

and fear not. Off we go! At the end of the first second we are 190,000 miles away from here; 380,000 at the next. One minute; two minutes; ten minutes. Great God! where are we? Steady again; we rise in the heavens. We cross the plains of that aerial and illimited ocean. We discover new spaces and new worlds. Heavens succeed to heavens, spheres to spheres, deserts open after deserts, immensity after immensity, and the human mind bewildered and exhausted halts on the threshold of creation as if it had made no advance. Our very heart shudders with terror and we ask: What can such a universe be which expands in proportion as our conceptions do, and which absorbs our boldest conceptions as the ocean swallows up the pebble thrown into it.

Now, gentlemen, you begin to realize that our globe is but a grain of that seed which the Almighty has scattered through the vast fields illumined by the sun, that, it should bud, blossom, and bear fruit.

Man very much overrated the importance of the earth in the general working and government of the universe, when he considered our globe as the centre of creation and pretended that the sun, the moon and the planets were but secondary bodies compelled by laws divine to revolve before the throne of our motionless home for the pleasure of its inhabitants, to illumine her days and give her nights a soft and mellow light. Nothing more untrue than this proud notion of ours! The earth is but one of the planets of the solar system, and one of the smallest too.

Detach yourselves from the earth; stand as an observer in the upper regions and consider this planet carried onward, not as a ship sailing on a tempestuous ocean, but on a sea where all is calm and serene and where no commotions ever arise to disturb its motion. Borne along with a velocity which is common to everything around us, we are in a state somewhat similar to that of a person in a ship swiftly sailing in a smooth current. He feels no motion except when a large wave happens to dash against the vessel; he fancies himself at rest, while the shore, the buildings and the hills appear to move. You wonder at the great speed of railroads and balloons; 60 miles an hour for the former and 90 for the latter. A mere trifle!

One beat of your pulse carries you 20 miles from where the preceding one had left you; and you can hardly believe that on your rising in the morning, after six hours sound sleep, you have travelled 400,000 miles without being conscious of it. Our globe, with its eleven hundred millions of inhabitants, its oceans, countless islands and mountains, moves through the fields of space at the rate of sixteen hundred thousand miles a day.

A few words about the sun. Its dimensions are seemingly the same as those of the moon, which is 50 times smaller than the earth. 'Tis an error! The sun is 1,400,000 times larger than the earth and 96 millions of miles distant from us. A mere trifle! It would take a man 2,000 years to reach the sun supposing he travelled day and night at the rate of 6 miles an hour, and 10 years would be required for a cannon ball travelling with a speed of 1,350 miles an hour. The sun is the centre of the planets that revolve around it and borrow from it light and heat. It is the sun that produces and regulates the days, the seasons and the years. 'Tis he that clothes the earth in the spring time with a rich green garment enamelled with beautiful and fragrant flowers. It is the sun that ripens our harvests, generates the cooling breeze, the furious winds, and causes light, heat, beauty and life.

Astronomers differ among themselves as to the nature of the king of day. The immense distance that lies between us and the sun does not permit these learned men to be positive in their assertions concerning that body. They generally agree on this, that the sun is, like the earth, an opaque body surrounded by a luminous atmosphere of phosphorescent clouds. And, now, is that majestic monarch, the source of light and beauty, wholly faultless and free from all blemish? No. Some 280 years ago the scientific world heard with bewilderment that the sun was charged with not being without spot or wrinkle. At first no one gave credence to the accusation, and the provincial of the Jesuits told Scheidler, who had seen these spots, that it must be a mistake, that these spots were not really on the sun, but rather in his own eyes, or in the lenses of his telescope. What! Spots on the sun! Alas, yes! Subsequent obser-