gravitation between the sun and the earth is also felt and made sensible in the tidal phenomena. So true is this that there is a very great difference in the height to which the tide rises when both sun and moon are pulling upon the earth in the same line, as opposed to that which takes place when they are in opposition to each other. In the case of the sun the attraction of gravitation is acting through a distance of over 90,000,000 of miles. The sun's attraction is less than that of the moon, because of the greater distance through which the attraction has to act. If the two were equidistant from the earth, the attraction of the sun would be many, many times greater than that of the moon.

There are other forces in nature that are in a sense like the attraction of gravitation. They differ in the respect that, when the bodies between which the attraction exists are sufficiently close together, it is very powerful; but it is totally lost the moment there is any perceptible separation.

First of these, let us consider the force called Cohesion. This force is the attraction which one molecule has for another, or mass of molecules have for each other, acting, however, through an infinitesimally small space. A pane of glass is held together with great rigidity, but the moment a crack runs through it, although the parts each side of the crack