

of a number of processes employed in the assaying of ores. Something, too, has been added to our knowledge of the chemical composition of Canadian minerals of scientific interest; among the minerals analyzed being sodalite, nepheline, garnet (andradite), axinite, albite, oligoclase, orthoclase, labradorite, etc. Some attention has been devoted to the chemical and mineralogical study of rocks of scientific interest from various parts of the Dominion, including sandstones, limestones, slates, gneisses, etc. Mineral and drinking waters, coals and various other economic minerals have also been made the subject of study. The work, it will be observed, has been directed mainly in the direction of mineral chemistry, as many of the laboratory students intend devoting themselves to work in connection with mining.

In the laboratories more especially devoted to the determination of the strength of materials, a very extensive investigation, in which the Third and Fourth Year students have taken part, has been carried out on the strengths of certain Canadian timbers. The experiments have now extended over a period of more than two years, and the results are being incorporated in a paper, which will be published during the present month. The experiments have numbered some thousands, and the value of the lumber used is upwards of \$3000.00. The whole of this timber has, however, been generously presented by various companies, amongst which may be mentioned the Canadian Pacific Railway Co., the British Columbia Mills Timber & Trading Company of Vancouver, and Messrs. McLaughlin Bros., lumbermen of Ontario. Important results have been found in connection with what is perhaps the most valuable of the Canadian soft timbers, *i.e.*, Douglas Fir, but the experiments are still far from complete, and are to be continued.

Mr. P. A. Peterson has offered a prize of \$25.00 for a research to be made by the Fourth Year students on the strength of Montreal building brick and the strength of Rockland slate.

An interesting investigation has also been begun as to the effect of internal pressure upon the strength and elasticity of iron and steel tubes under internal pressure.

In the Hydraulic Laboratory, investigations are being carried out on the flow of water through orifices of different sizes and forms, on the effect of viscosity upon the flow, and for the purpose of determining the co-efficients of discharge through conical nozzles. Important results have already been obtained, and it is hoped that they will be published in the near future so that the results may be available to the general public.

Similar experiments and also experiments on the flow of water over weirs have been directly conducted by the students, who are thus able to obtain experience in the scientific treatment of hydraulic problems, which will certainly be of the utmost value to them in their future career.

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