

CHAPTER III.

THE FORCES OF NATURE.

Having now, in a general way, given some idea of what is meant by Energy, in its two forms of motion and position, let us stop a moment and consider what are called the forces of nature. Force has been defined as the cause of motion, and Energy the motion itself, or the ability to pass into motion.

A weight that is elevated from the surface of the earth and suspended possesses something that it did not possess before it was elevated. This something is its ability to fall when released, and this ability we call Potential Energy. While it is falling it possesses Moving Energy. So far as the weight is related to force it is acted upon equally whether it lies upon the ground or is suspended in the air. This force we call Gravitation, and, as compared with some of the other forces, it may be called a very weak force acting through very long distances.

It is the force of gravity that causes the tides, occasioned by the mutual pull between the earth and the moon. The attraction of