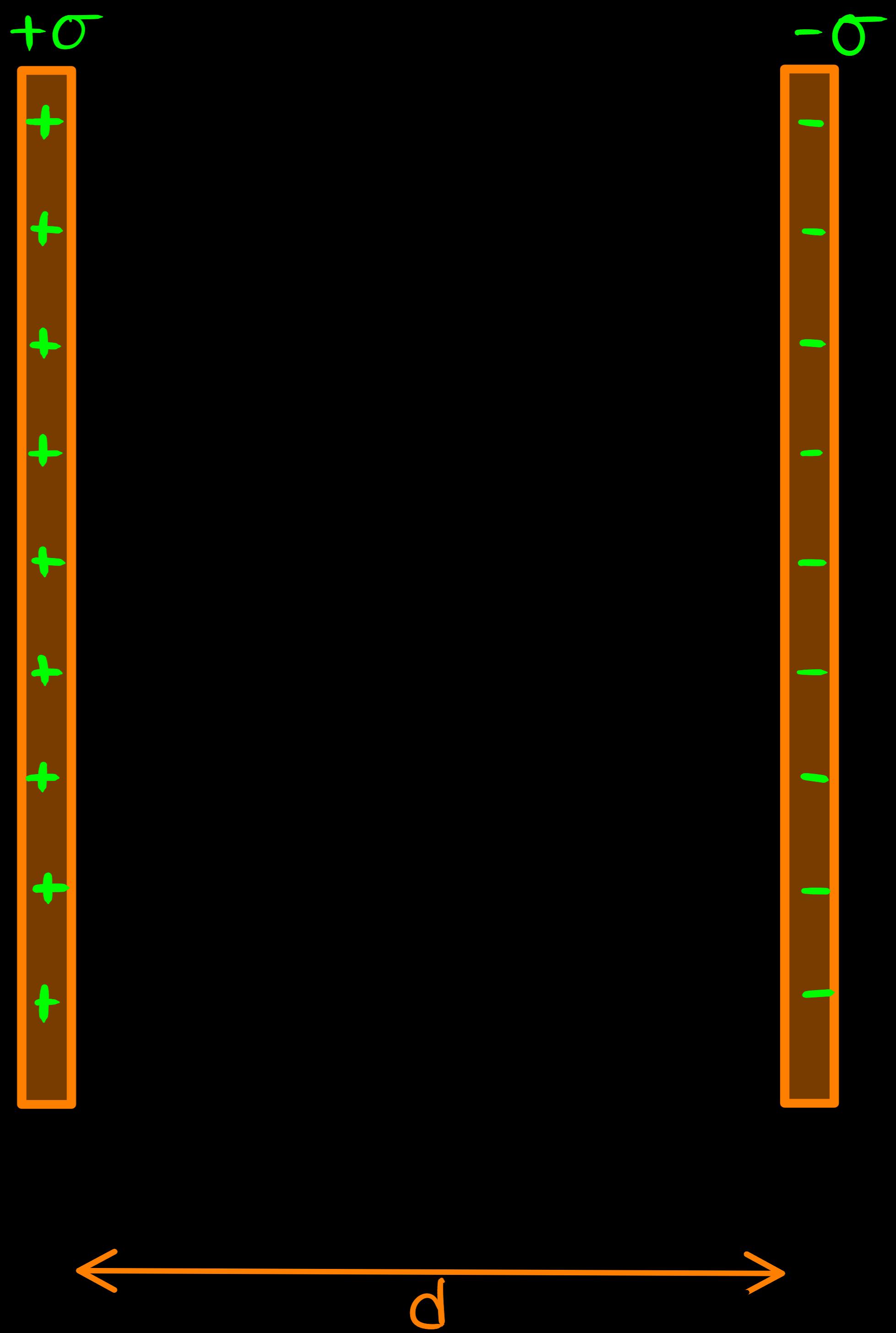


Capacitance of a parallel plate capacitor, partly filled with dielectric

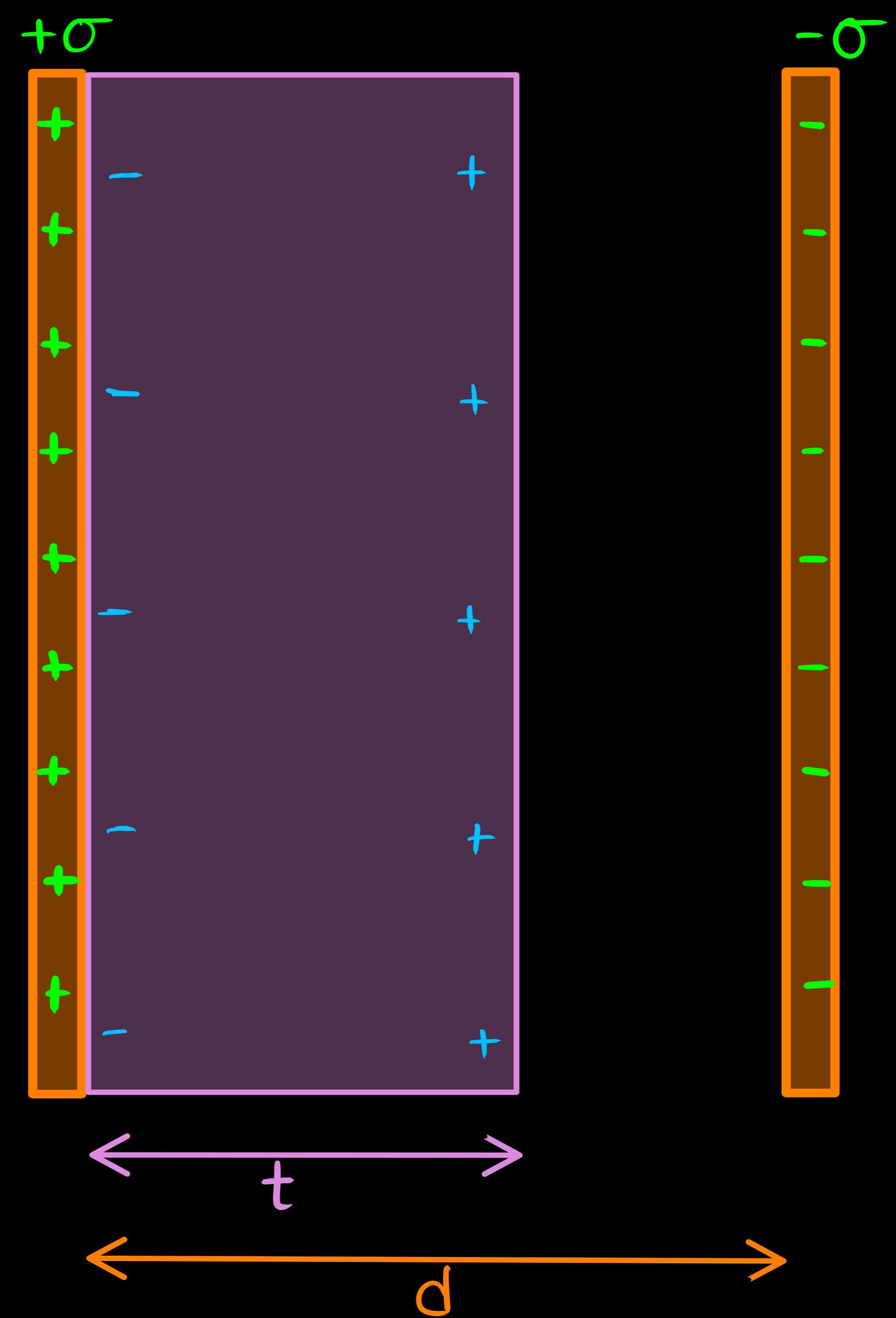
Capacitance of a parallel plate capacitor, partly filled with dielectric

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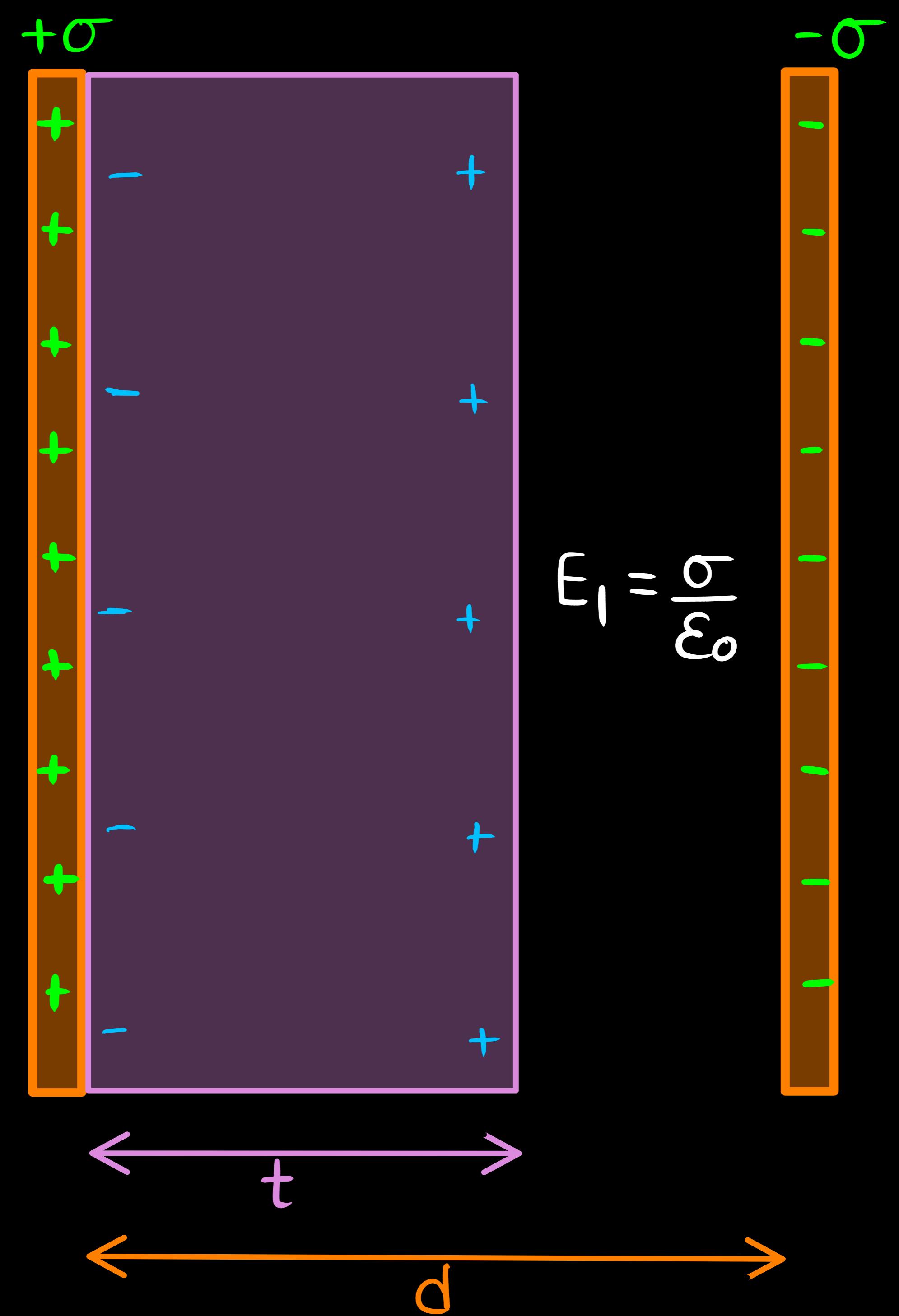
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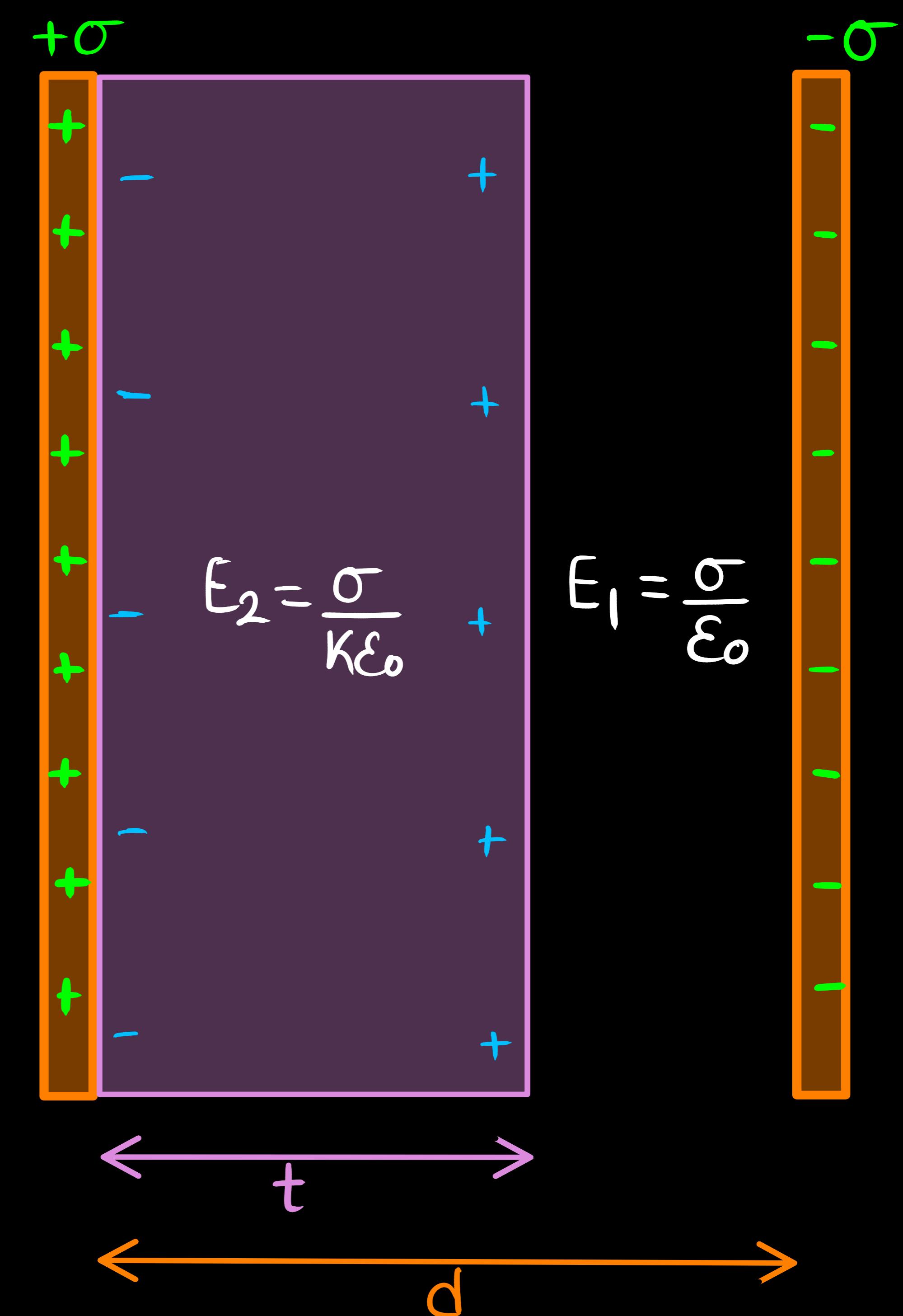
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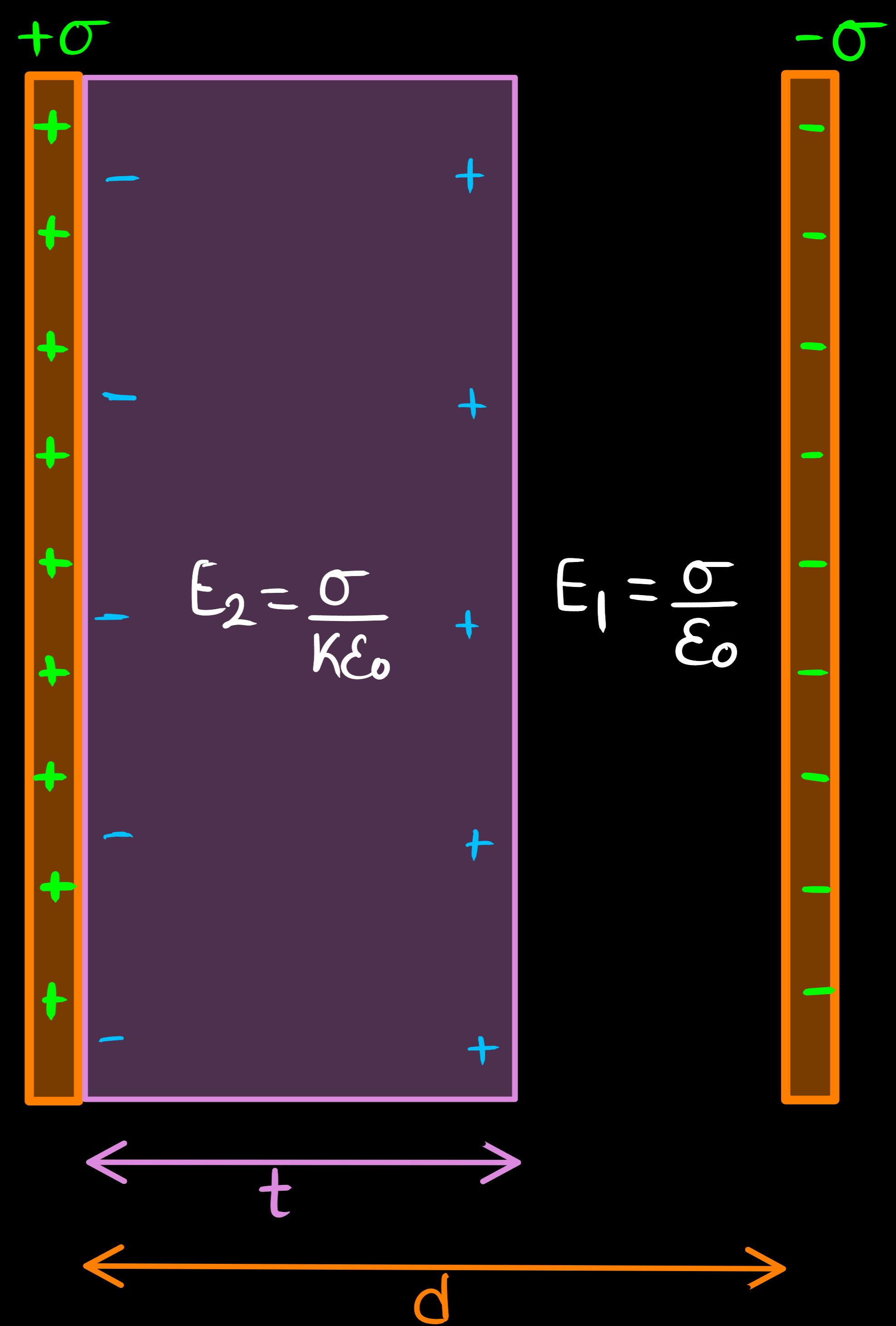
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Capacitance of a parallel plate capacitor, partly filled with dielectric

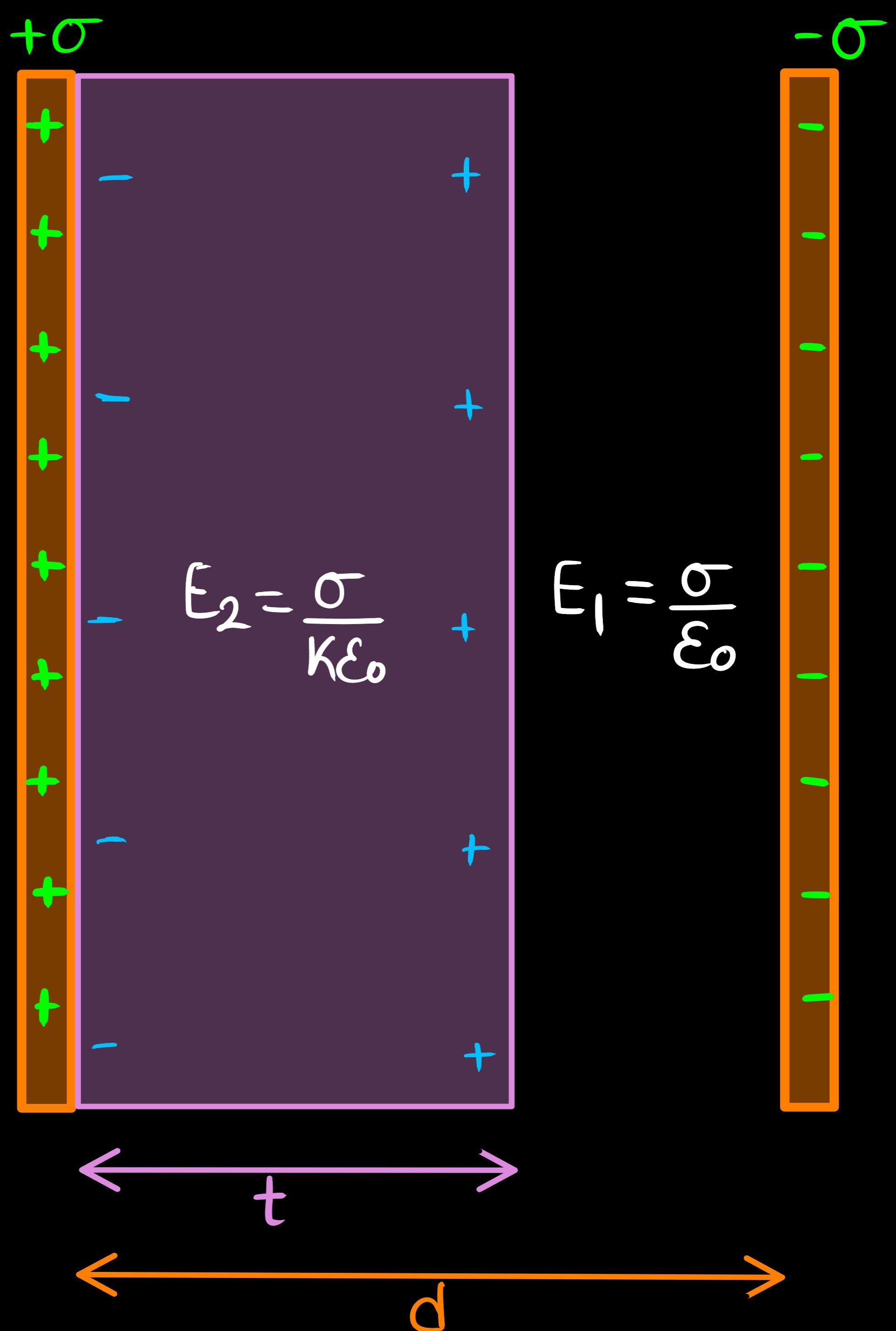
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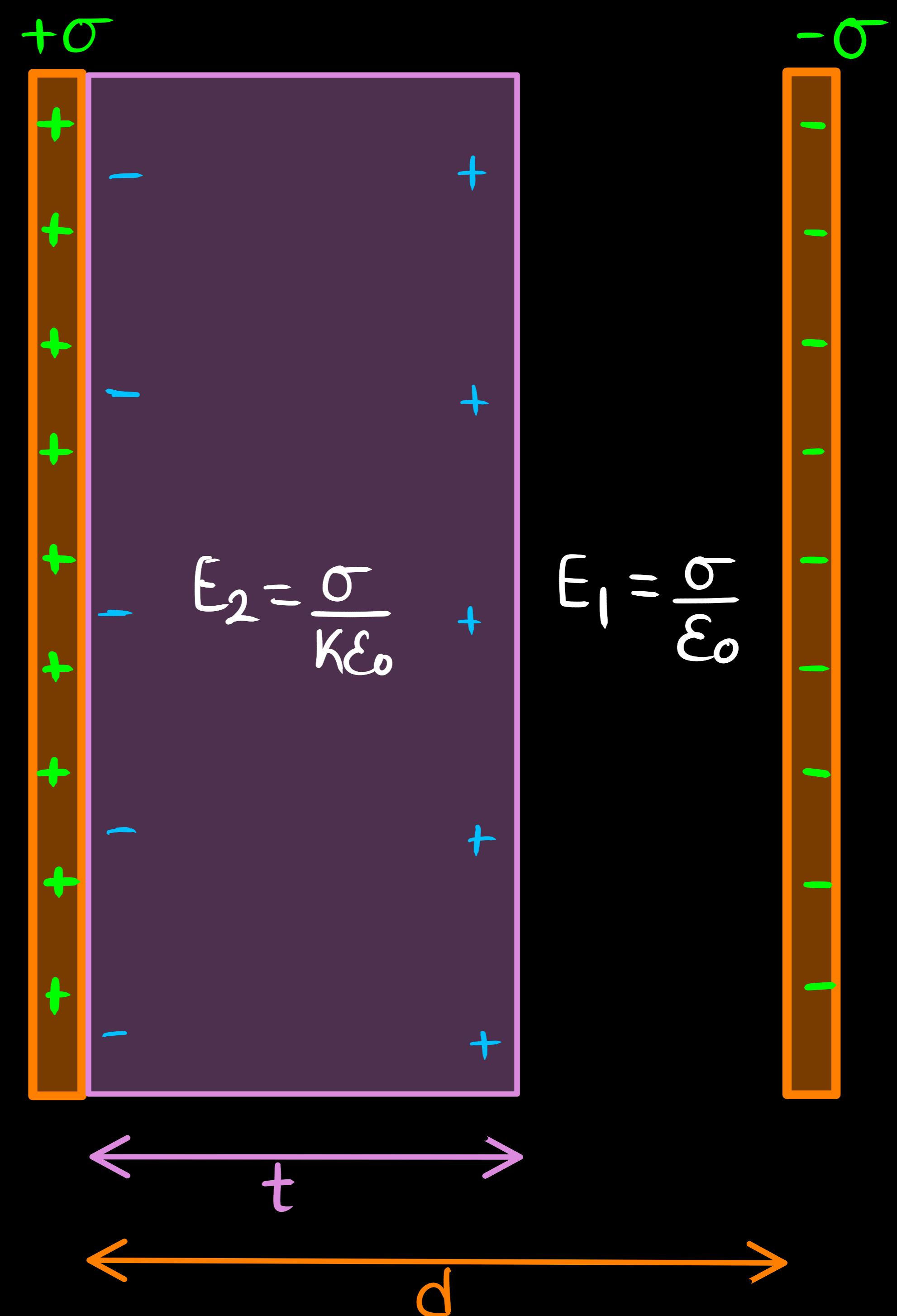


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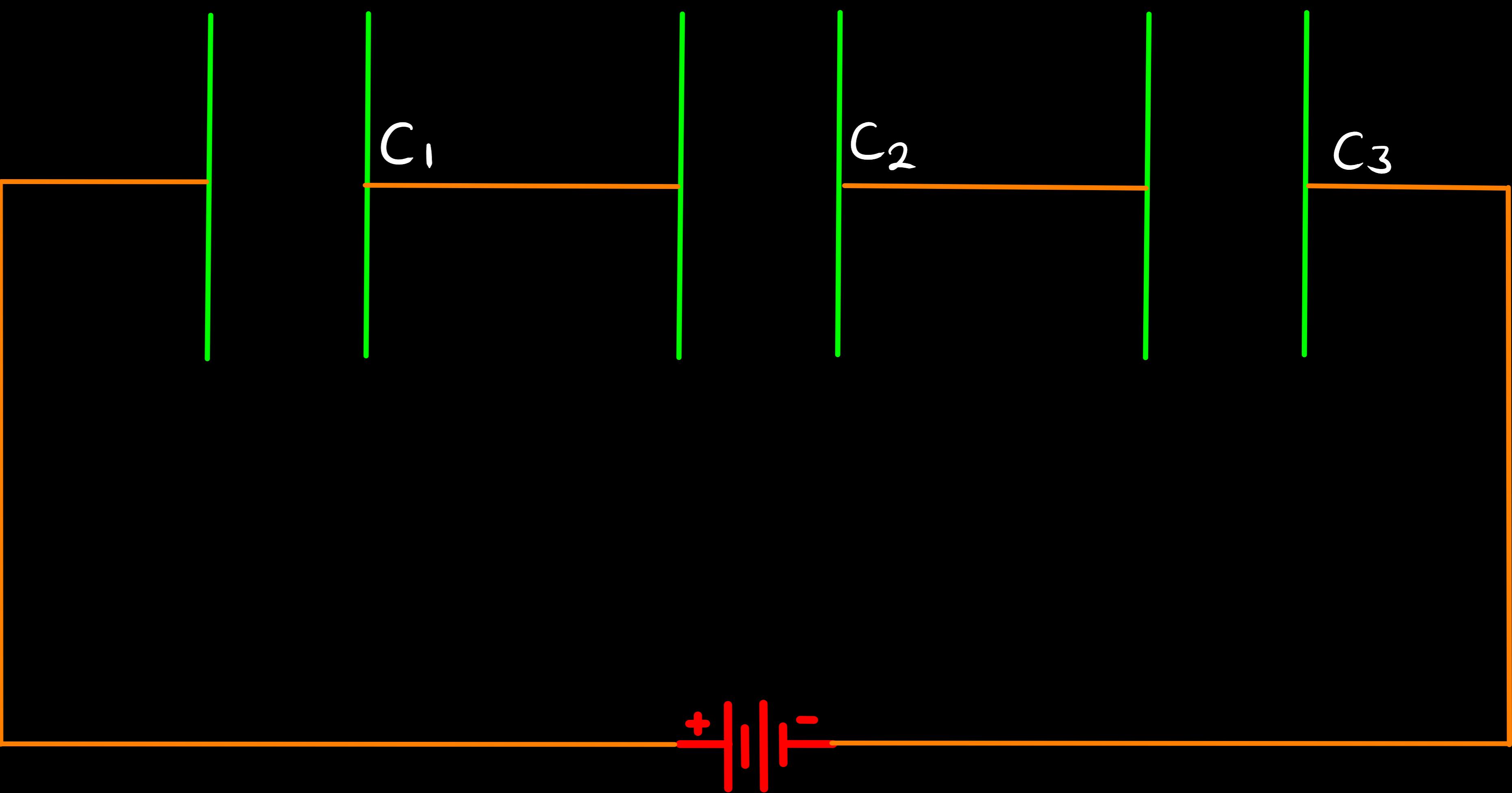
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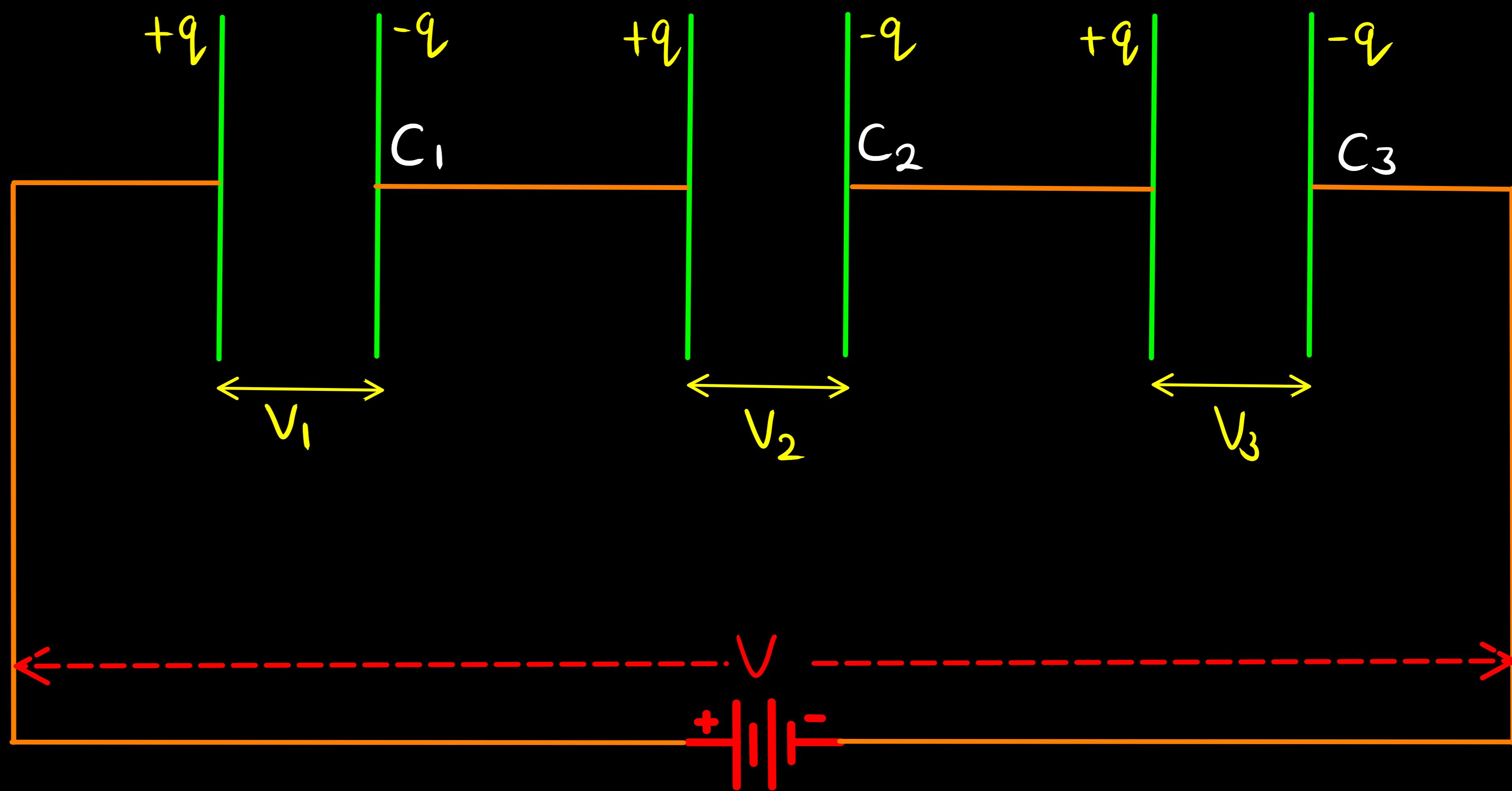


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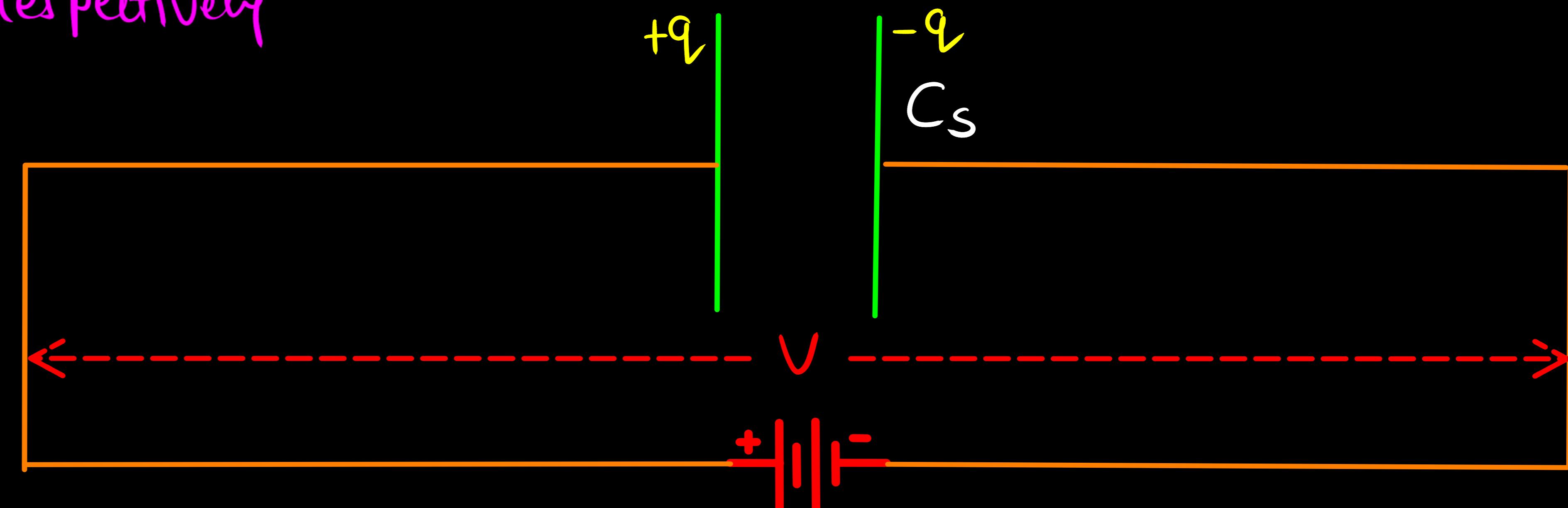
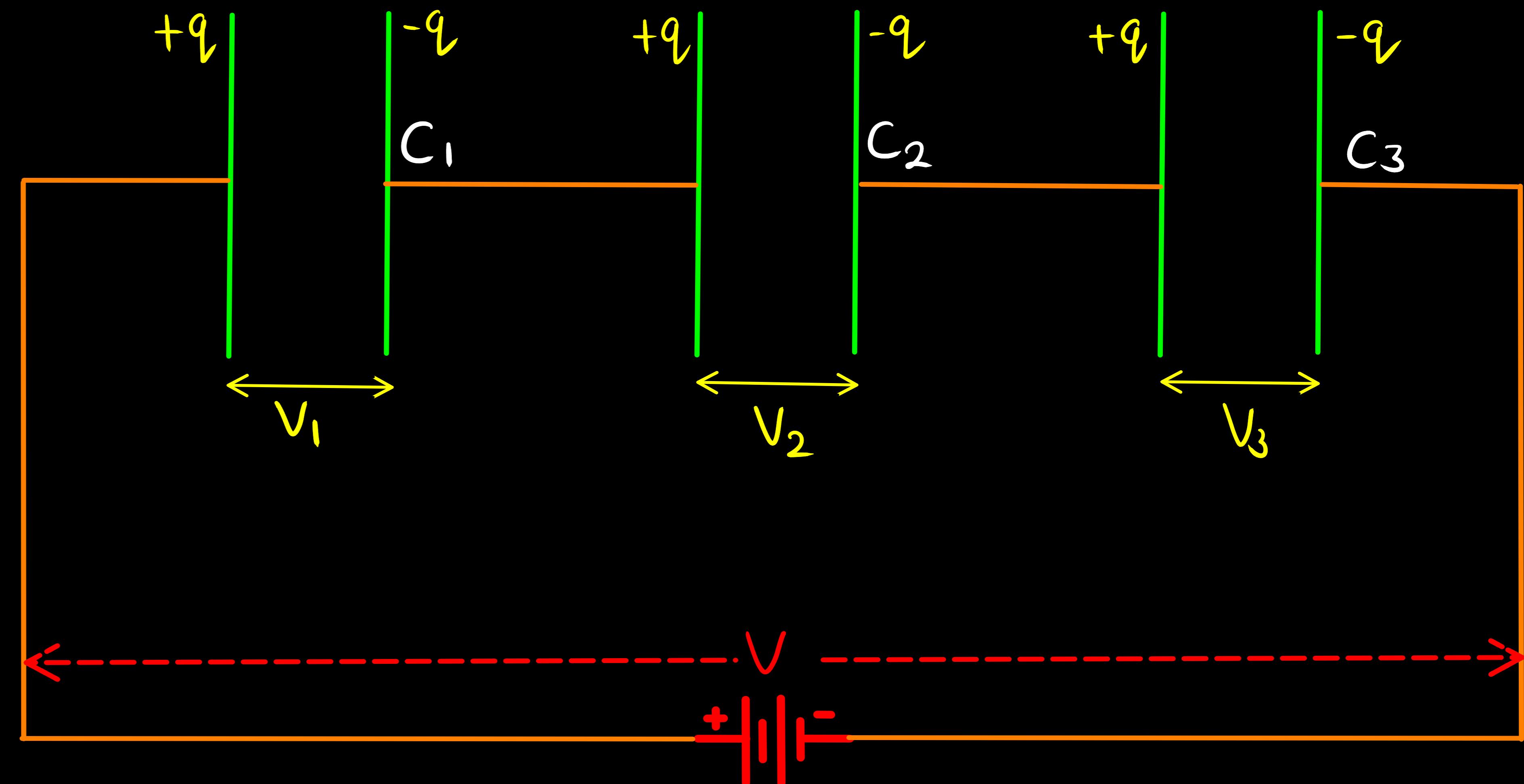
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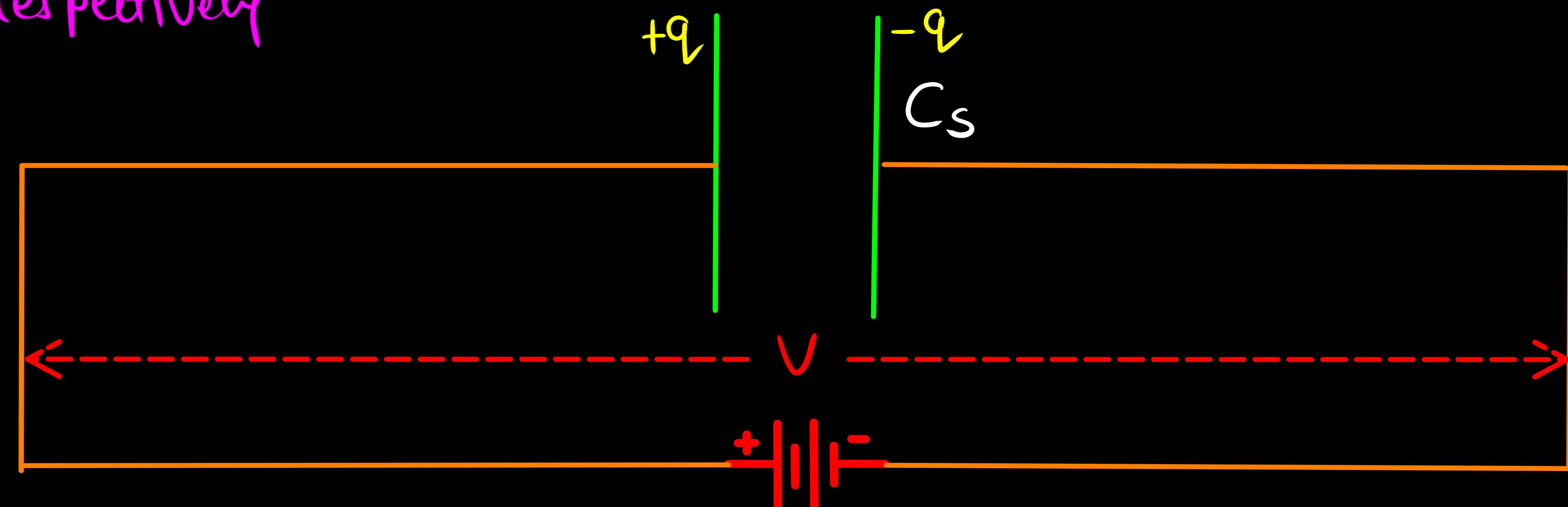
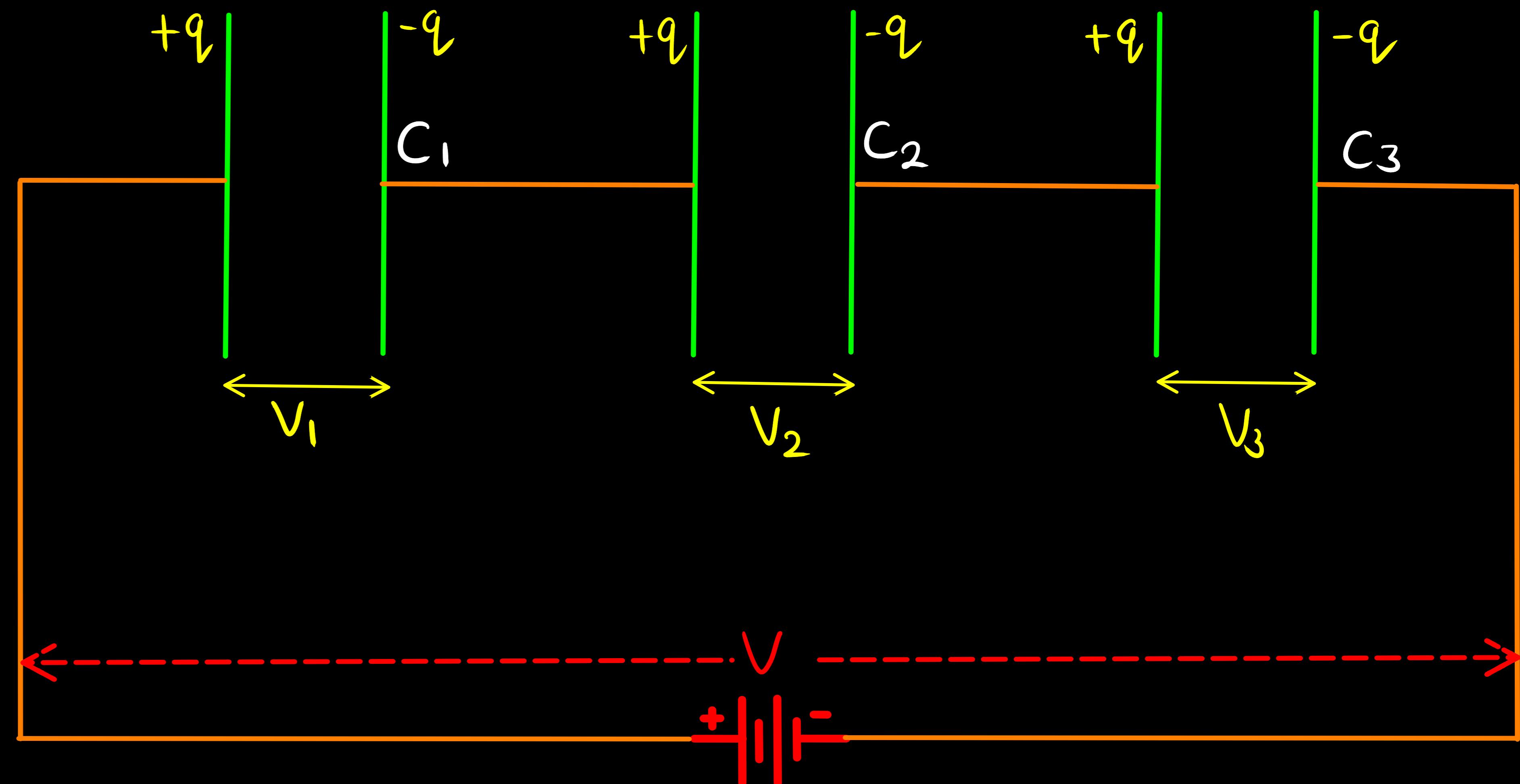
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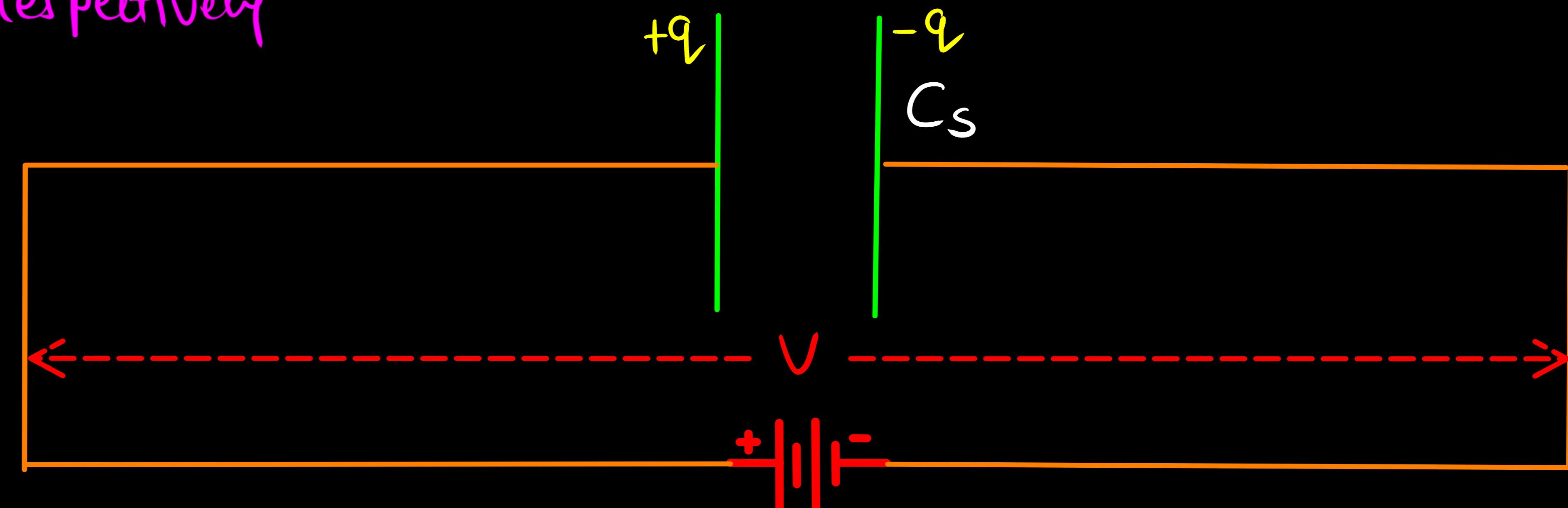
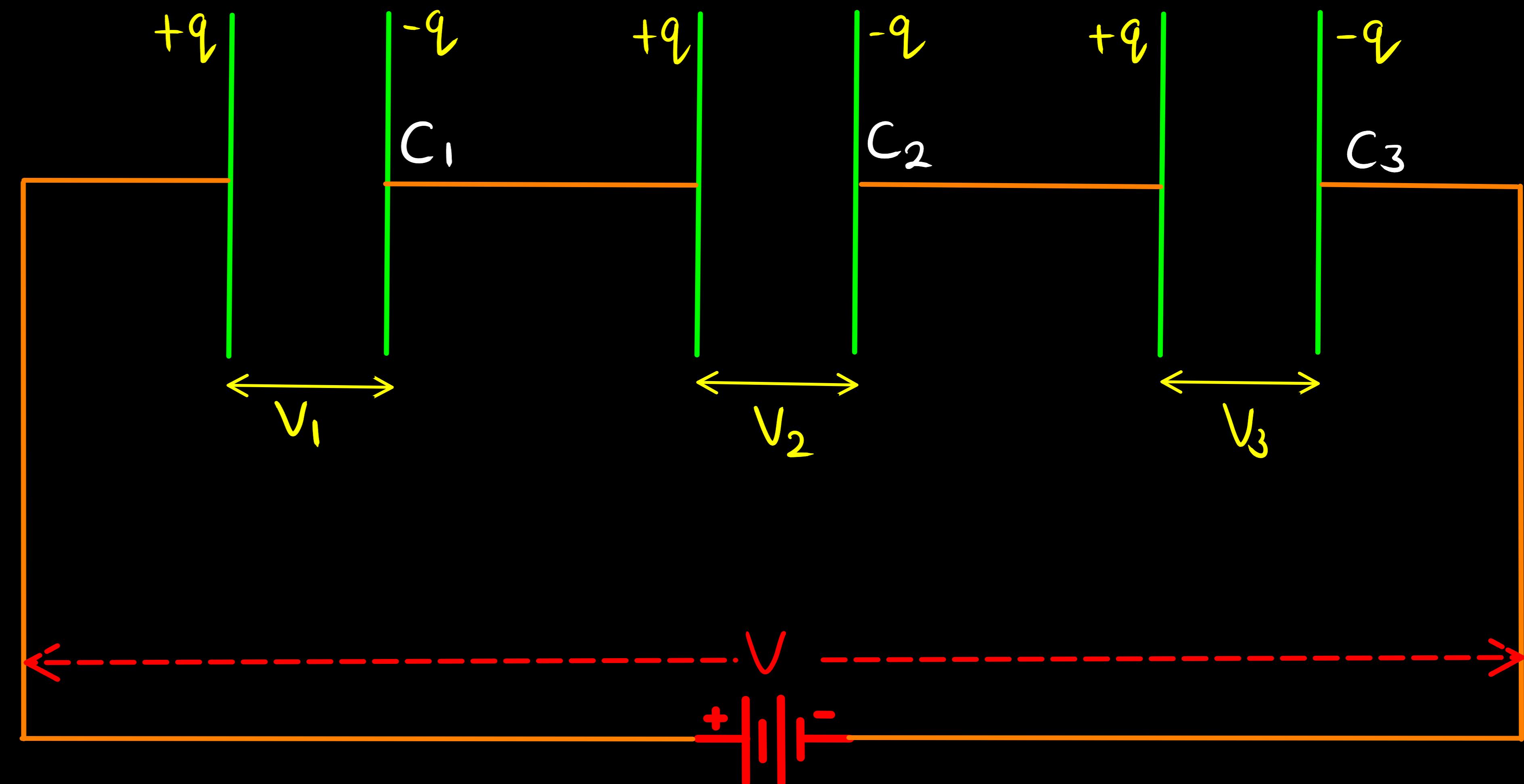
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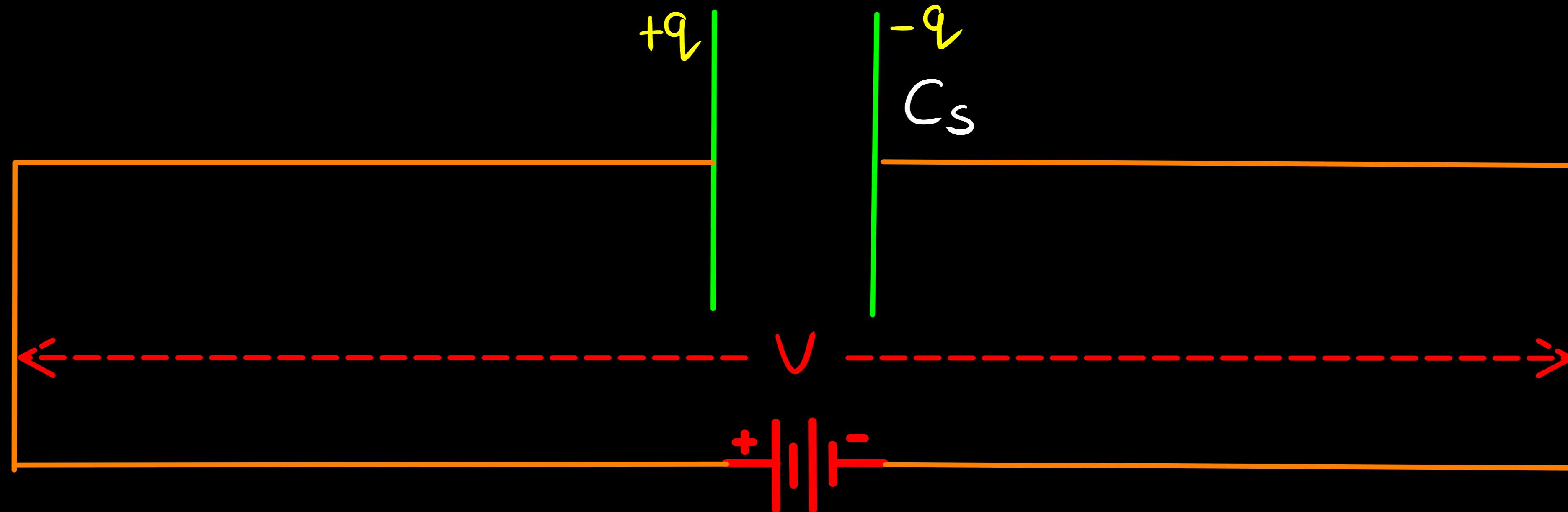
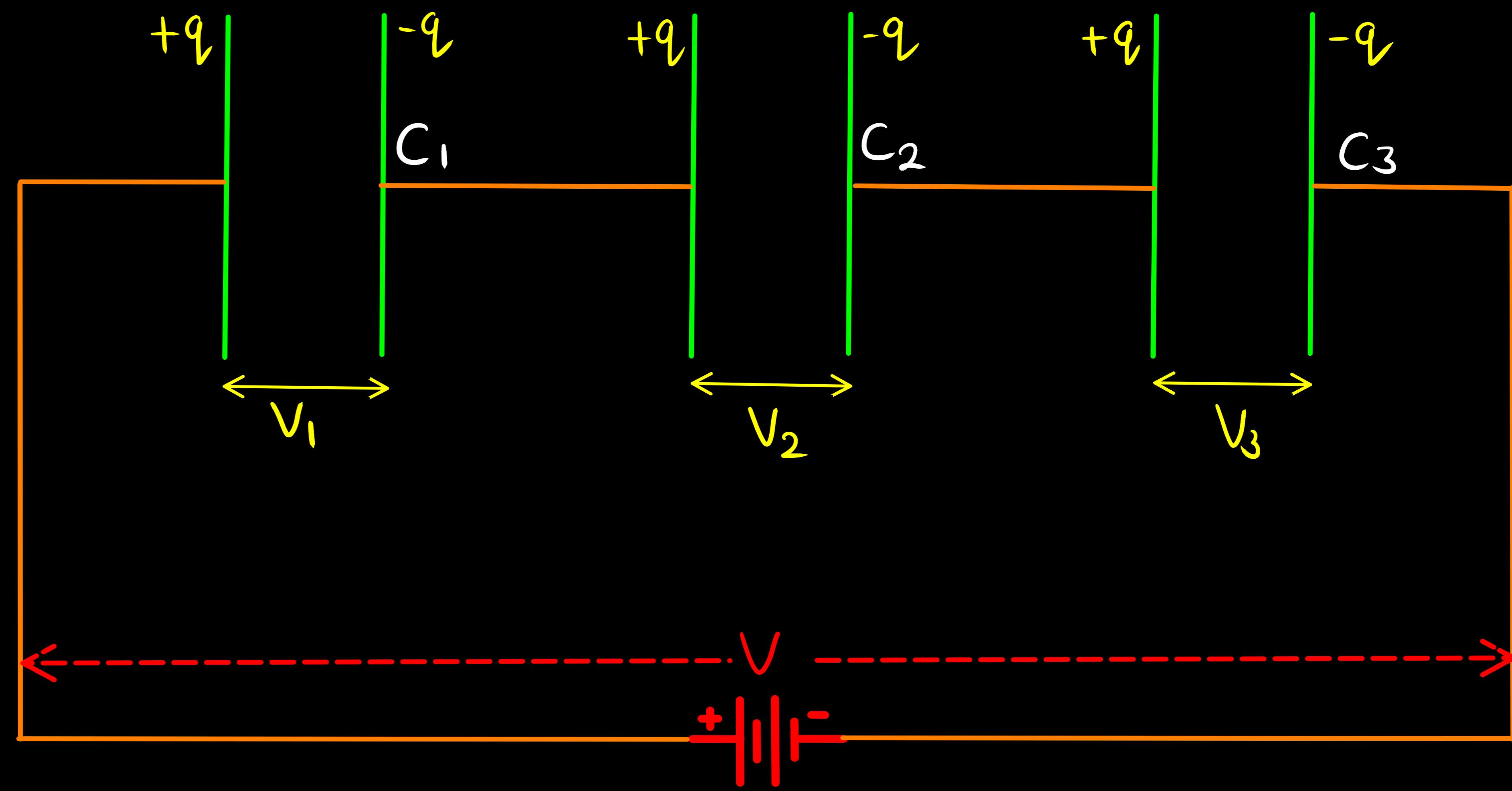
$$V = V_1 + V_2 + V_3$$

$$V = \frac{q}{C_1} + \frac{q}{C_2} + \frac{q}{C_3} \quad \text{--- (1)}$$



Combination of capacitors

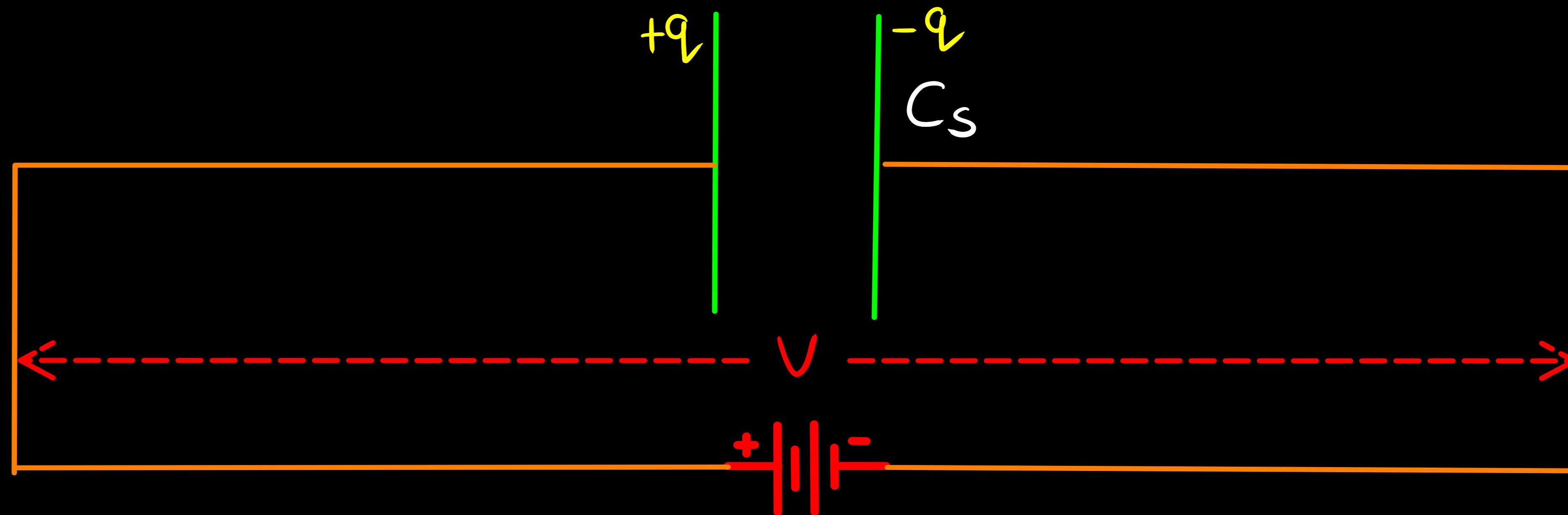
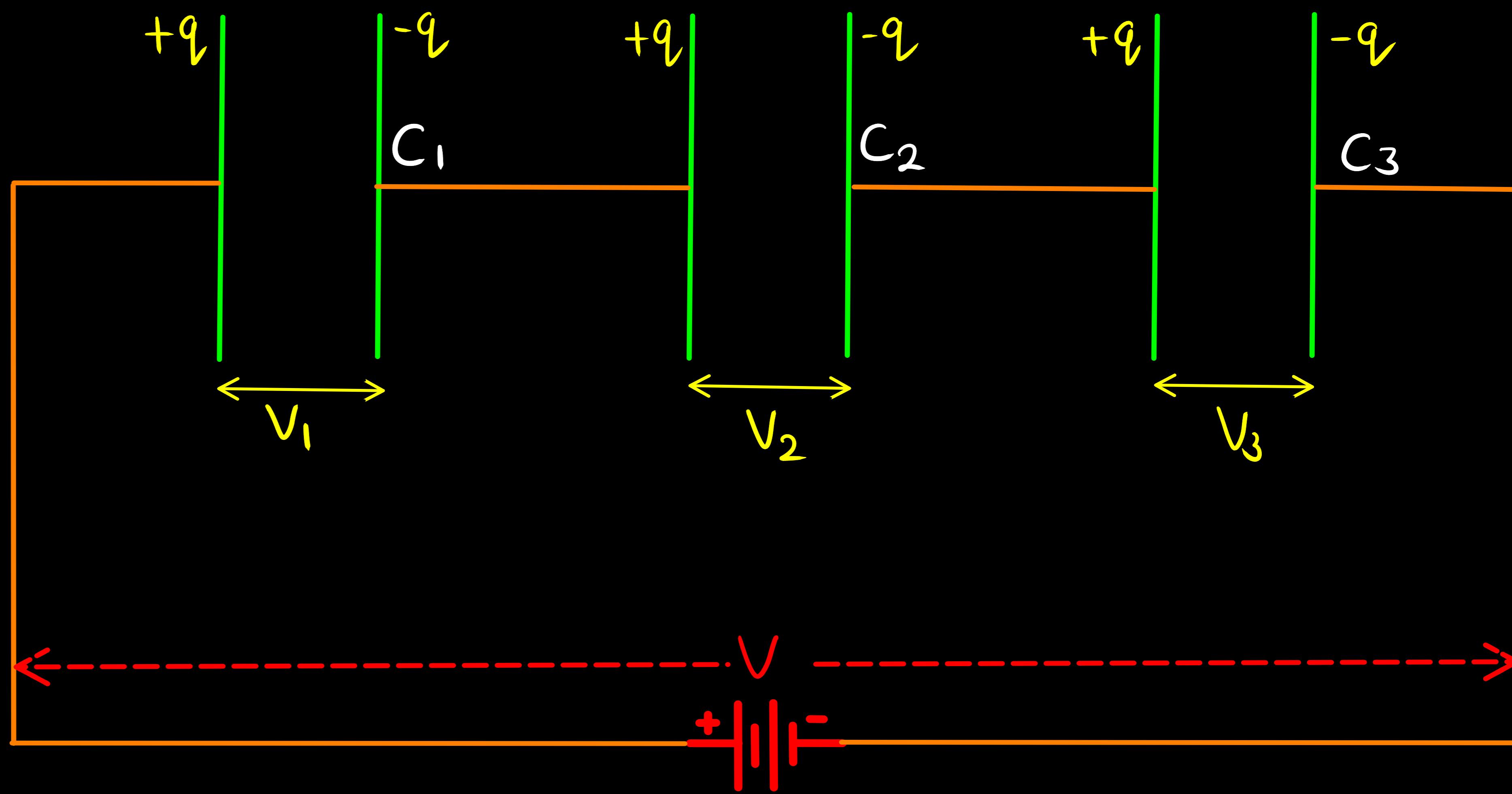
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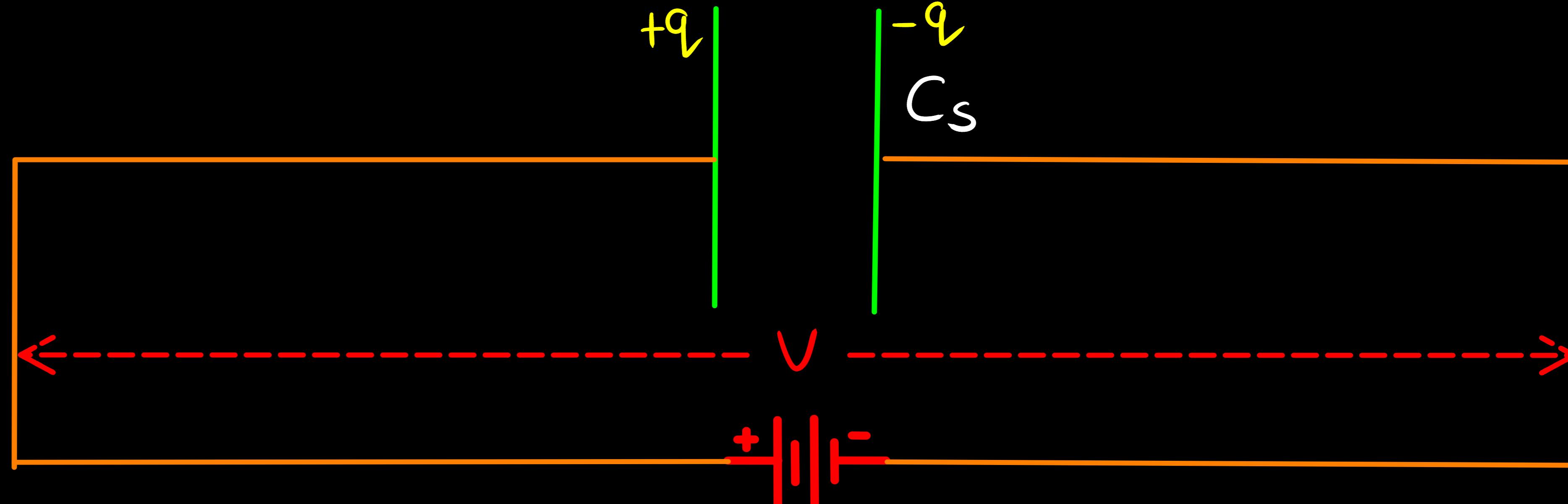
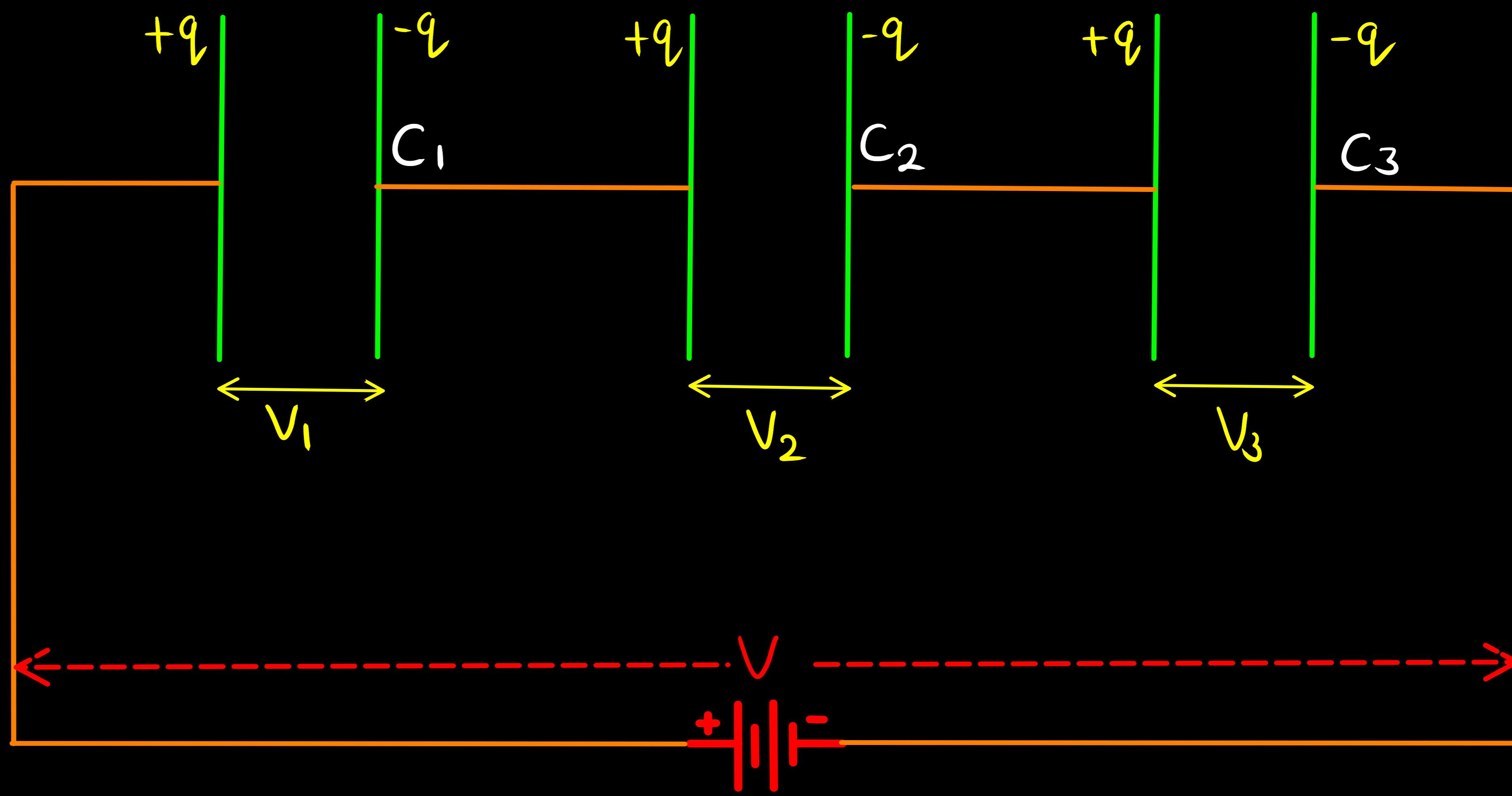
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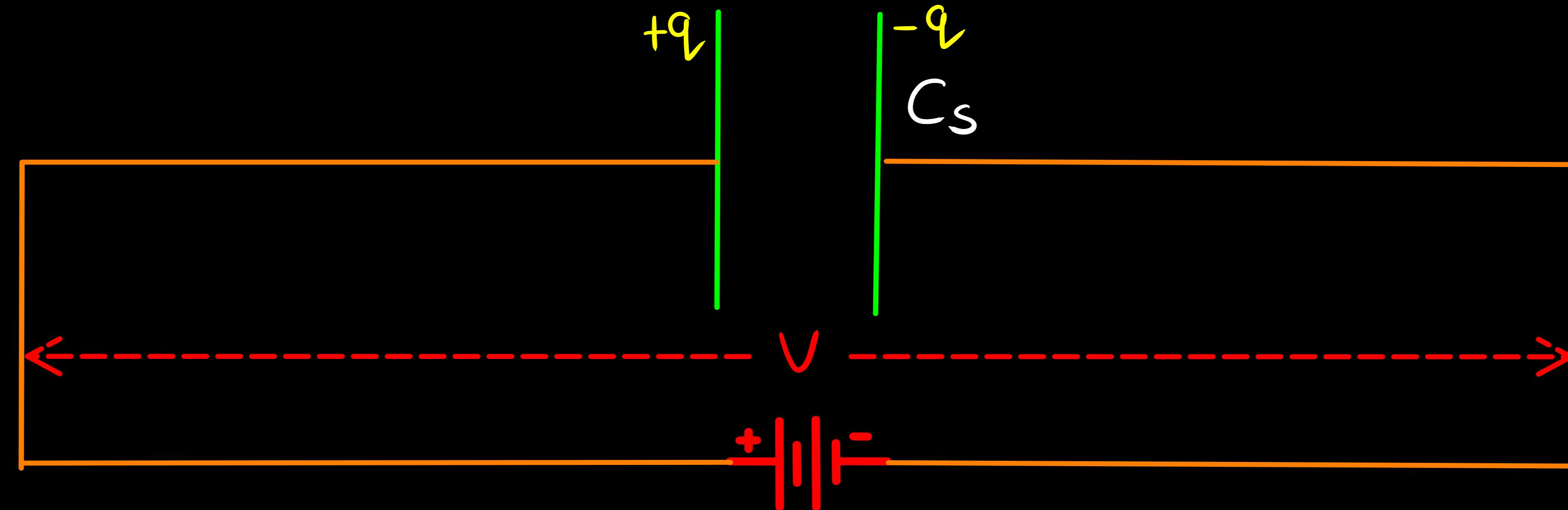
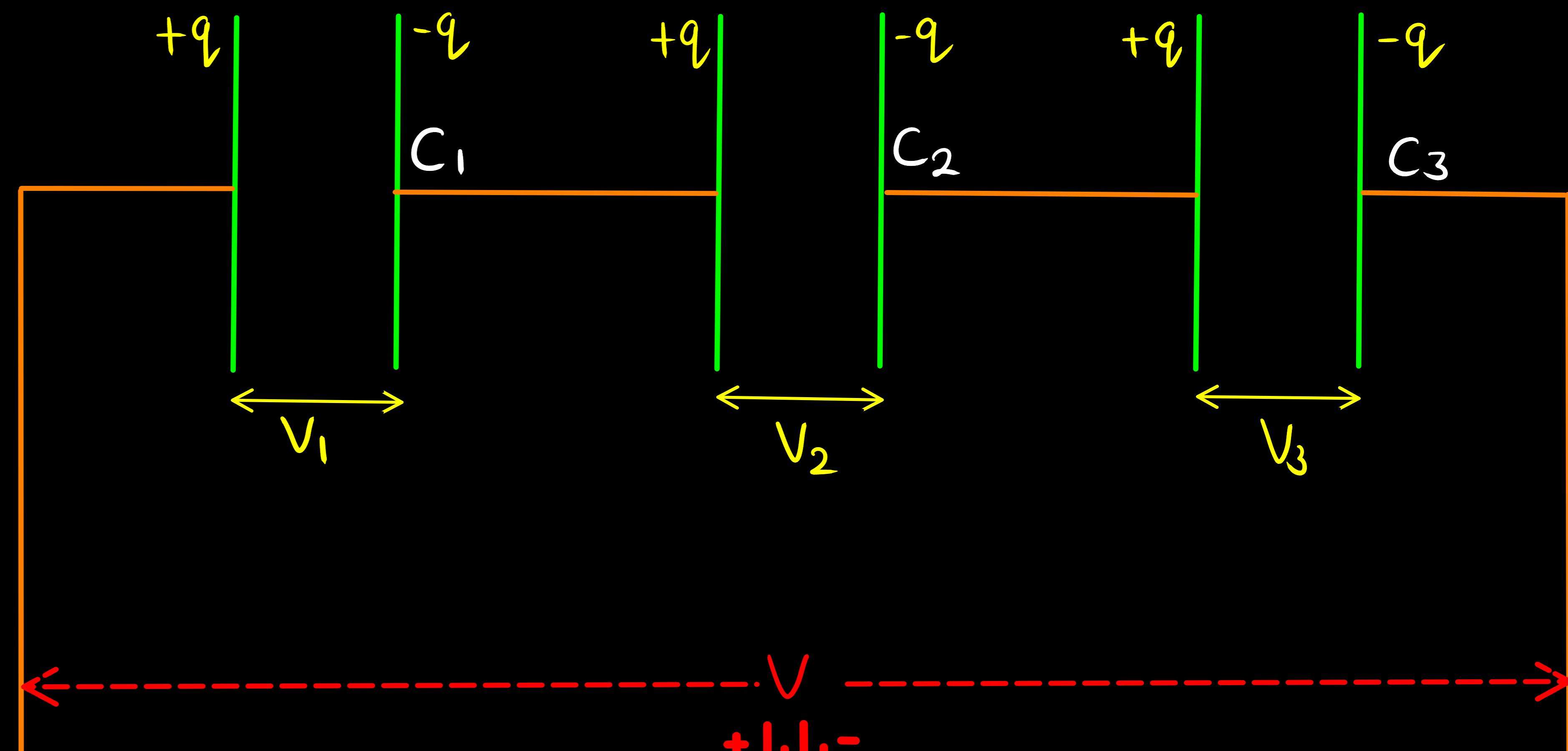
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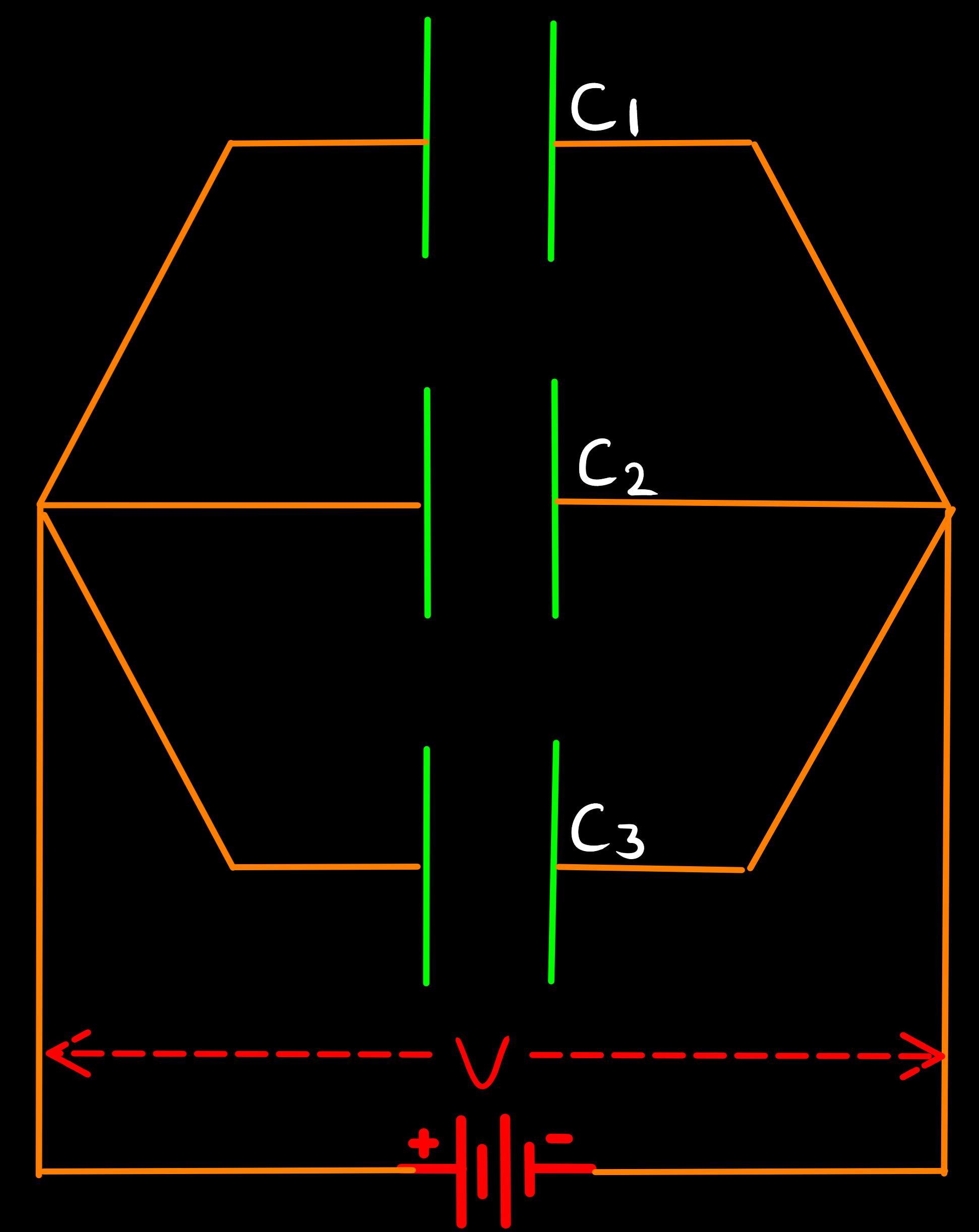
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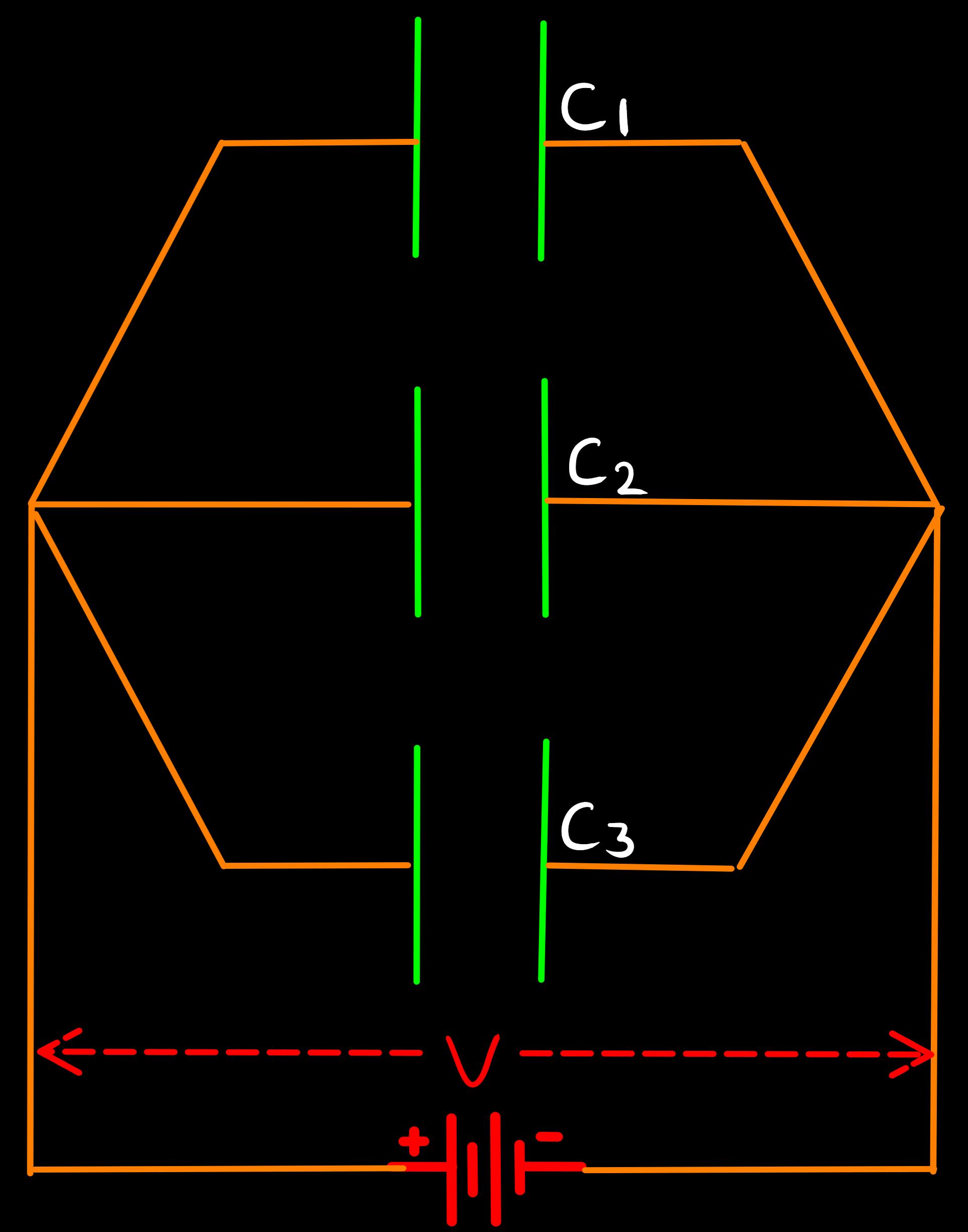
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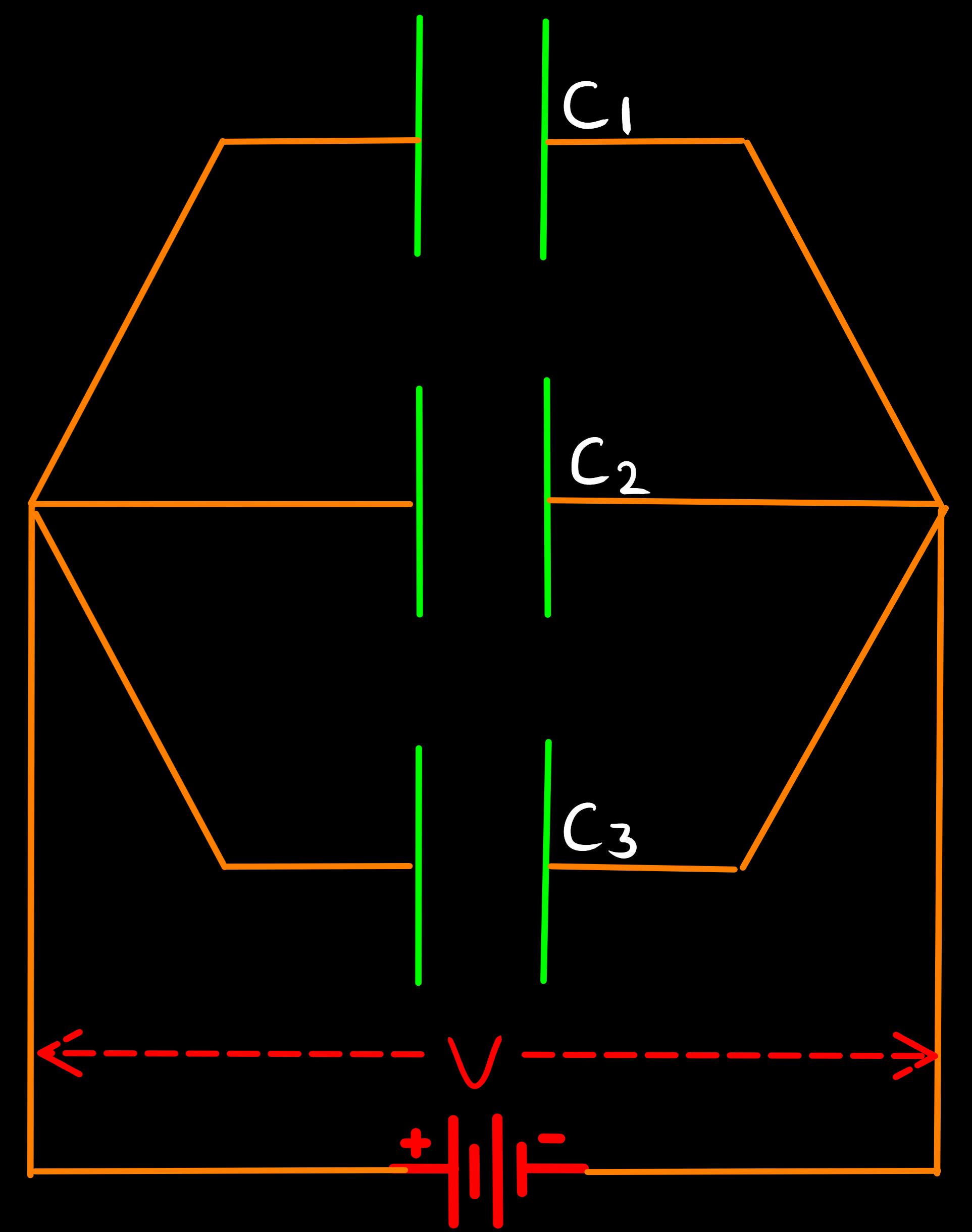
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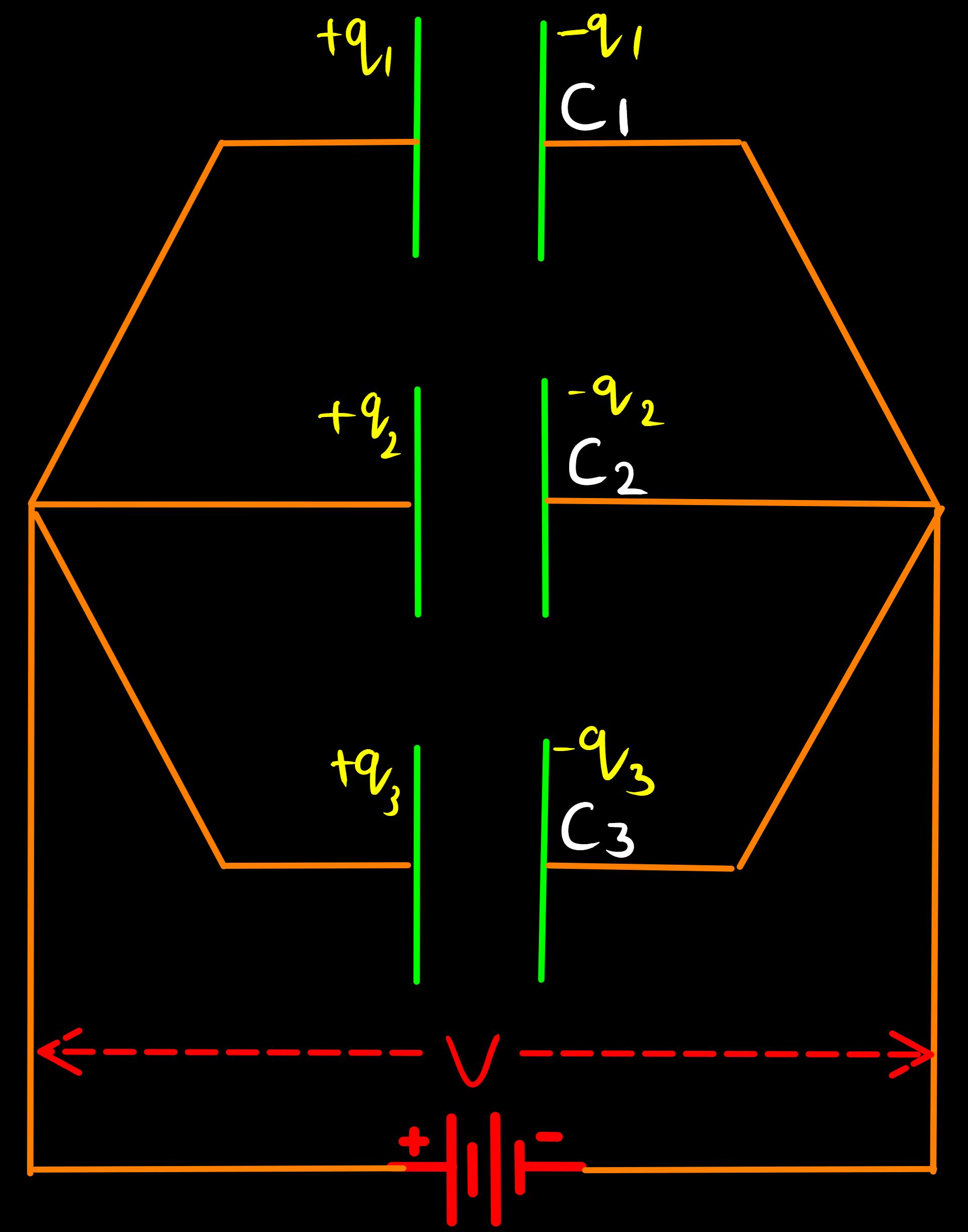
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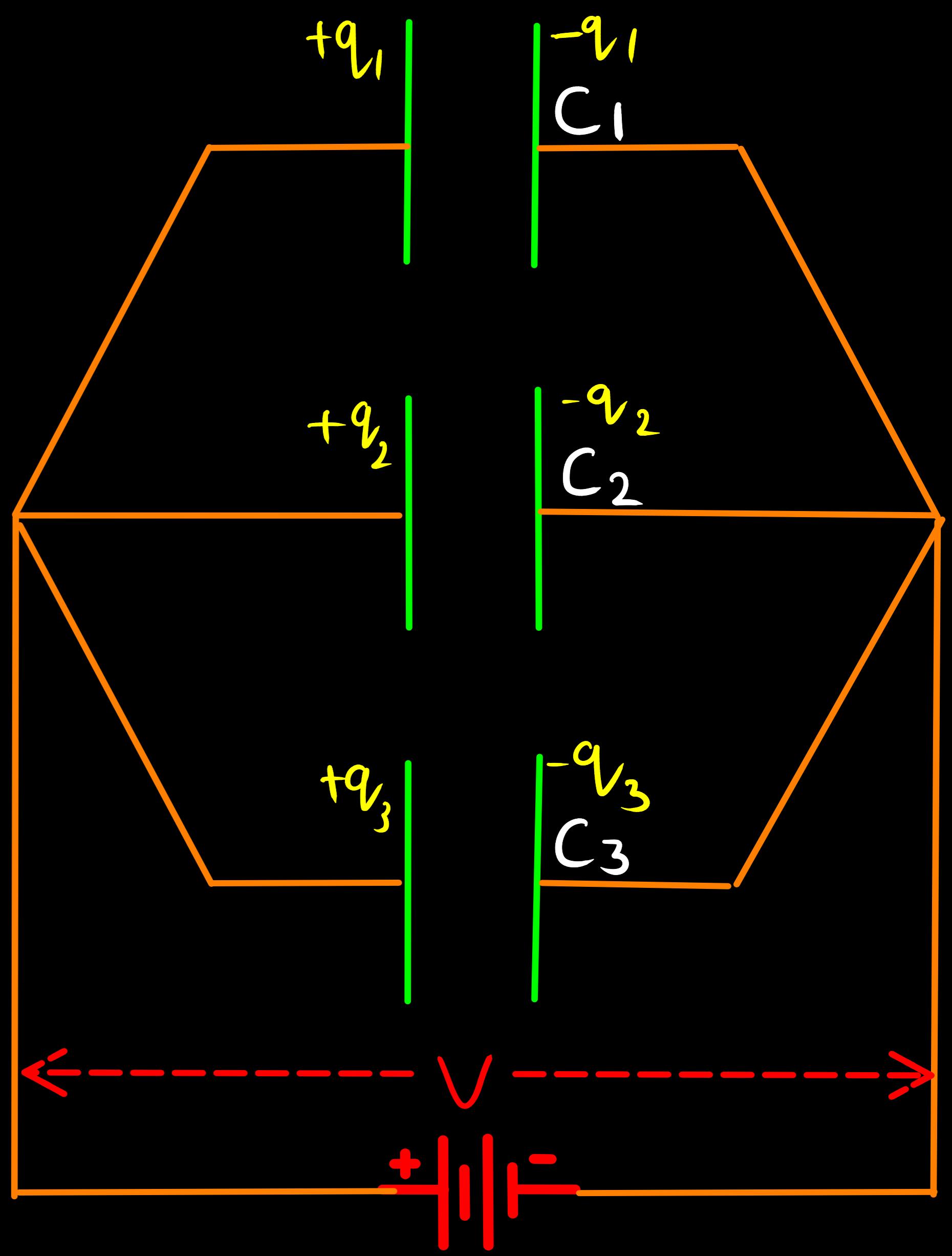
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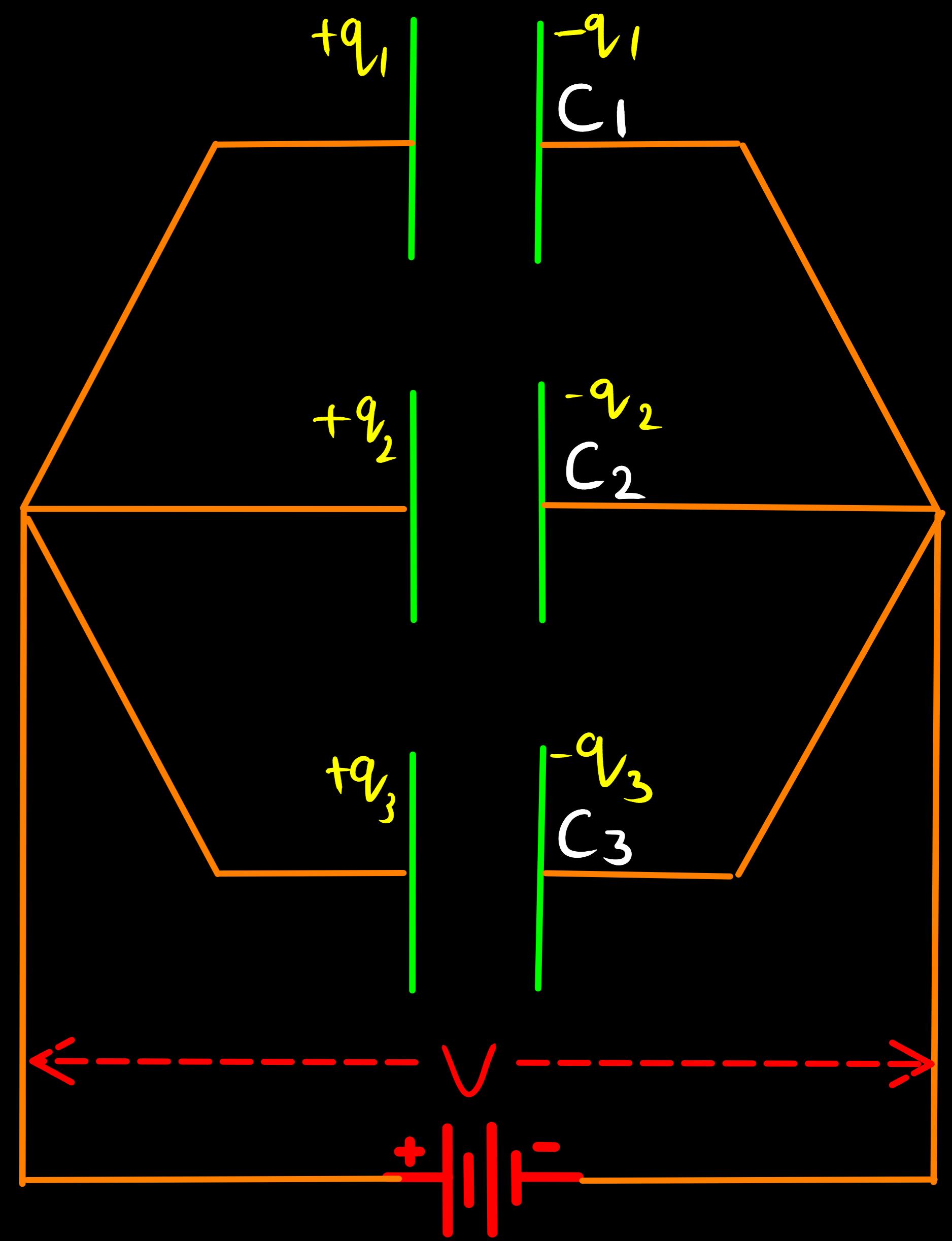
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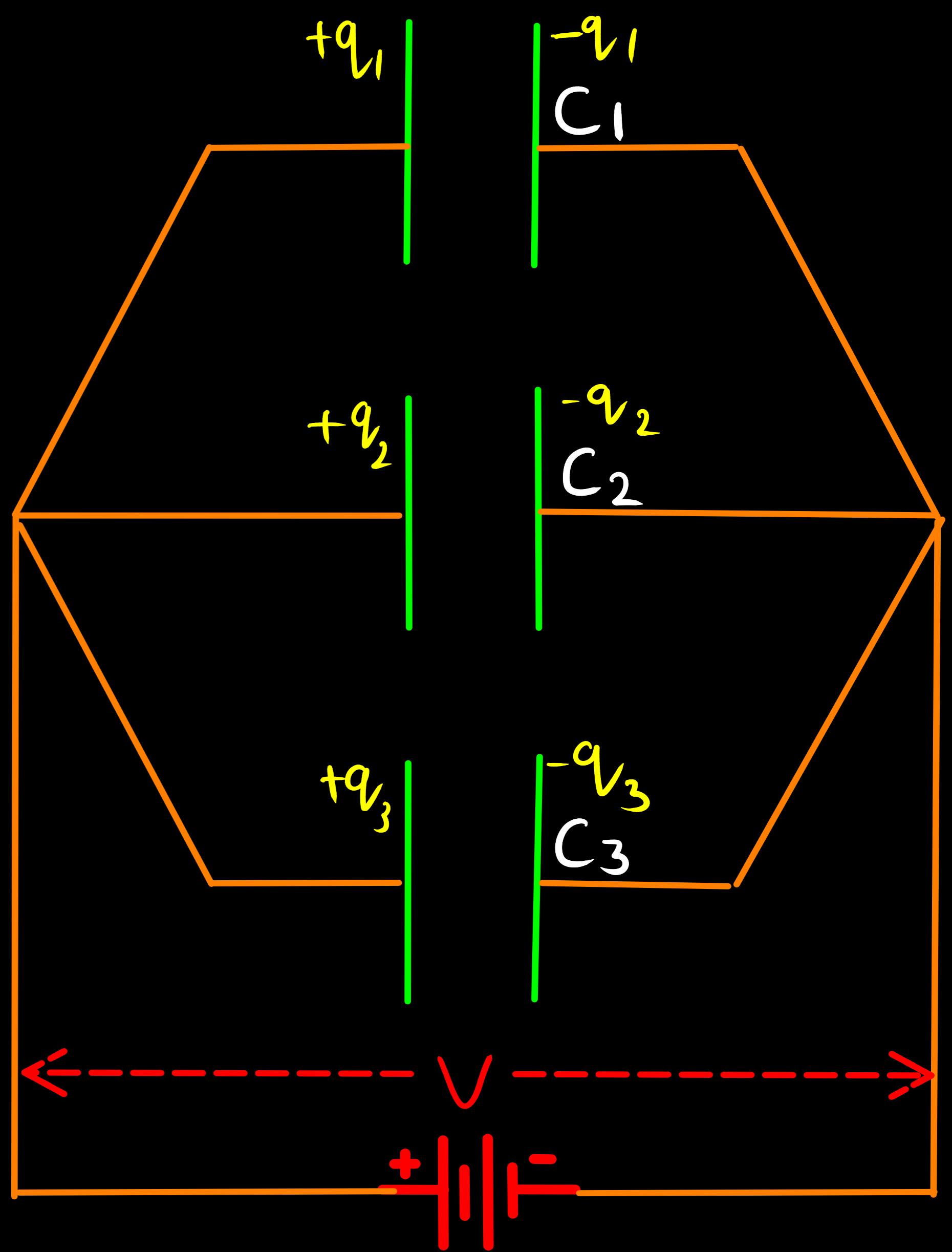
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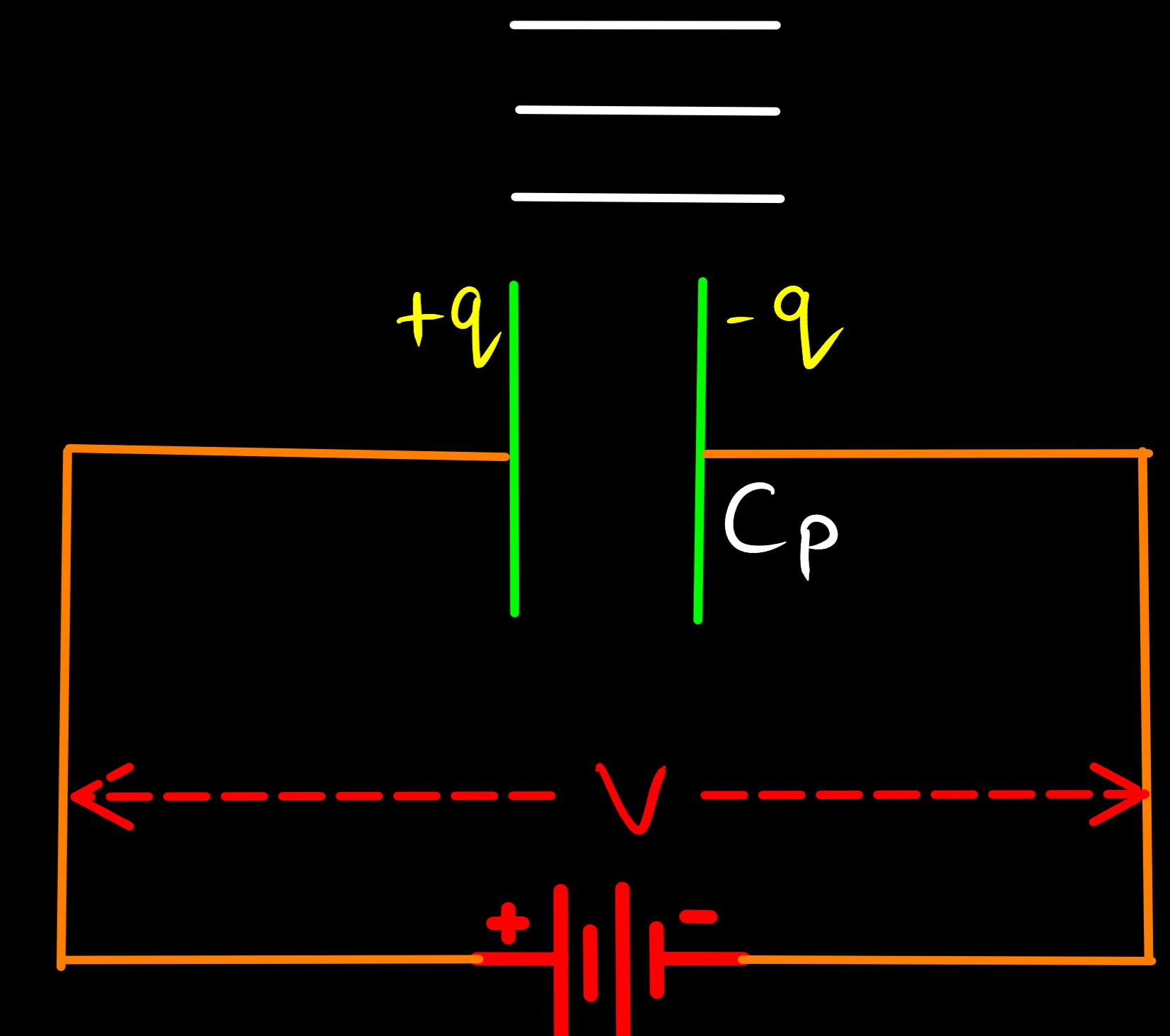
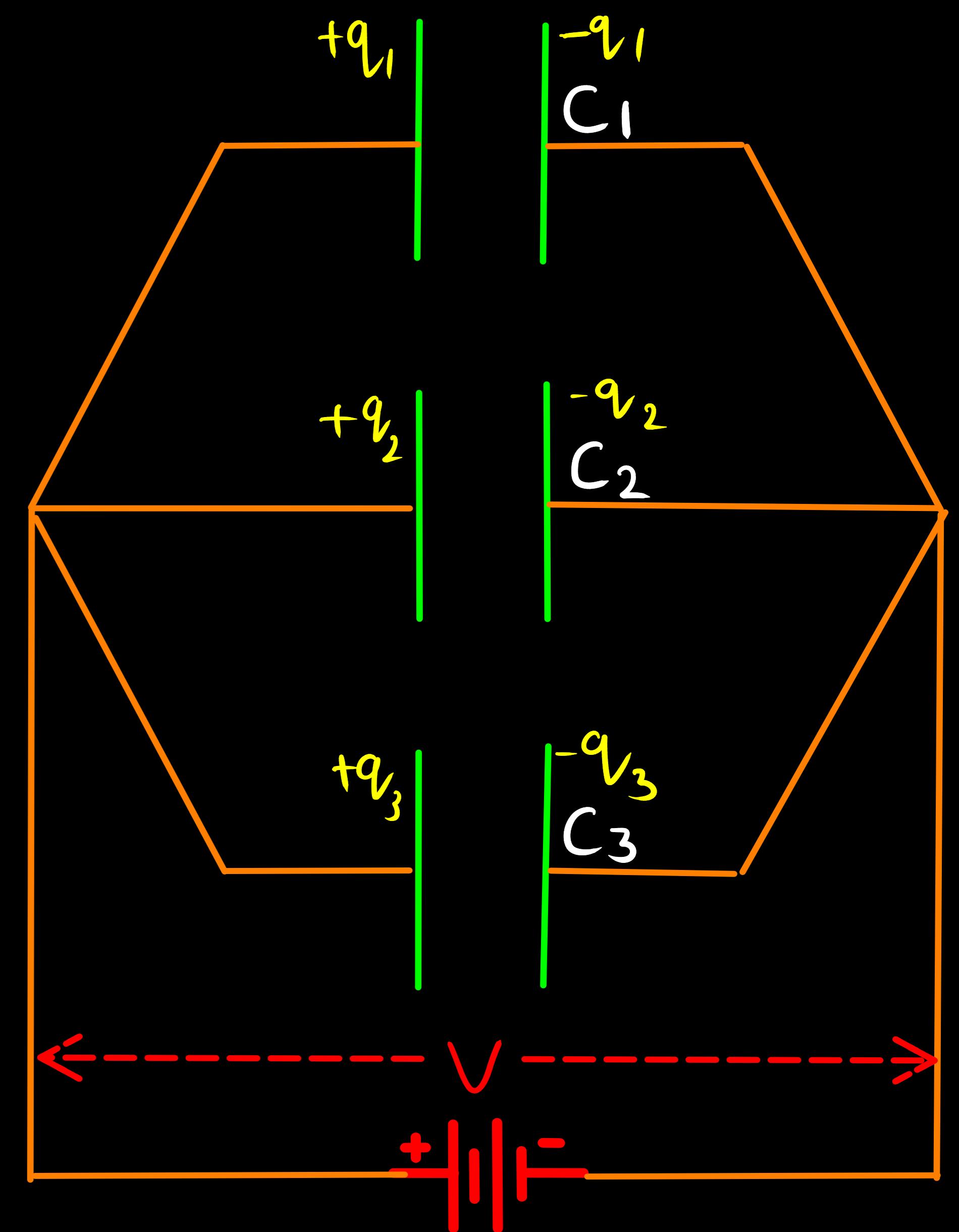
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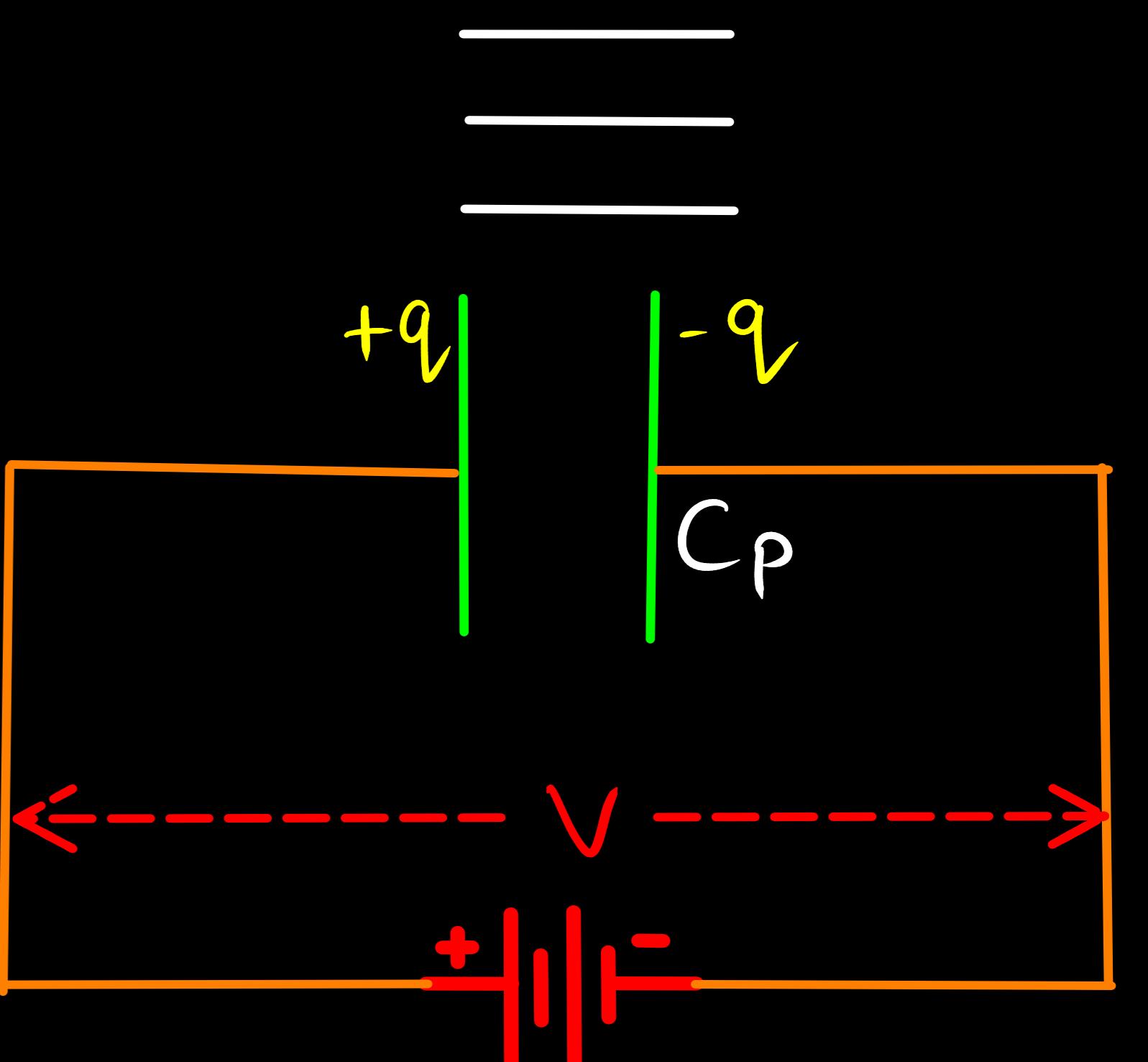
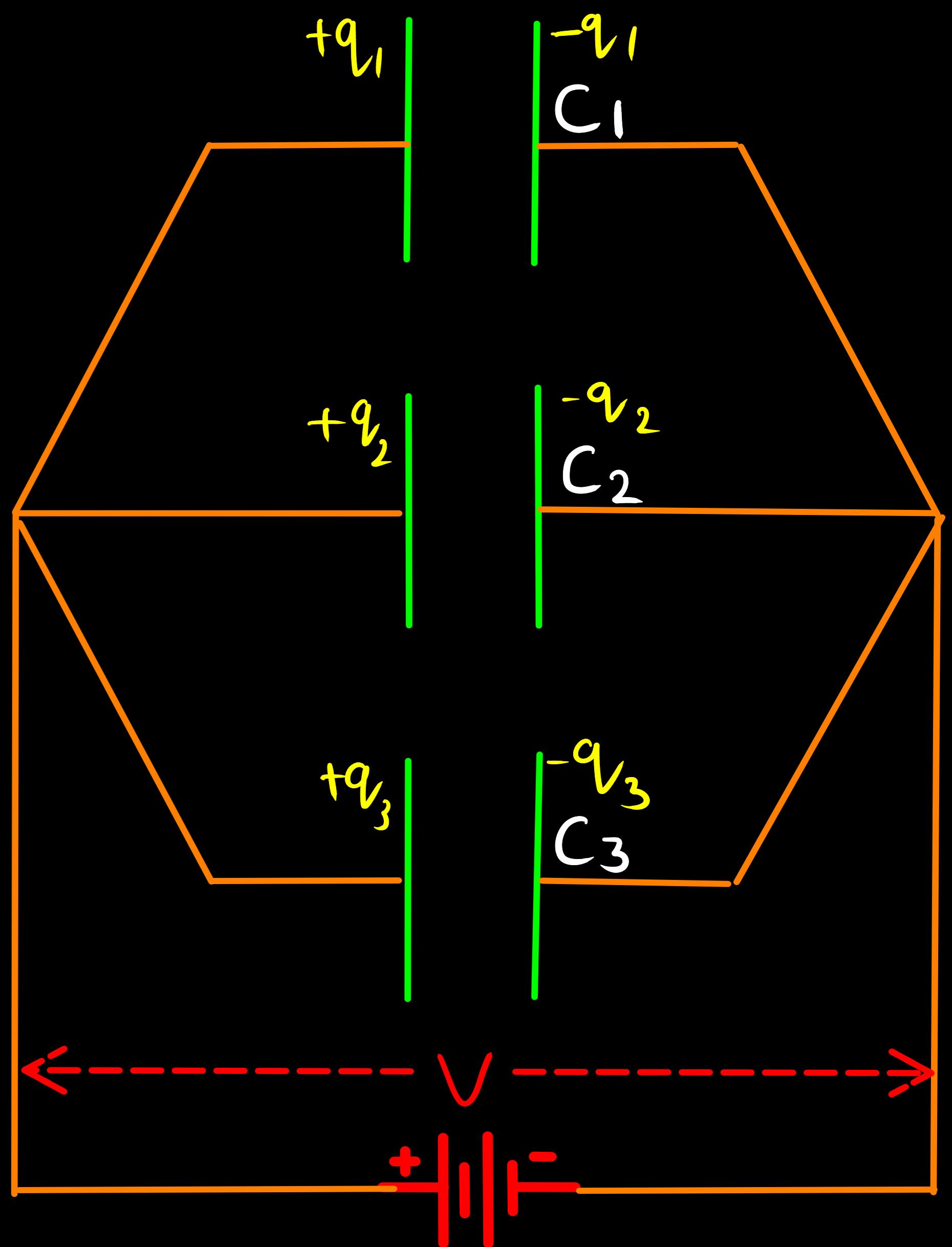
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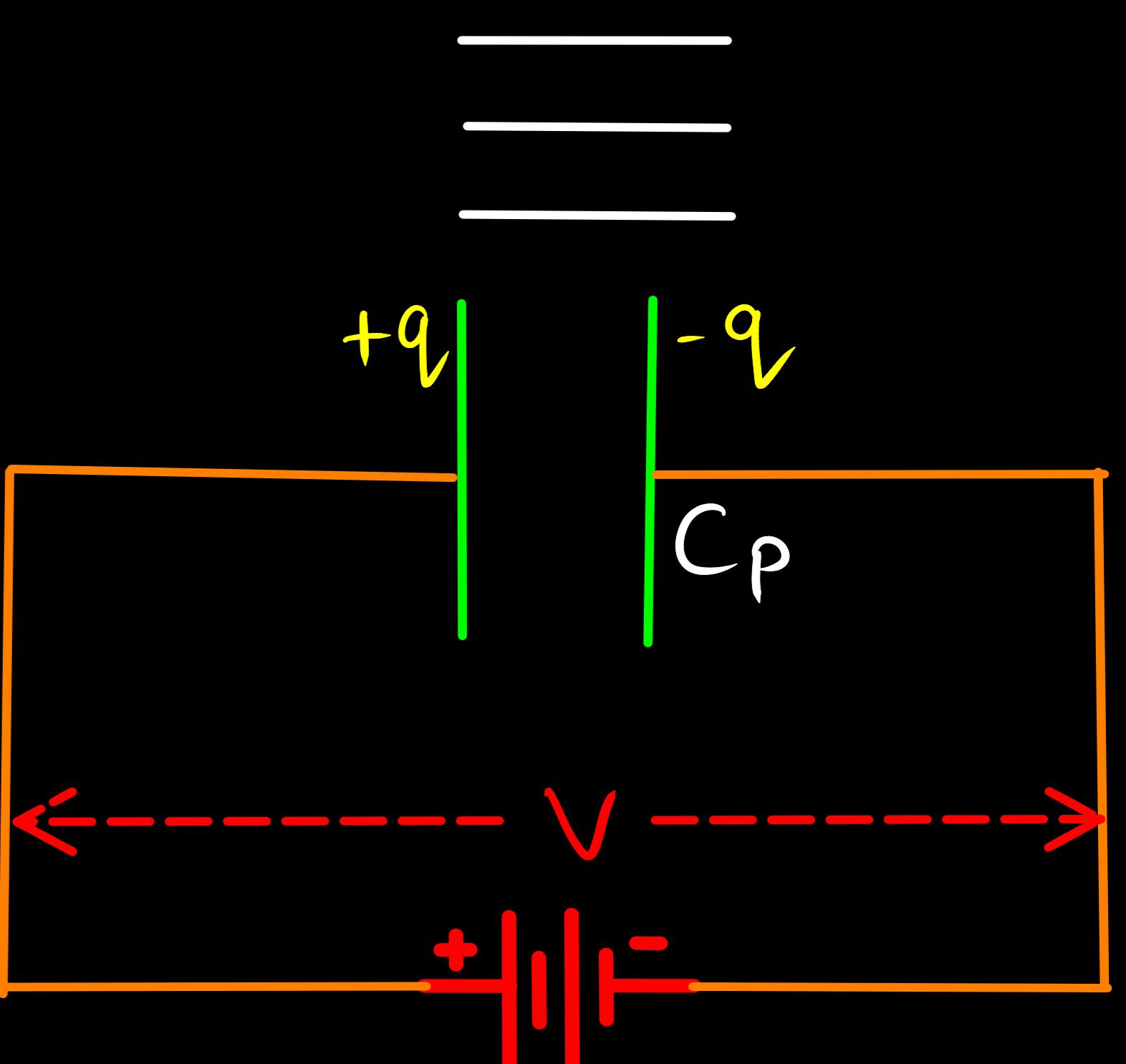
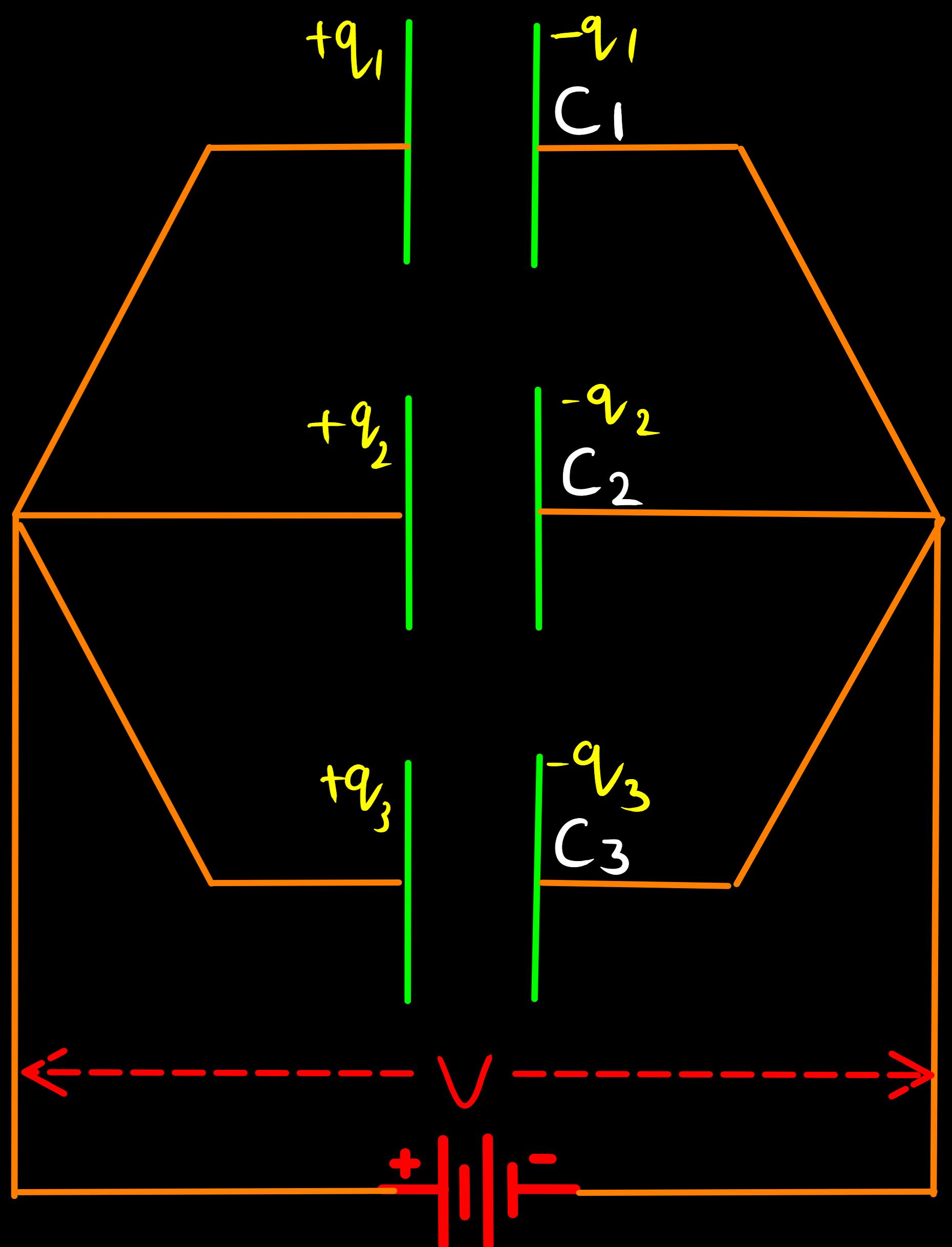
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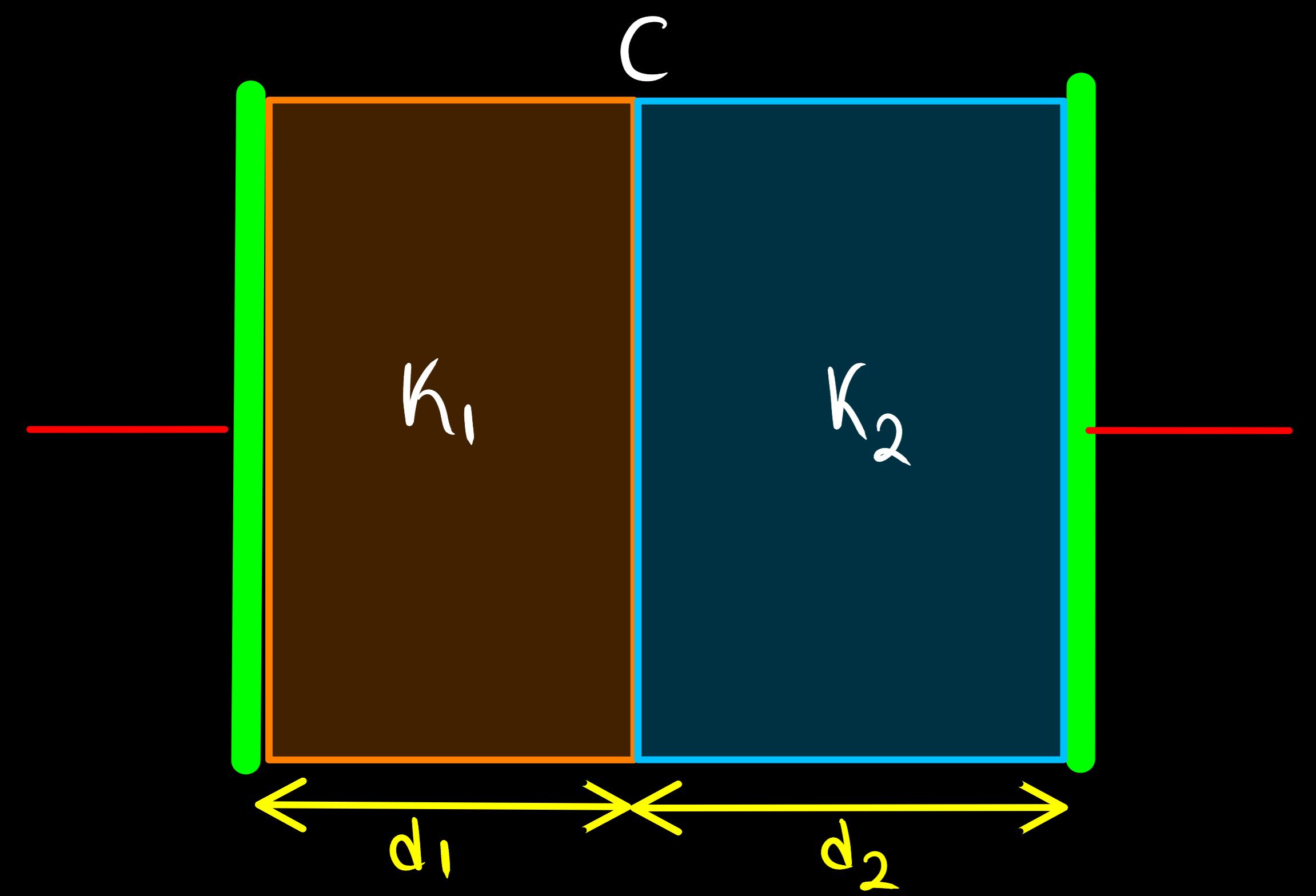
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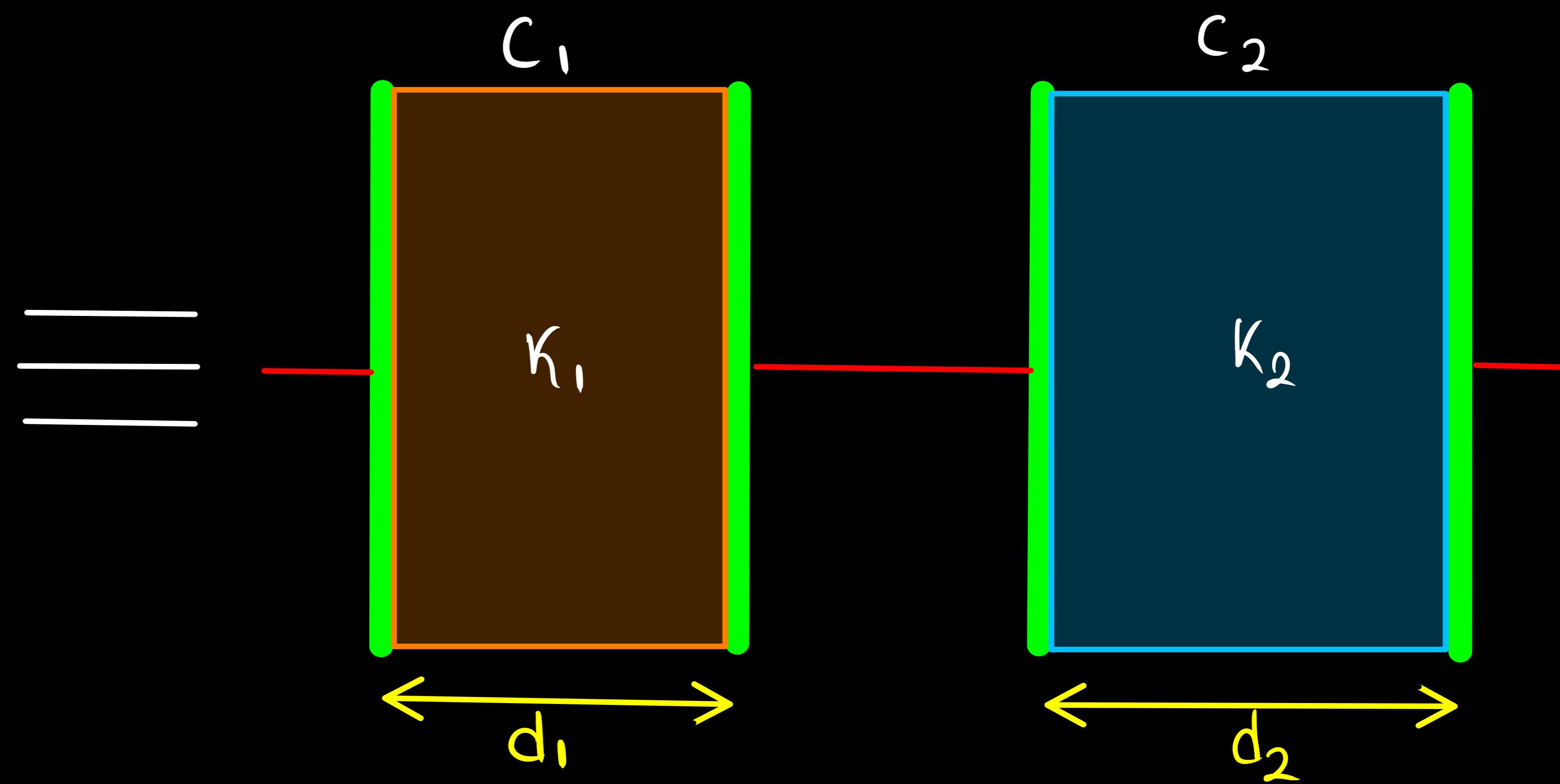
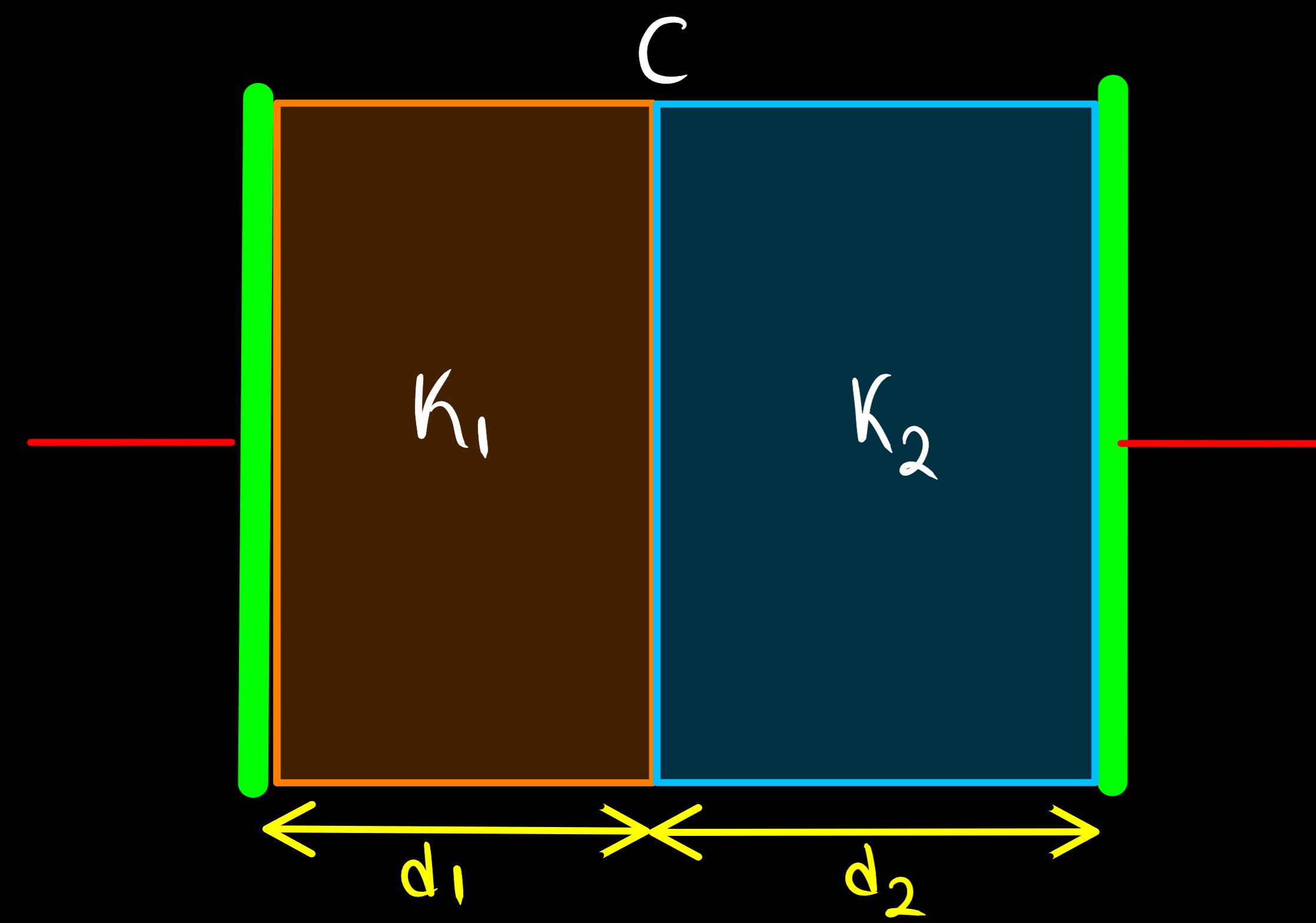
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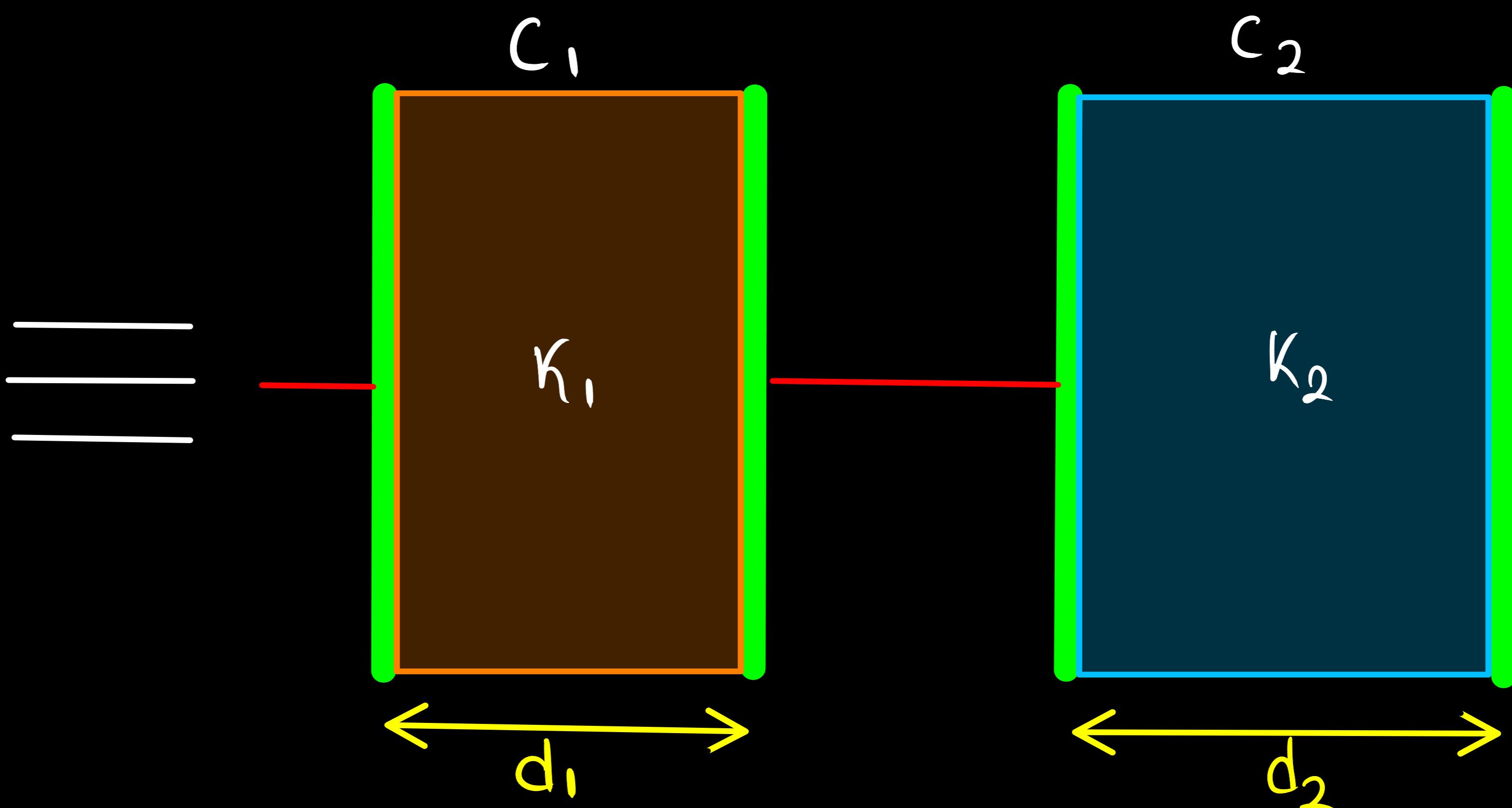
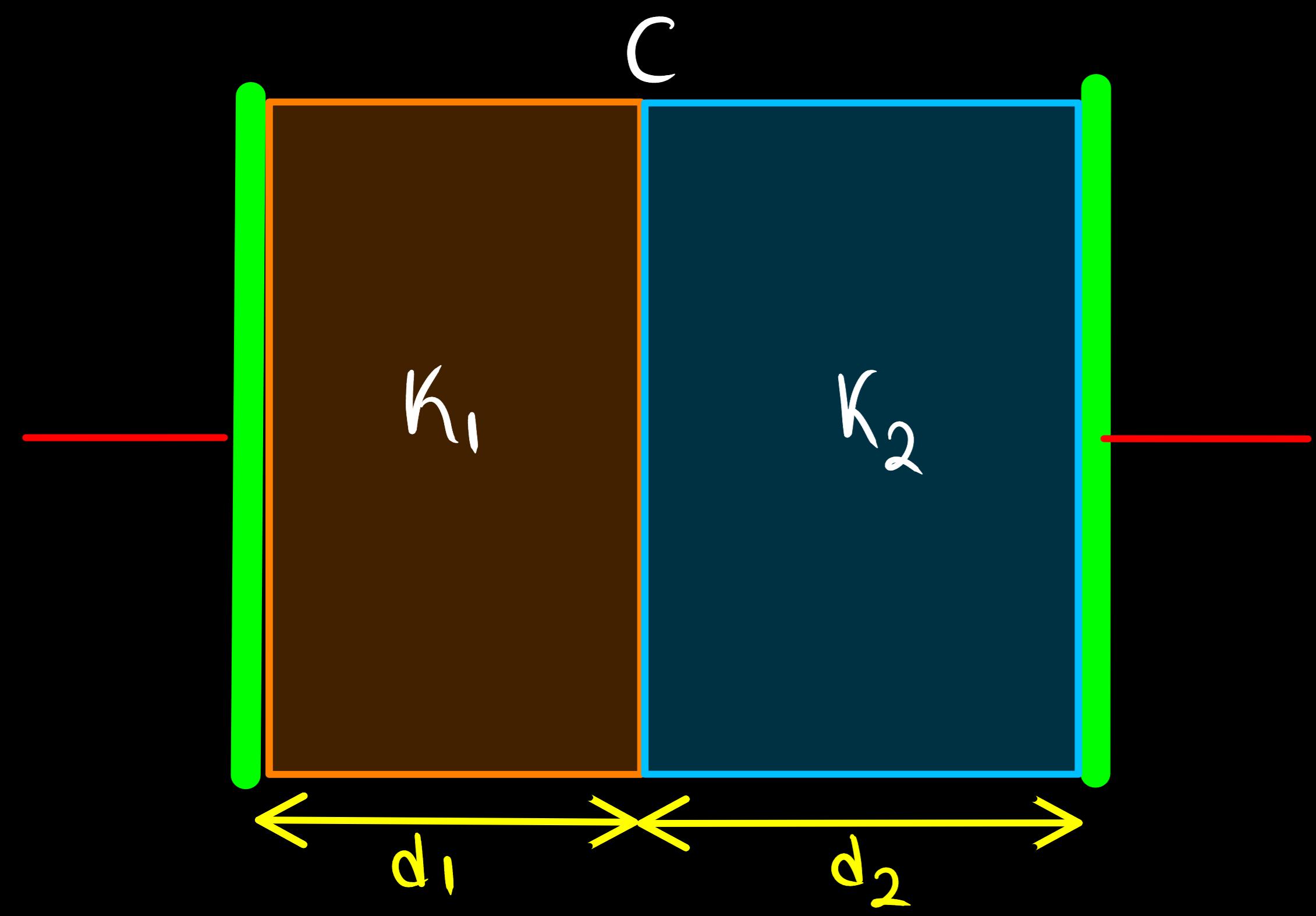
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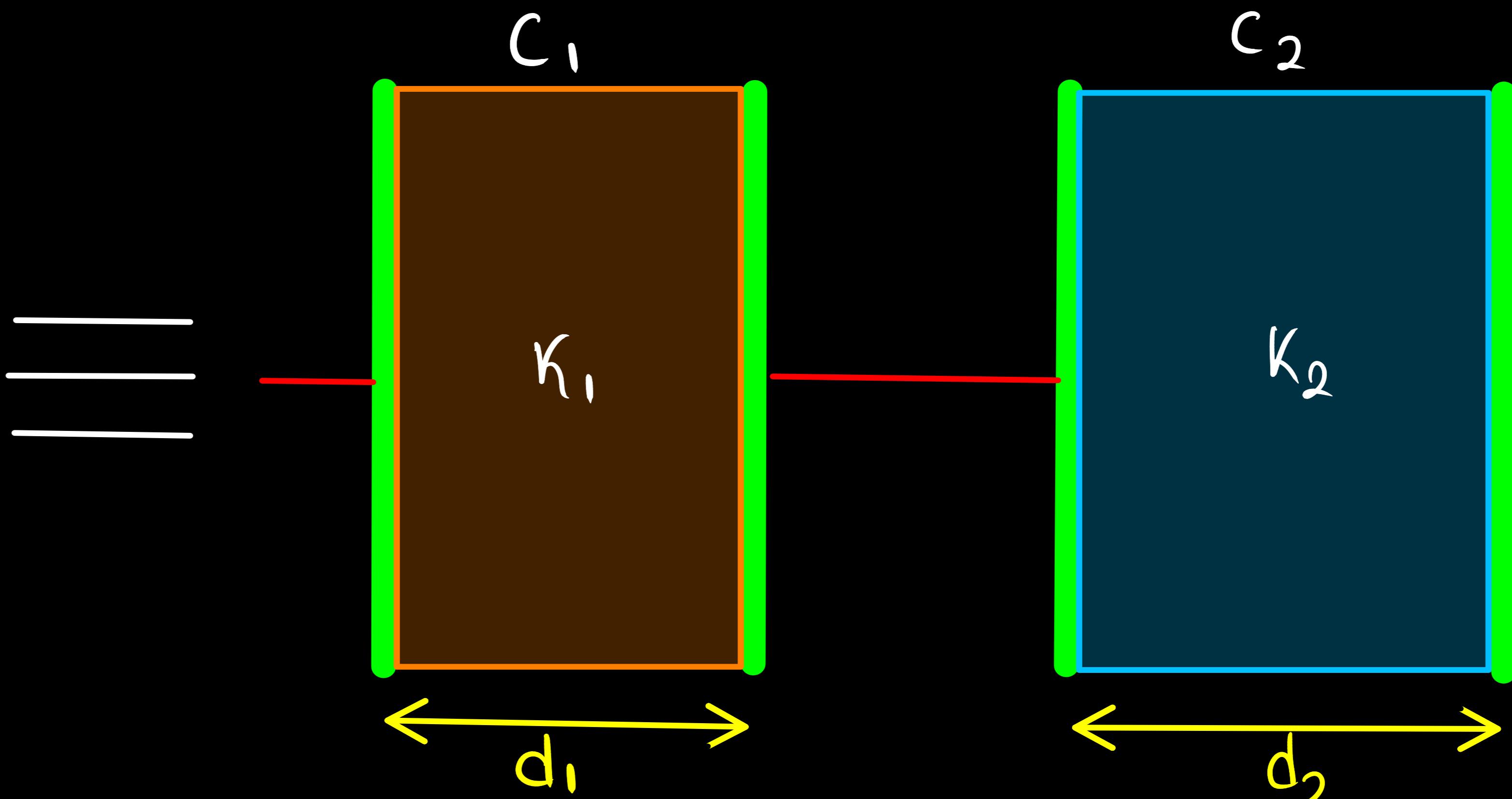
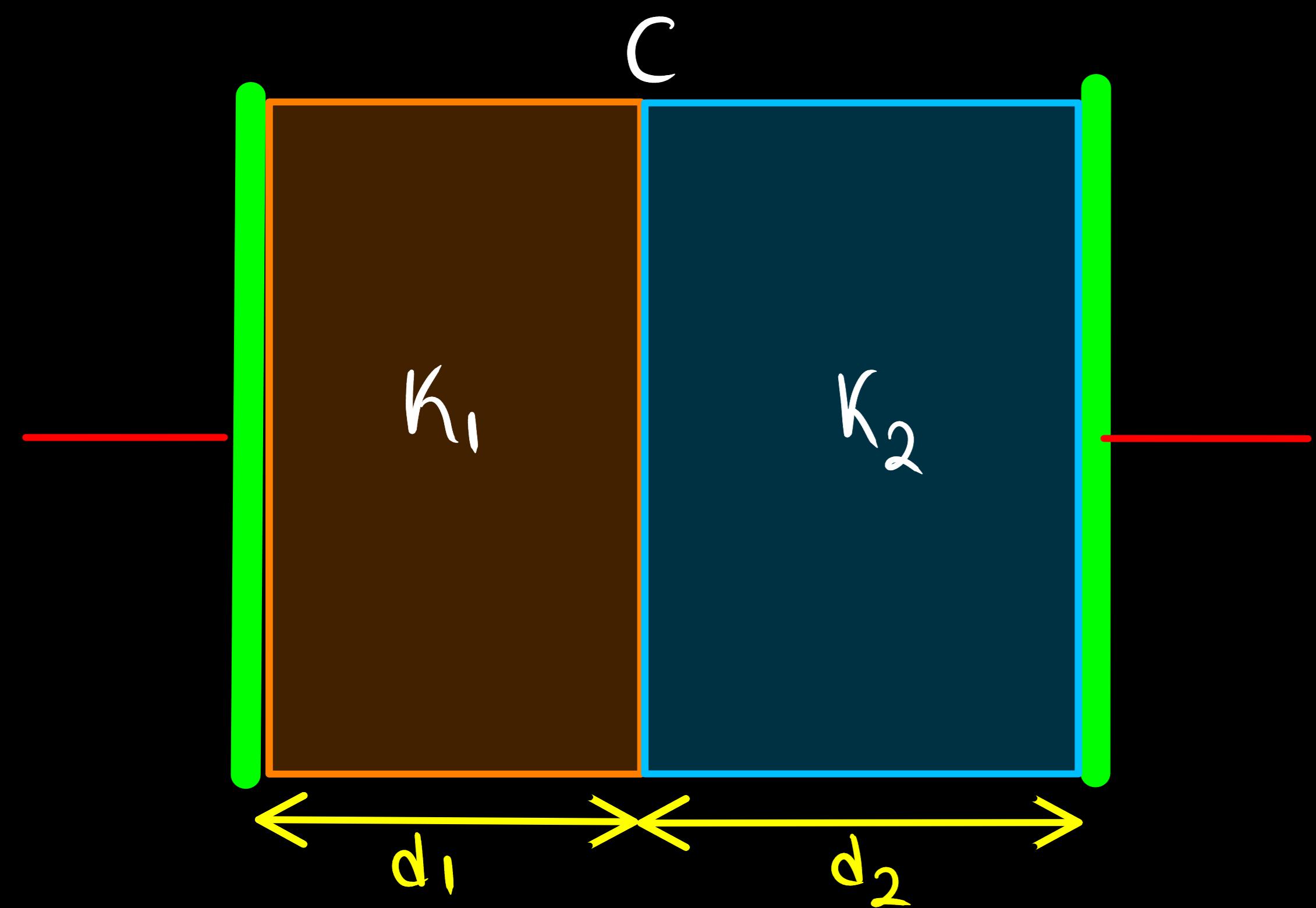


* Some important Concepts-



$$\frac{1}{C} = \frac{1}{C_1} + \frac{1}{C_2}$$
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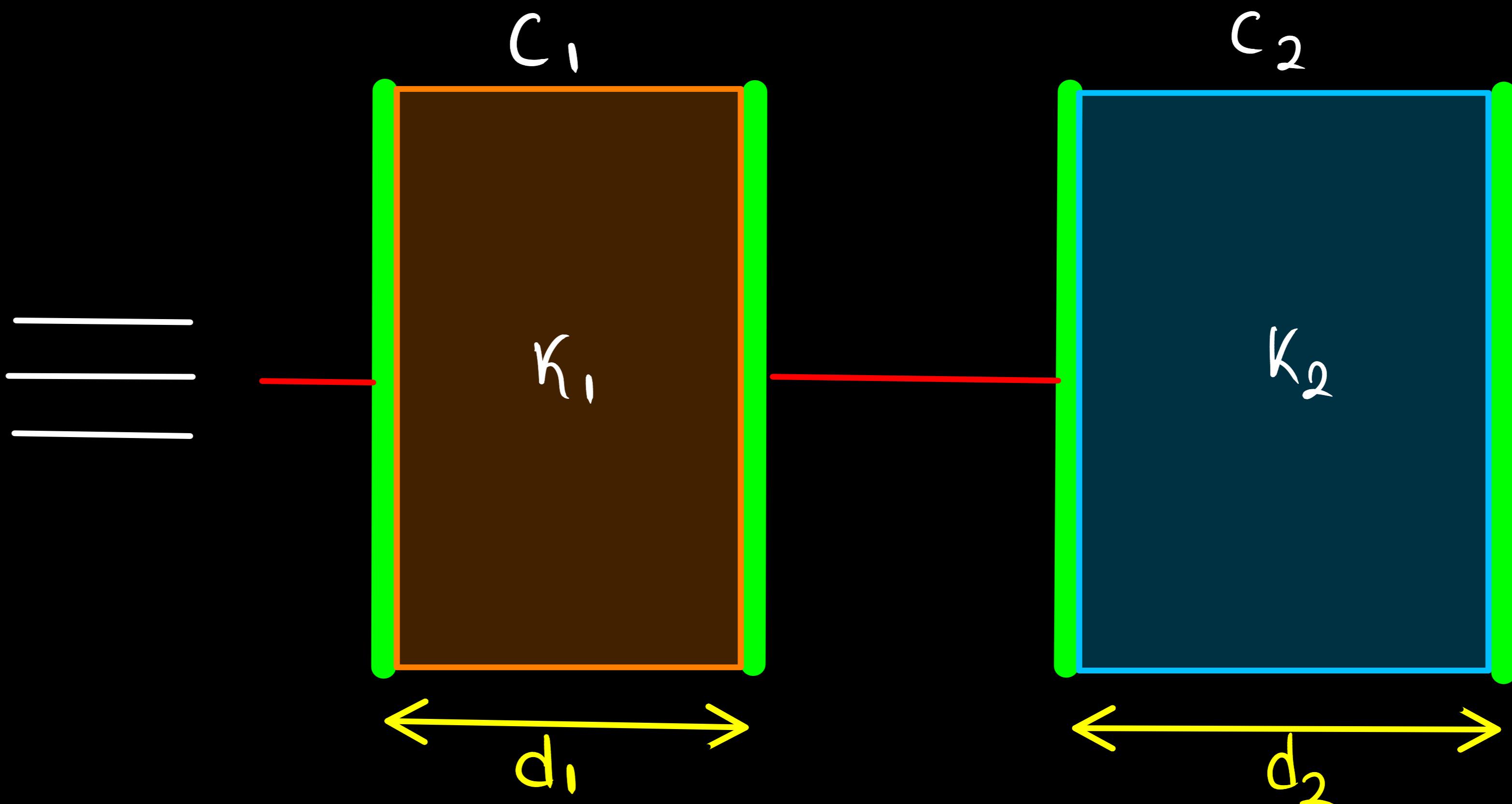
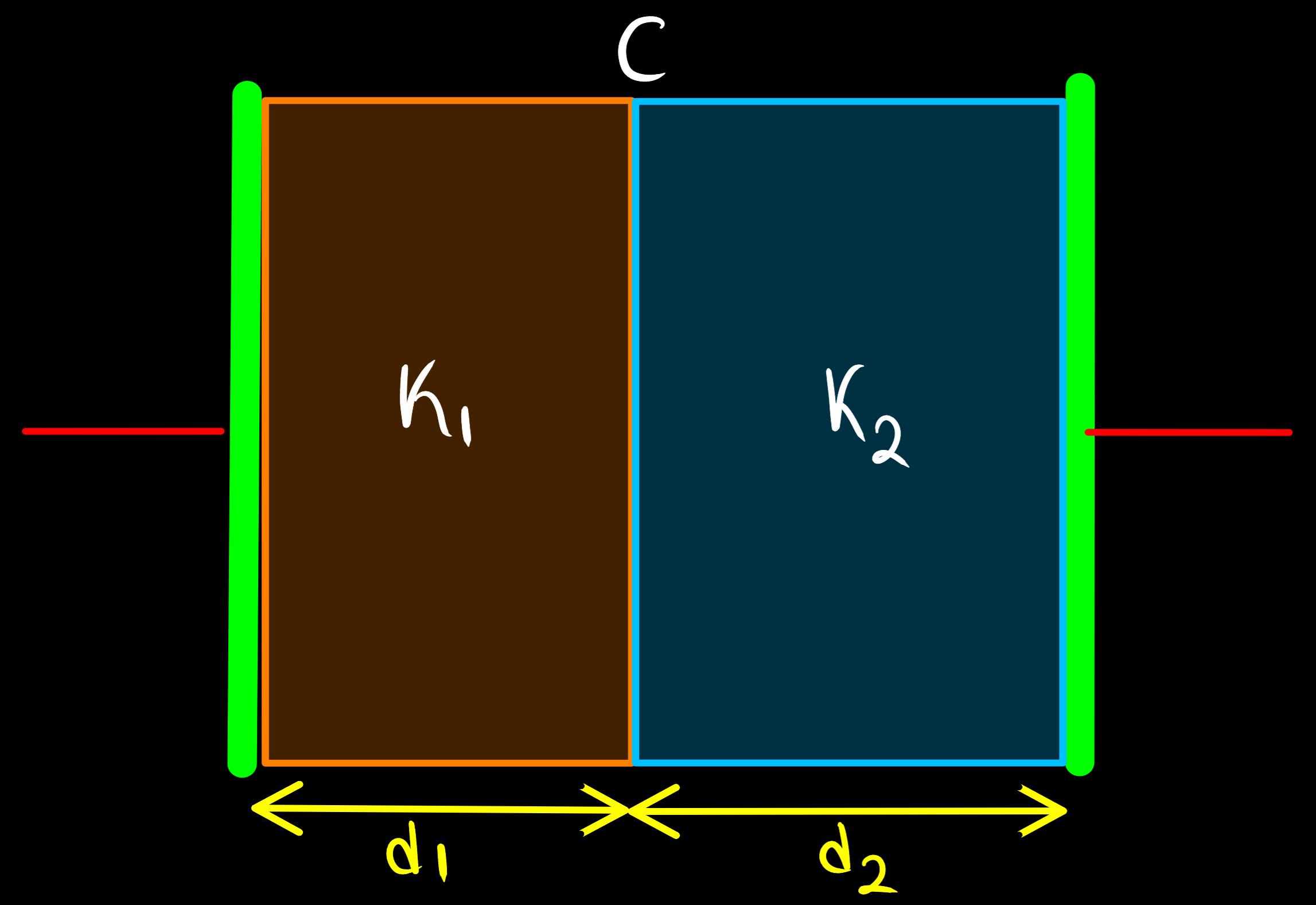
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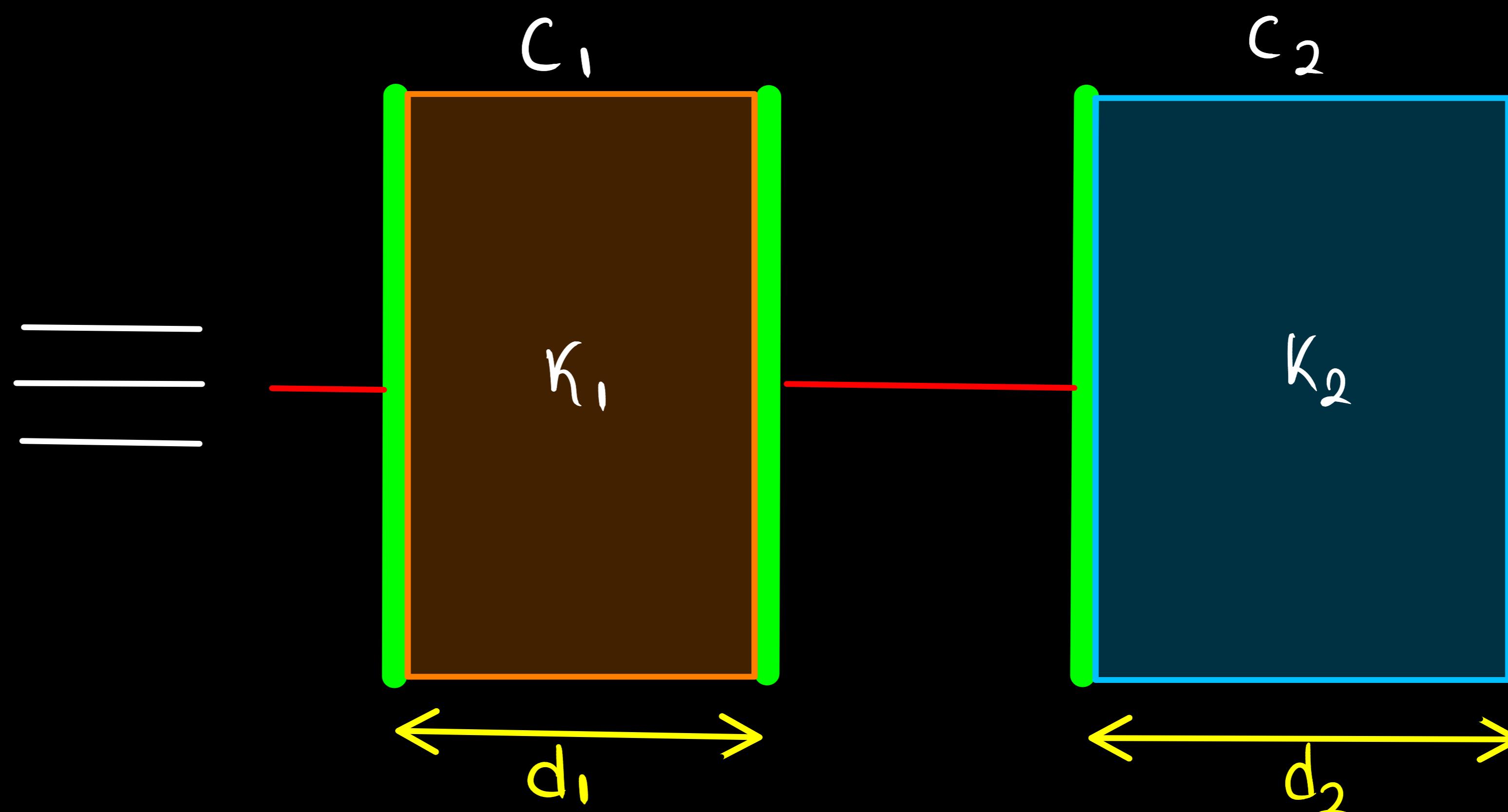
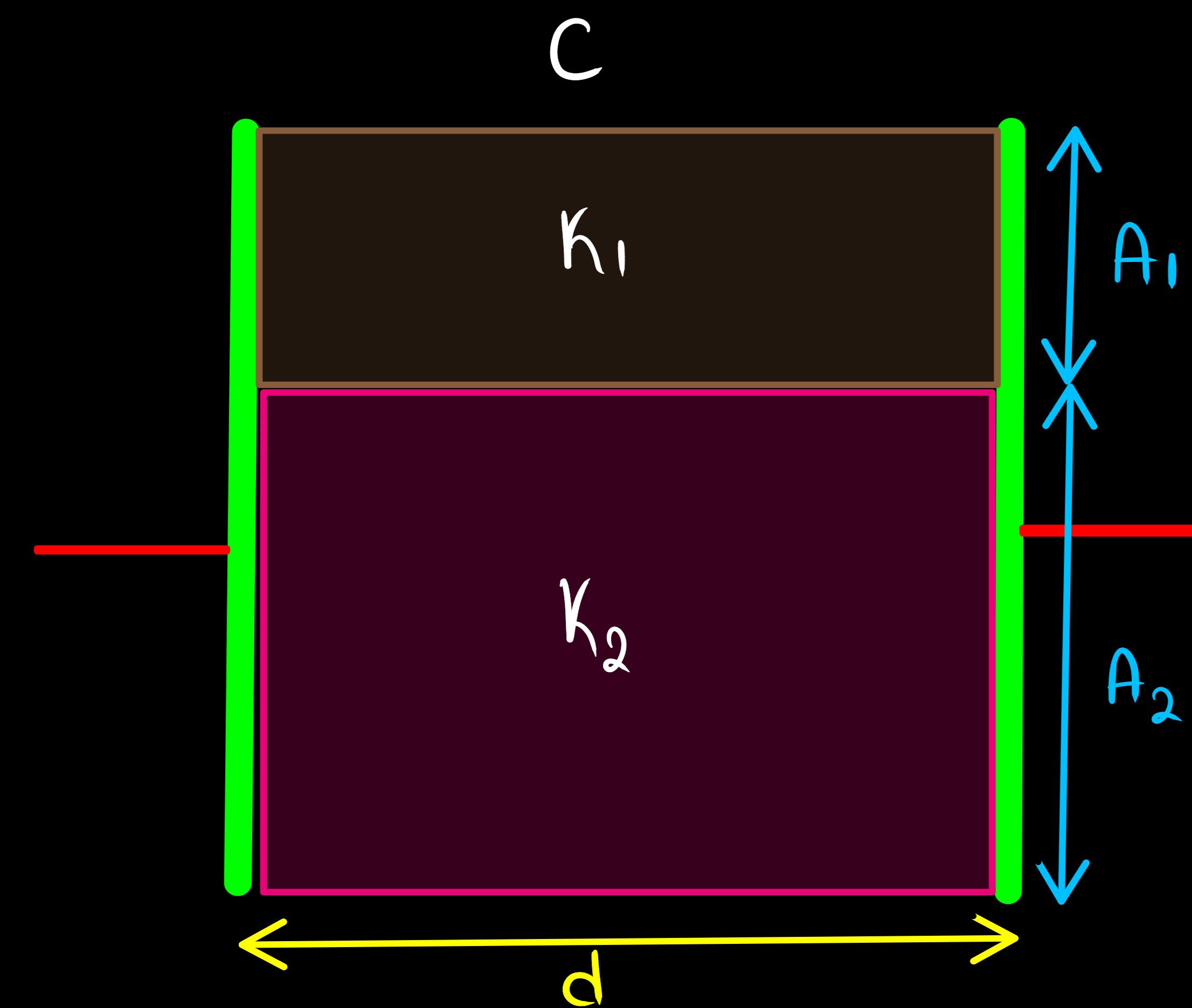
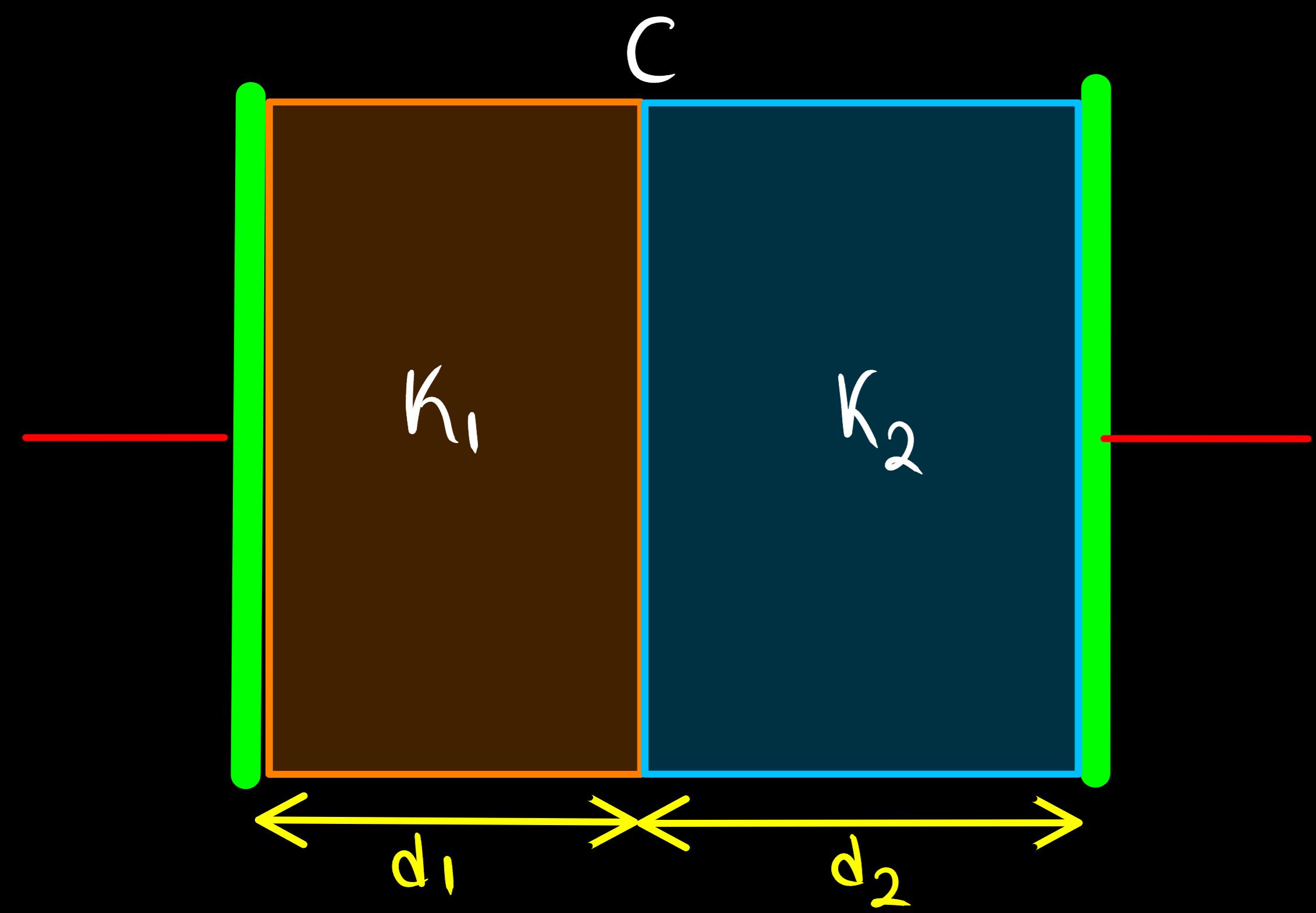
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$$C = \frac{\epsilon_0 A}{\left[\frac{d_1}{k_1} + \frac{d_2}{k_2} \right]}$$

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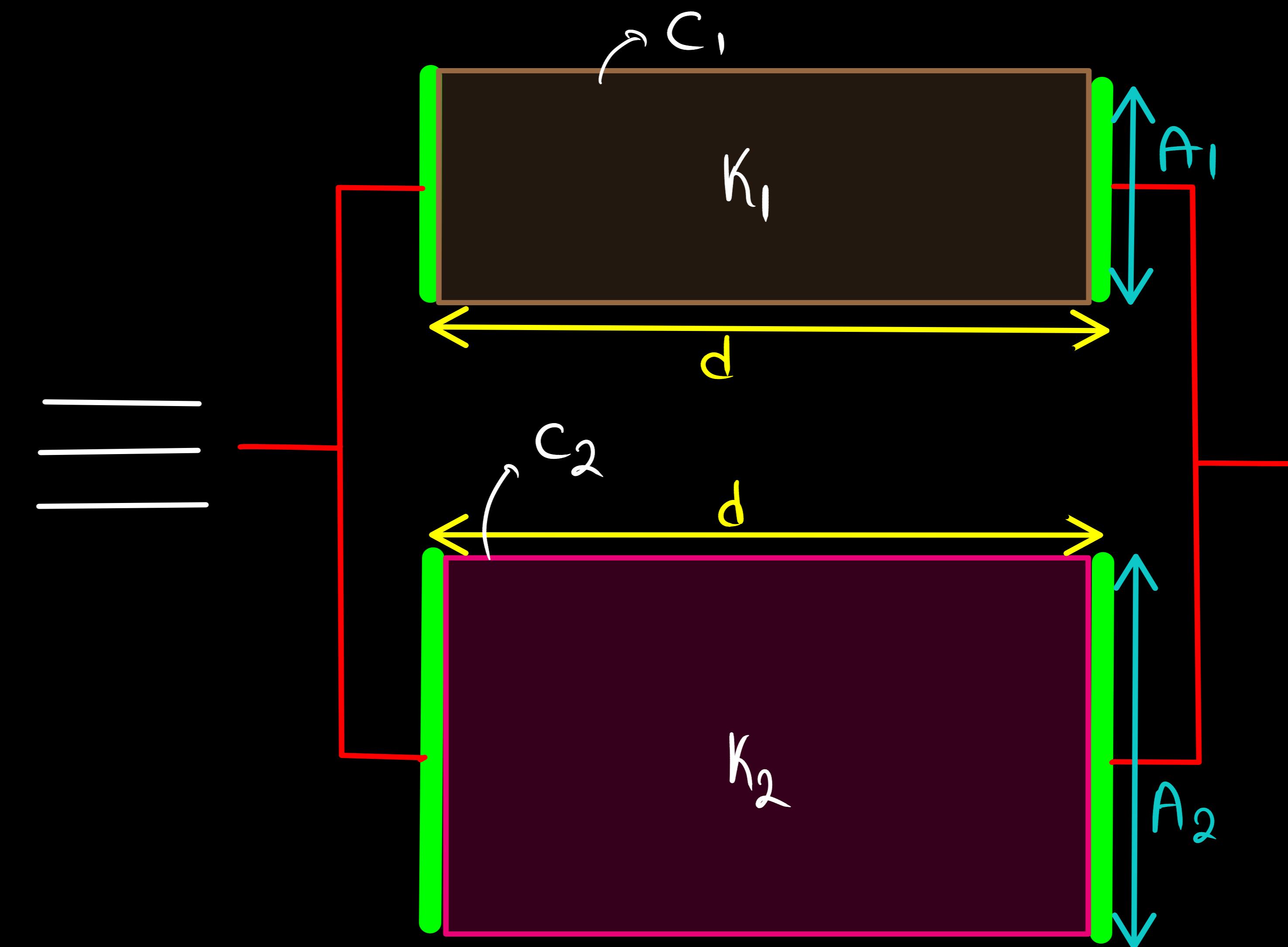
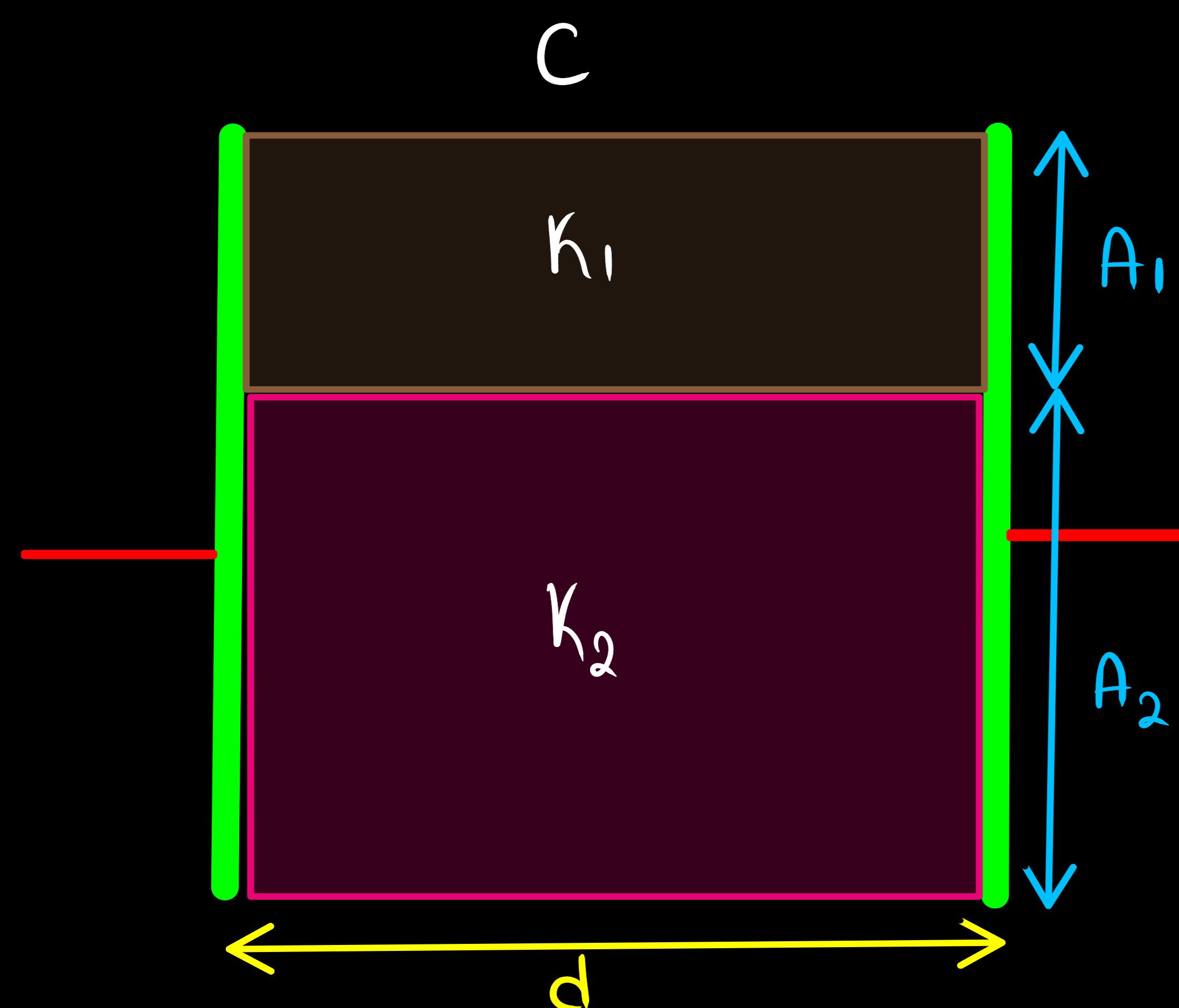
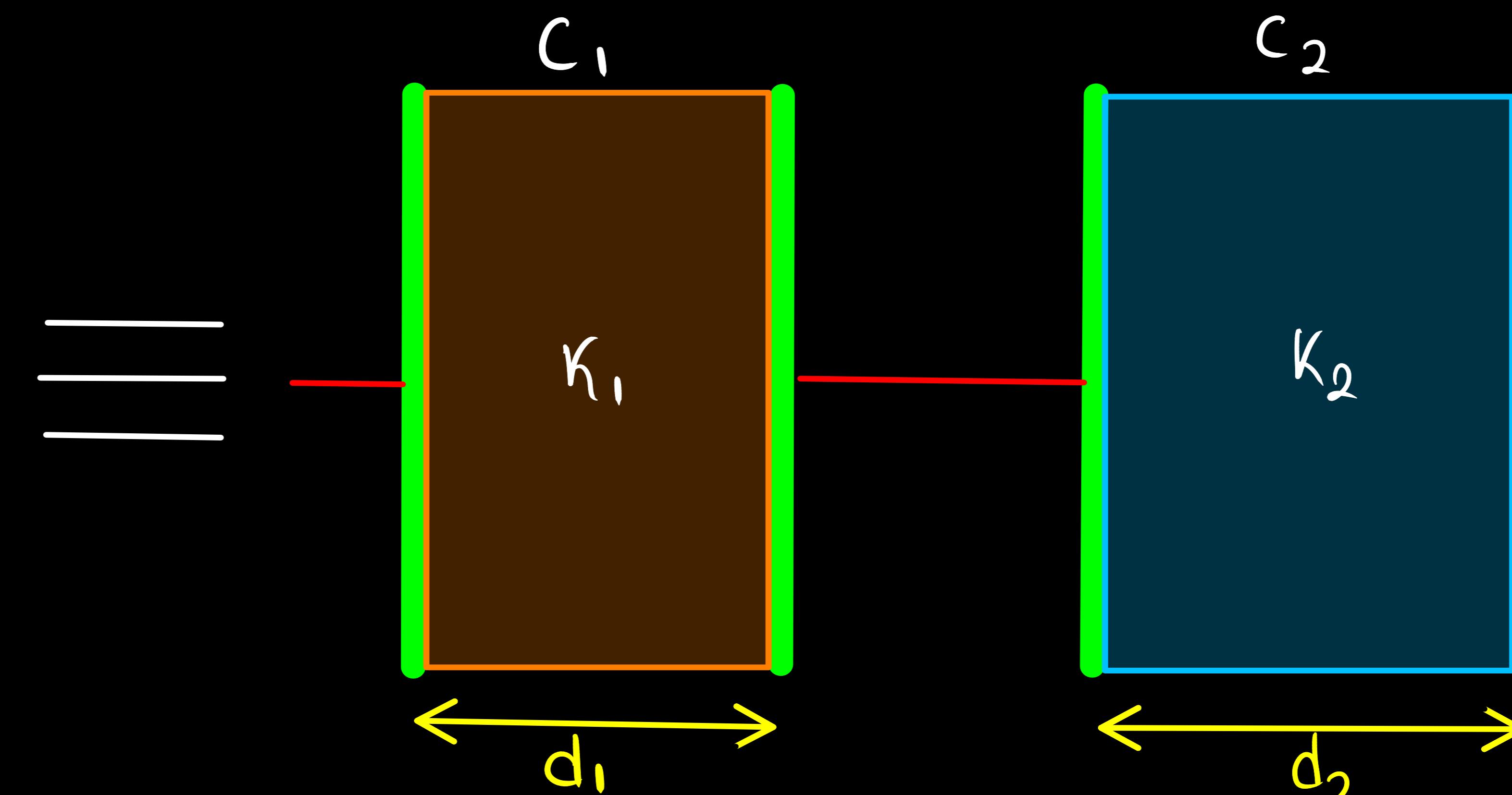
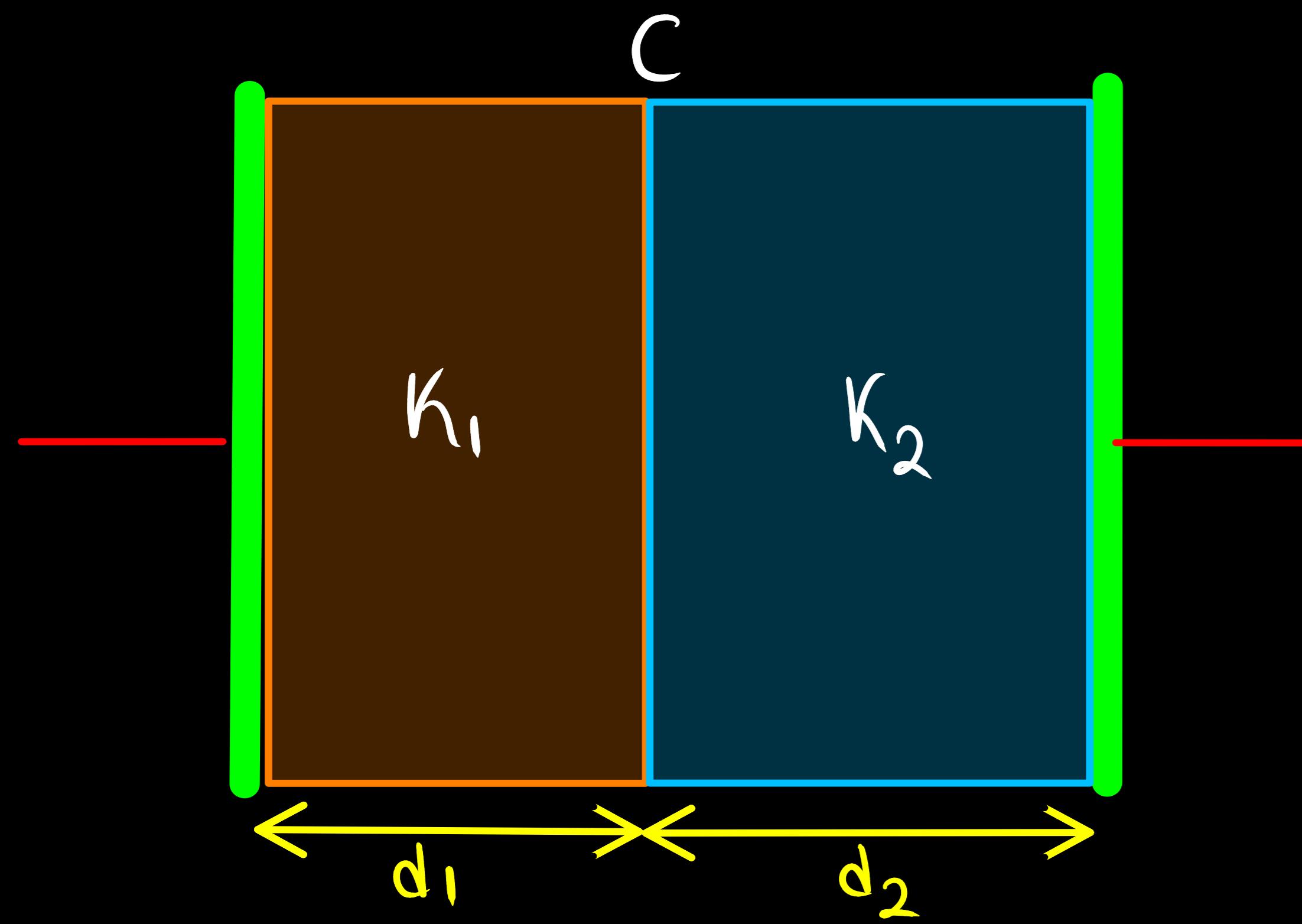
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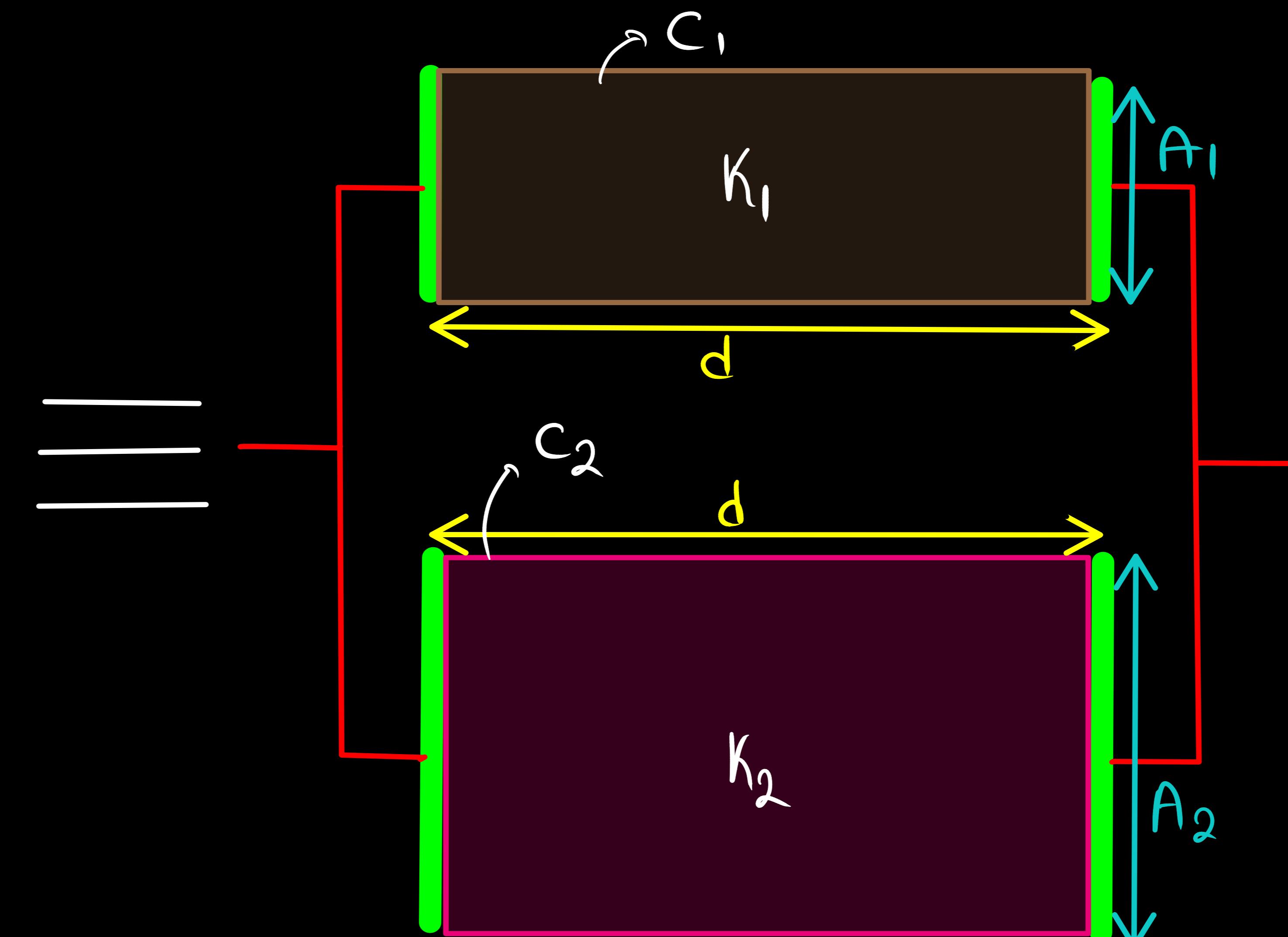
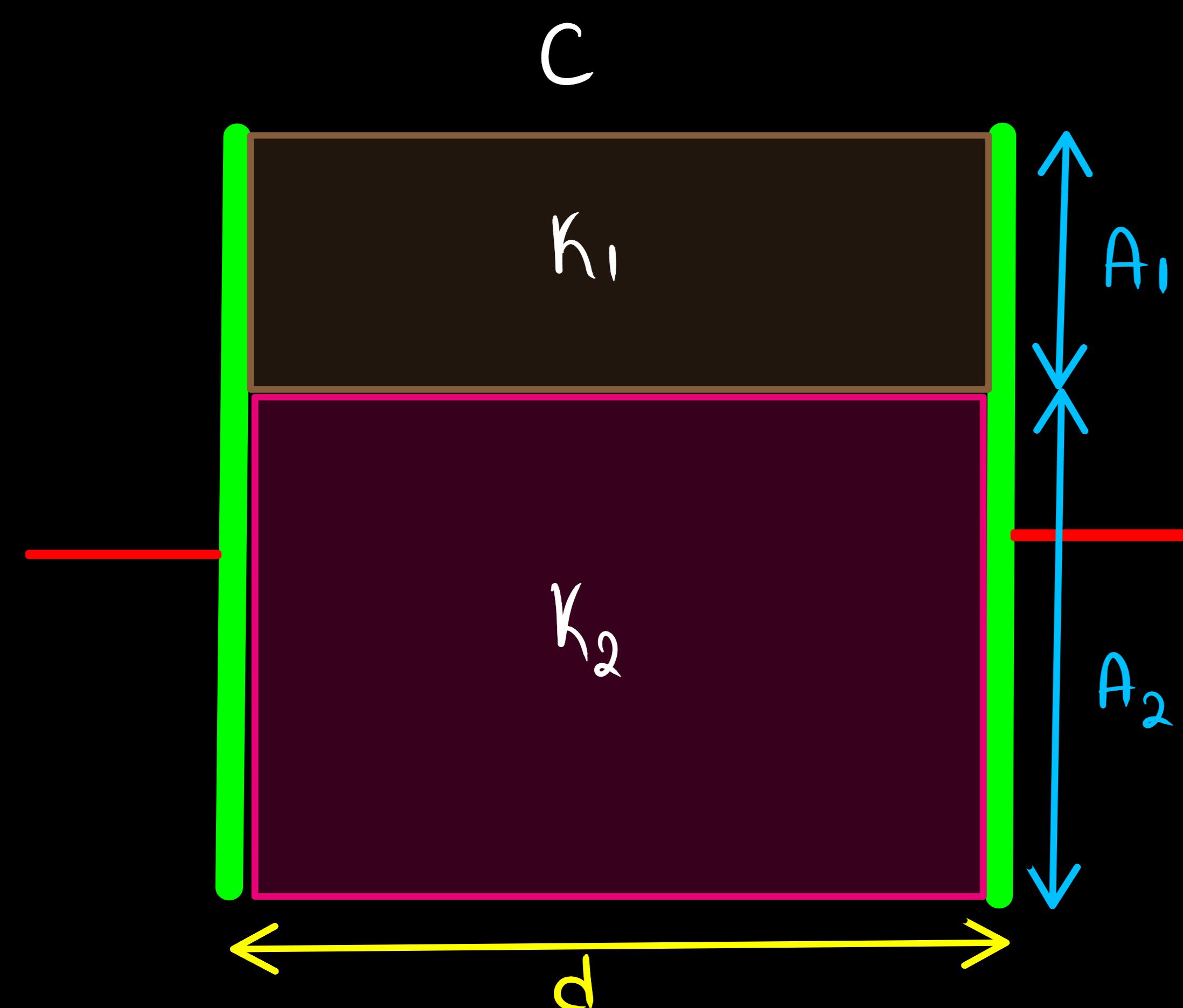
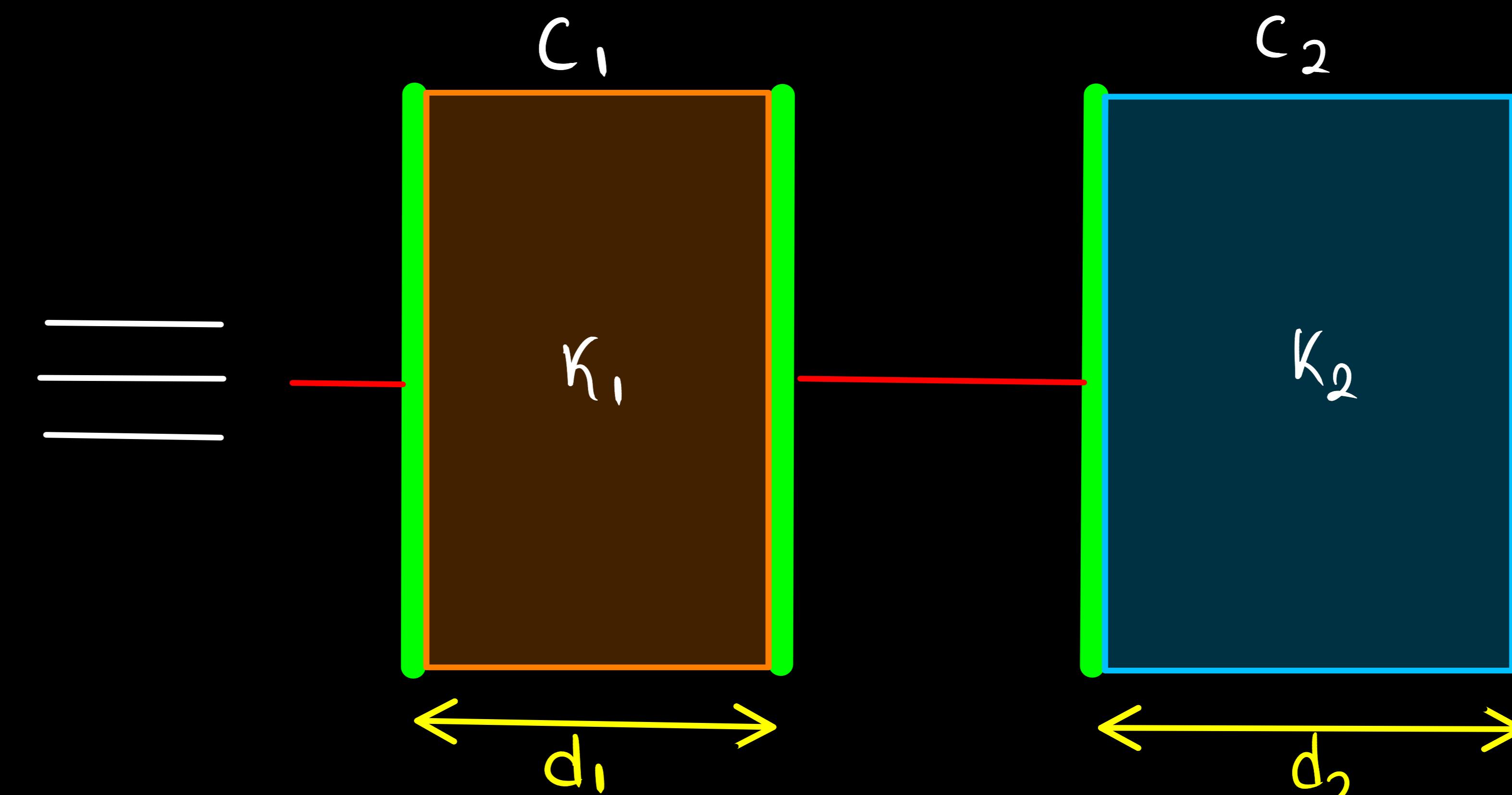
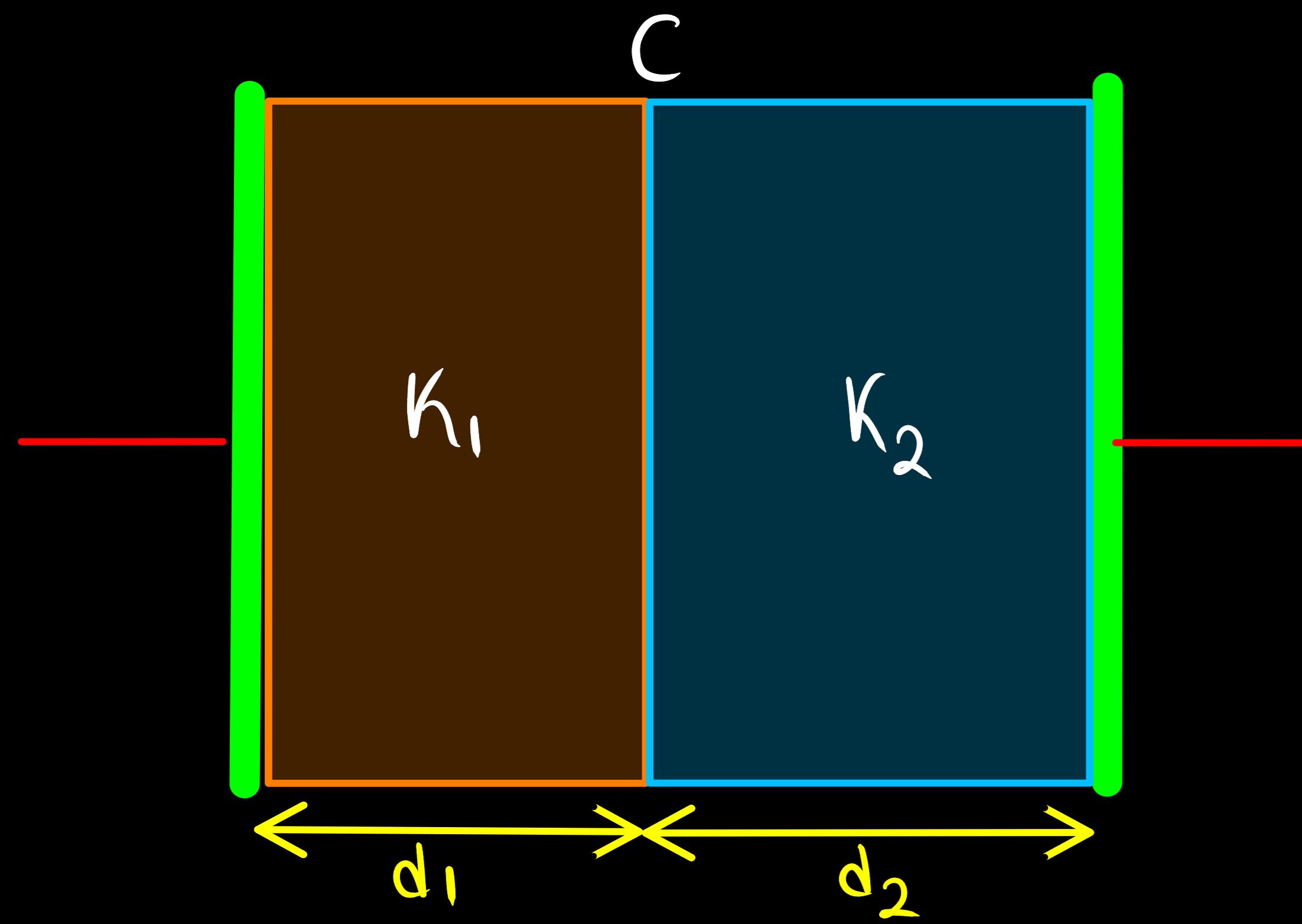
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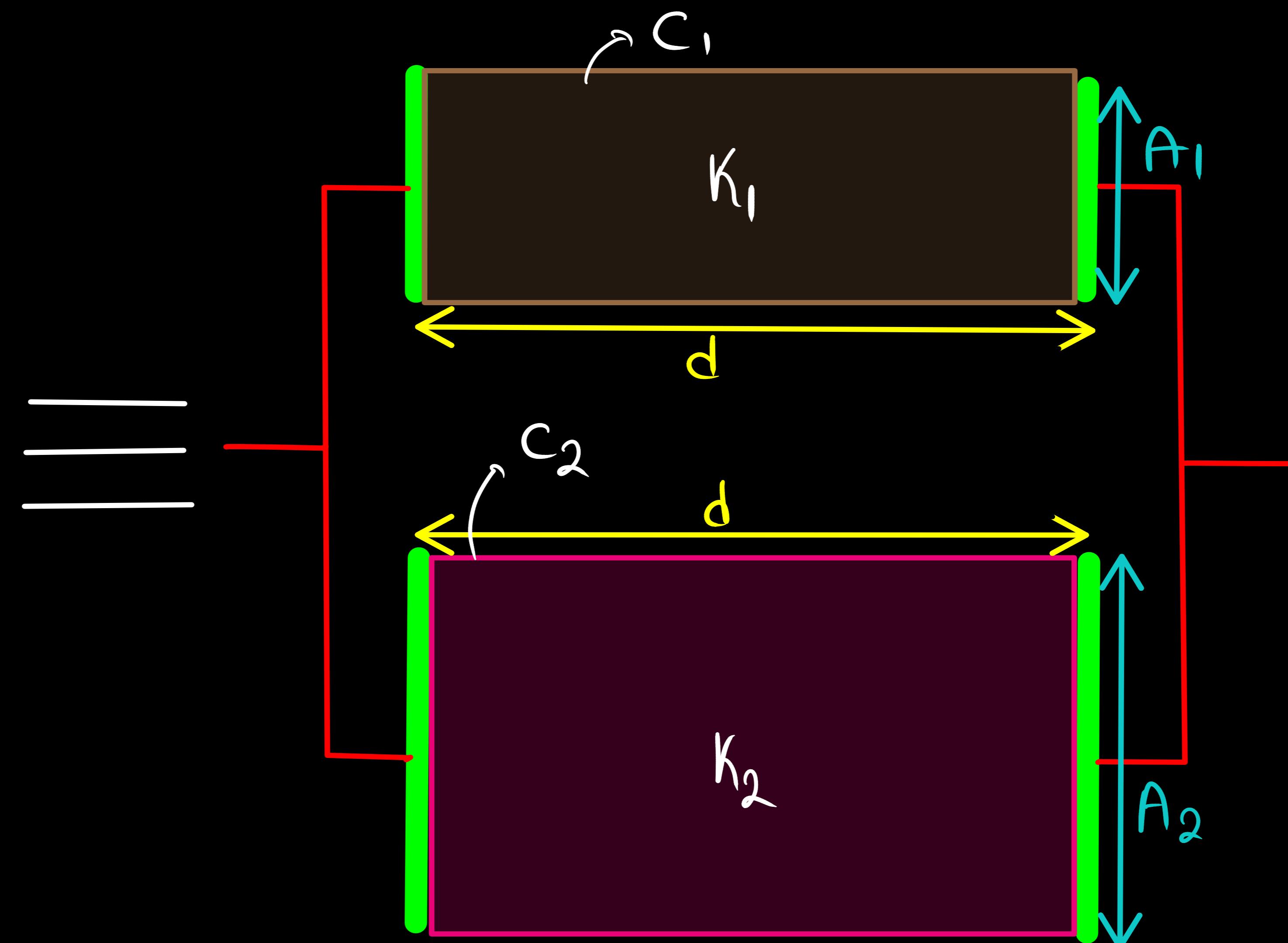
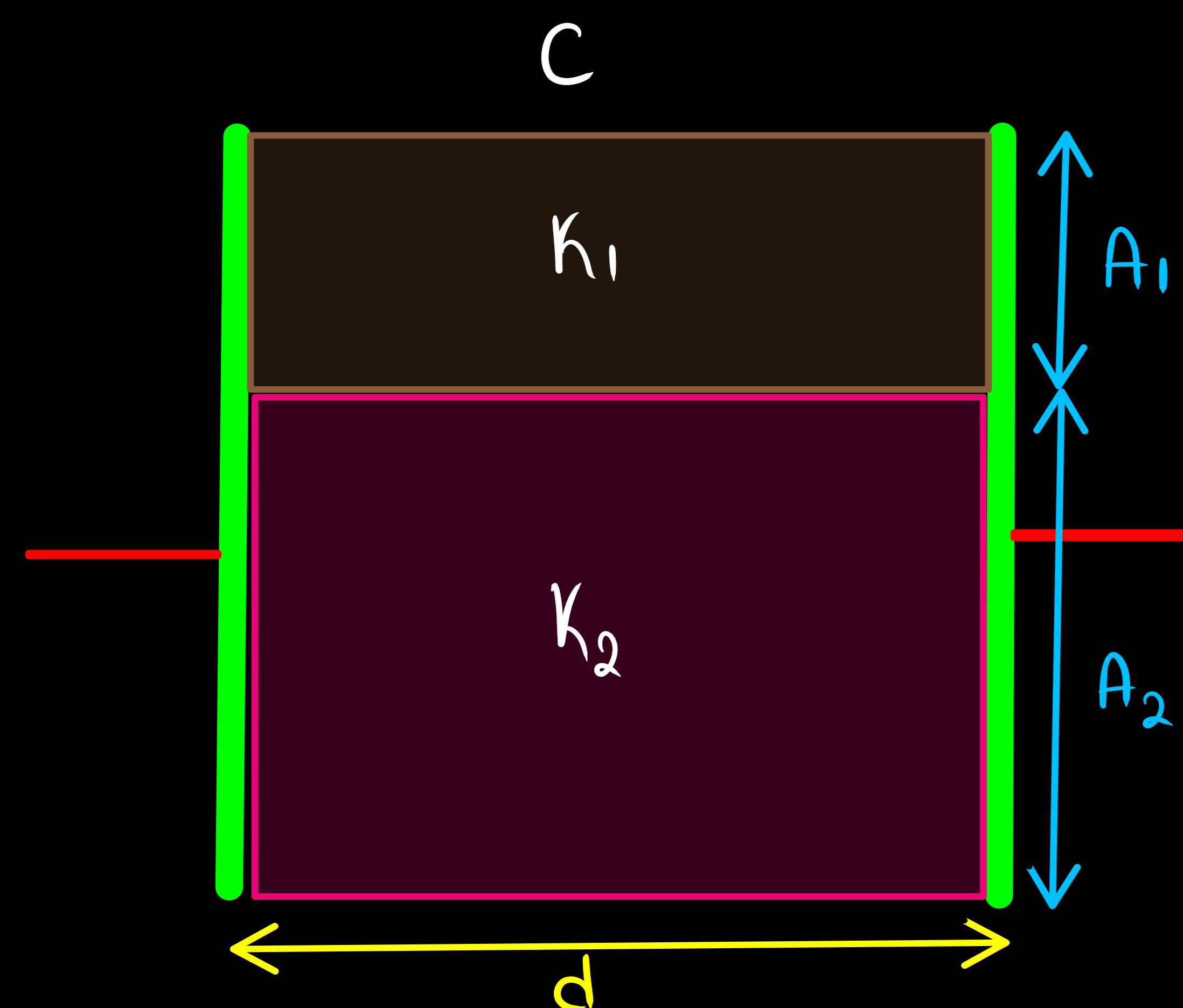
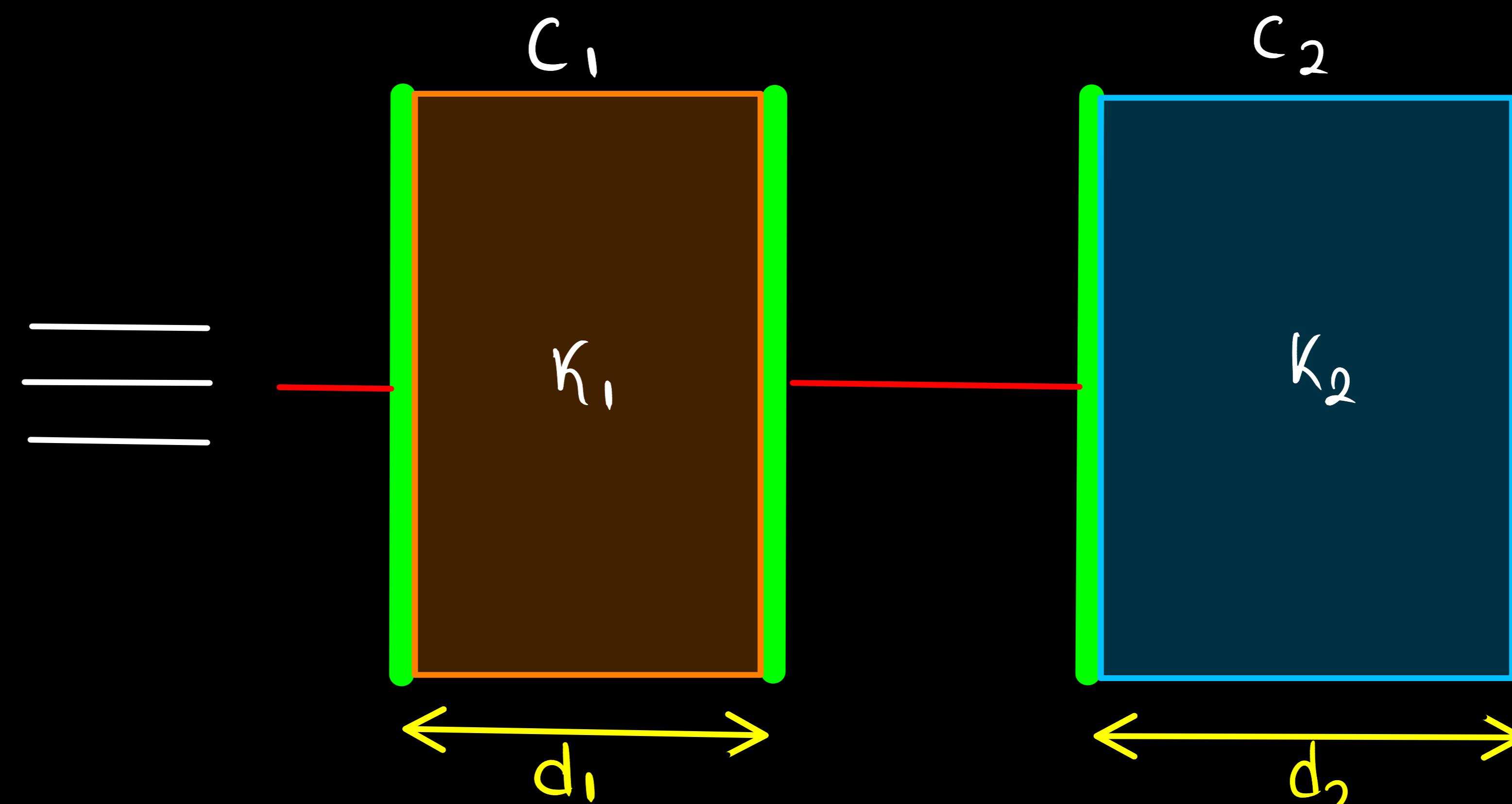
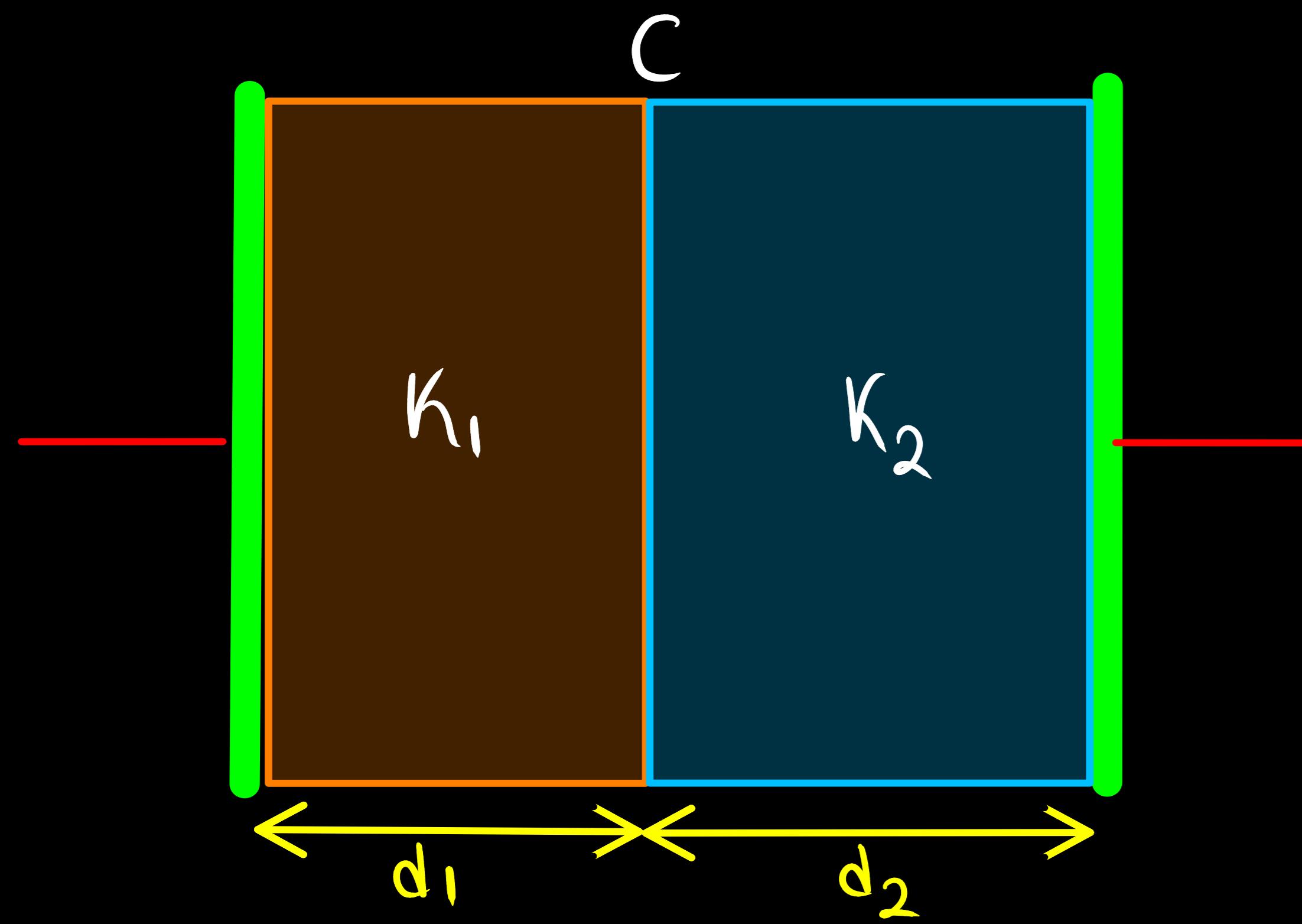
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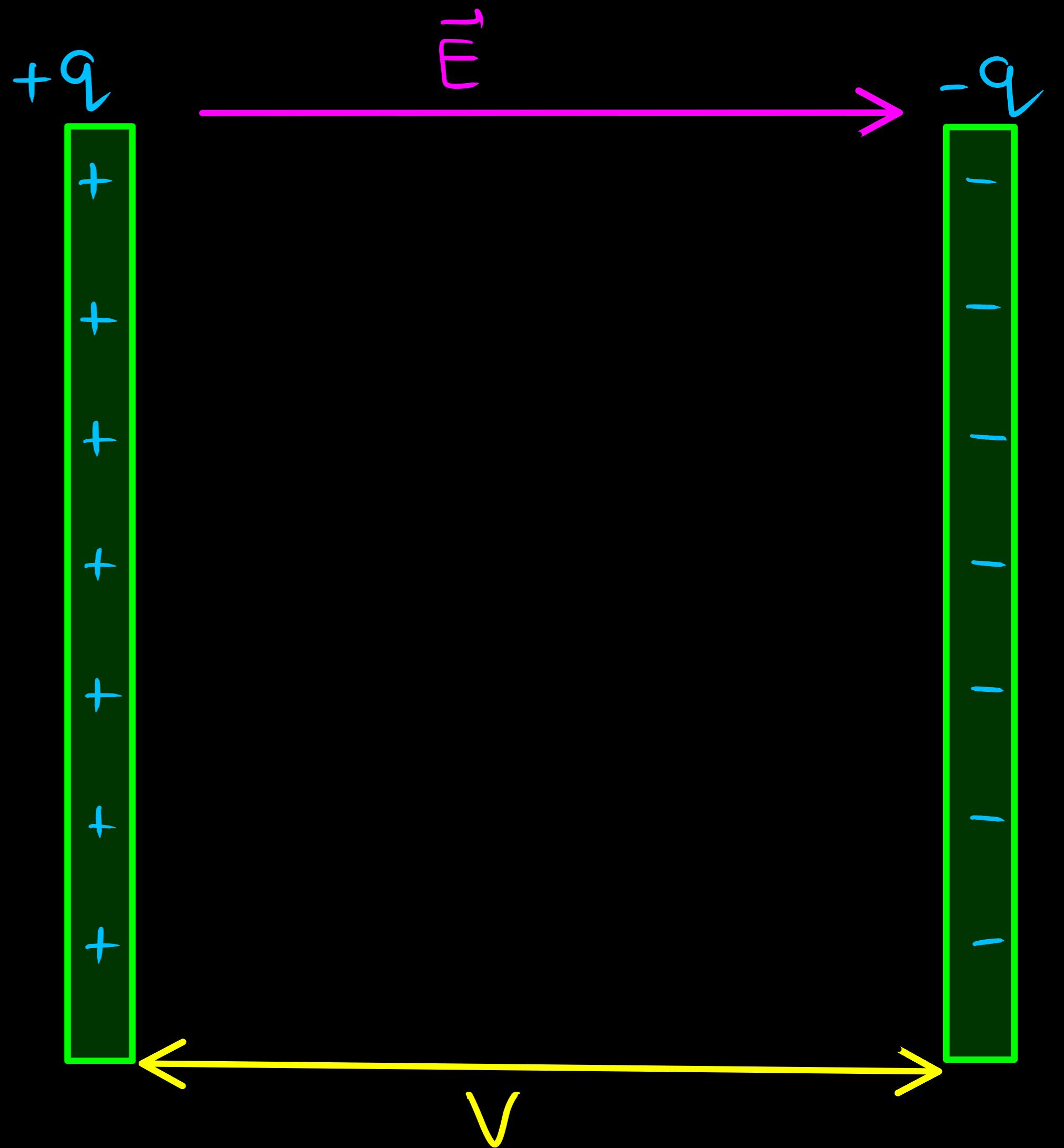
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Energy Stored in a Capacitor

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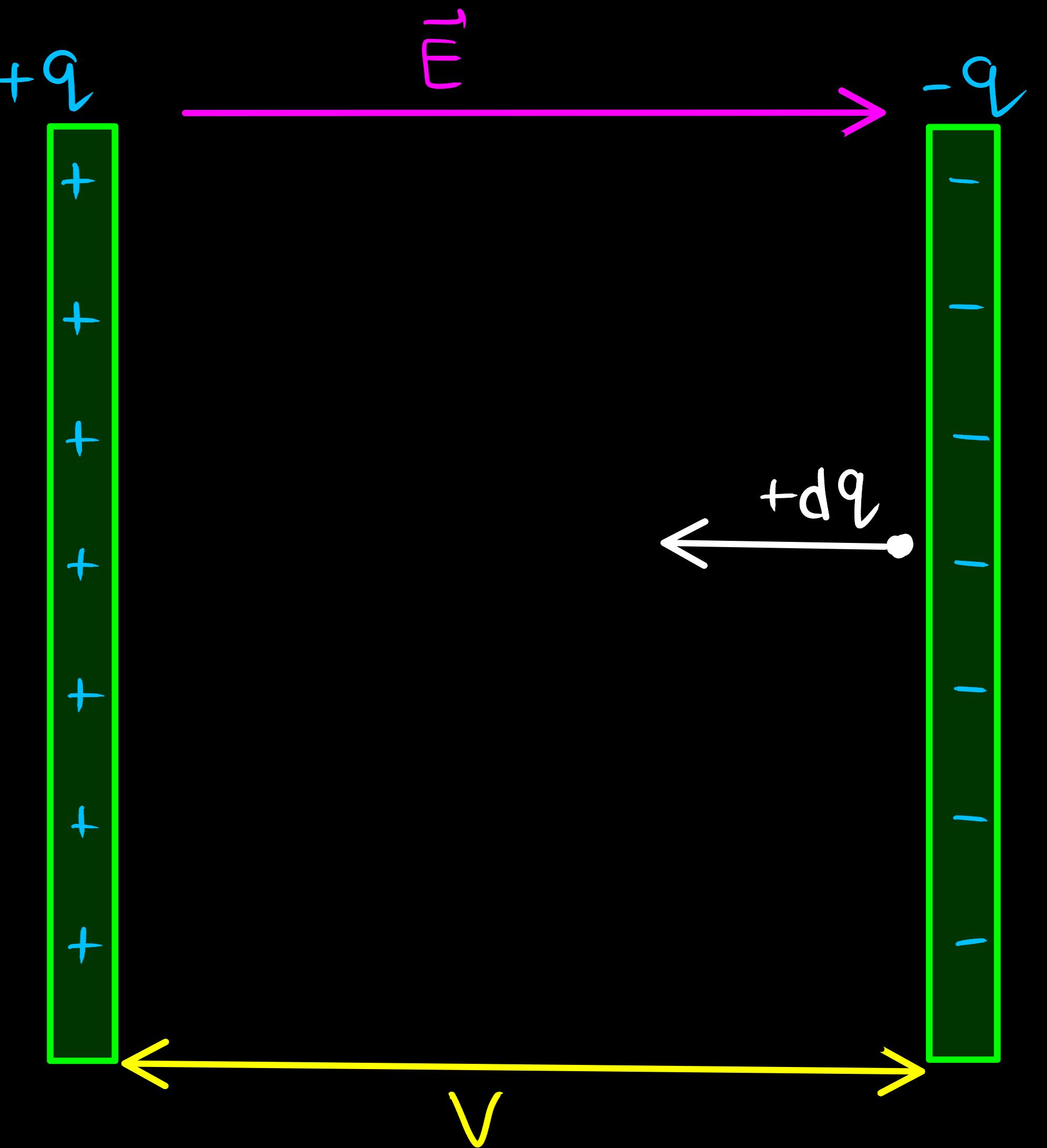


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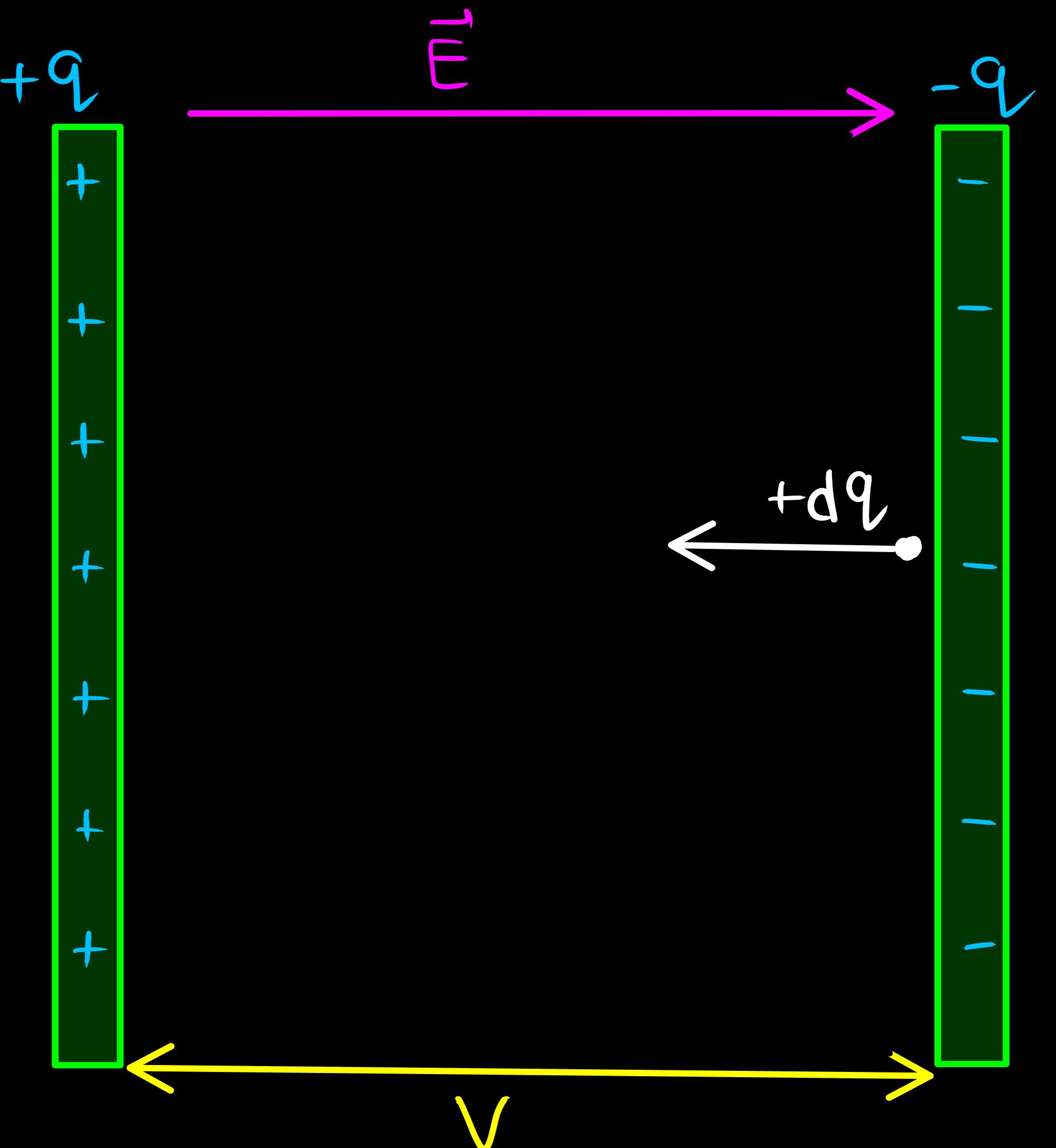
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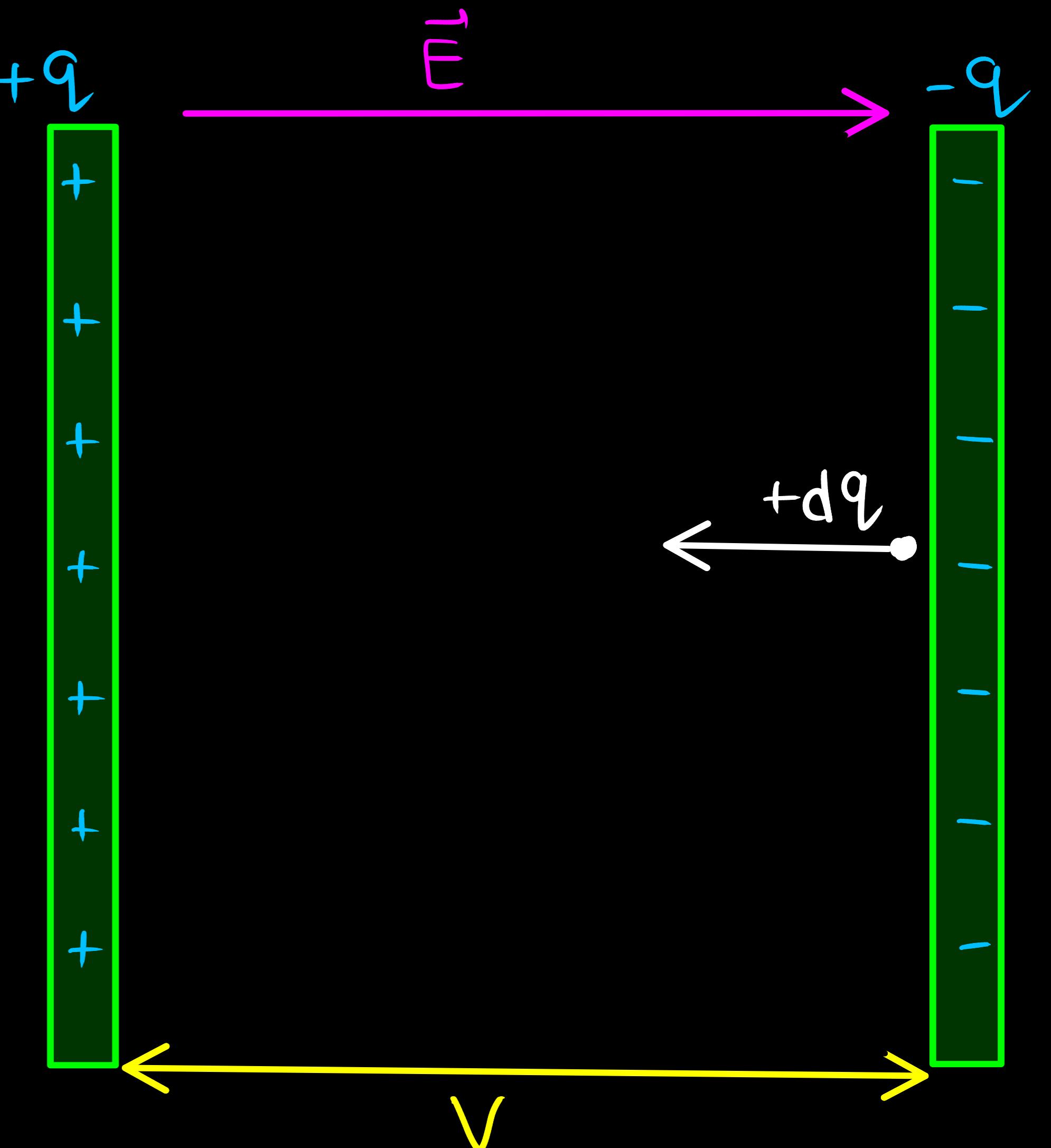
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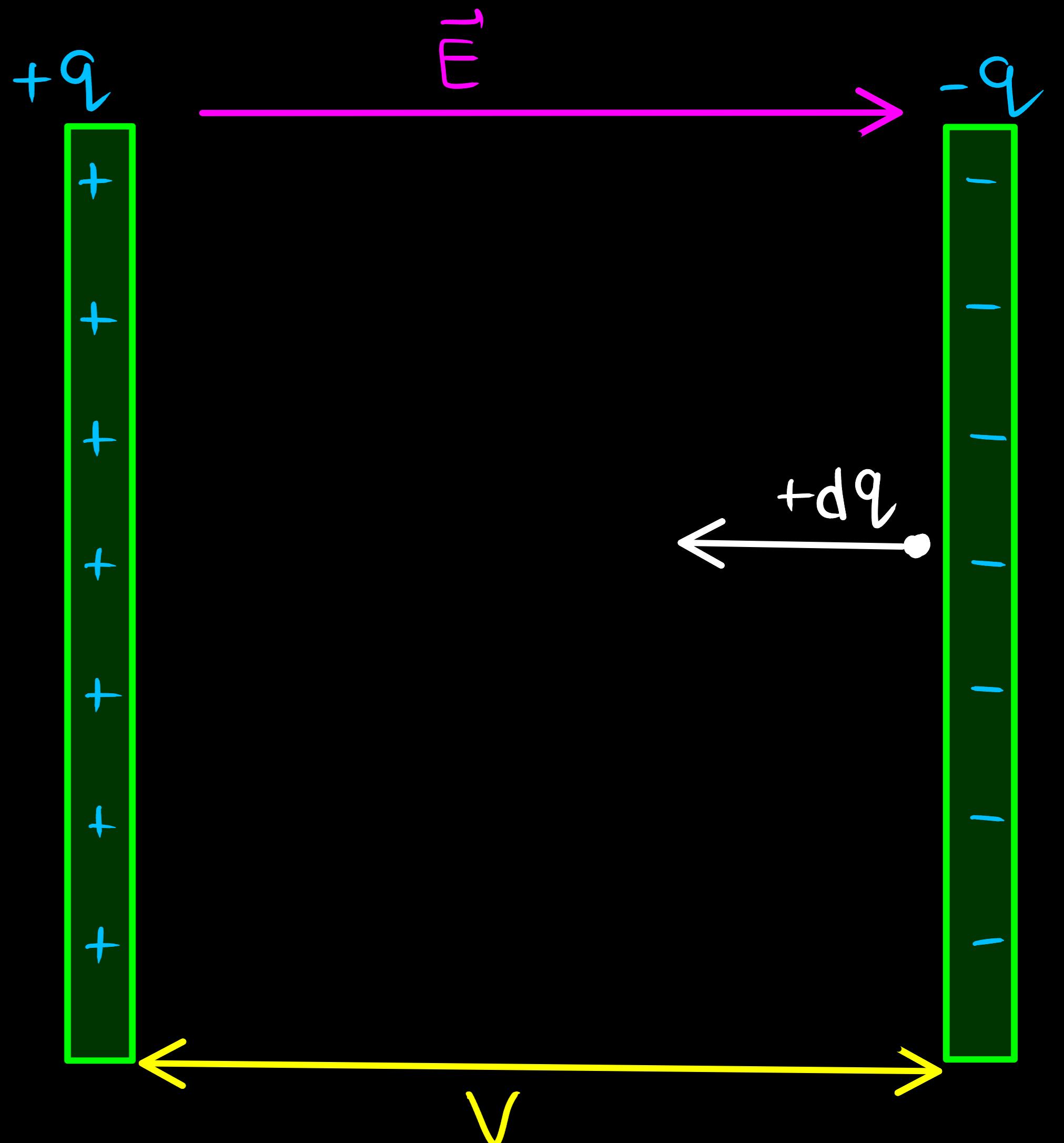
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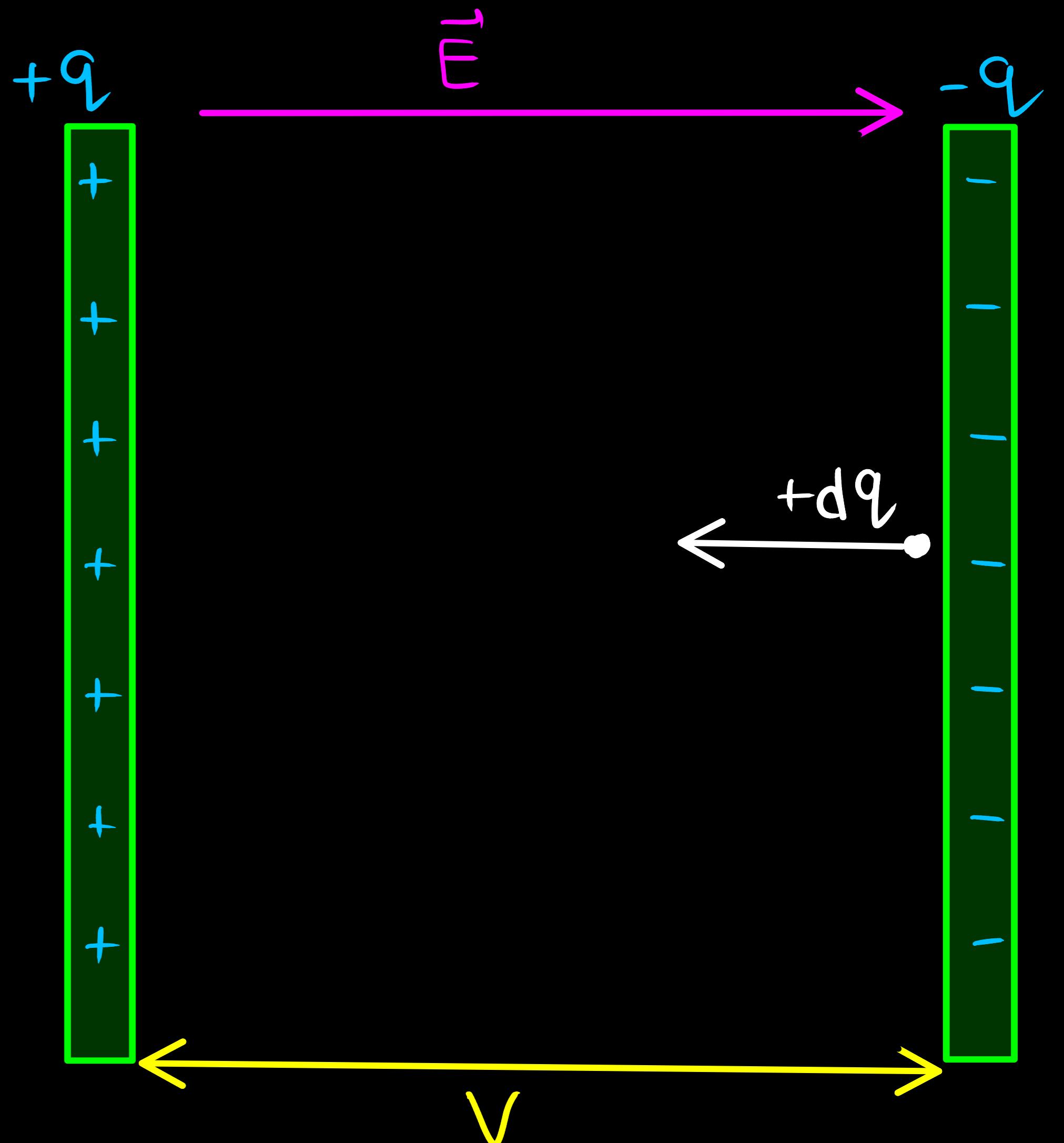
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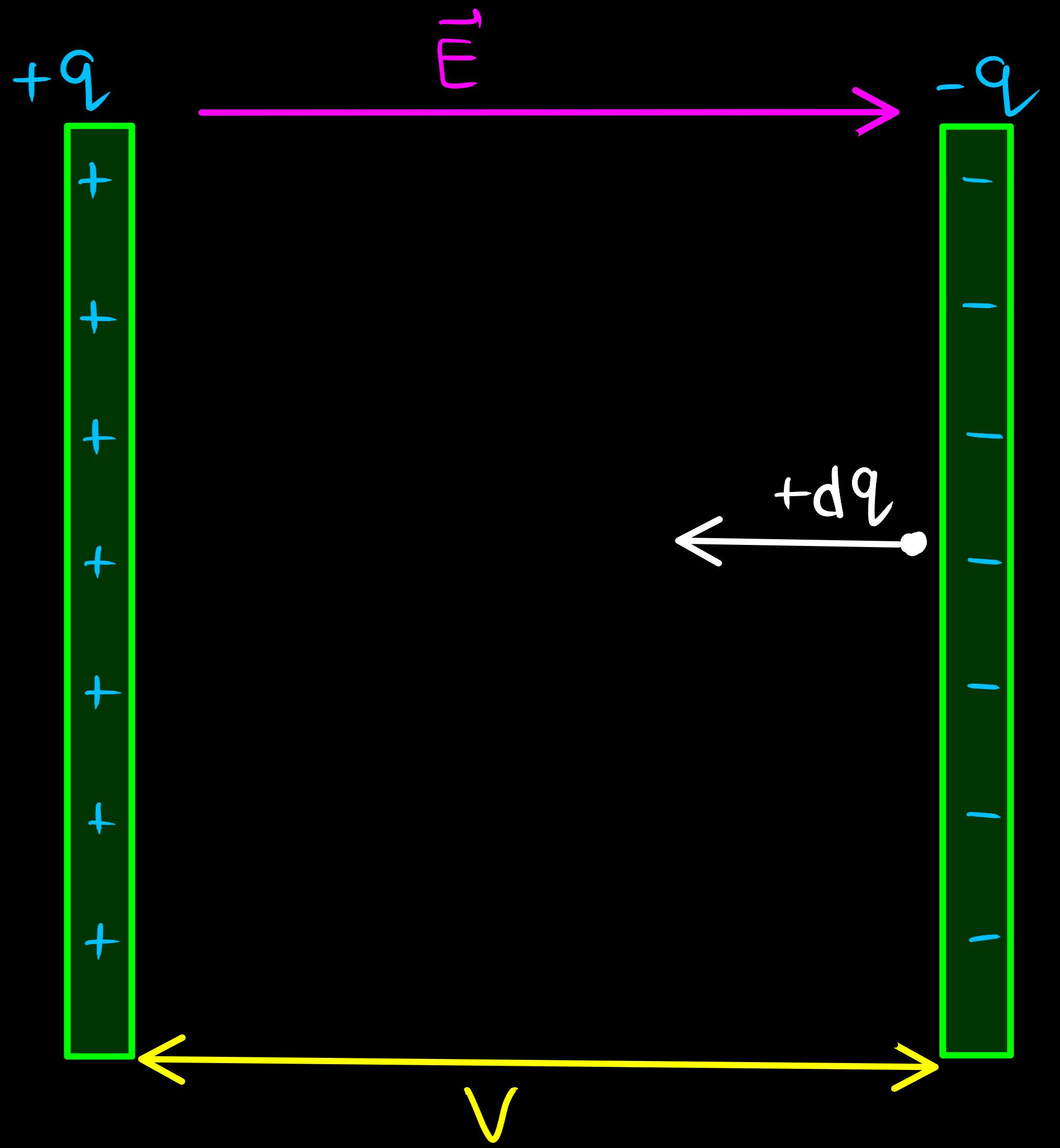
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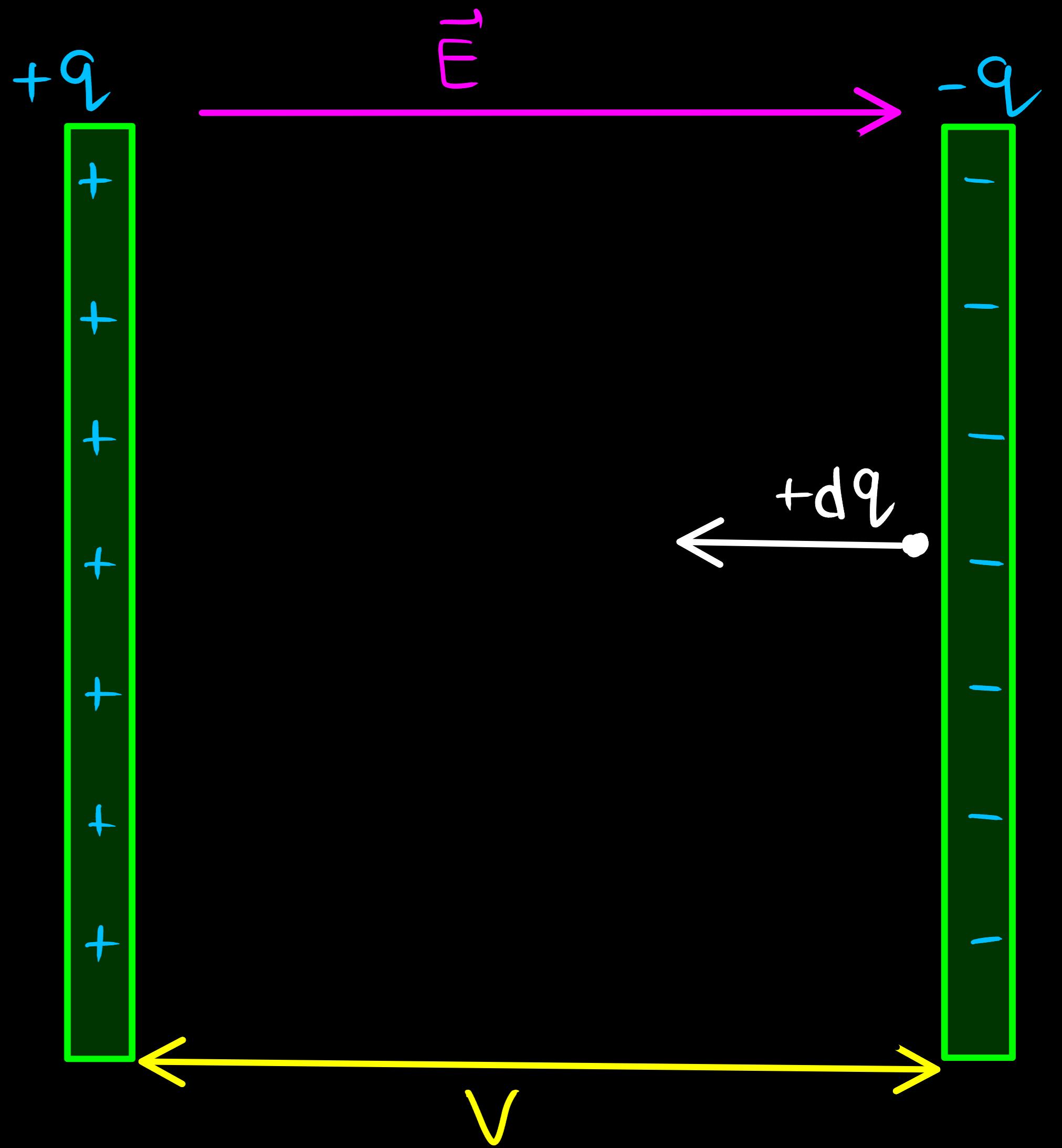
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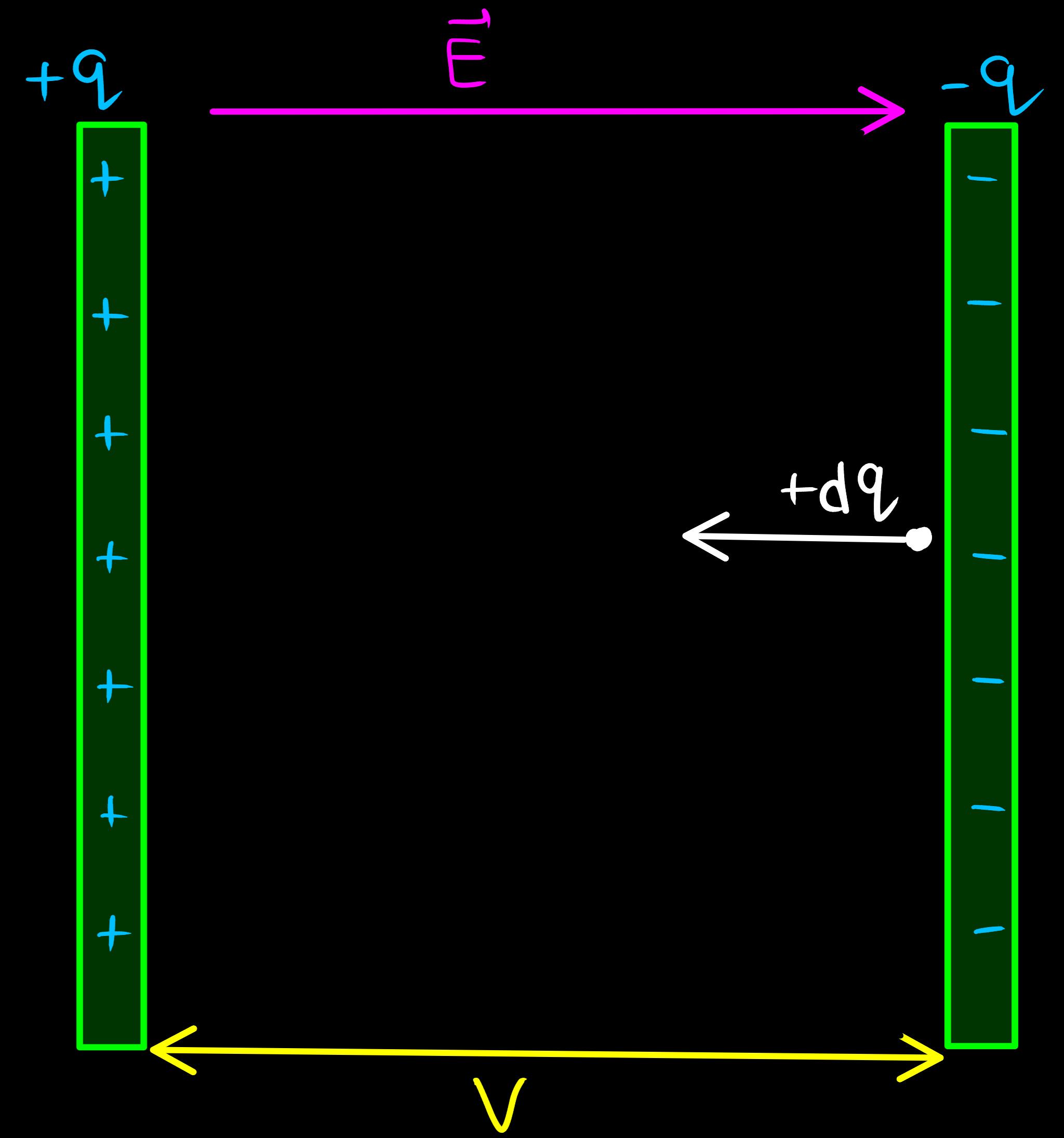
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* It is possible to view the potential energy of the capacitor as 'stored' in the electric field between the plates.