WHOLE NUMBER 25.

THE

Ohio Mining Journal.

OFFICIAL ORGAN OF THE OHIO INSTITUTE OF
MINING ENGINEERS.


MRS. B. G. KOLB, Stenographer.

PUBLISHED BY R. M. HASELTINE,
Secretary and Treasurer.
OFFICIAL DIRECTORY
Of the Ohio Institute of Mining Engineers for
1896.

PRESIDENT,
EDWARD ORTON, JR.,
O. S. U., COLUMBUS, OHIO.

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EXECUTIVE COMMITTEE.
Prof. N. W. LORD, COLUMBUS, Ohio
Prof. F. A. RAY, COLUMBUS, Ohio
E. B. WILLARD, HANGING ROCK, Ohio
WINTER MEETING, 1896.

PROGRAMME
ARRANGED ACCORDING TO STANDARD TIME.

Tuesday Evening, January 21, 7 O'clock.

Annual Address by the President,
Prof. Edward Orton, Jr., Columbus, Ohio

Report of Secretary and Treasurer,
R. M. Haseltine, Columbus, Ohio

Paper—Economic Questions Connected with Retort Coke Ovens with the Resulting Bi-products,
Prof. R. M. Atwater, Chemist for the Process Solvay Co., Syracuse, N. Y.

It is a rare opportunity for the Institute to have a paper presented like the above, and by such an author, especially to the coal operators of the State, none of whom can afford to miss the reading and discussion of this paper. Mr. Atwater is a man of large experience with this subject and is well qualified to demonstrate the advantages of this new industry, whereby the gas, ammonia and tar from the coal are saved, at the same time producing a commercial quality of coke. He has demonstrated that by adding a portion of the coking coals of Pennsylvania or West Virginia to the dry burning coals of Ohio, a good quality of coke can be produced and that the bi-products saved will yield a handsome profit.

Paper—The Mine Boss and His Relations to the Operator and Miner,
John Kane, Editor United Mine Workers Journal, Columbus, Ohio

Wednesday, January 22, 9 A. M.

The Institute will visit the Steel Works of King, Gilbert & Warner, South High Street, and located on the C., H. V. & T. R. R., City.

Wednesday, January 22, 1:30 P. M.

Paper—Practice Compared with Theory in Coal Mining,
William Hibbs, C. and M. E., Scio, Ohio
Paper—Wire Rope Haulage; Its Uses and Abuses,

Paper—
F. A. Ray, Ass't. Prof. of Mining Engineering, Ohio State University

Wednesday Evening, 7 O'clock.

Paper—What Geology Owes to Coal Mining,
Prof. Edward Orton, Columbus, Ohio

Paper—Theoretical and Practical Mine Ventilation,
Frederick C. Keightley, Uniontown, Pa.

Prof. N. W. Lord will explain the uses of the Calorimetric Bomb designed for the determination of the heating value of coals. This is the latest designed instrument for this use in the market and was imported for exhibition at Atlanta, and recently purchased for the Mining Department of the O. S. U.

Thursday, January 23, 9 A. M.

The members and their friends will visit the works of the Jeffrey Manufacturing Company in this city.

Thursday, January 23, 1:30 P. M.

Election of Members.

Miscellaneous Business.

Election of Officers for ensuing Year.

Paper—What I Saw in the Mines of South Wales and England During the Summer,
Capt. J. L. Morris, East Liverpool, Ohio

Paper—Mine Wiring. The Distribution of Electricity in Coal Mines,
Charles A. Pratt, E. E., of the Link Belt Co., Chicago, Ill.

In the paper he will outline the various methods now practiced of distributing current in coal mines, giving considerable attention to the standard 250 volt direct current transmission, its efficiency and its limitations, then pass to a higher voltage, direct current transmission, with their advantages and disadvantages, then take up the alternating current system, both two phase and three phase, which are now drawing some attention.

Paper—Some Hints About Mining Coal,
Thomas H. Love, Leesville, Ohio
Thursday, Jan. 23, 7 P. M.

On Thursday evening the Institute will accept the invitation of Prof. Henry C. Lord, to visit the Emerson McMillen Observatory, at the Ohio State University. This Observatory is the gift of our esteemed member, Col. Emerson McMillen, who was the second President of the Institute, and has always been one of its most influential members. It is the largest and most modern of any Observatory in the State, and certainly the newest in the world. It is equipped with astronomical instruments of the latest and most approved design. The large telescope, which is fifteen feet in length, and twelve and one-half inch aperture, being one of the most powerful now in use, will be explained, and each member will have an opportunity to witness through it some of the heavenly bodies.

It is especially fitting that the members of the Institute should be the visitors the first time this Observatory is able to throw open its doors to the public. Should the night be clear, none present will ever forget this evening spent at the Emerson McMillen Observatory.

Friday, Jan. 24.

EXCURSION.

On Friday morning the members will take the Columbus, Hocking Valley & Toledo train, which leaves this city at 7:30 A. M., for a day at New Pittsburgh and Jobs mines, where they will be given an opportunity of examining the two largest producing plants in the State. At the latter the new steel tipple, equipped with steam dumping apparatus, the first of the kind in the state, will be in operation.

A lunch will be served on the train.
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