shall always be equilibrium between the carbonic acid in the solution and in the atmosphere. Further, let the temperature be such that the absorption coefficient of carbon dioxide shall be 1.000. Then the successive states of the solution will be approximately as recorded in the following table:—

HCl ADDED	H_2CO_3: NaHCO$_3$	+ (H)	− (OH)	RELATIVE ACIDITY	RELATIVE ALKA- LINITY
Grams					
0	2.27 : 11.9	0.000000057 N	0.000000176 N	0.57	1.76
10	2.27 : 11.5	0.000000059	0.000000170	0.59	1.70
50	2.27 : 10.0	0.000000068	0.000000147	0.68	1.47
100	2.27 : 8.2	0.000000083	0.000000120	0.83	1.20
150	2.27 : 6.3	0.000000108	0.000000093	1.08	0.93
200	2.27 : 4.4	0.000000154	0.000000065	1.54	0.65
250	2.27 : 2.6	0.00000026	0.000000039	2.6	0.39
300	2.27 : 0.68	0.0000010	0.000000010	10	0.10
310	2.27 : 0.31	0.0000022	0.0000000045	22	0.045
318	∞	0.00026	0.00000000039	260	0.0039
320	——	0.00045	0.00000000022	450	0.0022
330	——	0.0027	0.000000000037	2700	0.00037

From the beginning of the experiment until almost 250 grams of hydrochloric acid have been added, neither alkalinity nor acidity is double in intensity the values which obtain in a perfectly neutral solution. This amounts to a constancy of reaction which, until a few years ago, was scarcely known to the chemist at all. Such close approach to neutrality