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CHAPTER II.

ENERGY OF MOTION AND OF POSITION.

Energy performs work when it falls from a higher to a lower level. Whenever energy is stored it is in a position to do work if released. As we have before said, stored energy is energy of position, or potential energy. It may exist in a great many ways. The power that has stored it is equal to that which it will give up when it is released and falls back to the level from which it was originally taken. If a cannon ball is fired perpendicularly in the air, its moving energy begins to be changed from energy of motion to that of position the moment it leaves the muzzle of the gun. Its velocity is being continually reduced by the constant pull of gravity and the resistance offered by the air. These two resistances cause the ball to move slower and slower as it mounts higher and higher until it reaches the turning point, when for a moment there is no motion of the ball, and all of the energy of motion has passed into that of position. At every point in its upward flight the sum of the two forms of energy