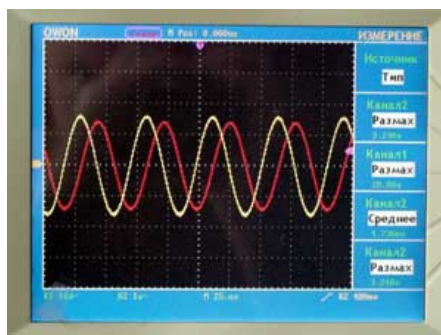
### Conditions

The resonance frequency is about 10 kHz. The total inductance  $L_S$  is 2.2 mHn, the  $L_2$  inductance (as  $L_1$  inductance) is 100 mHn, the ratio  $L_S/L_2$  is 1:45, E-type core, permeability is 2500.

### The result

At the resonance frequency one can get voltage that is **50 times more** on any parts ( $L_1$  or  $L_2$ ) matched with the total coil  $L_S$ , and voltage changes on R are **no more 15 percents**

The phase shift in voltage is about 90 degrees between  $L_S$  and  $L_2$ .



(The amplitudes were equalized)

### A bit more

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

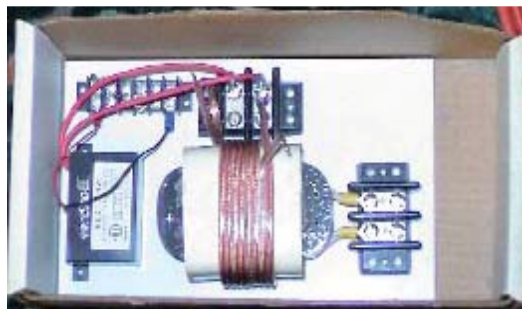
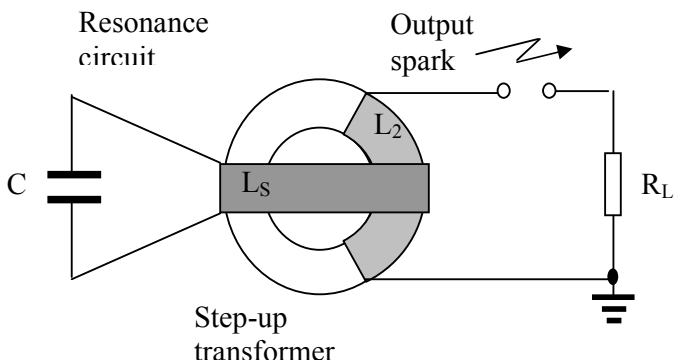
### The result

Changes in current consumption (estimated as voltage on R) are no more 15 percents.

## MODERN OPTIONS IN USAGE OF Asymmetrical transformer

By Don Smith

The schematic is like this.

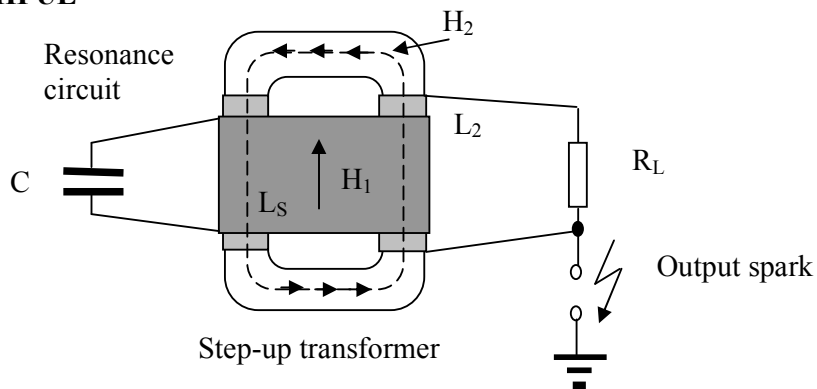


**REMARK**  $L_2$  has a voltage on its ends (without spark)

**REMARK** No output current without resonance (if  $R_L$  directly connected to  $L_2$ )

**REMARK** No output current without spark (if  $R_L$  directly connected to  $L_2$ )

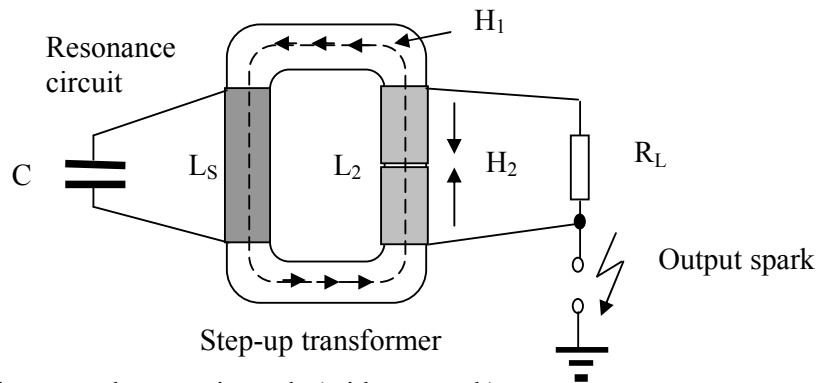
**MORE TRUTHFUL**



**REMARK**  $L_2$  has no voltage on its ends (without spark)

**REMARK** It is an ordinary back EMF suppression, invented by Nikola Tesla.

**MORE USEFUL**

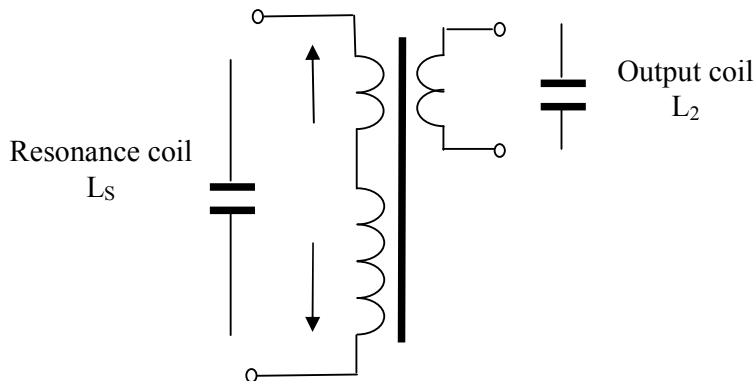


**REMARK**  $L_2$  has no voltage on its ends (without spark)

## MODERN OPTIONS IN USAGE OF Asymmetrical transformer

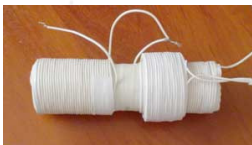
By Don Smith

There is no voltage transmission from output coil  $L_2$  to input coil  $L_S$  in this circuit



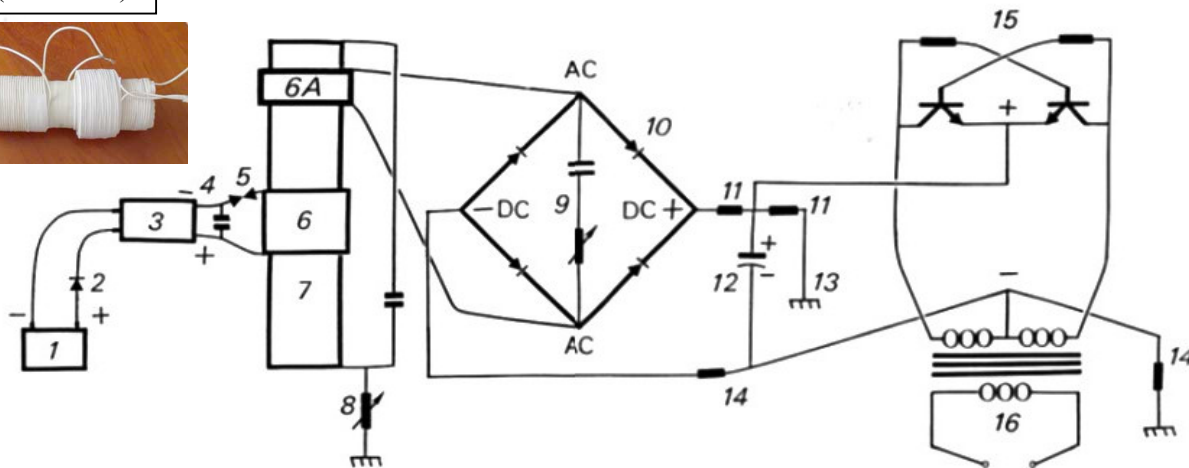
**EXPLANATION** Voltage transmission **from output to input** is equal for both halves of  $L_S$ , but they are wound in different directions.

**Real coil**  
(without 6)



### ELECTRICAL ENERGY GENERATING SYSTEM

Patent Pending 08 / 100,074



1. Gelcel, 6 or 12 Volt.
2. Diode, Pos. use a Varactor.
3. High Voltage Module, Constituting the L-1 and L-2 Coils.
4. Capacitor, TDK 10.9 Pf., 30 KV.
5. Spark Gap, Small Engine Spark Plug, Gap = .0025 in
6. Induction Transfer Coil L-3., 6A = L-5
7. Induction Receiving Coil L-4.
8. Voltage Control Shunt.
9. Frequency Adjustor, prevents derating by Diode Bridge

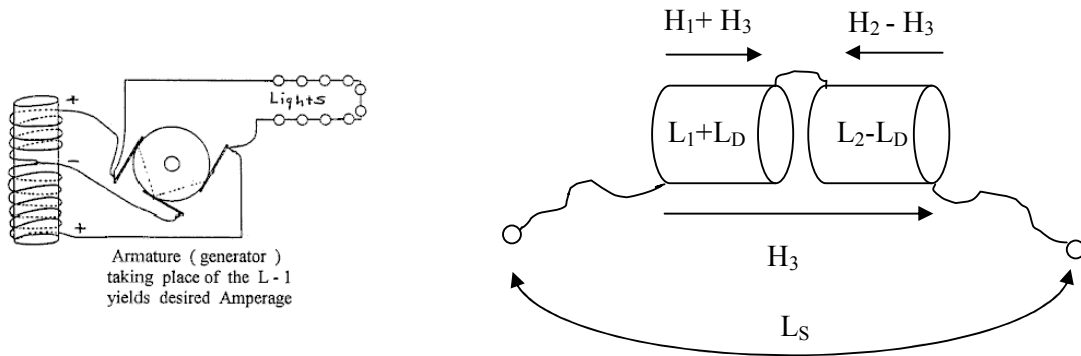
10. Diode Bridge, 200 Nanosecond, R.F., > 100 KV .
11. Voltage Divider Circuit, corrects voltage for next stage.
12. Capacitor, electrolytic, smooths out DC + ripple effect.
13. Earth Ground.
14. Voltage Divider Curcuit, corrects voltage for Transformer
15. Inverter Circuit, DC + in and 60 CPS to Transformer
16. Output from Transformer to Load ( Work ).

20 Dec., 1994

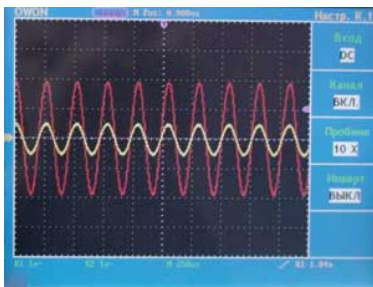
## SOME REMARKS ON ASYMMETRICAL IN FRONT CONNECTION

(Useful remarks)

Some turns were added on one half of the coil, and some turns were removed from the other half. Additional magnetic field occurred -  $H_3$ , and inductance -  $L_D$ .



**RESULT** The big part of the total inductance behaves itself as inductance, and the small part behaves itself as capacitor. **It is well known fact (read books).** The total voltage on the coil is less than on its halves.



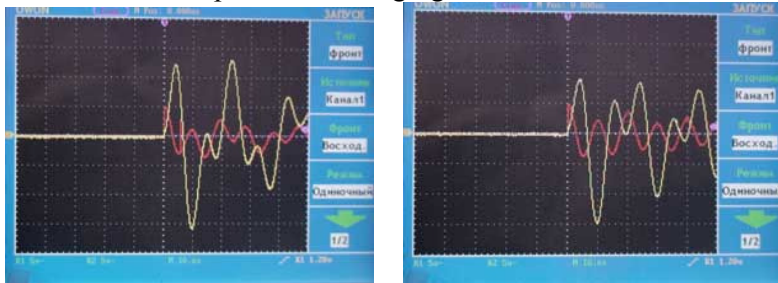
**Yellow** – voltage on the total coil

**Red** – voltage on its big part

**RESULT** The voltage on its halves is 4 times more than on the total coil.

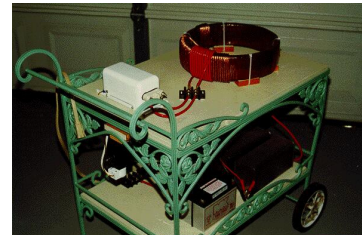
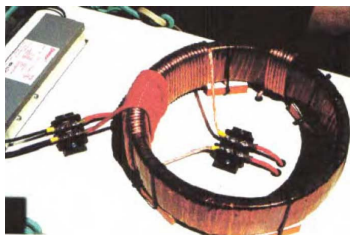
The measurements were in the band from 10 to 100 kHz.

The result of a capacitor discharging on this coil is beneath



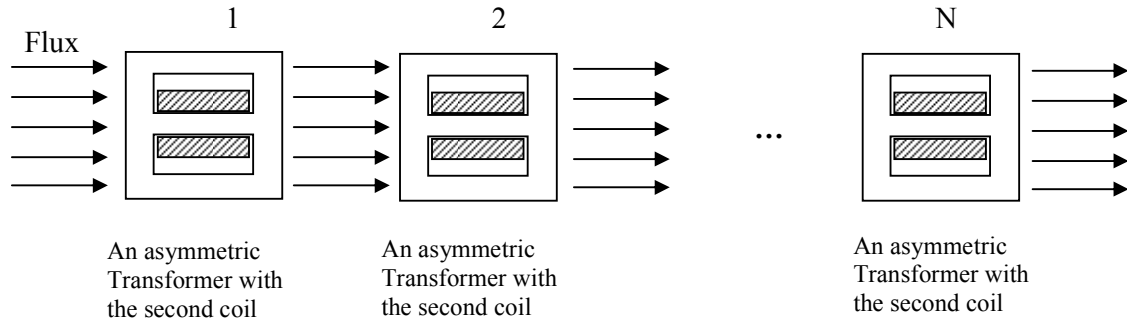
## ASYMMETRICAL TRANSFORMER COMBINED WITH STEP-DOWN TRANSFORMER?

By Don Smith

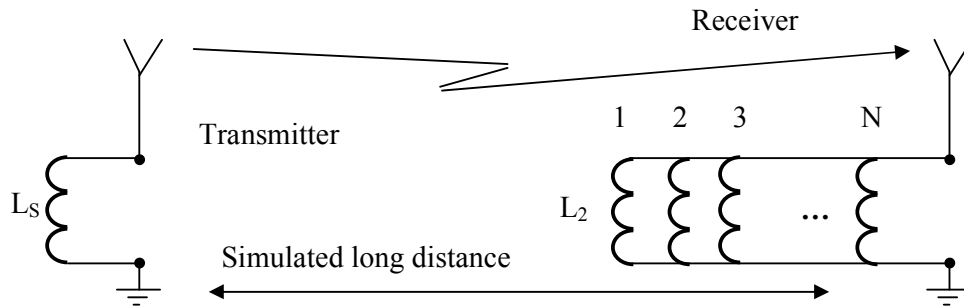


**SECRET 4**  
**CURRENT AMPLIFICATION**

If place a lot of asymmetric transformers in common flux, they will have no influence on this flux, as one transformer does not have. If connect the second coils  $L_2$  transformers in parallel, one will have the current amplification.

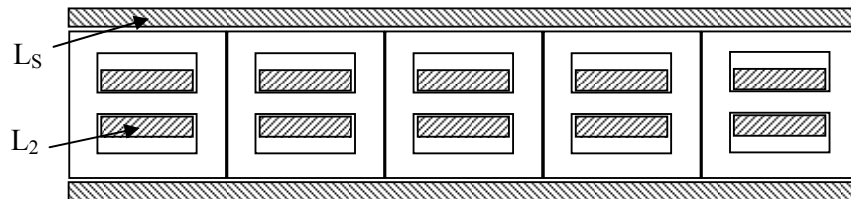


**EQUIVALENT SCHEMATICS**

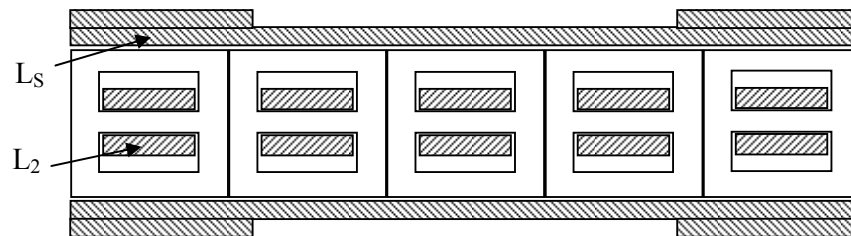


**AS A RESULT**

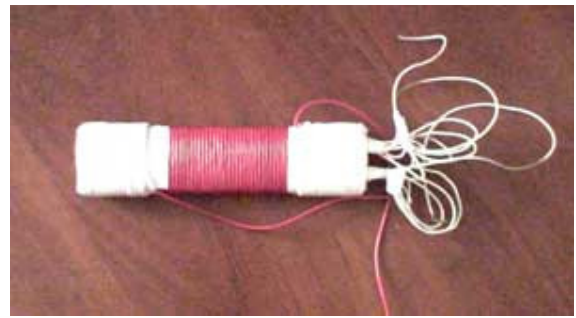
You have an asymmetric transformer arranged in a stack manner.



For flat (uniform) field inside of  $L_s$ , it can be arranged with additional turns at its ends.



**THE EXAMPLES OF THE REAL COILS**



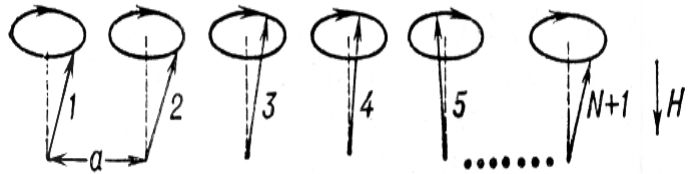
The coils consist from 5 sections, maiden from ferrite core E-type permeability 2500, and have wire in plastic insulator. Central sections  $L_2$  have 25 turns, and edge sections have 36 turns (for equalization voltage on them). All sections are connected in parallel. The coil  $L_S$  has flatting turns at their ends, and a single-layer winding  $L_S$  was used, a number of turns depend on the wire diameter.

**Amplification in current for presented coils is 4.**

Changing  $L_S$  inductance is 3% (if  $L_2$  is shorted)

**SECRET 5**

The power source in Nikola Tesla car “Red arrow” is **FERROMAGNETIC RESONANCE**

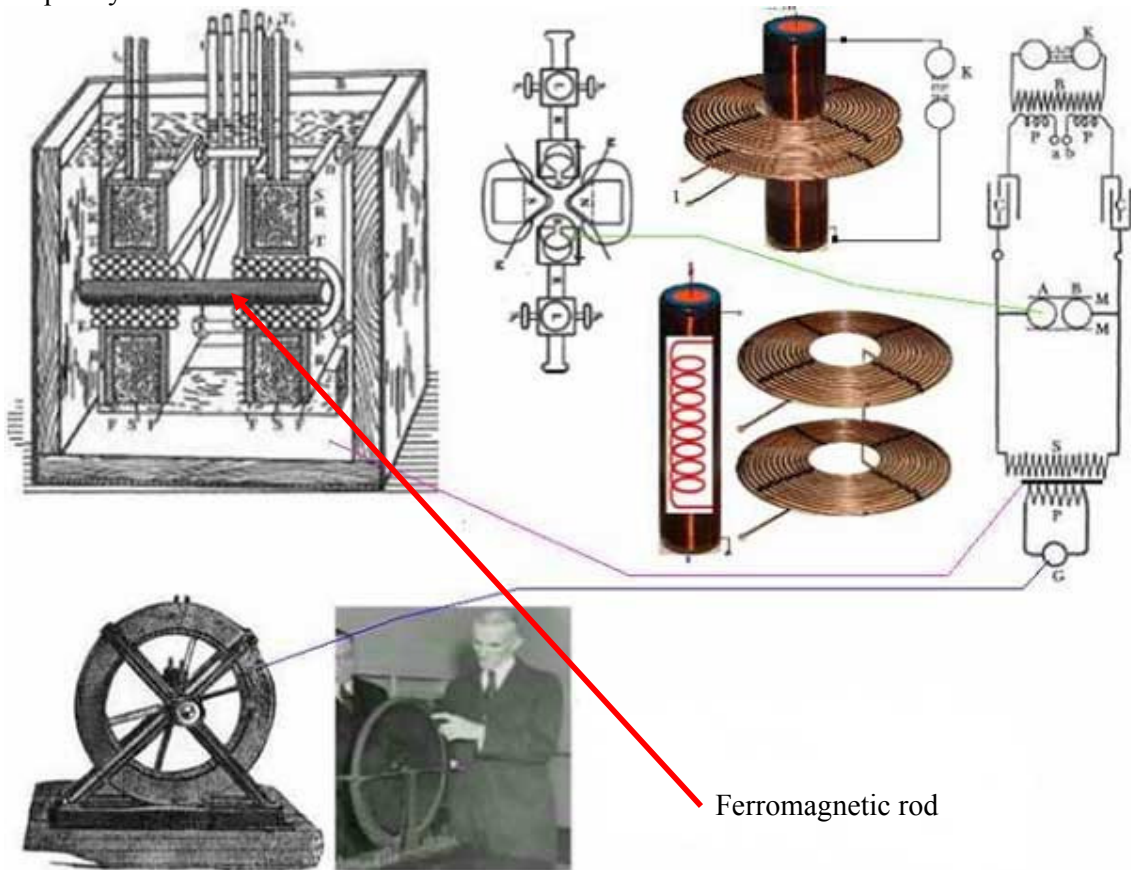


**REMARK**

The back-loop in e/m field one must understand as domains group behavior, or spin waves (like domino bones).

**THE BASIS OF FERROMAGNETIC RESONANCE**

When ferromagnetic material is placed in magnetic field, it can absorb external e/m radiation at the perpendicular direction of the pointed magnetic field for the ferromagnetic resonance frequency.



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

**QUESTION**

What is the usage of the FR for FE devices?

**AN ANSWER**

It can change magnetization of the material along magnetic field direction without powerful external force.

**QUESTION**

The resonance frequencies for ferromagnetic are tens Gigahertzes, is it true?

**AN ANSWER**

Yes, it is true, and the frequency of FR depends on the external magnetic field (high field = high frequency). But, FR is possible without any external magnetic field, so named "natural ferromagnetic resonance".

In this case magnetic field is defined by local magnetization of the sample.

In this case absorption frequencies are in wide band, because of wide conditions in magnetization, and one must use wide band of frequencies to get FR.

**THE POSSIBLE PROCESS OF FE ECQUISITION**

1. Irradiation ferromagnetic by short e/m pulse without external magnetic field, and acquisition spins precession (domains will have group behavior, and ferromagnetic can be easy magnetized).
2. Magnetization ferromagnetic by external magnetic field.
3. Energy acquisition as a result of strong sample magnetization, by not so strong external magnetic field.

**REMARK**

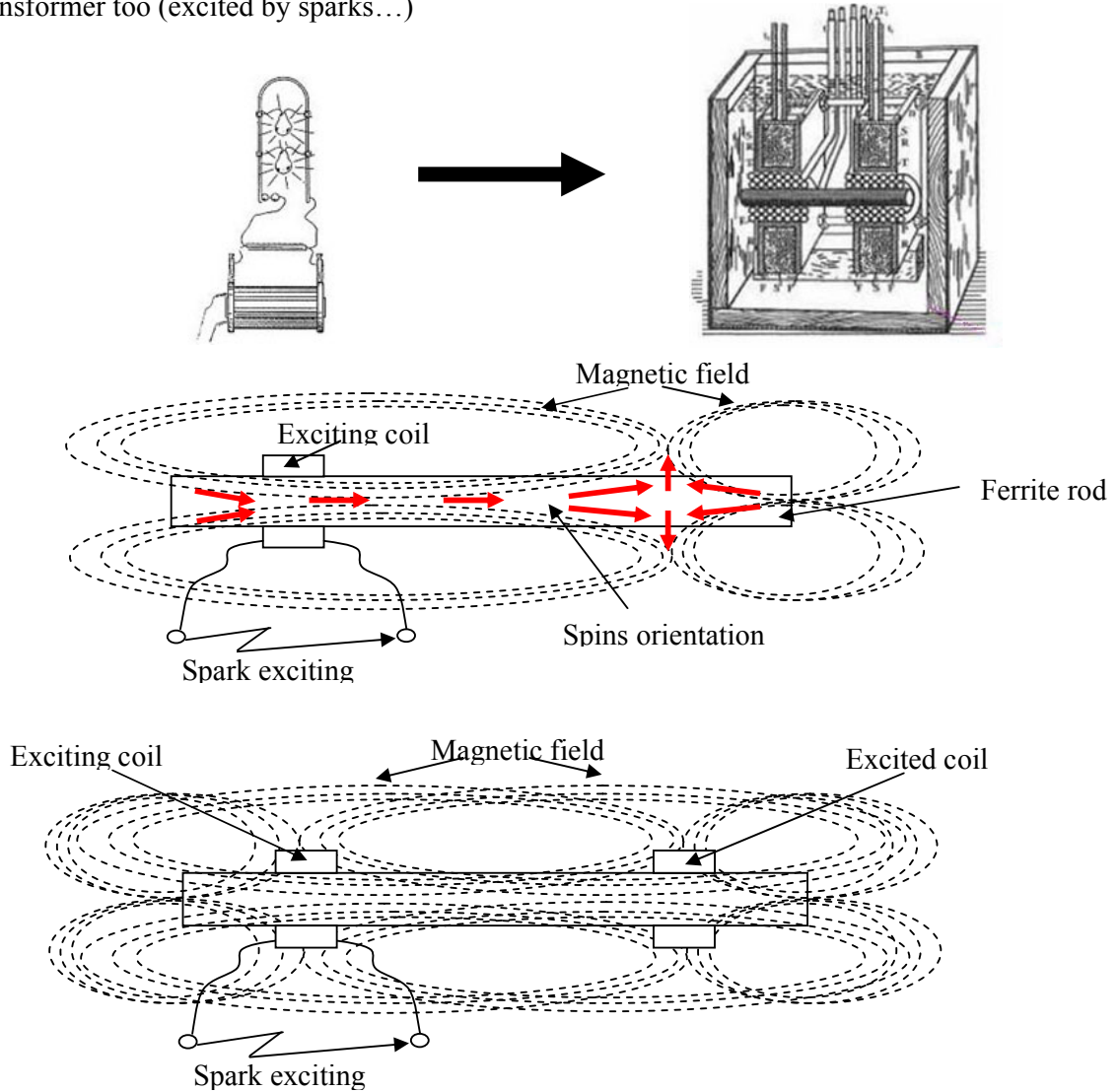
One must use synchronization for processes of irradiation and magnetization of the sample.

## TWO ORTOGONAL COILS ON 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", but in Tesla's ferromagnetic transformer too (excited by sparks...)



**REMARK** Exciting can be arranged in different ways, by coils connection. The frequencies of oscillations this coils depend on number of turns this coils (big difference is possible).

### REAL COILS



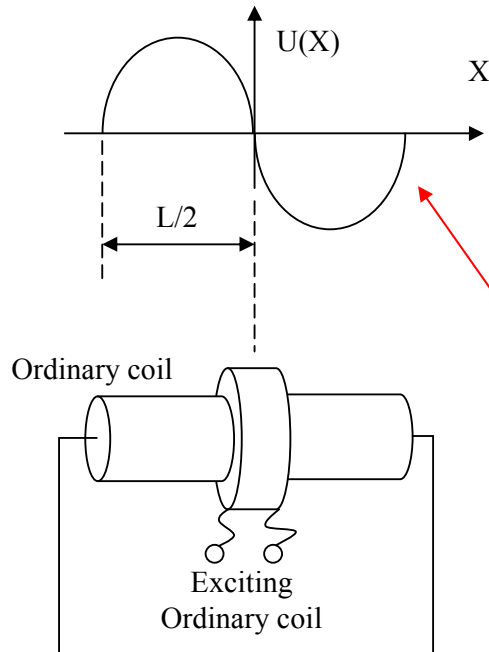
**REMARK** Positions of the coils on the rods depend on ferromagnetic material, and its size and must be chosen in experiment.

**REMARK** Transformer can have two pares of coils: exciting (tubes), resonance or load (inside) – look Tesla's picture

# POTENTIAL (VOLTAGE) DISTRIBUTION ON THE SHORTED COIL

## FULL PERIOD

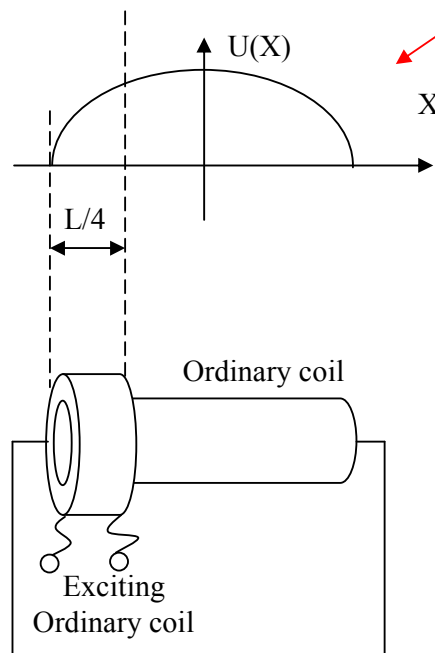
1



They are  
Orthogonal

## HALF PERIOD

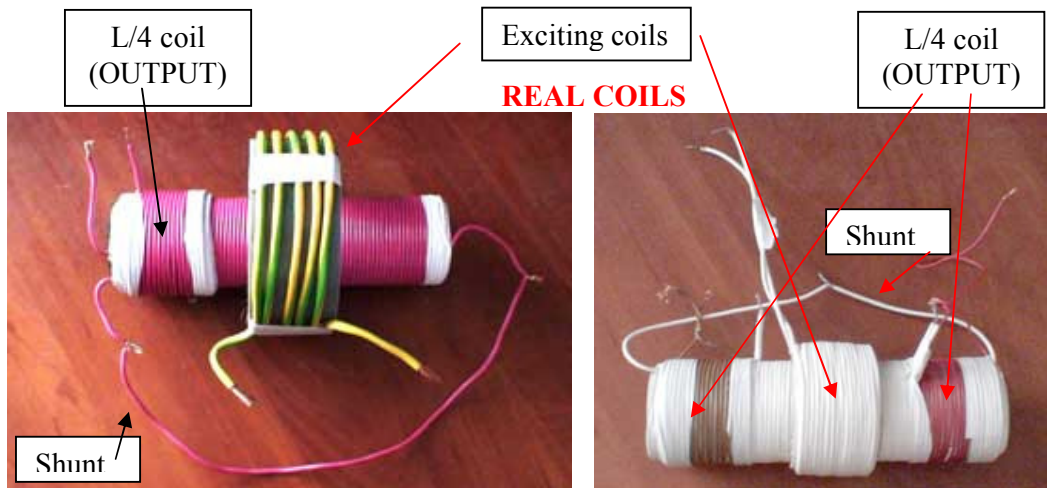
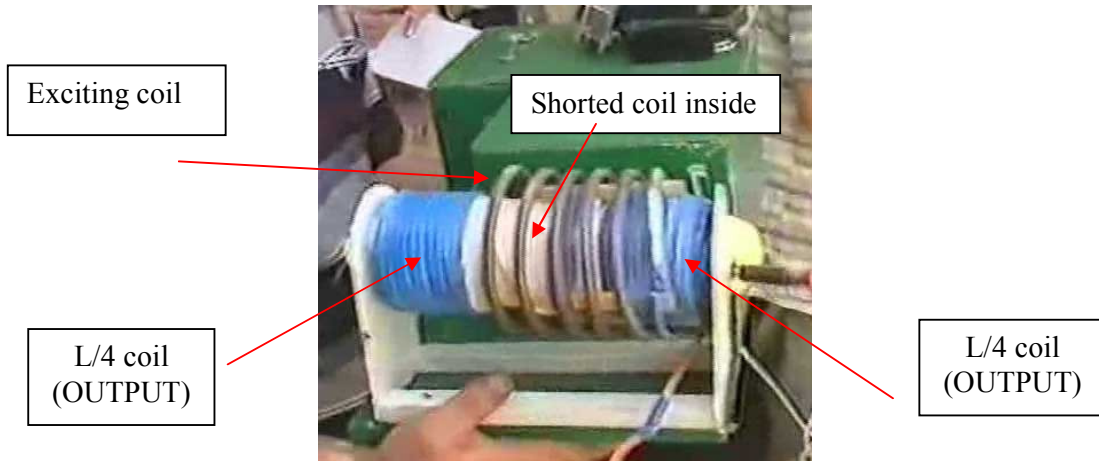
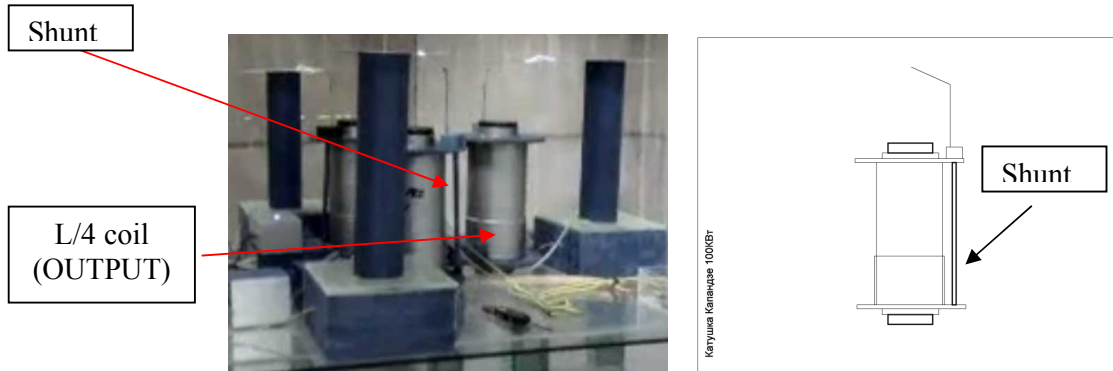
2



**REMARK** It can be used in real devices.

# MODERN OPTIONS IN SHORTED COILS USAGE

By Taniel Kapanadze

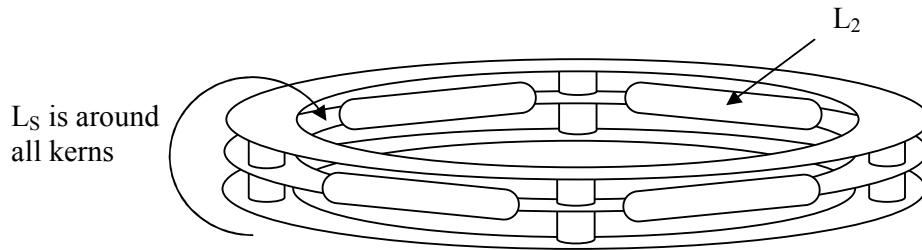


**REMARK** NO INFLUENCE OUTPUT L/4 COIL ON EXCITING (RESONANCE) COIL

**REMARK** Positions of the coils must be properly adjusted (for the best result)

### **TOROIDAL VERSION AN ASYMMETRIC STACKED TRANSFORMER**

An inductance  $L_2$  is placed on central kern between shorts of the core, and inductance  $L_S$  (not shown) is placed on all three kerns in all distance (as an ordinary toroidal coil).



The number of shorts depends on your needs, and influences on the current amplification.

**TO BE CONTINUED ...**

### **CONCLUSIONS**

1. Energy conservation law is a result (not reason) of symmetrical interaction.
2. The simplest way to destroy symmetry interaction is back loop in e/m field.
3. The asymmetrical systems are out of energy conservation law.

**ENERGY CONSERVATION LAW CANNOT BE VIOLATED**  
**(The field of this law is symmetrical interactions)**

**REMARK** No Private or State secrets were used in this document.

**REMARK** There are no ready for usage schematics in this document, understanding process only.