THE

CANADIAN NATURALIST.

SECOND SERIES.

CONTRIBUTIONS TO THE CHEMISTRY OF NATURAL WATERS.

By T. STERRY HUNT, A.M., F.R.S.; of the Geol. Survey of Canada.

II.

ANALYSES OF VARIOUS NATURAL WATERS.

CONTENTS OF SECTIONS .- 35, mode of analysis, date of collection; 37, waters of the first class; 37, their probable origin; the elimination of sulphates; 38, separation of lime-salts from waters; 39, earthy chlorids in saliferous formations; brines of New York, Michigan, and England; foot-note on errors in water-analyses; 40, brines of western Pennsylvania; waters in which chlorid of calcium predominates; 41, origin of such waters ; separation of magnesia as an insoluble silicate; 42, waters of the second class; 43, waters of the third class; 44, waters of the fourth class; Chambly; 45, other waters of the same class; Ottawa River; 46, waters of Highgate and Alburg; 47, changes in the Caledonia waters; comparative analyses: 48, waters of the fifth class; sulphuric-acid springs of New York and Canada; 49, changes in the composition of these waters; their action on calcarcous strata; 50, waters of the sixth class, their various sources; 51, examples of neutral sulphated waters; sulphate of magnesia waters.

٧,

§ 35. The analyses of the various mineral waters to be given in the second part of the present paper, were made according to the modes laid down in the treatise of Fresenius on Quantitative Analysis. The carbonate of soda in the alkaline waters was determined by the excess of the alkaline bases over the chlorine and sulphuric acid present. This was generally controlled by the amount of the carbonate of baryta thrown down from a solution of chlorid of barium by a solution of the soluble salts obtained by the evaporation of the mineral water; and in some cases, to be specified farther on, this latter process was relied on as the only means Vol. II.