al recoveries require machinery upon which large import duties are collected by the Government."

Taking part in the debate Hon. Mr. Fowler said he could not congratulate the House upon the tremendous interest which they had manifested in the discussion of this important subject.

This, like all new enterprises, is surrounded by a certain amount of risk, unless the request of my hon. friend is granted, they will have to pay 42½ per cent of their capital, practically, for the privilege of risking the other 57½ per cent. None of this machinery is made in Canada, as there is no such thing in Canada at the present time as the extraction of oil from shale.

This is not a new business, however, Scotland has been extracting oil from shale for nearly half a century, and has been doing it very successfully and very profitably. These New Brunswick shales have been analyzed by the best analysts in the world, and have proved to be at least as good as those of Scotland. Therefore, we have in our own country, in the province of New Brunswick, great potential wealth in these shales, and have the means of supplying to the Imperial Government a very necessary fuel which they are obliged to obtain to a very large extent from foreign countries.

Enormous amounts of British money are invested in Mexico, a country without a settled Government, where they have to take enourmous chances. Very recently the Cowdrey interests there were taken over by the Shell Company, I think it is. They have also taken oil from Borneo, from Roumania, and from many other parts of the world, as well as obtaining some in the United States.

The question of the development of these oil shales in Canada is a very important one, and I think the honourable gentleman is to be congratulated whether he is acting from a personal motive or not. If this House were properly seized of all the circumstances, I think it would realize the necessity of something being done."

And then our own Senator Roach had something to say, and though there was not much in what he said it should bring the blush to all the other N. S. Senators who remained silent, especially the Senators from the mining counties. The pity is that Mr. Roach spoke truly when he confessed ignorance as to the fact that there were shales in N. S., that is so for as personal contact and acquaintance with the mineral went.

Senator Roche said:—

I desire to add a word or two to what has been said in regard to the duty of the Government to assist in any measure or enterprise which will tend to enlarge the resources of the various provinces of Canada. We all agree to that proposition. The oil question is now upon a new basis with regard to fuel for ships. I am not so very familiar with the utilization of mineral oil in other branches—for machinery, for fertilizers, or for other uses; but I know that a very great advance has been made in the propulsion of ships by the use of oil. Not only in ships of the Royal Navy is oil superseding coal, but also in merchant ships, on account of its cheapness, on account of the reduced space which it occupies, on account of its cleanness, and also because of the reduction in the number of men employed in stoking. It is superseding to a large extent the use of coal on routes where oil can be obtained at both ends.

I am told—I do not know it of my own knowledge—that there are large beds of shale in Nova Scotia also. I think the Government could very well assist in having that article mined, and tested as to its oil-bearing capacity by the Imperial Oil Company, which has established extensive works at Halifax and employs now about 10,000 men,, and also had established a town with all the concomitants of very extensive works. They import their crude oil from Mexico and from the United States. I think that, with the facility which works of that kind would afford, the capacity and quality of the oil shales in Nova Scotia could be very cheaply tested, and, if they are valuable as oil producers, of which I have no doubt, they would add extensively to the revenues both of the province of Nova Scotia and of the Dominion of Canada.

With regard to the New Brunswick product, I have always heard that it is very valuable and will be a great resource of that province. I cheerfully concur with my honourable friend in asking the Government that they give every facility and every assistance to enable him and others to develop that very valuable product, for otherwise it will be a comparatively barren province."

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Having on an occasion come to the charitable conclusion that the seeming apathy of the N. S. Department of Mines was not wholly due to penuriousness but from the fact that the provincial exchequer was depleted in order to give employment to impecunious prosecuting attorneys, needy judges to act as coroners at inquests into mining fatalities, plaintive rudimentary roadmakers, the Record decided to obtain information, as to Scottish shales, in fuller detail than had been diffused by either the Federal or Provincial Departments of Mines. Luckly the writer had been conducted through one of the big Scottish Oil shale plants, that at Broxburn, near Edinburgh, and there made a friend. To our inquiries the friend has furnished the following details which will be useful for comparison, when real and practical tests shall be made of our Nova Scotia shales.

Introductory to the several analyses, our Scottish correspondent says: "Owing to the variable character of the shales it is difficult to get a true average sample, of almost any seam for analysis. At first blush a bore hole suggests a perfect method of obtaining it, and yet the material got from bores driven within a foot of each other sometimes vary by from two to three gallons or even more in the yield of oil. For obtaining the specific gravity, also, it is not easy to secure a piece representing the average of the whole thickness of the seam.

The shales from the upper coal measures give a crude oil of high specific gravity.

The AIRDRIE shale, from the upper part of the Kiltongue coal seam, Springwell colliery, gives 33 gallons of crude oil sp. gr. .957, setting point 65 degrees; Sulphate of Ammonia six pounds, (lab. tube.)

MONKLAND shale, 32 gals. sp. gr. .960, and Sulphate of Ammonia 6.3 pounds.