of the values of the table with the lines upon the map, that in this case the individual records are quite fairly represented.

Station.	Rainfall.	Station.	Rainfall.
NEW BRUNSWICK.		58.	....
1 St. John	2.46	59. Leominster	3.50
MAINE.		60 .Long Plain	5.88
2 { Bar Harbor, *a*.	3.50	61 { Lowell, *a*.	4.36
{ Bar Harbor, *b*	3.70	{ Lowell, *b*	4.54
3. Bridgeton	2.40	62. Ludlow	2.78
4. Buckfield	2.75	63. Lynn	5.68
5. Eastport[1]	1.54	64. Medford	5.58
6. Fairfield	2.51	65. Melrose	5.60
7. Gardiner	3.27	66. Milford	4.04
8. Kent's Hill	2.47	67. Milton	5.60
9. Mayfield	2.05	68. Monson	3.80
10. Orono	1.85	69. Mount Nonotuck	2.31
11. Portland[1]	3.07	70. Mystic Lake	5.64
12. Sebago Lake	2.38	71. Mystic station	5.11
13. Solon	1.65	72. Nantucket	1.82
NEW HAMPSHIRE.		73. New Bedford	4.51
14. Concord	2.80	74. Newburyport	4.78
15. Dover	3.50	75. Northampton	2.46
16. Grafton	1.08	76. North Beverly	7.66
17. Hanover	0.67	77. Northfield	1.71
18. Lake Village	2.40	78. Princeton	4.07
19. Littleton	0.46	79. Provincetown	2.65
20 { Manchester, *a*.	3.47	80. Quincy	5.54
{ Manchester, *b*.	3.65	81. Rowe	0.70
21. Meredith Centre	1.75	82. Salem	6.21
22. Nashua	3.71	83. South Hingham	6.51
23. Walpole	1.12	84. Springfield	2.97
24. Warner	1.95	85 { Taunton, *a*.	6.83
VERMONT.		{ Taunton, *b*.	6.53
25. Brattleboro'	1.57	{ Taunton, *c*.	6.91
26. Burlington	0.33	86. Waltham	6.08
27. Charlotte	0.60	87. Wellesley	5.70
28. Chelsea	0.99	88. Westborough	4.63
29. Dorset	1.12	89. Westvale	4.93
30. Jacksonville	1.61	90. Williamstown	0.99
31. Lunenburgh	0.35	91. Winchester	5.45
32. Marlborough	1.39	92 { Worcester, *a*	4.72
33. Newport	0.71	{ Worcester, *b*	5.29
34. Strafford	0.90	RHODE ISLAND.	
35. Townshend	1.41	93. Block Island[1]	6.22
36. Vernon	1.50	94. Lonsdale	7.69
37. Windsor	0.95	95. Narragansett Pier[1]	7.95
MASSACHUSETTS.		96. Olneyville	8.30
38 { Amherst, *a*.	2.66	97. Pawtucket	7.92
{ Amherst, *b*.	2.35	98 { Providence, *a*	8.13
39. Beverly Farms	6.60	{ Providence, *b*	9.04
40. Blue Hill	6.13	99 { Woonsocket, *a*.	6.74
41 { Boston, *a*[1]	5.62	{ Woonsocket, *b*.	6.88
{ Boston, *b*	5.76	CONNECTICUT.	
42 { Cambridge, *a*	5.70	100. Canton	3.08
{ Cambridge, *b*	5.63	101. Collinsville	3.28
43. Chestnut Hill	6.09	102 { Hartford, *a*.	4.32
44. Chicopee	3.24	{ Hartford, *b*	4.63
45 { Concord, *a*	4.90	103. Lake Konomoc	6.17
{ Concord, *b*	4.59	104. Middletown	5.30
46. Cotuit	2.79	105. New Haven[1]	3.84
47. Dalton	0.50	106. New London[1]	8.93
48. Deerfield	2.06	107. Norfolk	1.68
49. Dudley	3.88	108. Shelton	4.86
50 { Fitchburg, *a*.	3.42	109. Voluntown	8.00
{ Fitchburg, *b*	3.52	110. Wallingford	5.85
51. Framingham	4.64	NEW YORK.	
52. Gilbertville	3.38	111. Albany[1]	0.77
53 { Groton, *a*.	3.62	112. Brooklyn	3.39
{ Groton, *b*.	3.54	113. Lebanon Springs	0.84
54. Holyoke	2.62	114. Menands	0.87
55. Hopkinton	4.76	115 { New York, *a*	3.41
56. Lake Cochituate	4.95	{ New York, *b*[1]	4.10
57. Lawrence	4.31	116. Setauket	4.76

WINSLOW UPTON.

SOME WORK OF THE GOVERNMENT SURVEYS.

THE work of the topographical department of the geological survey during the past fiscal year shows an increase of thirty-nine per cent over that of the previous season, — a result due mainly to the increased experience and efficiency of the men engaged in its prosecution. The following statement presents in brief form the progress made during the past year, the area being given in square miles: Appalachian section, 22,080; Missouri, 20,000; Cascade, 10,400; Texas, 8,000; Arizona, 8,000; Yellowstone Park, 3,600; Gold Belt, 2,400; Massachusetts, 2,500; New Jersey, 1,500; total, 78,480. Of the maps intended to show the topographic survey of the United States, 88,000 miles have already been completed, and the proof-sheets issued, giving the results in Alabama, Missouri, Texas, Utah, and Montana. Additional work of the department, covering 82,000 square miles, is now in the engraver's hands, embracing the following states: Virginia, West Virginia, Tennessee, Missouri, Kansas, New Mexico, Arizona, Utah, and Nevada. The scale of publication of the survey of Massachusetts and New Jersey is about one mile to the inch; in the South Appalachian section, Gold Belt, Yellowstone National Park, Kansas, Missouri, and Texas, two miles; and in Arizona, Oregon, and northern California, four miles. The draughtsmen of the office have been mainly employed upon work of the originally compiled map of the United States, and the compilation of the map of New York to serve as a basis for the geologic map.

[1] Station of U. S. signal service.

Major Powell has just received a collection of objects illustrating the character of the Oraibi Indians of north-eastern Arizona, consisting of ancient pottery, war-clubs, ancient clothing, musical instruments, and the wooden implements used by them in making fire in connection with their religious rites. There is also a large collection of bone, horn, and stone implements, among the last being many fetiches and carved animals employed in their religious ceremonies. There are also several objects used by these Indians in their marriage and funeral rites, the uses of which have been previously unknown. The material gathered is especially valuable and interesting, as so little is known of these Indian tribes who were first visited by Major Powell about ten years ago.

In the archeological investigations in the south-west, about the ruins of Cañon de Chelly in Arizona, among the curious things unearthed by an exploring party of the geological survey were several fragmentary ears of corn, with one complete and well-developed ear. The latter was found in a grave with a mummified child. It resembles a common ear of red corn, although somewhat smaller; and the grains, even at the present time, are well developed, and fit closely over the entire cob. The antiquity of this corn can be determined as far back as six hundred years. The ruins in which the corn was found are in the same state of preservation as they were when Coronado first visited this country in 1540.

The traditions of the present tribes, as well as the archeological evidences in connection with its discovery, all attest its great antiquity. As corn is supposed to be a native of this continent, its discovery under these peculiar circumstances will aid in throwing considerable light on its origin and history.

HEALTH OF NEW YORK DURING FEBRUARY.

ON the opposite page will be found a graphic representation of the daily mortality in the city of New York for the month of February, together with certain meteorological data for the same period. The deaths are those from all causes, those from a few of the prominent causes which are constantly at work in all populous centres, and those of children under five years of age. These statistics are furnished to *Science* through the courtesy of Dr. John T. Nagle, of the board of health. The large number of those who die after having just commenced to live is a striking feature here, as it is in all reports of mortality. That the number is as low as it is, is accounted for by the few deaths which at this season of the year are caused by diarrhoeal affections; for seven days in the month there having been no deaths due to this form of disease, and in eleven days only one death each day, while the highest was but two deaths. When the spring has fairly set in, and the warm days appear, we shall expect to see this condition change, the disease assuming a more prominent place among the death factors, until, during the intense heat of the midsummer, it will overtop them all, and carry off its victims by the scores. Scarlet-fever was, during the month, a little more active as a cause of death than the diarrhoeal diseases; and yet the difference was so slight that the lines representing the mortality from these two affections cross each other repeatedly, and often coincide. Consumption occupies the most prominent position in the diagram, — a disease which has prevailed in all communities for ages, and which has been the subject of as much study and experimental research as, perhaps, any disease which affects the human race, and yet one which still ravages the world, and appears only in a slight degree to be amenable to treatment. Much has been done by sanitarians to point out the influences under which it thrives, and the means to be adopted to lessen its prevalence; and it is more than probable, that, if the advice which has been so freely given were to be put into practice, the number of deaths would be greatly reduced.

The meteorological data are obtained from the observatory in Central Park, through the kindness of Director Daniel Draper, Ph.D. The instruments from which these observations are made are placed fifty-three feet above the ground, and ninety-seven feet above the sea. The daily mean humidity is obtained from readings taken at seven A.M., two and nine P.M. The 'rainfall' recorded on the 4th as .10 of an inch was in reality 5 inches of snow; the .01 of an inch on the 6th was also snow, which fell to the amount of one-quarter of an inch. These, as is usual, have been reduced to water, and so recorded. February will be remembered as a month in which the thermometer fell to a very low point, —4° F. on the 5th; while on the previous day it was at 0°, and on the 6th but three degrees above that point.

RAILROAD TRANSPORTATION.

MR. HADLEY'S book deserves high praise. It is clear, scholarly, well written, well arranged, temperate and impartial, and yet vigorous and outspoken. It supplies a need which Mr. C. F. Adams's book on railroads filled with great, even though incomplete, success, for matters as they stood ten years ago, — the need of a compact discussion of what the railroad problem is, and what it means. It gives a brief history of the growth of the railroad system, points out the problems and evils that are now before us, and discusses the solutions and remedies. There are excellent chapters on the railroad experience of other countries, and abundant references to the literature of the subject. The book may be strongly recommended, both to those who are specially interested in railroads and the railway problem, and to the general reader who wishes to inform himself on one of the most important of public questions. It is much to be wished that studies of this kind should be read, and not only read, but bought. We have by far not enough of intelligent and careful investigation of our industrial and political problems; and it is a regrettable fact that the publication of such investigations has not been found, as a rule, to be profitable to the publishing-houses, not to mention the authors. The growing importance of such questions, the arousing of public attention to them, the increasing number of thoughtful men who wish information, ought to give a widening circle of readers of books like Mr. Hadley's.

The most important conclusion which the reader who approaches the problem through this book will reach — the conclusion which enforces itself on anyone who gives intelligent study to the sub-

Railroad transportation, its history and its laws. By ARTHUR T. HADLEY. New York, *Putnam*, 1885. 8°.