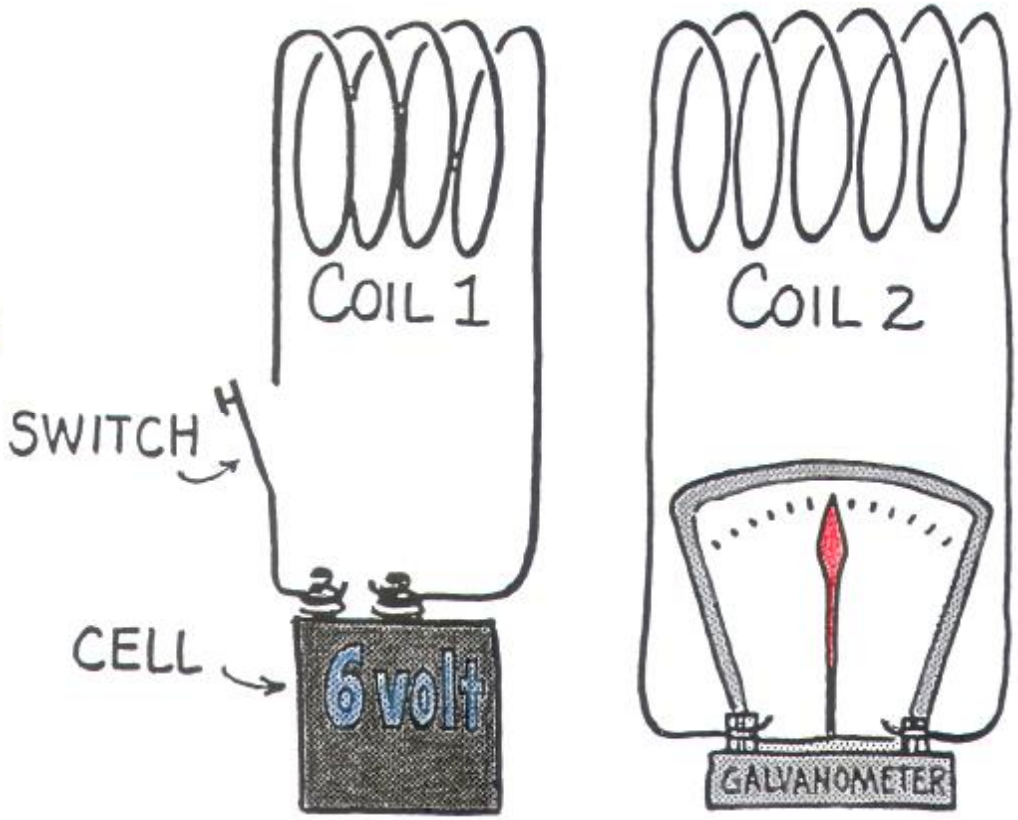
NEXT-TIME QUESTION

What happens to the readings on the galvanometer when the switch in Circuit 1 is

a) first closed

b) kept closed

c) opened again



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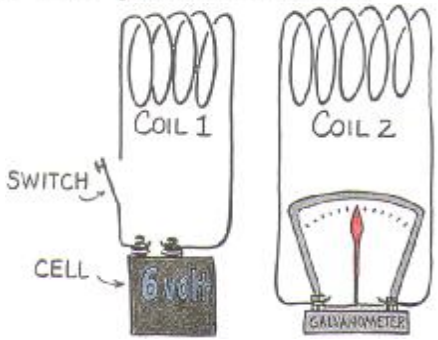
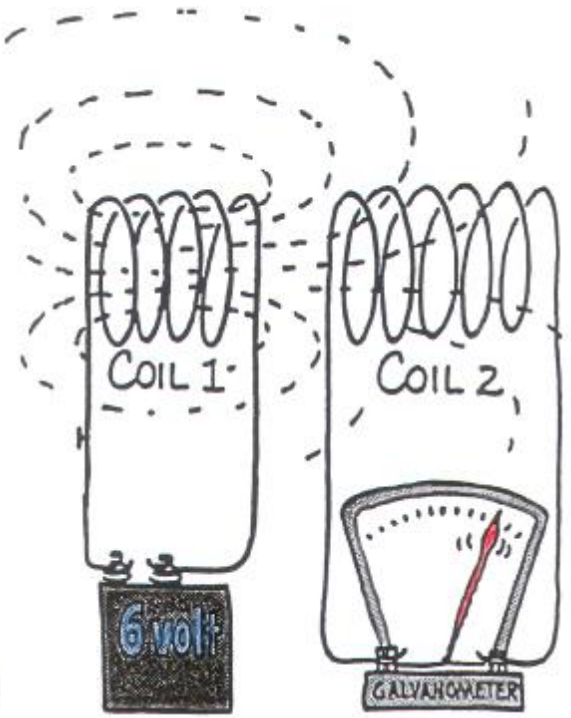


Answer:

When the switch is first closed, a current is established in Coil 1 and creates a magnetic field that extends to Coil 2. This buildup of field in Coil 2 induces current that is registered in the galvanometer. The current is brief, however, because once the field is stabilized and no further change takes place, no current is induced and the galvanometer reads zero current. When the switch is opene in Coil 1, and the magnetic field in the coil and the part that extends to Coil 2 collapses. This change induces a pulse of current in the opposite direction, which is registered on the galvanometer.



CONCEPTUAL Physics

ARBOR SCIENTIFIC
TOOLS THAT TEACH.