Prof. F. A. Gooch, Yale University, New Haven, Conn.

Prof. Charles Loring Jackson, Harvard Univ., Cambridge, Mass.

Dr. Wm. McMurtrie, 106 Wall St., N. Y. City.

Prof. Charles E. Munroe, Columbian Univ, Washington, D.C.

Prof. Albert B. Prescott, Univ. of Michigan, Ann Arbor, Mich.

Prof. W. B. Rising, Univ. of Cal., Berkeley, Cal.

Dr. G. L. Spencer, Centralia, Wis.

Dr. W. C. Stubbs, Audubon Park, New Orleans, La.

Dr. Thomas Taylor, Washington, D. C.

The Cyanide Method of Extracting Gold from its Ores. Application to the Assays of Ores Poor in Gold and Silver.[1]*—Preliminary Notice.*—Having undertaken this work, at the suggestion of Prof. Mallet, only within the last two or three weeks, I have no exhaustive report of any nature to present. The work has not, as yet, advanced to such a stage that results can be stated satisfactorily in numbers. The attempts to apply this method to assay purposes *may* have been already made. If so, I have been unable to find any statement of that fact, and have no knowledge that such an attempt has been made.

I am at present comparing the method with the methods using chlorine and bromine. Quartz ores, too poor in gold or silver to be advantageously worked by the ordinary method of crucible assay, are the ores so far used.

The pulverized ore is well and repeatedly shaken with 0.25 per cent. solution of potassium cyanide, free access of air being provided for. After filtration and partial evaporation, the liquid is slowly passed over pure zinc filings. The zinc is then scorified with a larger amount of lead and the button cupelled.

The work has only progressed far enough to give hopes of good results. It seems at this stage to offer several advantages over the other methods mentioned.

The cyanide extracts the silver as well as the gold; bromine and chlorine only extracting the gold. The extremely disagreeable fumes of the other methods are entirely avoided. The work can be conducted without the use of hoods or fume rooms.

[1] Read at the Cleveland meeting, December 31, 1895.

The method yields the metals in a condition in which they can be more easily handled and their weights determined than can be the exceedingly fine precipitate from the bromine or chlorine solution.

The time is materially shortened, the long delay in the collection of the gold by the use of ferrous sulphate or oxalic acid being avoided.

In the few comparisons made, the amount of gold (and silver) extracted has been greater with the cyanide method than with the others. Though sufficient work has not as yet been done to make this reliable.

Before pronouncing on the availability of the method, other classes of ores than those so far used (quartz ore with and without pyrite) will be treated.

I expect to push the work as rapidly as possible.

Jan. 3, 1896. WILLIAM J. MARTIN, JR.

BOOKS RECEIVED.

Mining Journal of the Northwestern Mining Association. Spokane, Wash. 58 pp. Price 10 cents.

A Text-Book of Gas Manufacture for Students. By John Hornby, F.I.C. New York: Macmillan & Co., 1896. xiv, 216 pp. Price $1.50.

Bulletin No. 59. Spraying Experiments in 1895. Lexington, Ky.: Kentucky Agricultural Experiment Station of the State College of Kentucky. December, 1895. 19 pp.

Bulletin No. 60. Analyses of Commercial Fertilizers. I. Official Analyses. II. Analyses of Farmers' and Inspectors' Samples. Lexington, Ky. Kentucky Agricultural Experiment Station of the State College of Kentucky. December, 1895. 12 pp.