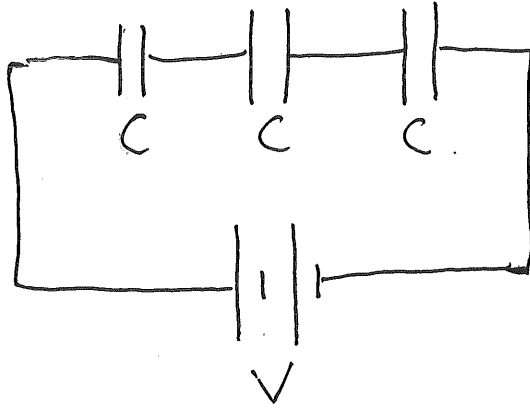


Demonstration.

Case 1



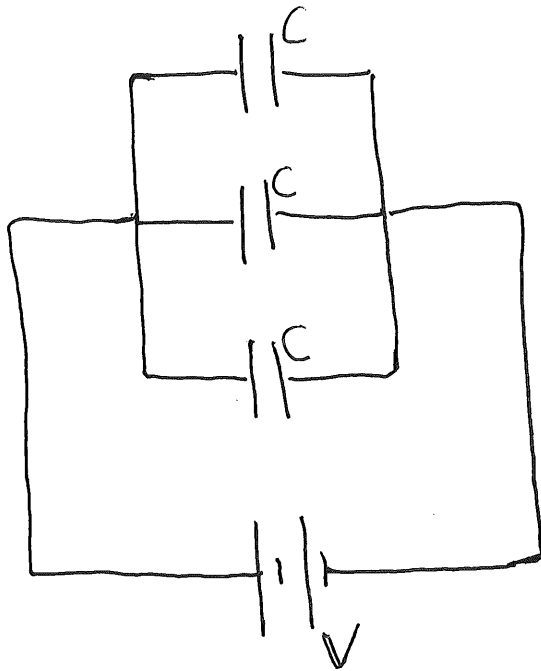
$$\frac{1}{C_{\text{eff}}} = \frac{1}{C} + \frac{1}{C} + \frac{1}{C} = \frac{3}{C}$$

$$U_{\text{Total}} = \frac{1}{2} C_{\text{eff}} V^2$$

$$= \frac{1}{2} \left(\frac{C}{3} \right) V^2$$

$$= \frac{1}{6} C V^2$$

Case 2.



$$C_{\text{eff}} = C + C + C = 3C$$

$$U_{\text{Total}} = \frac{1}{2} C_{\text{eff}} V^2$$

$$= \frac{1}{2} (3C) V^2$$

$$= \frac{3}{2} C V^2$$

$$= \frac{1}{2} (9) C V^2$$

Actual ^{speed} ~~velocity~~ of electron in a
conductor $\sim 10^6$ m/s. — Fermi
velocity.