protection for the industry. By protection only could the permananency of the silver-lead-zinc industry be assured. Under present conditions the Canadian mine owner could not compete with the American competitor. He expressed an abounding faith in the mines of British Columbia. The lead industry affected every person in the Dominion, he declared. Mr. Caldwell said that he pleaded not for the operating properties, but for the prospects and mines which were idle. He described the present conditions as unhealthy and tending to make the high grade properties pay for the low grade properties, which, he said, could only be operated at a profit by a big smelting company.

"It takes bulldog tenacity and unfaltering courage to make a success of mining. The man who knows how to quit is no good in mining," declared Mr. Caldwell, who sat down amidst applause after urging an enquiry into the question by a commission.

The idea of the late government in making the grant of $50,000, said L. B. Reynolds, was to obtain a knowledge of the research made into the metallurgy of zinc by private companies and inventors, but not made public.

Experiments Should Be Here.

J. P. Farrell said that the conditions of the mines of this district were peculiar to the Kootenays and that any experiments should be carried on in Nelson. Even in the Kootenays there were hundreds of different complications in the ores which varied to a remarkable degree frequently in different workings on the same vein. He advocated an adequate tariff on ores from the United States.

Urges Bounty on Zinc.

A. Gordon French told of what had been done in Australia toward the solution of the complex ore question. The problem was one of the most intricate and difficult problems in metallurgy. It was no problem for a student or for an entirely theoretical man. While in Ottawa, said Mr. French, he had been told that both Dr. Haanel and Dr. Ingalls had abandoned the problem.

Efforts to treat sulphide zinc ores with or without lead, by an electric heating process was a physical impossibility, declared Mr. French, who explained in technical terms his reasons for the statement.

With regard to the Nelson zinc plant, which was erected under his supervision, Mr. French said that the zinc was coming off every day. He would not, in any event, leave this country until he had completely solved the question on a commercial scale.

He advocated not only a bounty on lead but also a bounty on zinc. He thought there was a good market in Great Britain for all the zinc Canada could produce. Mr. French was not in favor of the offering of a prize by the government for the solution of the problem. If the bounty on zinc was given it should be seen that the bounty was proportionately divided between the prospectors and the smelters, who stood at the two ends of the industry. For the next 50 years the market for zinc and zinc pigment in Canada would be a growing one, said Mr. French. Zinc white could be produced very cheaply in this country. Another industry of importance which would grow out of the zinc industry was the manufacture of galvanized iron, he said.

The cheapness of electric power for the electrolytic process of zinc treatment was a great advantage offered by Nelson to the prospective builder of zinc plants, Mr. French said.

Oscar V. White spoke of the low price realized under present conditions for zinc.

In reply to a question Mr. French explained that from the silver-lead-zinc ores by his process he obtained the zinc and forwarded the silver-lead residue to a lead smelter. Another product of the process was black manganese di-oxide, an extremely valuable commercial product.

Would Protect Canadian Industry.

I. W. Bingay, explained that some lead products, such as tea paper, red lead, both manufactured products which might be made in Canada, were imported into the Dominion every year. He thought the Canadian manufacturer should be protected. The proportion of a duty on pig lead involved the whole schedule, as the manufacturer who used the raw material must be protected. Whether a tariff would be better than a bounty was a very deep question which should be thoroughly investigated. He advocated the appointment of a strong committee to prepare a case for the proposed federal tariff commission. It was not true that the lead bounty had not proved of benefit to the industry.

T. G. Proctor thought that one of the most important matters to be brought before the federal government was the formation of a department of mines with a minister with a portfolio.

Bonus for Zinc Smelter.

A. J. Becker, as an amendment to Mr. Johnstone's motion, suggested that the government pay a bonus to a local smelter of $10 per ton of spelter produced up to 20,000 tons, or $200,000. The motion was seconded by J. J. Fingland. It was explained that the object of such a grant of $200,000 was to induce efforts to solve the problem. If there were several competitive smelters each was to receive the bonus as each ton of spelter was produced.

Should Sell Lead in Canada.

W. E. Zwicky thought that a protective tariff should be placed on lead and that a bounty be placed on zinc. This bounty, he said, should be divided between the producer and the smelter. Another point was that the Canadian producer should sell in Canada and not in free trade England. He urged that the government be asked to appoint a commission to go into the various questions affecting the industry.

M. Giegerich advocated a bounty on zinc and a tariff on lead.

Mr. Caldwell supported a duty on zinc, in order to build up a Canadian market, instead of a bounty.

C. A. Mackay was in favour of protection for lead and lead by-products. He thought a case should be prepared on general lines and presented to the government asking the appointment of a commission to investigate the questions of bonuses on land and zinc, the tariff and a bonus to encourage efforts toward the solution of the zinc problem.

Suggestions for Government.

T. G. Proctor, who took the chair during the temporary absence of Mr. Starkey, appointed, on the suggestion of H. Giergerich, R. H. Stewart, C. A. Mackay, and A. J. Becker a committee to draw up a resolution on general lines on the question. This committee brought down the following resolution, which passed:

"Whereas, there is at present no market available which will allow of the profitable mining and treat-