near it which is in the opposite direction to the inducing current. Just as a flow of current sets the lines of force in motion, so also if we set the lines in motion by a force from without we get a current of electricity in the wire or conductor they surround.

To complete our illustration we must go further and assume that these lines of force resist displacement from without, and are ready to resume their former position as soon as the disturbing force is removed. The reason for this is that the induced current is a momentary one and subsides after a brief interval—a small fraction of a second. No matter how long the inducing current continues to flow, the *induced* current in the neighbouring conductor subsides at once, but the moment we cut off the inducing current another momentary induced current flows in the adjoining circuit, but this time it is in a contrary direction to the first one. To go back to our illustration of the wooden discs, the sudden movement of those on the primary conductor caused those on the secondary to be displaced in the opposite direction, but the latter after moving a certain amount resisted further displacement, as if they were held back by springs. Though the primary discs continue to revolve they now slip on those of the secondary, though keeping the latter displaced. When the force displacing them is removed by cutting off the primary current, they at once fly back to their original position, and this sudden movement of the lines of force causes a current to flow in the conductor, and as this return movement is in a contrary direction to the first one, this second induced current is also in the opposite direction.

Further consideration will show that the more sudden the movement of the primary lines of force, the greater will be the effect on those around the secondary, also that there is nothing gained by allowing the primary to flow for more than a very brief period of time, and, lastly, that induced currents are always alternating in direction.

This idea of picturing the lines of magnetic force