that the poles of rotation and the terrestrial magnetic poles are not situated in the same point. This circumstance may possibly have led the navigators, who first employed the magnet to direct their course over unknown seas, into many errors, and the inaccuracies which we sometimes detect in their observations may frequently be traced to this cause. But the variation, and the changes to which it is subject, do not in any degree affect the practical utility of the magnetic needle, when employed by the mariner to direct him from shore to shore over known and unknown seas.

The application of the directive power of magnets has done more to extend our acquaintance with the superficial character of the earth and the condition of its inhabitants, to extend commerce, to promote manufactures, and to civilize mankind, than any other scientific fact. It is true that navigation in a great degree depends upon astronomy, but it is scarcely possible to imagine how the sailor could dare a passage over the vast wild of waters, had he not the compass as his director. The heavens, covered from day to day with an impenetrable curtain, would be a chilling anticipation to the mariner, sufficient to quench the most enthusiastic ardour for discovery or commerce; but with the magnet he is comparatively safe; for though causes do exist by which the directive power may be destroyed, yet even the voyager may be put in possession of means by which to restore it; and it is a singular circumstance, that the agent which destroys can also restore. Several instances have occurred in which vessels have been struck with lightning, and the passage of the electricity through the magnets has either destroyed or reversed their polarity. It is seldom that the mariner possesses the means of inducing again the same power, though an electrifying machine and a large Leyden jar are all that would be required for the purpose, for it is well known to the electrician, that the magnetic power may be produced by passing electricity in an accumulated state through ferruginous substances. These accidents, however, are by no means frequent, and their number bears no proportion to what might be anticipated from the known frequency of the cause of disturbance, and in no instance has the spirit of discovery been retarded by the fear of accidents; but, with the compass in his hand, man has traversed deserts and oceans, introduced civilization and the arts of life into the most inhospitable and