The New York State Science Teachers' Meeting—"What May Be Done to Improve Our Laboratory Work," Mr. J. A. Randall, Pratt Institute.

"The Quick Comprehension of Machinery," Dr. John F. Woodhull, Teachers College.

"The Physics of Geysers," illustrated, Professor William Hallock, Columbia University.

Luncheon was served at the Institute Club. This was one of the most interesting and helpful meetings which the club has ever held. Not only were the papers valuable, but not the least valuable was the coming together of persons engaged in the same line of work, "brushing" against each other, talking "shop" and getting inspiration from fellow teachers, which is worth while to possess and which cannot be obtained in any other way.

C. H. S.

NEW YORK STATE SCIENCE TEACHERS' ASSOCIATION.

The sixteenth annual meeting of the New York State Science Teachers' Association was held at Albany, with the State Teachers' Association at Thanksgiving time. This time was chosen as an experiment, with the hope that the school authorities through the state would be willing to allow the science teachers their time for the two days. In point of attendance, the experiment would hardly be called successful; yet, although the number of teachers from any distance was small, those who were fortunate enough to be present will remember the papers and discussions with pleasure.

Tuesday morning, the general session was called to order by President L. S. Hawkins of the Cortland Normal School. Following a few brief announcements, the various section meetings were held.

Before the teachers of physics and chemistry, H. S. Miner, chief chemist of the Welsbach Light Company, gave an extremely interesting talk on the history, development, and manufacture of gas mantles. Besides an instructive collection of lantern slides, he exhibited a number of gas mantles of slightly different composition, showing that the mantle treated with about one per cent of ceria gives the highest candle power.

Chairman of the section, H. A. Carpenter, spoke briefly about a class in physics for girls. He emphasized the subject of heat and outlined several experiments in radiation, leading to the determination of the best insulating materials for fireless cookers. Some discussion followed, which brought out the fact that the physics teachers are deeply interested in the movement for experiments for the girls different from those for the boys.

In the biology section, the first paper by F. W. Hartwell presented some of the problems in biology which confront the city teachers especially. The idea was repeated several time in the discussion, that the subject should be made a study of living things rather than dead things. Snakes, frogs, turtles, fish, beetles, etc., can be easily kept in the laboratory and constantly furnish material for interest.

G. A. Bailey gave a short talk on the use of the lantern in biology teaching. He emphasized the following uses: To show (a) rare specimens; (b) small fruits and flowers that need to be magnified; (c) different stages in the development of flowers, etc.; (d) to be used in review when specimens cannot be obtained; (e) in taking up a new subject, the different points can be explained to the whole class at one time; (f) to show animals in their natural environment.

The section in agriculture held an enthusiastic meeting, addressed by F. W. Howe and Miss Elizabeth F. Genung.

Tuesday afternoon the Association greatly enjoyed a visit to the immense plant of the General Electric Company at Schenectady.

Wednesday morning a general session was held, addressed by Professor C. P. Steinmetz of Union College on the subject, "School Science and Industry." He showed the relation between the school and community and criticised each for its apparent lack of interest in the other. This was followed by an address by Professor C. F. Hodge of Clark University on the subject, "Civic Biology." He told of the many problems in sanitation, in cleanliness, in ridding a community of pests, such as flies and mosquitoes, etc., that could be better solved through the influence of the schoolroom than elsewhere.

One of the most important matters of business that came before the Association was the report of the committee on the preparation of new experiments in physics. Chairman J. A. Randall of Pratt Institute reported that the committee had prepared several experiments in mechanics and had had the apparatus made by one of the large Eastern apparatus manufacturers and brought to the meeting as an exhibit. These experiments are to be performed with apparatus that is large enough to command the respect of the pupils and are practical applications of some of the important laws of physics, such as the parallelogram of forces as applied to the crane, roof truss, etc.

The work of the committee has only begun as the entire list of experiments will include all of the main topics of the subject as usually taught. As the work goes on, the committee hopes to be able to publish blue prints of the apparatus so that it can be made by any teacher having a little mechanical skill; and also mimeographed sheets of directions to accompany the apparatus showing its use. These will probably be sent to all members of the Association who are teaching physics. The character of the work of the committee is shown in the type of experiments described in Mr. Jameson's article on page 195 of this JOURNAL.

The committee on chemistry experiments, Chairman Professor J. F. Woodhull of Teachers' College did not report at the meeting, but it was understood that it had not been idle, and under the leadership of the committee on physics would be ready to report at the next meeting. A committee on physics experiments, especially for girls, was voted to work in conjunction with the other two committees. These three committees will be ready to give full and detailed reports at the next meeting of the Association and will form the nucleus of a meeting that ought to be full of interest for all science teachers. The next meeting will probably be held at Syracuse at Christmas time as formerly.

The following officers were elected: President, Ernest Reveley Smith, North High School, Syracuse; Vice-President, Guy A. Bailey, Geneseo Normal School; Secretary-Treasurer, Bryan O. Burgin, Albany High School.

ERNEST R. SMITH.

REPORT OF THE ANNUAL MEETING OF THE AMERICAN FEDERATION OF TEACHERS OF THE MATHEMATICAL AND THE NATURAL SCIENCES.

The American Federation of Teachers of the Mathematical and the Natural Sciences held its annual meeting at the New Willard Hotel in Washington on December 27.