zius of Beauvais gives in his "Mirror of Nature" to the two ends of the magnetic needle, indicate, like many Arabic names of stars which we still employ, the channel, and the people from whom Western countries received the elements of their knowledge. In Christian Europe the first mention of the use of the magnetic needle occurs in the politico-satirical poem called *La Bible*, by Guyot of Provence, in 1190, and in the description of Palestine by Jacobus of Vitry, bishop of Ptolemais, between 1204 and 1215. Dante (in his *Parad.*, xii., 29) refers, in a simile, to the needle (*ago*), "which points to the star."

The discovery of the mariner's compass was long ascribed to Flavio Gioja of Positano, not far from the lovely town of Amalfi, which was rendered so celebrated by its widely-extended maritime laws; and he may, perhaps, have made some improvement in its construction (1302). Evidence of the earlier use of the compass in European seas than at the beginning of the fourteenth century, is furnished by a nautical treatise of Raymond Lully of Majorca, the singularly ingenious and eccentric man whose doctrines excited the enthusiasm of Giordano Bruno when a boy,* and who was at once a philosophical systematizer and an analytic chemist, a skillful mariner and a successful propagator of Christianity. In his book entitled *Fenix de las Maravillas del Orbe*, and published in 1286, Lully remarks, that the seamen of his time employed "instruments of measurement, sea charts, and the magnetic needle."†

which Klaproth erroneously endeavors to derive the Spanish *sur* and the Portuguese *sul*, which, without doubt, like the German *süd*, are true German words, does not properly refer to the particular designation of the quarter indicated; it signifies only the time of high noon; south is *dschenub*. On the early knowledge possessed by the Chinese of the south pointing of the magnetic needle, see Klaproth's important investigations in his *Lettre à M. A. de Humboldt, sur l'Invention de la Boussole*, 1834, p. 41, 45, 50, 66, 79, and 90; and the treatise of Azuni of Nice, which appeared in 1805, under the name of *Dissertation sur l'Origine de la Boussole*, p. 35, and 65–68. Navarrete, in his *Discurso Historico sobre los Progresos del Arte de Navegar en España*, 1802, p. 28, recalls a remarkable passage in the Spanish *Leyes de las Partidas* (II., tit. ix., ley 28), of the middle of the thirteenth century: "The needle, which guides the seaman in the dark night, and shows him, both in good and in bad weather, how to direct his course, is the intermediary agent (medianera) between the loadstone (*la piedra*) and the north star . . . . ." See the passage in *Las siete Partidas del sabio Rey Don Alonso el IX.* (according to the usually adopted chronological order Alonso the Xth), Madrid, 1829, t. i., p. 473.

* *Jordano Bruno*, par Christian Bartholomès, s. 1847, t. ii., p. 181–187.

† "Tenian los marcantes instrumento, carta, compas y aguja."—Sal