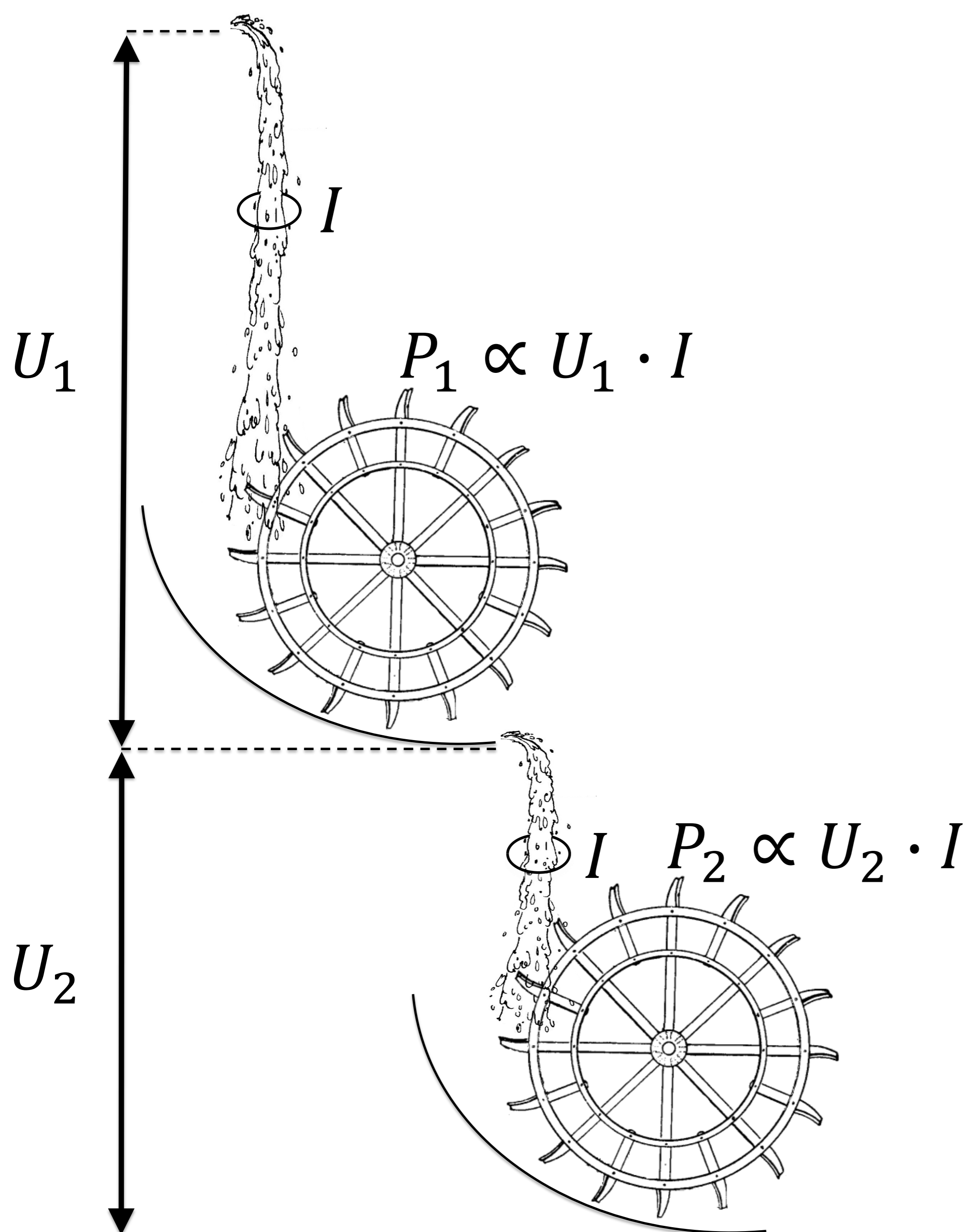


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## Why does the electric current flow?

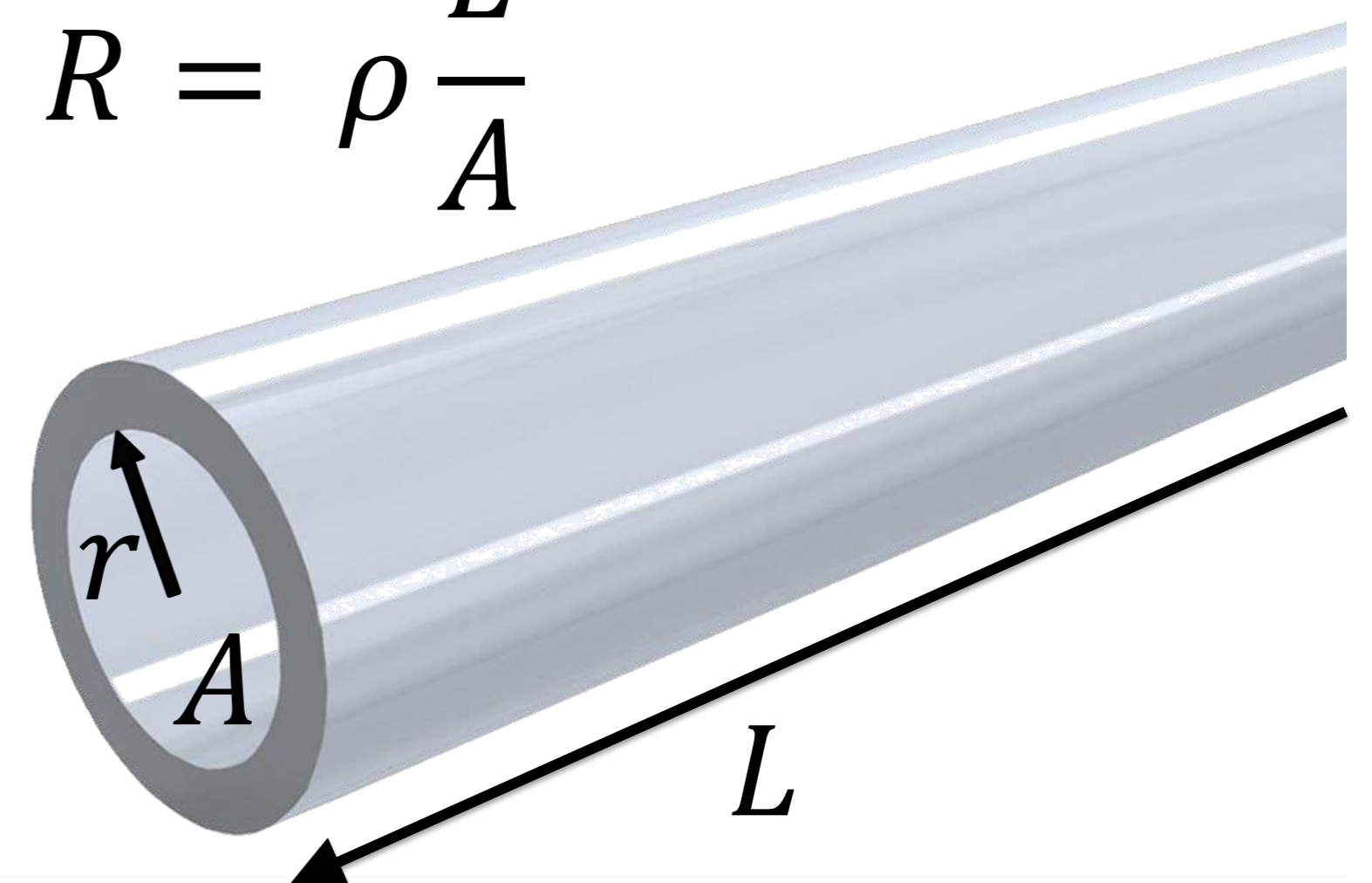
Many student have a hard time understanding the **abstract concepts of electricity**. For some of them it might be helpful to show a **visual and practical analogy** that helps them to remember the many interesting phenomena of this subject.

The **flow of water is a surprisingly perfect analogy for the flow of electric current**. The height have the role of voltage as the driving force. The flow rate (gram/s) is analogous to electric current and even the mechanical power behaves the same as electric power.



Water flowing in tubes can demonstrate all aspects of the resistance of electric wires.

$$R = \rho \frac{L}{A}$$



The  $\rho$  can be represented as obstacles in the tube, and then **the dependence on the type of material and length can be demonstrated, too**.