Question 3.

Four batteries of EMF $E_1 = 4$ V, $E_2 = 8$ V, $E_3 = 12$ V, and $E_4 = 16$ V, four capacitors with the same capacitance $C_1 = C_2 = C_3 = C_4 = 1$ μF, and four equivalent resistors are connected in the circuit shown in Fig. 3. The internal resistance of the batteries is negligible.

- Calculate the total energy W accumulated on the capacitors when a steady state of the system is established.
- The points H and B are short connected. Find the charge on the capacitor C_2 in the new steady state.
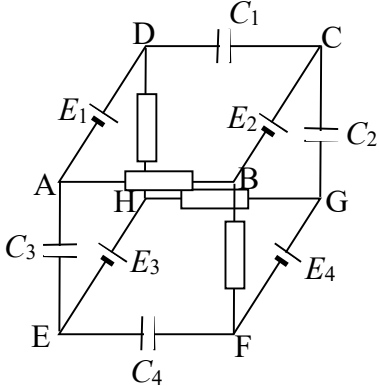

Fig. 3