

weight of the most important bodies of the solar system, compared with water, is as follows : —

Sun, . . .	1.40	Mars, . . .	0.71
Moon, . . .	3.37	Jupiter, . . .	1.42
Mercury, . . .	15.24	Saturn, . . .	0.56
Venus, . . .	5.15	Uranus, . . .	1.53
Earth, . . .	5.48		

From this statement we learn that Saturn is composed of matter only half as heavy as water; while Mercury is considerably heavier than quicksilver, and a third heavier than lead. Our own globe, also, taken as a whole, is twice as heavy as common rock, and half as heavy as lead—a fact which shows the great density of its internal parts.

The disturbances that take place among the heavenly bodies in consequence of their mutual attraction constitute a branch of knowledge the most profound, it is said, in the whole circle of human science—requiring all the aid of the most difficult and subtle mathematical analysis. In this field such men as Newton and La Grange, La Place and Bowditch, have won their noblest honors; and I may add, it is only such minds that can disentangle the mazes of this labyrinth. The problem to be solved was this: given the directions and velocities of about thirty mutually-attracting bodies, to find their places after any number of ages. And to give some idea of the complexity of the problem, it may be stated that one of these bodies, the moon, is subject to no less than sixty perturbations in her longitude. And to show how successful astronomers have been in estimating these, it may be stated that the lunar tables actually contain twenty-eight corrections, or equations, to be applied to her mean place to obtain her true place; and the result never varies from the truth more