

however, that force has been destroyed, because it is the attraction of gravitation that holds the stone against the earth's surface. If now we elevate the stone to some position above the earth we have given it a potential energy; that is to say, we have put it into a position where the force of gravitation can cause the stone to do work if it is released and allowed to fall to the earth. That force has become a potential energy. The attraction is just as great practically after the stone has been elevated as before; but it is in the position now of a bent bow, and if released it can do work. The motion of a cannon-ball when fired from a gun, the motion of a falling body from an elevated position, the turning of a wheel and the vibratory movement of the atom as sensible heat, are all instances of actual or moving energy. The bent bow held in that position, the elevated weight, static electricity, and permanent magnetism are instances of energy of position, or potential energy.

It is a law of physics that action and reaction are equal. If we should take a gun-barrel open at both ends and place a charge of powder in the center of the barrel and a bullet on each side of the charge, and then fire the powder, the gun would shoot in both directions with equal power. If, however, we plug up one end of the barrel rigidly and mount it in a stock, in the ordinary way, and load