

hemisphere, in a meridian about 20° to the westward of Magellan's Straits. The other, which Halley considered the most powerful of the four, he conceived to be about 20° from the pole of the earth, and in about 120° east longitude. One pole in each hemisphere is supposed, according to the terms of this theory, to have a revolution round the magnetic axis in a period of about seven hundred years.

Professor Hansteen has adopted Halley's hypothesis, so far at least as to acknowledge the existence of four magnetic poles, though he supposes them all to be in motion, the northern poles having a revolution from west to east, the southern from east to west. This theory accounts for many phenomena, and has received much attention from philosophers in this as well as in other countries.

There has been much speculation as to the cause of this rotary motion of the magnetic axis. Some writers have attributed it to the progressive oxydation of the metals, some to cold, and others to electricity. But the attention of all observers is now turned towards the application of the wonderful discoveries which have been made in the circumstances and effects of electro-magnetic action, hoping that the time may not be very far distant when the cause of magnetism shall be perfectly understood, and its phenomena accurately traced.

CHAPTER VIII.

INTERIOR OF THE EARTH.

WHEN the semi-diameter of the earth is compared with the depths to which geological researches have extended, it is almost literally true, that we are ignorant of the constitution and condition of its interior. But it is singular that, with so few facilities for investigation, so much should have been determined, which in all probability is nearly allied to truth, if it be not truth itself. A few strong-minded individuals commenced the investigation, and although practical inquiries were for some time retarded by the visionary theories