THE AMERICAN INSTITUTE OF MINING-ENGINEERS.

THE winter meeting was held at Cincinnati, Feb. 19–22, and was not so numerously attended as usual by reason of the flood in the Ohio, which had so interfered with railroad travel during the preceding week as to keep many at home who had expected to be present.

At the first session, on the evening of Tuesday, Feb. 19, the institute was cordially welcomed to Cincinnati by representatives of the city authorities, of the citizens, of the university, of the Ohio mechanics' institute, and of other organizations.

Mr. Robert W. Hunt of Troy, N.Y., president of the institute, returned thanks in behalf of his fellow-members. The remainder of the evening was occupied by Mr. Arthur V. Abbott of New-York City, who delivered a lecture on physical tests of metals, in which he gave a lucid description of the Fairbanks automatic testing-machine at New York. Diagrams of the various parts of the machine were thrown upon the screen, including representations of the novel contrivances employed for the automatic registration of stresses and strains, as well as some of the autographic sheets, which showed how the ultimate tensile strength of short bars differs from that of longer ones of the same material and same cross-section. The machine has a capacity of two hundred thousand pounds for either kind of stress, — tension, compression, torsion, etc. (see p. 312).

The session of Feb. 20 was opened with a paper by Mr. Magnus Troilius of the Midvale steel-works, Philadelphia, describing and advocating the bromide process for determining the sulphur in steel; and this was followed by a supplementary paper, by the same author, giving tables for facilitating the heat-calculations of furnace-gases containing CO_2, CO, CH_4, H, and N.

The next paper, by Mr. George C. Stone of Newark, N.J., was on further determinations of manganese in spiegel, being a continuation of a paper presented at the Troy meeting, in which the results of many analyses of spiegel by different chemists were tabulated, and the comparative value of the chemical processes employed was discussed.

The next paper read was by Dr. T. Sterry Hunt of Montreal, on the apatite deposits of Canada, their distribution, richness, and value, the amount at present annually exported, the economic conditions for mining it, etc.

Mr. Nelson W. Perry of Cincinnati exhibited specimens of a new mineral discovered by him near Ramos, San Luis Potosi, Mex., for which he proposed the name ramosite. Its hardness is nine in the scale, being next to the diamond; its color, black; its specific gravity, 3.83. Mr. Perry also exhibited crystals of topaz found in Mexico, some of which were as much as an inch in diameter, occurring in the unusual matrix, trachyte.

After a paper by Mr. Frank Firmstone of Easton, Penn., on incrustations in pig-iron, a report was made by Dr. Thomas Egleston of the Columbia school of mines, New York, on the bill now pending before Congress to re-establish a commission for testing the strength and other properties of iron, steel, and other materials of construction. He earnestly disclaimed any intention of interfering in any manner with the use of the Emory testing-machine at Watertown (built by the last commission), or of having it removed to any other locality, and urged that all legitimate influence be brought to bear to have the bill passed.

In an elaborate paper by Mr. S. Stoltz of Pittsburg, Penn., on coal-washing, elevating and conveying machinery, the plant employed by him in handling soft coal was explained in detail by the aid of numerous diagrams.

Professor Lord, of the Ohio state university, Columbus, gave the results of analyses of certain Ohio clays.

A paper by Mr. Joseph H. Harris of Philadelphia, on the benefit fund of the Lehigh coal and navigation company, gave a *résumé* of this and various other forms of life and accident insurance for the benefit of miners, and compared the usefulness of the different plans which have been adopted in Pennsylvania; it being a matter of extreme difficulty and delicacy to arrange a plan which works well, in face of the strained relations often existing between the miners and their employers.

The session of Feb. 21 was opened with a lecture by Dr. A. A. Springer of Cincinnati, on torsion, illustrated by diagrams. He was followed by Prof. William L. Dudley of Cincinnati, who explained somewhat minutely the new process of electroplating with iridium, and exhibited specimens of articles so plated.

A paper by Mr. Pedro G. Salom of Thurlow, Penn., giving the results of the analyses and tests of steel used in the U. S. cruisers now building at Chester, Penn., was, by reason of the important and remarkable results obtained, made the special order for the next meeting of the institute.

The officers elected at this meeting were: —

President, James C. Bayless, New-York City; vice-presidents, Eckley B. Coxe (Dufton, Penn.), Thomas Egleston (New York), Edwin C. Pechlur (Cleveland); managers, Edward S. Cook (Pottstown, Penn.), Frank Firmstone (Easton, Penn.), C. W. Maynard (New York); treasurer, T. D. Rand, Philadelphia; secretary, Rossiter W. Raymond, New York; scrutineers, S. T. Williams, J. T. Lewis.

The annual report of the secretary showed a total membership of 1,341, which was largely increased at this meeting.

The meeting was a success, not only in a professional and scientific way, but socially as well. The institute invited its Cincinnati friends to dinner at the Grand Hotel on Wednesday evening; Mr. and Mrs. T. B. Aldrich entertained the institute, at their residence on Mount Auburn, on Thursday evening; the Southern railway provided an excursion to the high bridge over the Kentucky River, with special train of Pullman cars, and lunch, on Friday; and the institute was invited to attend the opera festival to hear Nilsson on Friday evening.