with that of the Sun = 1, it is represented by $\frac{1}{354936}$. [Young students are often astonished at the idea of weighing the Earth; yet the process is simple, and without it we could never ascertain the density of our globe. The best known method is called Cavendish's Experiment, because first made by Henry Cavendish, on the suggestion of Michel. It has also been confirmed by Reich of Freyberg, and by Mr. Francis Baily of London. In Baily's apparatus two small balls at the extremities of a fine rod are suspended from the roof or ceiling by a wire, and their position carefully observed by the aid of a telescope. Large balls of lead placed on a revolving frame are then brought near them in such wise that they can affect them only by the force of their attraction. On the large balls being so arranged, the small ones move towards them through a limited space, which is accurately measured. The position of the large balls is next reversed, and the change of position of the small balls again noted. These observations are repeated until the exact amount of deviation of the small balls has been indisputably established. Then, by calculation, the amount of attraction of the large balls to produce this deviation is readily attained; and the next question, What would be their attraction if they were as large as the Earth? is no less easily answered. Hence, the attractive force of the Earth being known, we can at once compare its mean density with that of lead. The result of Mr. Baily's experiments was to give the Earth's mean density as 5.67 times that of water.*]

The mass, or weight, of Mercury is 6 times less than that of the Earth [1 = 0.073]. Mars is 8 times lighter [0.132]; Uranus 14 times [14.251]; and Neptune 18 times [18.900] heavier than our planet. The weight of Saturn is equal to that of 101 terrestrial globes [101.364]; it would take 338 [338.718] to produce a planet equal to Jupiter. On the other hand, the Asteroids are 800,000 times lighter than Earth. These small masses of body, frequently not exceeding a few leagues in diameter, are perhaps the wrecks of shattered planets, whirled along in the common vortex of the solar world.

* [The Earth's mass equals 6,669,000,000,000,000,000,000 tons. Its density, as compared with water = 1, is 5.6747. Its volume, 259,800,000,000 entire miles.]