From the table it appears that the first 50 grams of alkali reduce the hydrogen ion concentration to but 50 times that of neutral solutions, and 200 grams of alkali have made it only about 10 times that of pure water, in spite of the fact that there are more than 750 grams of free carbonic acid still present in the solution. So much acidity can at once be obtained by dissolving merely 0.004 gram of hydrochloric acid in 100 liters of water. Thereafter neither acidity nor alkalinity surpasses this intensity until 450 grams more of sodium hydrate have been added to the solution. Yet *in pure water* 0.005 gram of sodium hydrate would make the reaction more alkaline than that.

Such is the case when the equilibrium is homogeneous, *i.e.* in an isolated solution. But when, in similar cases, an atmosphere containing carbon dioxide is present, the conditions are still more striking. Suppose, for example, a solution of 100 liters containing 1 kilogram of sodium bicarbonate in equilibrium with an atmosphere containing 1 gram of carbon dioxide per liter. Let hydrochloric acid be added in successive small portions to the solution. Further let the solution be constantly stirred and shaken, and let the experiment be conducted slowly, so that there