

LETTERS TO THE EDITOR.

. Correspondents are requested to be as brief as possible. The writer's name is in all cases required as proof of good faith.

The editor will be glad to publish any queries consonant with the character of the journal.

On request, twenty copies of the number containing his communication will be furnished free to any correspondent.

The Rotatory Motion of Heated Air.

NOTICING that Professor Hazen questions, in *Science*, the rotatory theory of tornadoes, it occurs to me to publish an observation that I recently made, which may have some bearing on this subject. Not long ago, while watching the surface of a cup of hot tea, which contained some sugar, but no milk or cream, my attention was attracted to the phenomena presented on its surface. Close to the hot liquid, and covering it quite evenly, was a thin layer of condensed vapor. The air of the room was still, and I protected the film from my breath, as I watched it. I saw the film in constant motion. At one or two points at a time the vapor acquired two motions,—one in a whorl, and one progressive. In the former the motion was first visible at the exterior, in a circle a little more than half an inch in diameter. The broad part of each ray of the whorl appeared first, and afterward the parts near the focus were developed, and were rotated or twisted round the focus at a relatively rapid rate. As this took place, the whole whorl advanced across the surface of the liquid until the whorl disappeared, and the clear surface appeared without any film above it. Sometimes only one whorl was in sight, sometimes two appeared at once. This phenomenon was repeated until no more vapor was visible above the liquid.

As it appeared to me, there were here conditions favorable to observing the behavior of moisture-laden air over a super-heated level surface. Some condition which escaped notice must have determined the point at which a special motion was initiated; but the uniformity with which this developed into a centripetal rotatory and advancing movement was quite impressive. How far the conditions of the observation coincide with the conditions present in tornadoes, those who are competent to discuss meteorological questions may decide.

CHARLES W. DULLES.

Philadelphia, Sept. 20.

AMONG THE PUBLISHERS.

"THE Essentials of Medical Chemistry and Urinalysis," by Sam E. Woody, M.D., published by P. Blakiston, Son, & Co., has reached a third edition, which would indicate that the book, which is small, is filling its place.

—Another characteristic brochure by Professor Henry Drummond, under the title of "Perfected Life, the Greatest Need of the World," has just been issued uniform with the popular booklet "Love the Supreme Gift, or the Greatest Thing in the World." Both are published by Fleming H. Revell, New York and Chicago.

—We have received from Messrs. Dauchy & Co.'s Newspaper Advertisement Agency, 27 Park Place, New York, their "New Catalogue of American Periodicals," a volume of 624 pages. It contains a list of all newspapers, magazines, and other periodicals in the United States and Canada which insert advertisements, and is corrected up to Aug. 15 of this year.

—Messrs. Macmillan & Co. have just issued "The Parabola," being Part I. of "Geometrical Conics," by Rev. John J. Milne and R. F. Davis. Instead of following the usual plan, the authors have endeavored to make a continuous treatise as distinguished from a series of detached propositions. At the close of the book is a valuable collection of problems.

—Dr. Charles M. Andrews of Bryn Mawr College will publish in the October number of the *Annals of the American Academy of Political and Social Science* an interesting article on "Beginnings of the Connecticut Towns." The Constitution of 1639 has a wider than local interest, since it was the first written constitution, the prototype of Republican government on this continent. It is a question of no small importance, therefore, whether the Constitution was founded by the towns as such or by the people. This is the question discussed by Dr. Andrews. A painstaking study of

the facts leads him to the conclusion, in opposition to the late Alexander Johnston and many others, that Connecticut draughted its organic law on the theory "that the sovereignty of a State is in the people of that State."

—Another example of the rapid growth of chemical literature is shown in the appearance from the press of John Wiley & Sons of "Sugar Analysis," by Ferdinand G. Wiechmann, Ph.D. Dr. Wiechmann is instructor in chemical physics and chemical philosophy at the School of Mines, Columbia College, and is consulting chemist to the Havemeyers & Elder Sugar Refinery Company of Brooklyn. The work is intended as a handbook of instruction in schools of chemical technology, and for use in the refineries, sugar-houses, and experiment stations. Within the past few years many changes have been introduced in the methods of sugar analysis, and new methods have been devised, and, as is usual with such matters, the literature is scattered through numerous foreign journals. It has been Dr. Wiechmann's purpose to bring this new matter together into such shape as to make it available for those directly interested. The methods of analysis which he has selected from the vast wealth of material available have been chosen after long trial and practice under the supervision of the author. Instead of taking up for discussion, as is usual, the different products met with in sugar laboratories, such as raw sugars, refined sugars, liquors, molasses, etc., and describing for each in turn the determination of their constituents, the author has deemed it more expedient to discuss the methods of determining the individual constituents, as sucrose, invert sugar, water, ash, etc., independently of the products in which they may occur. He believes that by the adoption of this plan repetitions have been avoided. Examples have been inserted in the text to aid in the understanding of the principles discussed, and of the calculations. As is usual with such works, various references to original memoirs are given. The book is furnished with numerous tables, as is required in such a subject.

—The twentieth anniversary of *The Century* is celebrated by the publication of the next (November) number. *The Century* series of separate illustrated papers on the movement to California in 1849 and the events which preceded it, begins in the November number with a narrative, by Gen. John Bidwell, of the experiences of the first emigrant train to California. There is no part of the world, of equal civilization, of which so little has been divulged as of Thibet. A well-qualified American traveller, Mr. W. Woodville Rockhill, has recently returned from a journey through this the unknown heart of Asia, and will give in a series of illustrated papers the results of his travels and observations. For seven hundred miles of Mr. Rockhill's journey he passed through a country where no white man had ever set foot. Among the articles promised are some on "The Personal Traits of Lincoln," "Adventures of War Prisoners," "Minister Dallas at the Court of the Czar Nicholas," "Indian Fights and Fighters," "American and English Frigates in the War of 1812," "The Faith Doctor" (by Edward Eggleston), "Mmes. De Staël, Roland, and Récamiér," "Pictures by American Artists," "American Newspapers," "Municipal Government in Europe and America," and "Present Day Papers." This last unique series of well-considered utterances by prominent writers, on the great questions of the day, will be continued during the coming year. The group has recently added to its own number, and now consists of the following: Charles W. Shields, Hugh Miller Thompson, Henry C. Potter, Charles A. Briggs, Theodore T. Munger, Washington Gladden, William Chauncey Langdon, Francis G. Peabody, Samuel W. Dike, William F. Slocum, jun., Seth Low, Edward J. Phelps, Richard T. Ely, William J. Sloane, and Charles Dudley Warner. The above list gives only a part of the contents of the new year, special announcements of features in preparation being reserved. Mr. George Kennan, who was interrupted in the preparation of his concluding papers, will, it is expected, before long give further chapters of the story of his travels in Siberia and Russia; Mrs. Van Rensselaer will publish her final papers on English cathedrals; and Mr. La Farge will give his views of art in general, and especially of modern and Western art methods, from the point of view of an Oriental residence.