satellites are now in view sparkling against the deep blue sky with a brilliancy exceeding that of Venus. But here comes Jupiter himself. With what majesty he approaches, "walking in brightness," and exhibiting a diameter equal to two full moons—the cloudy belts for which his surface is remarkable, and which are produced by causes similar to those which give rise to the trade winds, being clearly discernible. After seeing a few of the double stars, and having our eyes dazzled by the brightness of Arcturus and Sirius, and gazing with wonder on the celebrated nebula in Orion—one of the island universes which the telescope reveals, to all of which we shall specially refer in a future paper—we left the observatory delighted with our visit, furnished with matter for subsequent reflection, and we hope with a more profound and abiding experience of the force of the Psalmist's exclamation—"the heavens declare the glory of God."

The satellites of Jupiter in their adjustments present the same exquisite regard to their stability as we find in other parts of the solar system. Their periodic times are so related that a thousand periods of the first, added to two thousand periods of the third, are precisely equal to three thousand periods of the second. As in the case of the time of the moon's axial rotation corresponding exactly with the period of its revolution round the earth, we have here a remarkable proof that during the time the solar machinery has been in operation it has not, by means of an erratic comet or otherwise, sustained any shock by which these delicate adjustments have been affected. The satellites of Jupiter have also been the means of proving the propogation of light—a discovery made by Roemer in 1675, when he observed that eclipses of them occured about twenty minutes sooner when the planet was at its perhelion in relation to the earth than at its aphelion, which he very shrewdly and correctly attributed to the smaller space which light had to travel. The satellite next to Jupiter appears, viewed from its surface, about the size of our moon, the second and third appear about half the size of the first, and the fourth presents a much smaller surface than the last specified.

Pursuing our journey into space we next come to Saturn, whose bulk is equal to a thousand of our worlds, but whose specific gravity does not exceed that of cork. It has a diameter of 79,000 miles, performs a revolution round the sun in 29 of our years, revolves on its axis in a little more than 10 hours, and has eight satellites. It is remarkable for its rings. These are at least three in number, and are supposed to be solid matter. When Galileo looked at Saturn through his telescope he was amazed at the aspect it presented. His imperfect instrument made it appear in something like the form of a double planet. The diameter of the outer ring cannot be less than 169,000 miles. It is separated from the one next to it by a space of about 1800 miles. Its breadth is estimated at about 10,000 miles, while its thickness is not supposed to exceed 100 miles. The inner ring has a breadth of about 16,000 miles, its inner edge being about 18,000 miles from the planet. The poising of these very remarkable appendages, to which there is no parallel in the solar system, required a delicacy of adjustment which continues to excite the wonder of scientific men. The rings are rotating in the same direction as the planet—objects on the exterior edge of the outer ring travelling at the rate of about 50,000 miles an hour. The slightest disturbance of the relations in which the rings stand to the planet would hurl them to its surface, but such disturbance is rendered impossible on account of rigid adherence to the laws or equilibrium.

For a long period Saturn was regarded as the most remote of the planets. Though certain peculiarities in its orbit led to the conjecture of an exterior planet no systematic search on the basis of theory was made for it. Its discovery may be said to have been accidental. In March, 1781, Sir Wm. Herschel noticed a star whose aspect was peculiar. On applying highe power a disc was presented, and never thinking of its being a new planet, he announced the discovery of a comet. A close examination of a segment of its orbit showed that it could not be one of these erratic bodies, and further observatson proved it to be a planet. Its distance from the sun was found to be