# Coulomb's inverse square law of magnetism

Consider two bar magnets A and B .When the north pole of magnet A and the north pole of magnet B or the south pole of magnet A and the south pole of magnet B are brought closer, they repel each other. On the other hand, when the north pole of magnet A and the south pole of magnet B or the south pole of magnet A and the north pole of magnet B are brought closer, their poles attract each other.
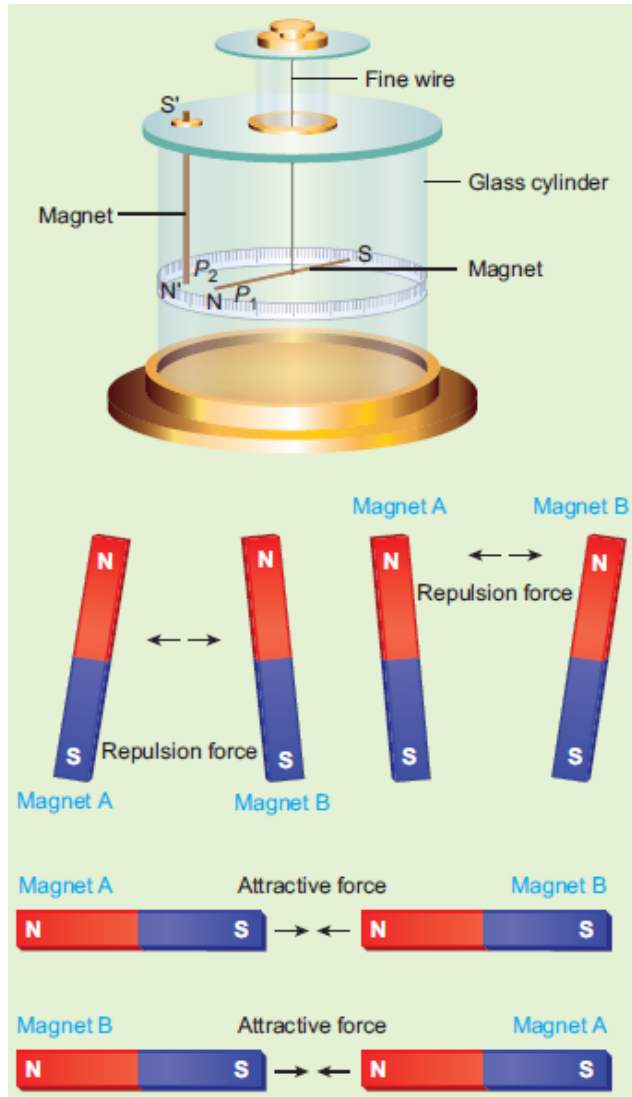
This looks similar to Coulomb's law for static charges studied in Unit I (opposite charges attract and like charges repel each other). So analogous to Coulomb's law in electrostatics, (Refer unit 1) we can state Coulomb's law for magnetism (Figure) as follows:
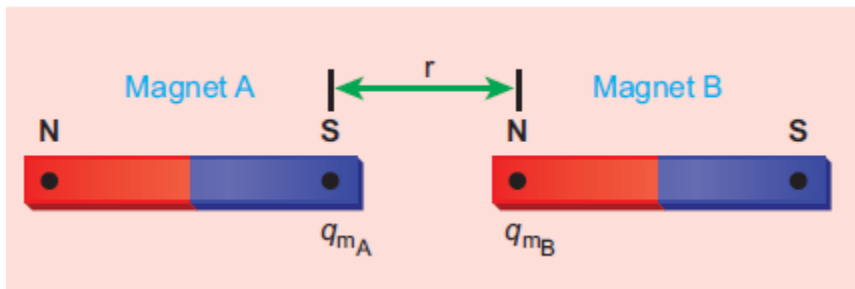
The force of attraction or repulsion between two magnetic poles is directly proportional to the product of their pole strengths and inversely proportional to the square of the distance between them.