raising over one thousand tons of coal daily. And by its aid, more or less directly applied, minerals are smelted which were before considered valueless; all the labours of the metallurgist are facilitated, and his products correspondingly cheapened.

We thus find that these professions have widely extended their aims, and now call to their assistance and use practically every item of knowledge that has been gathered about the composition and laws of the earth, the waters and the atmosphere —electricity—chemistry—geology—the laws of fluids—the yet almost unknown currents of the air,—all are pressed into the service of the Civil and Mining Engineer, and we are irresistibly led to the thought that their preliminary training must correspond in liberality and breadth to the importance of the subject they are to deal with.

Few, perhaps, except a professional man, can detect and account for the imperfections in the practice of the subject he is interested in, and I can hardly hope to take you all behind the scenes this evening; but the leading facts to be noticed are quite familiar to you all.

When the scant production of Canada is considered, and the preponderating importance of agriculture and the fisheries, the first and most natural question is, whether these professions are important enough to require any special training for those intending to engage in them; in short, would it pay to give our engineers a better training than that at present in their reach.

When a practical question is to be dealt with in a practical manner, figures may perhaps convey a clearer impression than any mere assertion.

The value of the minerals raised in Canada for export and home consumption for the year ending June 30, 1876, was, on a rough estimate, $4,038,000.

The readiest way of estimating the value of the Civil Engineering profession is from a consideration of the number of miles of railway annually built in the Dominion. From figures furnished to me I believe the amount under construction in 1877 to be about 1000 miles, which would involve an expenditure of over $5,000,000. The amounts paid for private and preliminary