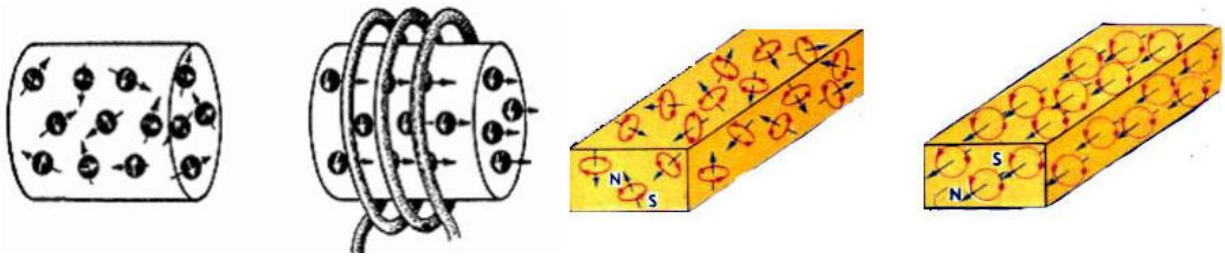
Answer on Question #63665, Physics / Electromagnetism

Question:

Can a magnet with one pole be created?

Answer:

In terms of Ampere, elementary magnet is a circular current that circulates inside the small particles of matter: atoms or molecules. Circular current randomly oriented in the body, to compensate for the magnetic properties of each other when the body not magnetized. Some of these currents is set parallel to each other during magnetization of the body (see Figure). Focusing certain way, the magnetic properties of these circular currents are not compensated, but rather reinforce each other, resulting in the body acquires magnetic properties.



Model of the magnet Ampere

Each elementary magnet is a circular current. One side of the coil meets the South Pole, and the other is north. That is why it is impossible to separate the North Pole from the South Pole, as it is impossible to split the circular current.
Therefore, it is not possible to create a single pole magnet.