

be devoted to mastering the details of it and preparing men for usefulness in that particular line, advantages which would be lost if he were taken to another field. Dr. George Dawson went over to Europe recently to look into the question of the brown coal in Germany and Bohemia, and if he had followed that up it would have given us results which would have been of immense practical value to the country. By sending a man into one field one season and into another the next, even though he may be most zealous in working up the material, the work gets disconnected and he loses the thread of it, and the great part of the skill and knowledge acquired in one region is lost.

Q. That must be attributable to a defect in the directorate?—Certainly it is.

*By the Chairman :*

Q. I would be glad to get your views upon the sub-division of Dominion and Provincial attention to geological subjects and mineral resources and statistics, as illustrated by similar sub-divisions between the Federal and State authorities of the United States?—This centralizing system now adopted for the actual Geological Surveys of the United States will eventually efficiently supplant the work of the State Surveys. You cannot discuss the economic value of a coal field without you take in the whole of that coal region. Some coal fields extend through Pennsylvania, Ohio, West Virginia, Tennessee and Alabama, and therefore the discussions on these coal fields are of value just as they go into the question, irrespective of States. The old State Surveys have done a great deal of excellent work, and I have pointed out what has been done in Alabama and California, to show what single States might do for themselves. More might be said of the work of New York, Pennsylvania, and New Jersey. They have stations of the United States Geological Survey at Washington, Newport (Rhode Island), Denver (Col.), and within the last few months another in San Francisco, which might perhaps unite with and take the place of the State Mining Bureau. I have referred to these merely to show the way in which the question presents itself to the people of Alabama and California, and to show how this local work, so excellently conceived and so well carried out, will not be done away with, but simply carried out on a larger scale by the Federal Authorities.

Q. I suppose the present State Survey will become subsidiary to the Federal Surveys?—Yes; to the greater advantage of geological science. The consolidation of the State Surveys with the Federal Survey now going on in the United States is going to contribute very much to the progress of geological science and to the development of the resources of the country, and the efficiency of the State Surveys are undoubtedly enhanced by it. Here we have one Survey extending from ocean to ocean and splendid conditions for carrying it out, following in the way that is being so successfully carried on in the United States.

HOUSE OF COMMONS, OTTAWA, 20th March, 1884.

The select Committee on Geological Surveys met this afternoon, Mr. HALL in the Chair.

J. FRASER TORRANCE, Esq, of Ottawa, was called and examined.

*By the Chairman :*

Q. You have been connected with the Geological and Natural History Survey of Canada?—Yes; from May until the end of February of this year.

Q. What were your previous qualifications and experience to fit you for work on the Survey?—I was educated at McGill University, where I took the degree of B.A., and B.A.Sc., and I have studied for two years in the Royal School of Mines in Freiberg, Germany. While I was there I was engaged by the Borneo Company to undertake the management of their mines. A fortnight completed my term of work there. I was struck with jungle fever and was some two years recovering from the effects of it. Since then I have been engaged in professional work in many parts of Canada—in the Chaudière gold fields, and in the Nova Scotia gold fields where I