

mountain, a warm saturated air is continually rushing up the side of the mountain, and the temperature must necessarily rise as long as the rain is formed.

I have projected in curves all the temperature observations at Pike's Peak for the hundred and thirty-six months during which at least .75 of an inch of rain fell. There were thirty-eight months, in all, in each of which less than that amount fell. A very slight diurnal range was eliminated in the manner already indicated many times. Then the precipitation for each eight hours was placed upon the curve of temperature, and the condition of the temperature and precipitation was taken out under three heads,—first with rising, second with stationary, third with falling, temperature. The results for each month are given in the following table:—

Pike's Peak Precipitation and Temperature.

	TEMPERATURE.					
	Rising.		Stationary.		Falling.	
	Total Inches.	Per Cent.	Total Inches.	Per Cent.	Total Inches.	Per Cent.
January.....	3.38	16	4.05	20	13.40	64
February.....	3.22	17	4.92	27	10.27	56
March.....	5.24	17	6.17	20	19.31	63
April.....	13.84	25	16.17	29	26.13	46
May.....	14.68	27	20.11	37	19.98	36
June.....	7.11	27	6.53	25	12.66	48
July.....	17.48	28	16.05	26	28.49	46
August.....	10.38	19	15.32	28	29.19	53
September.....	4.48	20	5.37	24	12.69	56
October.....	4.41	24	4.63	26	9.09	50
November.....	4.29	17	6.88	27	14.34	56
December.....	3.09	17	3.11	17	12.26	66
Year.....	91.60	22	109.31	27	207.81	51

No one can be more surprised than the present writer at this extraordinary result, so contrary to all preconceived theories. We find that on the average more than half the rain occurs with a falling temperature. It seems probable, however, that in general the rain is independent of the temperature. While it might be thought that a falling temperature in a saturated air would tend to produce precipitation, yet such is by no means the fact. There are many cases in which a fall of from ten to fifteen degrees Fahrenheit has occurred in a saturated air without any corresponding rainfall. Whatever may be thought of these facts, there is one point that is certainly made perfectly clear in this discussion, and that is that the temperature in a column of air in which rain is falling is not *higher* than that of the surrounding region.

It is probable that some will think there is a contradiction between the results here presented and those given several times before, especially in this journal for Sept. 5, 1890, but I think this is only a seeming contradiction. While the great bulk of the rain in the eastern part of the country occurs with a rising temperature at the earth's surface, yet I have shown, that, during the passage of storms and high areas, the temperature in the upper air changes several hours earlier than at the earth (in the case of Mount Washington five to ten hours earlier); so that there may easily be a falling temperature where the rain is formed. Several months of observations at Mount Washington have shown practically the same result as at Pike's Peak.

For several years I have contended that there is absolutely no proof of an ascending current in the centre of our storms, or even where rain is falling. It seems as though the present discussion must be regarded as a culminating point, and a perfectly satisfactory disproof of such ascending current.

H. A. HAZEN.

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BOOK-REVIEWS.

Socialism New and Old. By WILLIAM GRAHAM. (International Scientific Series.) New York, Appleton. 12°.

THIS is an interesting work. It is written in a more attractive style than that of most economic treatises, and bears the marks of study and thought as well as of a philanthropic spirit. It opens with a statement of what socialism is, its various forms being recognized and defined, with special attention to what is now the leading form of it, that known as collectivism, or nationalism, according to which the State is to be the owner of all the instruments of production, while private property in other things is to remain undisturbed. The author then sketches the history of socialism with special reference to the evolution of the contemporary forms of it, and showing the various contributions of Rousseau, St. Simon, Marx, and others to the doctrine as it is to-day. He then goes into an elaborate discussion and criticism of the proposed socialistic or collectivist state, pointing out the respects in which it would be sure to fail, as well as others in which its success would be very doubtful. The main objection he makes, and one that he rightly deems insurmountable, is the impossibility of determining the relative rates of wages of the different classes of workers in the socialistic state. He has no difficulty in showing that equality of payment would be impracticable, since the more skilful workmen and the abler managers could not be induced to put forth their best efforts except for relatively higher pay; while, on the other hand, there is no possible way to determine how much higher the pay ought in justice to be. Other objections, such as the impossibility of applying the collectivist scheme to foreign trade, the lack of personal liberty under a socialistic regime, and the difficulty of providing for intellectual workers, are also emphasized; and the conclusion is that the attempt to introduce the system "would bring chaos, and 'confusion worse confounded,' until human nature rose in revolt against the impossible thing."

But while Mr. Graham is no collectivist, he maintains that the condition of the laboring classes can be bettered, and ought to be bettered, and that the State ought to do it; yet he seems at a loss with regard to the means. He has some chapters on "practicable socialism," in which he advocates several measures of a more or less socialistic character, such as State loans to co-operative societies, allotments of land to laborers, and purchase of city lands by the municipalities, all more or less objectionable, and, as it seems to us, promising but little real benefit to the poor. Mr. Graham, in short, is more successful as a critic of socialism than as a constructive social reformer; the most useful suggestion he makes being that of giving all classes the means of getting a good education in order to equalize opportunities,—a suggestion, however that is not new. In his last chapter he discusses the supposed present tendency toward socialism, expressing the opinion that such tendency is overrated, and that counter tendencies are at work which will nullify the socialistic movement. Altogether, Mr. Graham has given us a useful discussion, and one that deserves to be read by all who are interested in the subject.

AMONG THE PUBLISHERS.

HENRY HOLT & Co. have just ready "Told After Supper," a series of brief burlesque ghost-stories by Jerome K. Jerome. Although represented as told in good faith by their narrators, the reader is sometimes let into a hint of realistic explanation which gives the touch of good-natured satire characteristic of the author.

—Benjamin R. Tucker, Boston, has just ready "Church and State," a new volume of essays on social problems, by Count Leo Tolstoi, translated directly from Tolstoi's manuscript. It was written several years ago, but has thus far been kept in manuscript.

—Roberts Brothers will publish Feb. 10 the following: "Petrarch, his Life and Works," by May Alden Ward (author of a similar work on Dante), a clear and well-written sketch, in which the subject is considered as the precursor of the Renaissance, and as one of the great triumvirate that created the Italian language and inaugurated its literature; and a volume entitled "Power through