SOME of the fourth-year miners and chemists have begun on their "proof analysis." The element in question this year is lead.

Monday Richards and Capen finished their work in the mining laboratory, and Tenney and Willcutt began theirs on Calumet sand and smelt, for gold and silver respectively.

The sheet of dormers and wrought-iron work were handed in last Saturday, and the next problem will be one in designing.

The senior architects in mechanics have been assigned the strength of framing-joints as their special work on the testing machine.

The annual meeting of the A. A. M. I. T. was held in its new room in the M. F. A. on Wednesday the 18th. After the reading of the secretary's and treasurer's reports, and that of the Committee on the "Sketch Book," the new constitution was read, and after a few amendments it was decided to adopt the new one in place of the former. Then followed the election of officers for the ensuing year. Mr. Arthur Rotch was chosen president; Alden, secretary; Hartwell, treasurer. After a discussion on the best way of publishing the new "Sketch Book" the meeting adjourned.

Cornell has graduated forty-four students in mechanical engineering since 1869, when that department was established at the university. There were no graduates from this course last year.

The Pennsylvania Railroad has recently made successful experiments on lighting cars by electricity, using secondary storage batteries under the floor of the cars; thirty cells of battery furnishing current enough to supply six Edison lamps for seventeen hours.

The first meeting of the Σ. M. E. Society this year was held on Monday of last week. G. H. Bryant was elected president; F. E. Davis, vice-president; H. P. Barr, secretary and treasurer. A committee was appointed to arrange a suitable time for the meetings during the coming year. This society was organized last year, and has been very successful. Much valuable information has been gained from papers and discussions, and the vacation excursion indulged in by the society will be long remembered as a very enjoyable affair. It is hoped that this year, with a larger membership, increased interest will be taken in the meetings, and the society be made a source of even greater pleasure and profit than last year. The next meeting will be held on Tuesday, Oct. 31, at 12 o'clock. Subject for discussion, "Is a one story cotton or woollen mill better than one of two stories or more?"

Vertical rolls for bending boiler plate were first used at the Jarrow Works in England. As the size of the plates increased, great difficulties were found in supporting them in the ordinary bending rolls, and the plan of vertical rolls was suggested, enabling the plates to rest on their edges on the ground during the whole operation. In the boiler shop at Jarrow may be seen boilers sixteen and a half feet in diameter and twenty feet long. They are made wholly of steel, each ring consisting of only three plates. When finished, two of them will furnish steam for 3,000 indicated horse-power, and will weigh eighty tons each.

The attention of mechanicals is called to the differential high-pressure air engine, a specimen of which was exhibited last year at the Mechanics' Institute Fair. Since then improvements have been made, and the machine is now a thoroughly practical affair, which does its work promptly and regularly, and with economy equal to, if not greater than, that attained by the best steam engines. In the Boston Journal of Commerce for July 29 may be seen a series of indicator diagrams taken from a ten-horse engine with two cylinders six and a quarter inches in diameter and fourteen inches stroke, running at one hundred revolutions per minute, and at pressures ranging from one to six atmospheres. It is said that before Jan. 1, 1883, engines will be in the market varying from ten to sixty horse power.