

Mining Laws, Dr. W. R. Ingalls, New York City.

Report of Committee on Smelter Rates, Hon. E. A. Colburn, Denver, Colo.

Report of Committee on Investigation of the National Forest Service and its Effects upon the Mining Industry, Colonel A. G. Brownlee, Denver, Colo.

"The Mineral Resources of Arkansas," A. W. Estes, Yellville, Ark.

Annual address of the president, Hon. J. H. Richards.

Reception to delegates and members by the citizens of Pittsburgh.

"Conservation in the Coal Industry. Protection of Life and Prevention of Waste," John Mitchell, Indianapolis, Ind.; G. W. Traer, Chicago, Ill.; J. B. Zerbe, Cleveland, O.; J. V. Thompson, Uniontown, Pa.

"Formal Opening of the Government Stations for Investigation of Mine Explosions," Hon. James R. Garfield, Washington, D. C.; Hon. O. W. Underwood, Birmingham, Ala.

"Brief Statement concerning the Government Work for Greater Safety in Mining" (illustrated), Dr. J. A. Holmes, Washington, D. C.

"Work of the Government of the United States for the Mining Industry," Hon. James R. Garfield, Secretary of the Interior, Washington, D. C.

"Arbitration as a Factor in the Mining Industry," Mr. Thomas L. Lewis, Bridgeport, Ohio.

"The Federal and States Governments in their Relation to the Mining Industry," Senator Charles Dick, Akron, Ohio; Congressman George F. Huff, Uniontown, Pa.; Thos. L. Lewis, Bridgeport, Ohio; George H. Harrison, Columbus, Ohio.

"The Mining Industry as influenced by Transportation," E. H. Harriman, New York City; Dr. James Douglas, New York City; Wm. G. Mather, Cleveland, Ohio; Alexander Dempster, Pittsburgh, Pa.

"The Distribution of the Nation's Mineral Wealth" (illustrated with lantern slides), Dr. George Otis Smith, Director U. S. Geological Survey, Washington, D. C.

"Alaska and Its Mineral Resources," Dr. A. H. Brooks, Chief Alaska Division, U. S. Geological Survey, Washington, D. C.

"Nevada and Its Mining Industry."

"Utah's New Developments in Mining," Duncan MacVichie, Salt Lake City, Utah.

"Mining and the Mineral Resources of Arizona," Colonel Frank Cox.

"The New Mining Industry—The Rare Metals," Dr. Herman Fleck, Professor of Mining Engineer-

ing, Colorado School of Mines, Golden, Colorado.

"Secondary Mining Education," H. H. Stoek, editor *Mines and Minerals*, Scranton, Pa.

"The Iron and Steel Industry," Hon. Elbert H. Gary.

"The Mineral Resources of Virginia," E. A. Shubert, Roanoke, Va.

"A Tariff Duty on Zinc Ores," S. Duffield Mitchell, Carthage, Mo.

"The Barren Zone of the Appalachian Coal Field," Dr. I. C. White, State Geologist, Morgantown, W. Va.

---

#### THE AMERICAN INSTITUTE OF CHEMICAL ENGINEERS

A MEETING of the institute is to be held in Pittsburgh, December 28 and 29, in the buildings of the Carnegie Technical Schools. Papers of general chemical engineering interest are to be presented; notable among these will be the first technical statement by the inventor, Mr. James Gayley, regarding the process for dehydrating air used in blast furnaces and other metallurgical apparatus. Other papers on the use of fuels and power production are to be presented. The measurement of high temperatures and dryer calculations and dryer designs are the subjects of two other important papers.

One feature of the Pittsburgh meeting will be the exhibition by manufacturers of novel plants and machinery, partly by drawing and partly by the actual installation for tests in the presence of the institute. These exhibitions and tests are in no way official in that the institute does not undertake to pass official judgment upon any of the exhibits, and are no more sanctioned or indorsed by the institute than technical papers presented to it would be, but are offered by the manufacturers as a method of acquainting those in charge of manufacturing operations with the latest and best machinery in the various lines.

Such an exhibit, however, should be an increasing source of breadth and education to the members, and the tests and discussions which will inevitably result from the special installation of machinery for this purpose should do much to unify the judgment of chemical engineers on the question of certain

classes of apparatus which have hitherto been largely matters of individual opinions.

This meeting will be the first annual meeting of the American Institute of Chemical Engineers, organized last spring in Philadelphia for the purpose of bringing together all those who are particularly interested in the combined application of chemistry and engineering to technical problems. The organizers of the institute, after considerable investigation as to the need of such a society, have made the qualifications for active membership extremely rigid, believing that a very important object of an organization of chemists and engineers (besides meeting for purely social purposes) should be the raising of professional standards among its members. To this end a careful and serious effort is being made to so limit membership that admission to the institute will be in itself an evidence of the standing of its members.

That there was need for some such movement is sufficiently evident by the extent to which fake processes have at times been offered in this particular field. Hitherto chemistry has by the very nature of the phenomena studied, the transformation of matter, presented that element of the mysterious which seems to be important to the successful exploitation of fraud. Numerous patents, which never worked and never could work, have been taken out and sold or made the basis of "Wildcat Companies." Numerous manufacturers have been victimized and it is hoped that in time the Institute of Chemical Engineers may be able to do for the chemical engineering profession what the Society of Civil Engineers has so ably accomplished in its field.

All communications from those desiring to attend the Pittsburg meeting, or from manufacturers who desire to exhibit, should be addressed to the secretary, Dr. J. C. Olsen, Polytechnic Institute, Brooklyn, N. Y.

#### VOCATIONS OF YALE ALUMNI

THE *Yale Alumni Weekly* gives some statistics from the new quadrennial catalogue of living graduates. It shows that the law holds its own, or nearly so, in the ratio of alumni

choosing it even if one goes back far into the expired century or even earlier. In 1797 there were 42 per cent. of Yale graduates in the law. This ratio fell to 33 per cent. in 1802; rose to 36 per cent. in 1813-14; fell to 31 per cent. in 1821-2-4; rose to 32 per cent. in 1831-3-4; and to 33 per cent. in 1841-5. During the last ten years in the academical department there were graduated 2,950 men, of whom 713 (or somewhat more than 24 per cent.) took the law. The choice of law varies much in particular classes. Thus in the class of 1898 it runs up to 31 per cent.; in the class of 1901 it runs down to about 21 per cent. But the average of 24 per cent. in the last ten classes is not strikingly divergent from the ratios of the first half of the nineteenth century.

As was to be expected, the ministry shows a big decrease. It took 39 per cent. of the Yale graduates in 1797; 30 per cent. in 1802; 25 per cent. in 1813-14; 34 per cent. in 1821-2-4; the same in 1831-3-4; and 27 per cent. in 1841-5. The last ten academic classes, with 2,950 men, return but ninety-five ordained or prospective clergymen, or somewhat more than 3 per cent. For the whole university there are but thirty-six more clergymen as compared with four years ago, although during that time the total of living graduates shows an increase of 2,141.

Medicine in 1797 took 8 per cent. of the college graduates; in 1802 the same; in 1813-14 it rose to 14 per cent.; in 1821-2-4 to 20 per cent.; in 1831-3-4 it fell to 15 per cent.; and in 1841-5 to 9 per cent. Among the 2,950 graduates of the last ten years it numbers 162, or about five and one half per cent. Here again appear striking disparities—eight out of 290 men in the class of 1906 taking that vocation, as compared with twenty out of the 305 men in the class of 1903.

Education in the vocations of the academic graduates comes out stronger than any occupation except the law and business. In 1797 it counted 3 per cent.; in 1802 it fell to 2 per cent.; in 1813-14 it rose to 5 per cent.; in 1821-2-4 it was the same; in 1831-3-4 it was up to 10 per cent. and in 1841-5 fell to 8 per cent. During the last ten years it has taken