the above indicated processes, miners can confidently rely on the accuracy of the results of tests of any samples intrusted to him. The council being acquainted with the history of the movement (initiated by Mr. J. A. Chapman, one of the principal mining men in town) that led to the promise by the Hon. Mr. Cadman of a parliamentary money vote covering the cost of the testing-plant, I need here only relate some special incidents connected therewith, and how the case stands at the present time. When in the early part of the year the Hon. Mr. Cadman passed Dunedin on his travels through the Otago goldfields, accompanied by Mr. H. Gordon (Inspecting Engineer of the Mines Department), both gentlemen, at the invitation of Mr. James Allen, inspected our metallurgical laboratory, and expressed themselves satisfied with the space and convenience provided for a small testing-plant when the building was erected. Later on we received notice from Mr. Allen that the Mines Department required plans and estimates of cost of the necessary machinery and apparatus, including expense of erection, but with the proviso that the sum must not exceed £300. Mr. Fitzgerald thereupon at once prepared the plans, and, assisted by Mr. Cutten (the lecturer in applied mechanics), I furnished the estimate of cost. Mr. Allen next informed us that Mr. H. Gordon, who, as the Inspecting Engineer of the Mines Department, had the matter in hand, was much interested in it, and proposed that we should obtain a plant that would really serve as a model for the students. Although generally approving of the nature and relative positions of the different parts of the plan proposed by us—namely, five-horse power gas-engine, three-stamper battery with amalgamated copper-plates and blanket-strakes, berdan basin, cyanide apparatus capable of treating up to a ton in weight of material, and a small roasting furnace—still Mr. Gordon wished a small rock-breaker to be added to the battery, and requested some further information regarding the proposed position of the battery. This was supplied without delay, and now, quite recently, Mr. Gordon, in a letter to Mr. Allen, made the further request for a plan and cross-section of the part of the building proposed for the plant, together with accurate levels of the ground between the building and Leith Street, where a rock embankment offers a fine foundation and good height for the battery with easy access from the street—a position which we were originally very anxious to choose, but I found that the cost of preparing the ground and of the necessary housing-in of the battery would bring the total cost of the plant considerably above the stipulated limit of £300. Mr. A. Begg, our lecturer in surveying, having kindly promised to furnish the required plans and levels at once, we may now hope to receive soon authority from the Mines Department to commence preparations and order the plant, so as to have it in working-order in the early part of next year.

The work done for the public since the close of session 1894 by Mr. P. Fitzgerald in assays and analyses, and by myself in determinations of minerals and rocks, was as follows:—

Charged for at Fixed Rates.

(Work done by Mr. P. Fitzgerald.)

November 28th, 1894.—Assay of quartz for gold; for Mr. Collier, Dunedin.
February 14th, 1895.—Assay of quartz for gold; for Mr. Thomas Kinvig, Dunedin.
February 14th.—Assay of quartz for gold; for Mr. Fahey, Dunedin.
February 25th.—Assay of quartz for gold; for Mr. Fahey, Dunedin.
March 5th.—Assay of quartz for gold; for Mr. Cheyne, Skipper's.
May 1st.—Assay of quartz for gold; for Mr. R. Allen, Invercargill.
May 1st.—Assay of quartz for gold; for Mr. Durie, Dunedin.
May 3rd.—Assays of four samples of quartz for gold; for Mr. R. Allen, Invercargill.
May 18th.—Assay of two samples of tailings for gold; for Mr. R. Allen, Invercargill.
May 18th.—Distillation of samples of oil shale for determining quantity of oil contained in it for Mr. R. Lee, Dunedin.
May 18th.—Analysis of pyrites; for Mr. Calvinier, Wyndham.
May 22nd.—Assay of quartz for gold; for Mr. Johns, Christchurch.
June 3rd.—Analysis of sample of building-stone; for Mr. Wales, Dunedin.
June 30th.—Assay of sample of quartz sand for gold; for Mr. Watts, Mornington.
July 13th.—Three samples of quartz assayed for gold; for Mr. R. Allen, Invercargill.
August 20th.—Assay of quartz for gold; for Mr. Begg, Westland.
September 21st.—Assay of sample of quartz for gold, and assay of sample of tailings for gold; for Mr. Wilkinson, Dunedin.
September 23rd.—Assay of quartz for gold; for Bluff Harbour Board.
September 24th.—Assay of quartz for gold; for Mr. Whitburn, Dunedin.
September 30th.—Five assays of five samples of quartz from the Leviathan Mine, Skipper's, for gold; for Mr. L. O. Beal, jun.
October 5th.—Two assays of two samples of quartz from the Leviathan Mine, Skipper's, for gold; for Mr. L. O. Beal, jun.
October 10th.—Assay of highly-pyritous quartz for gold; for Mr. Thomas Fergus, Dunedin.
October 10th.—Analysis and assay for gold of a sample of a dense mixture of arsenical and iron pyrites from Preservation Inlet; for Mr. Bradshaw.
October 16th.—Three assays for gold of three samples—one of concentrates, one of tailings, and one of pyrites; for Mr. R. Allen, Invercargill.
October 24th.—Two assays for gold of two samples of quartz from the Leviathan Mine, Skipper's; for Mr. L. O. Beal, jun.
November 6th.—Twenty-eight assays of gold bullion; for the Colonial Bank, Dunedin.

Determinations of Mineral and Rock Specimens.

(Made by myself, and not charged for.)

November 13th, 1894.—Yellowish-grey ore (forwarded by editor of *Witness*) proved to be secondary iron-pyrites.