

Capacitors: one of the key for "OU"?

According to wikipedia:

A **capacitor** (originally known as a **condenser**) is a **passive two-terminal electrical component** used to store **energy electrostatically** in an **electric field**. The forms of practical capacitors vary widely, but all contain at least two **electrical conductors** (plates) separated by a **dielectric** (i.e., **insulator**). The conductors can be thin films of metal, aluminum foil or disks, etc. The 'nonconducting' dielectric acts to increase the capacitor's charge capacity. A dielectric can be glass, ceramic, plastic film, air, paper, mica, etc.

And:

An **electrical insulator** is a material whose internal **electric charges** do not flow freely, and therefore make it very hard to conduct an **electric current** under the influence of an **electric field**. A perfect insulator does not exist, but some materials such as **glass, paper** and **Teflon**, which have high **resistivity**, are very good electrical insulators. A much larger class of materials, even though

So no 'real' current (hard electrons(?)) can flow through a capacitor. Meanwhile something seems to pass through (between to 2 plates) of a capacitor. It is the "Displacement Current"

Displacement current

From Wikipedia, the free encyclopedia

In **electromagnetism**, **displacement current** is a quantity appearing in **Maxwell's equations** that is defined in terms of the rate of change of **electric displacement field**.

Displacement current has the units of electric **current density**, and it has an associated **magnetic field** just as actual currents do. However it is not an electric current of moving **charges**, but a time-varying **electric field**. In materials, there is also a contribution from the slight motion of charges bound in atoms, **dielectric polarization**.

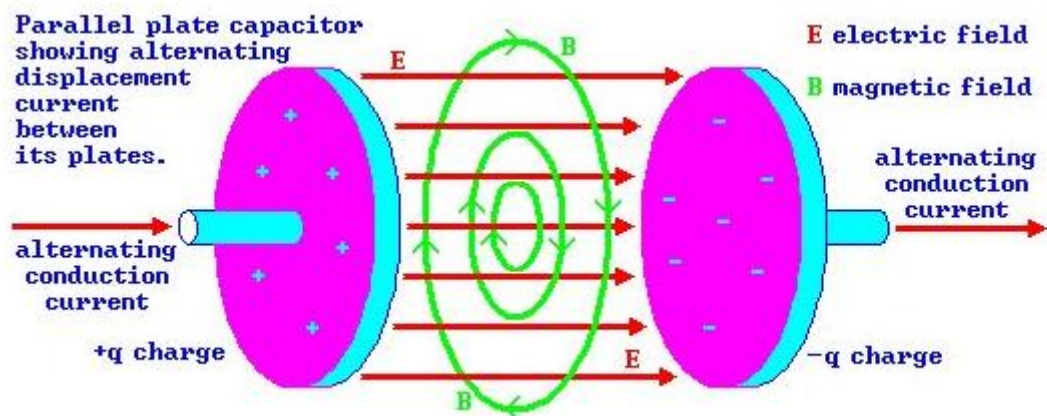
An also:

Displacement Current

The condition in which an alternating current can be maintained with no translational movement of charge carriers is found in a capacitor. A displacement current consists of the back and forth movement of bound charges within the lattice structure of a non-conducting dielectric material.

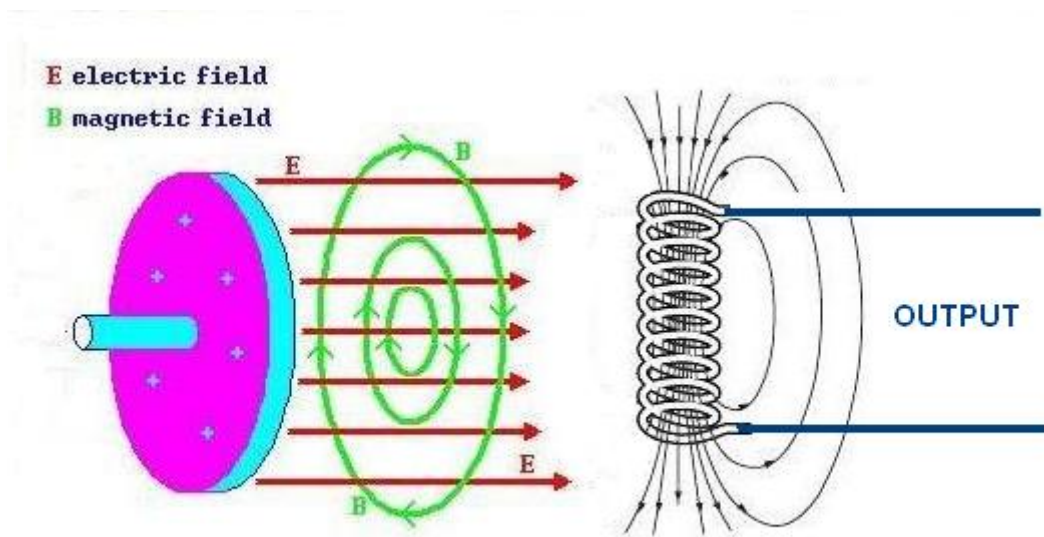
No work would be done if the device operated with a displacement current. If a large voltage displaced a small amount of bound charge, the power requirements of a load, like a light bulb, would be met with no conduction current, therefore, with no expenditure of energy.

What is the effect of this "Displacement Current". Something like this:



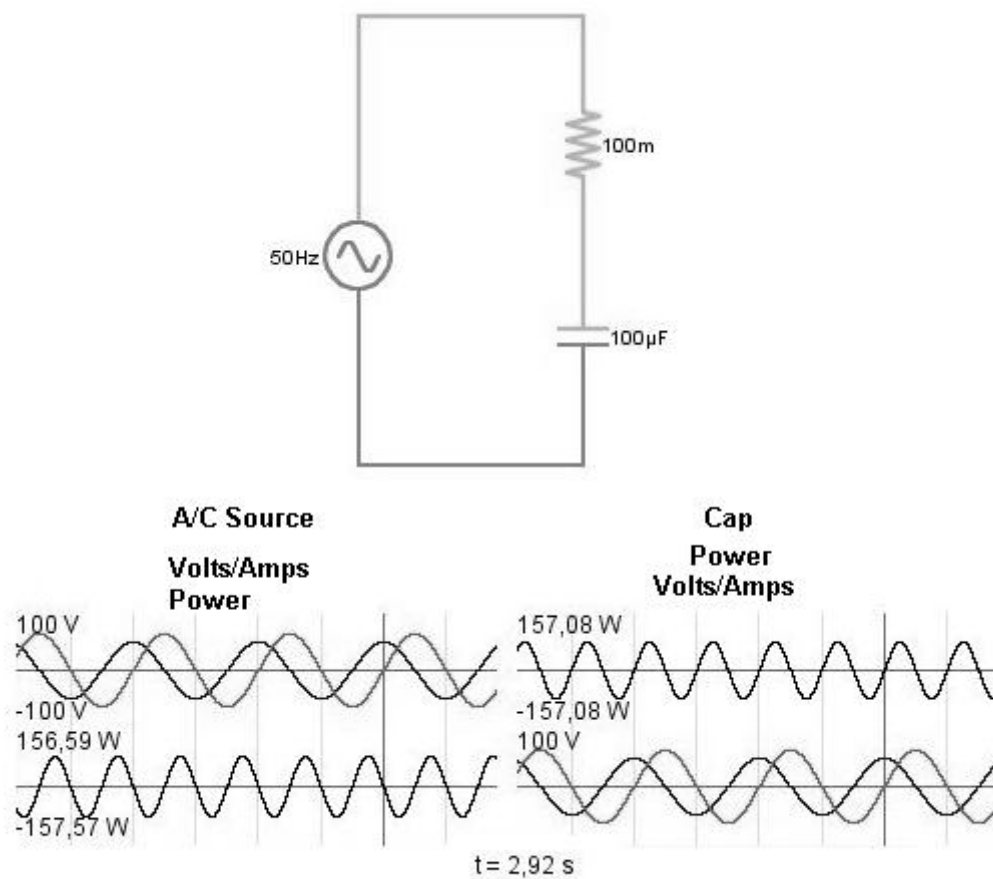
So, an alternative (variable/changing) **magnetic field** (B) is generated between the capacitor plates? And what is the effect of a changing B ? It produces a voltage. No?

So, the idea (not mine) is to replace one on both the capacitor plates with inductor(s). Something like:

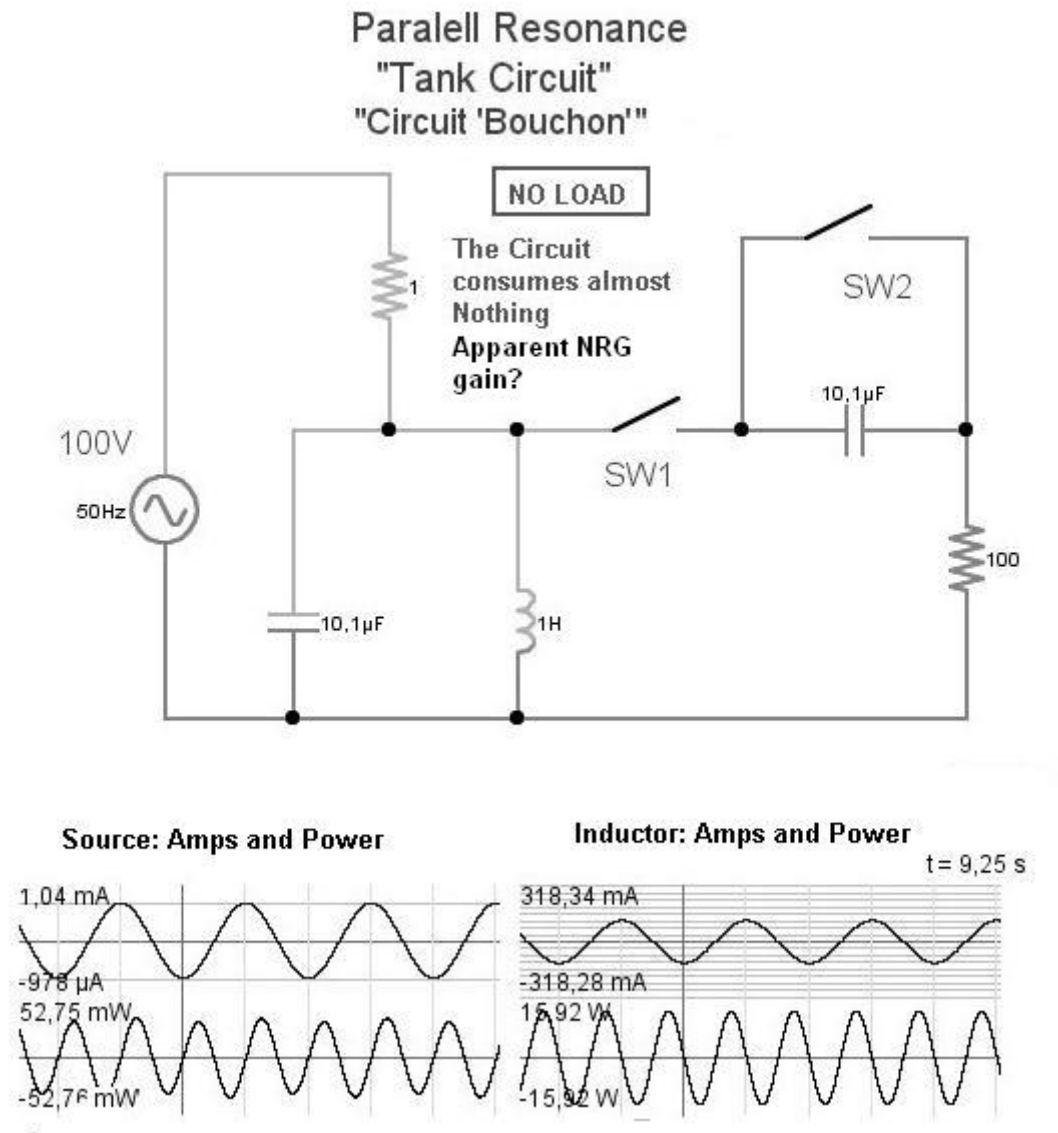


It cost almost nothing (NRG-wise) to charge and discharge a cap. On the other hand, a *normal* cap will give you nothing back...

One simulation:



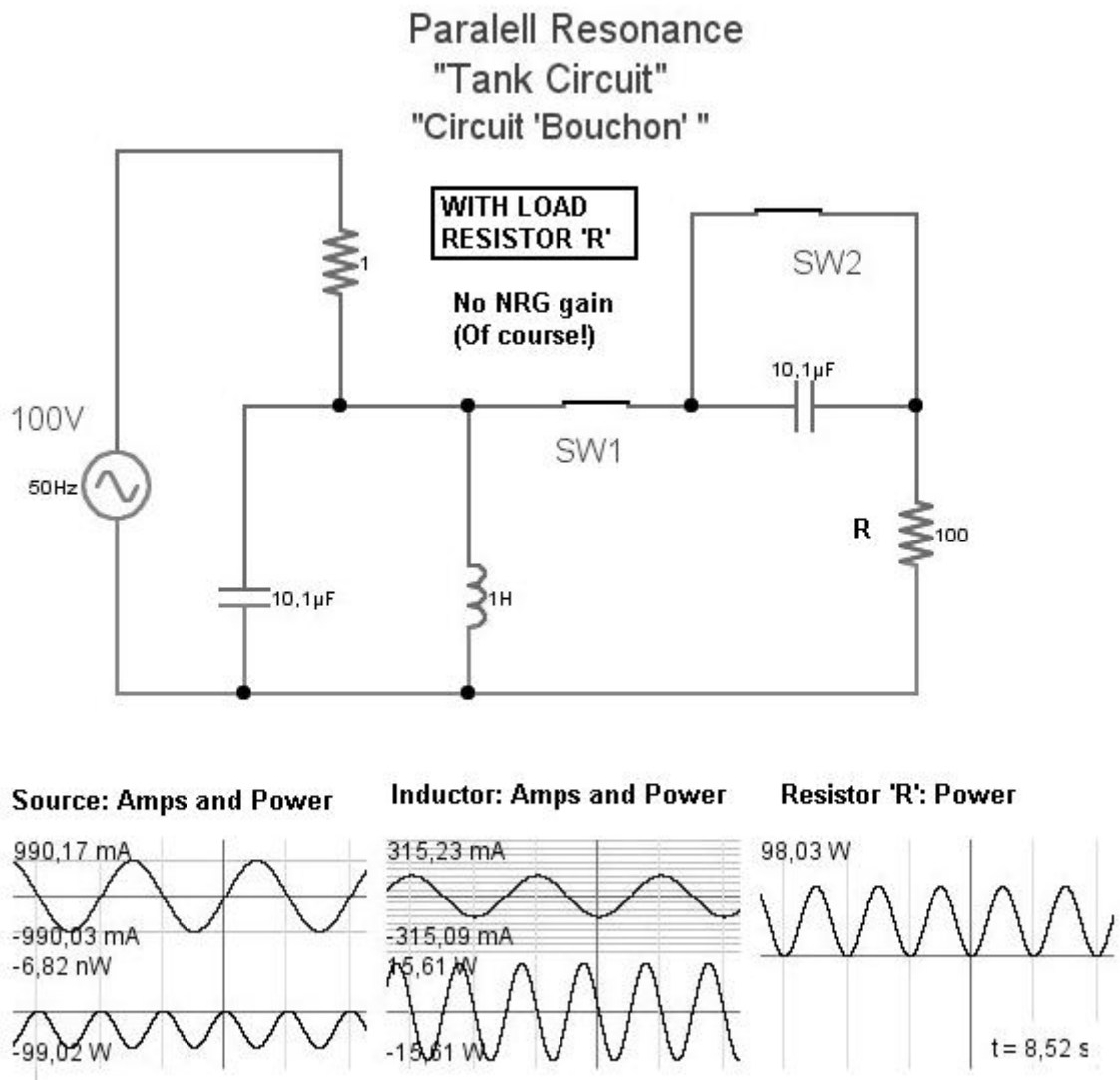
We could also use parallel resonance:



We can see that about 318 ma (peak to peak) are circulating in the inductor (and the capacitor) versus about only 1 ma from the source. **A** kinda amperage (**power**, as the voltage across the inductor (and the cap) is nearly the same as the source) **multiplication?**

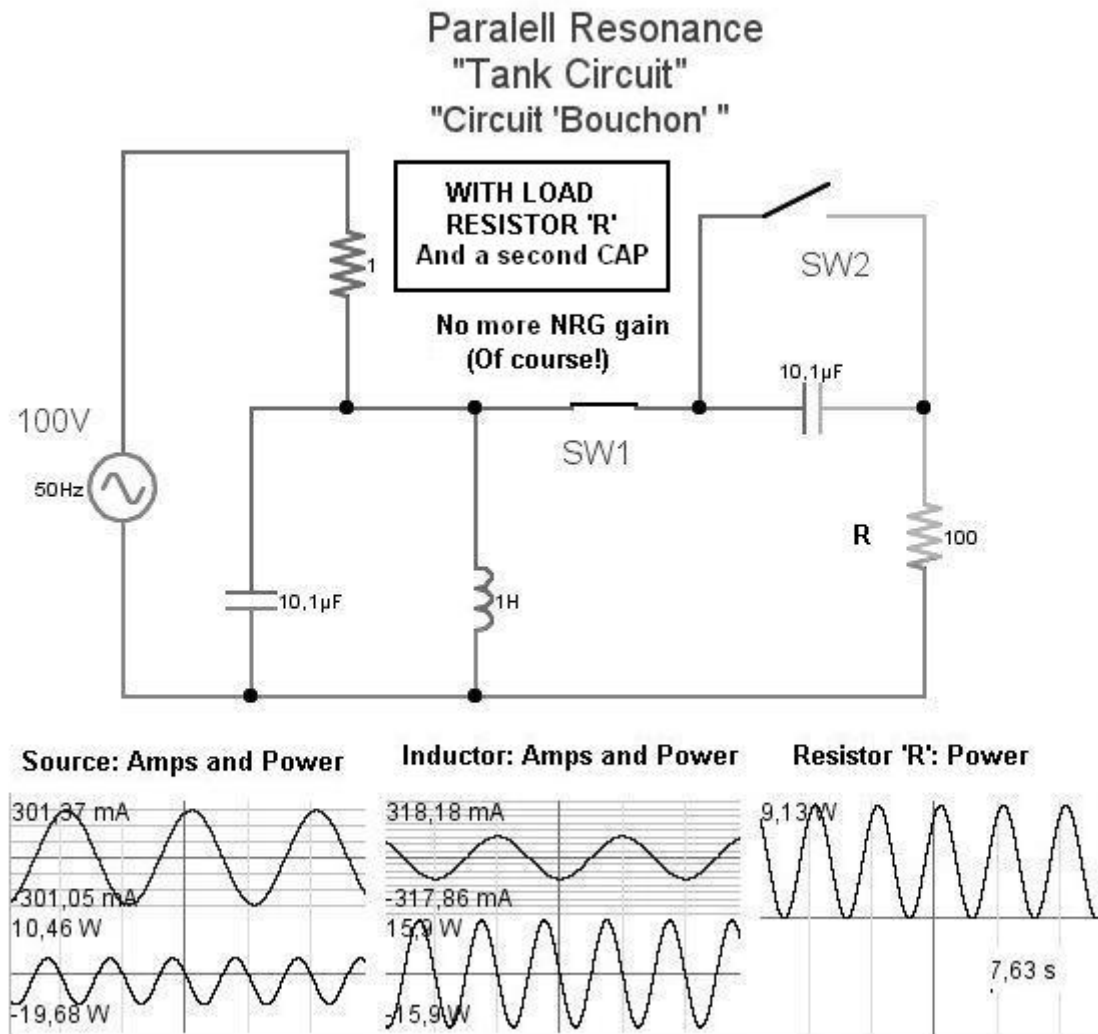
Come on! According to the books, It is just "reactive" stuffs.

This second picture will show this.



As soon as you 'load' the circuit, that this *"power multiplication"* vanish.
 A very well known effect, indeed. Is it not Mr Lenz?

Perhaps, another cap would do any trick?



OU (Over-Unity)?

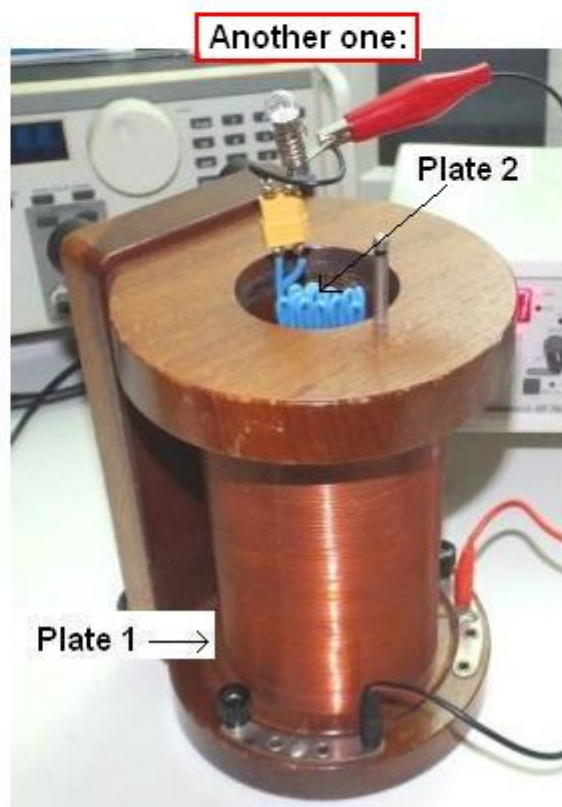
No way!

This way, in that case,

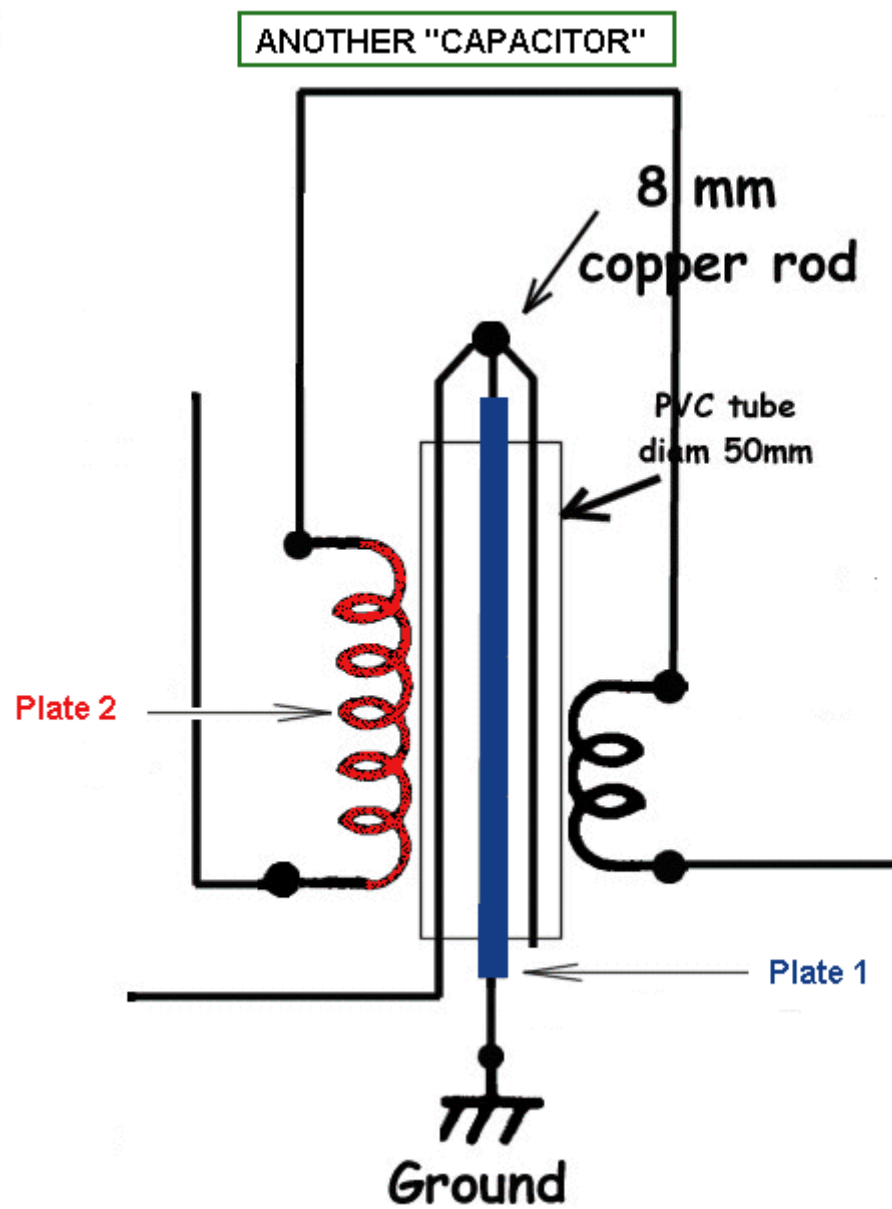
So, it sounds like that any "normal" capacitor can do any trick.
meanwhile, I keep on seeing strange Caps in some devices claiming: abnormal
behavio(u)r, great efficiency and even "OU".

Some examples:

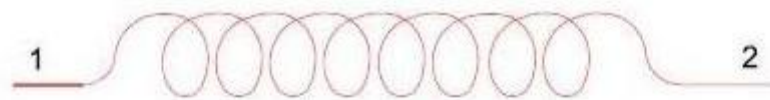
In the Jean Louis Naudin Website (NextGen)



In the same Website (Kapanadgen)

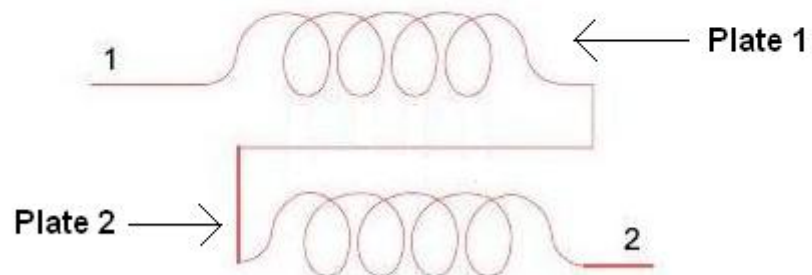


And even in another documents.



MONOFILAR COIL
STANDARD GEOMETRY

Yet Another Cap Or What?
(YACOW)



BIFILAR COIL
ALTERNATIVE GEOMETRY