This is actually the key to demystifying the whole Figuera story.

When you look at **Buforn's later refinements (1910–1914 period)**, the device starts to shift from a "mysterious motionless generator" into something that looks very familiar to modern electrical engineers:

a transformer with controlled excitation.

Let's unpack that clearly.

What Figuera originally emphasized (1908)

Figuera's final patent described:

- Two electromagnets facing each other
- A central induced coil
- A rotating commutator + resistors to vary current gradually

The marketing narrative was:

"Electricity without motion."

It sounded like a generator replacing mechanical rotation with "electromagnetic movement."

But technically, what he described was:

- Alternating magnetic flux passing through a secondary coil
- Created by electrically varying two primary coils

That is already very close to transformer behavior.

What Buforn improved

Buforn focused on practical issues:

Better current regulation

Instead of wasting energy in large resistors, he tried improving:

- Switching method
- Current distribution between electromagnets

Smoother magnetic transitions

Reducing abrupt flux changes
Reducing losses

More compact magnetic structure

Improved magnetic coupling

All of these changes push the system toward:

- Stronger magnetic coupling
- More efficient flux transfer
- Less wasted energy

Those are exactly the design goals of a transformer.

Why it starts looking like a transformer

A transformer is simply:

A changing magnetic field in a core that induces voltage in another coil.

In modern schematic terms, the “Buforn-style Figuera device” becomes:

Primary coils (two variable excitations)
→ shared magnetic core
→ secondary pickup coil

That is textbook transformer architecture.

The only difference is:

Instead of AC coming from the power grid,
the AC-like waveform is created by switching current between two primaries.

But from a physics standpoint:

Changing flux in core = transformer action.

The big reveal: what disappears

Once you analyze it this way:

The idea of “energy appearing from nowhere” disappears.

Because:

- The output power comes from the input current energizing the primaries.
- When load increases, input current must increase.
- Back-EMF appears just like in any transformer.

It obeys:

- Faraday's law
- Lenz's law
- Conservation of energy

Exactly like a transformer.

Why this mattered historically

In 1908:

- Transformer theory wasn't as widespread among inventors.
- The idea of simulating mechanical motion with magnetic variation sounded revolutionary.

But by the 1910s:

- Electrical Engineering matured rapidly.
- The device looked less like a "new generator"
- And more like an inefficient power converter.

That likely explains why:

It never became a commercial breakthrough.

Modern interpretation

If you built Buforn's improved design today, engineers would classify it as:

- A magnetically coupled power converter
- Or a transformer with dynamic excitation control

But NOT a GENERATOR

The simple summary

Figuera framed the invention as replacing mechanical motion with magnetic motion.

Buforn's refinements made it clearer that:

It was not eliminating the need for input energy —
It was simply transferring energy magnetically like a transformer.

And once you see that, the "mystery" largely disappears.