of South America between the mean humidity of the dry months and that of the whole year; an annual mean humidity is obtained, for the valleys of Aragua, at farthest of 74°, the temperature being 25·5°. In this air, so hot, and at the same time so little humid, the quantity of water evaporated is enormous. The theory of Dalton estimates, under the conditions just stated, for the thickness of the sheet of water evaporated in an hour's time, 0·36 mill., or 3·8 lines in twenty-four hours. Assuming for the temperate zone, for instance at Paris, the mean temperature to be 10·6°, and the mean humidity 82°, we find, according to the same formulæ, 0·10 mill. an hour, and 1 line for twenty-four hours. If we prefer substituting for the uncertainty of these theoretical deductions the direct results of observation, we may recollect that in Paris, and at Montmorency, the mean annual evaporation was found by Sedileau and Cotte, to be from 32 in. 1 line to 38 in. 4 lines. Two able engineers in the south of France, Messrs. Clausade and Pin, found, that in subtracting the effects of filtrations, the waters of the canal of Languedoc, and the basin of Saint Ferréol lose every year from 0·758 met. to 0·812 met., or from 336 to 360 lines. M. de Prony found nearly similar results in the Pontine marshes. The whole of these experiments, made in the latitudes of 41° and 49°, and at 10·5° and 16° of mean temperature, indicate a mean evaporation of one line, or one and three-tenths a day. In the torrid zone, in the West India Islands for instance, the effect of evaporation is three times as much, according to Le Gaux, and double according to Cassan. At Cumana, in a place where the atmosphere is far more loaded with humidity than in the valley of Aragua, I have often seen evaporate during twelve hours, in the sun, 8·8 mill., in the shade 3·4 mill.; and 1 believe, that the annual produce of evaporation in the rivers near Cumana is not less than one hundred and thirty inches. Experiments of this kind are extremely delicate, but what I have stated will suffice to demonstrate how great must be the quantity of vapour that rises from the lake of Valencia, and from the surrounding country, the waters of which flow into the lake. I shall have occasion elsewhere to resume this subject; for, in a work which displays the great laws of nature in different