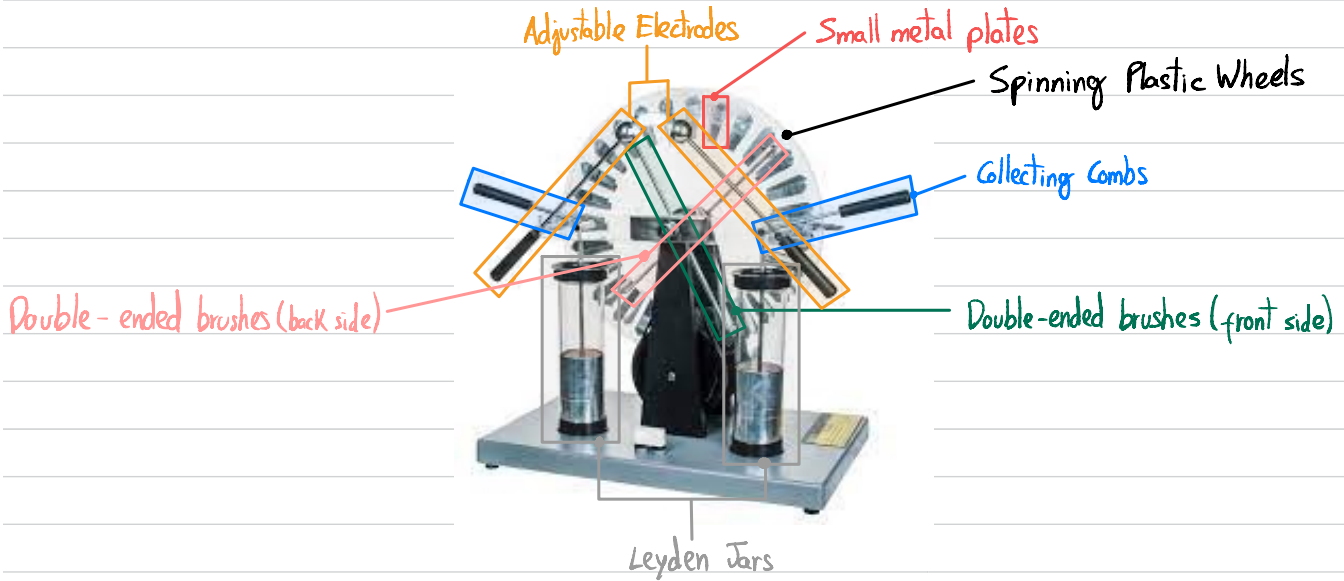


# The Wimshurst Machine Lecture 1

o Usa-se este método para gerar cargas de sistemas opostos.

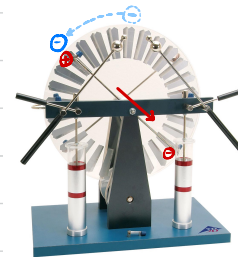


- o Notice that the brushes on either side are perpendicular to each other.
- o Also notice that the wheels spin in opposite directions.

① Suppose the back plate starts with a small **negative** charge.



② When the charge lines up with the brush on the front side, it induces a **positive** charge on the near side of the brush, and a **negative** charge on the far side.



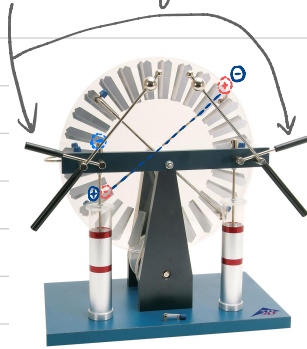
③ Soon the charges rotate to a position opposite the brush on the back side of the machine (dashed line).



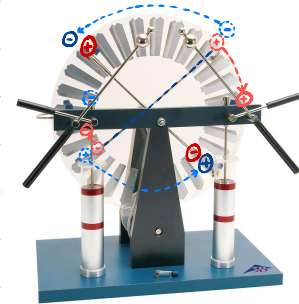
④ The charges on the front wheel induce opposite charges on the plates of the back wheel that are touching the brush (**blue**).



- ⑤ The charges are then collected on the side by collecting combs.



- ⑥ When the charges on the back wheel line up with the brush on the front, they induce opposite charges on the front wheel.



- ⑦ This process repeats itself until it reaches a very high voltage and discharges between the electrodes!



Each time the machine sparks, the entire process starts over again.