a perfectly spherical body without a motion on its axis, all the water, however distributed on its surface, would have left the places it occupied, and have rushed towards the poles, leaving a ridge of barren mountains round the equator. But if it had been possessed of the same form, and had received an impetus giving it a revolution on its axis, the centrifugal force being greatest at the equator, the water would have been accumulated there, and a mountainous ridge of rocks would have been exposed at the poles.

It may not be perfectly understood by the reader what is meant by the centrifugal force. When a body is made to revolve on its axis, there will always be an attempt in the particles composing that body to fly off from the centre of motion. If a bucket of water be suspended by a string, and a rapid rotary motion be communicated to it, the water will accumulate, and form a sort of wave round the side of the vessel: and if we could give the same motion to a substance which consisted of very loosely connected parts, they would fly one from the other, and leave the string by which they were suspended. Now these are the results of the centrifugal or centre-flying force.

But it is well known that the force with which a particle is urged to fly away from the centre of motion increases with its distance from the centre, and consequently, in every globular body, that line of superficial particles intermediate between the points which terminate the axis of revolution, will have the greatest centrifugal force. From this statement it follows, that the equator of the earth must suffer a greater centrifugal force than any other part of its superficies. A very pretty instrument is used by lecturers to illustrate this fact. Two elastic iron hoops are united together, and placed upon an axis, having a capability of compression, so that a pressure upon the top would cause a swelling out of the centre or equator. These hoops are put into motion by a multiplying wheel, or by a band and wheel, which, in consequence of the centrifugal force, causes an expansion of the equator, with an attendant depression of the poles.—(*See p.* 32.)

Now let it be supposed that the earth, when created, was a perfectly spherical body, and that it had a revolution on its axis, then an immense body of water must have been accumulated round the equatorial regions. But water is everywhere charged with the *débris* of rocks, which it forms or