*Retiring Age.*—The commissioners recommend that the retiring age for all members of the university teaching and administrative staffs shall be 65, but contemplate that the general board would have power to continue a professor in office for a period not exceeding five years—that is, until he attains the age of 70.

Position of Women in Relation to Teaching.—The commissioners contemplate that the statutes will be so framed as to render women eligible for professorships, readerships, university lectureships and examinerships, subject to the reservations made by the Royal Commission. Fellows of women's colleges will be eligible to become members of faculties.

## CANADA'S WATER POWER AND MINING INDUSTRIES

A BULLETIN has been issued by the water power branch of the Canadian government on the effect of the plentiful water power on the future developments of the mining industry which states that the theory is often advanced that Canada is likely to become the leading mineral-producing country of the world, and considerable ground for this assumption is found in the fact that the Dominion contains 16 per cent. of the world's known coal resources, has greater asbestos. nickel and cobalt deposits than any other country and ranks third in the production of gold, while the diversity of her mineral endowment is indicated by the fact that the three main divisions-metallic, nonmetallic and structural and clay products-include some sixty principal items, seventeen of which had a production value of \$1,000,000 or over for each in 1923.

The best conception of the value of the output may be given by stating that the lowest since 1910 was \$103,221,000 for 1911, and the highest was in 1920, when the valuation of \$227,860,000 was reached, the average value being \$194,957,000 for the five-year period. As the commodity prices reached a peak in 1920, and have since receded, production computed in terms of value is not a fair basis for comparison. An index showing the volume of production by weight would undoubtedly mark 1923 as the banner year in Canada's mineral industry, since new output records were established last year for coal, lead, zine, asbestos and for the value of cobalt produced.

The principal uses of power in mining are for compressed air for drilling, driving motors for hoisting, haulage of ore above and below ground, driving ore crushers and conveyers, pumping water for the water supply and removing it when it accumulates below ground, lighting, heating, ventilating, signaling, for machine shops and for various electrical-metallurgical

processes. Even in the comparatively simple method employed in the recovery of coal as much as 10 per cent. of the product may be consumed in generating the necessary power.

The bulletin states that the Dominion Water Power Branch has computed that on January 1 last the hydraulic installation for mining purpose in the Dominion had reached a total of 277,600 horsepower, of which 233,200 horsepower was purchased from central electric stations. It is estimated that the capital investment necessary to develop this power was  $\pounds74,000,000$ .

From the point of view of minerals and the development of mining Canada is divided into five main areas, which consist of the Maritime Provinces, Quebec, Ontario, the Prairie Provinces and British Columbia and the Yukon. Each of these possesses large resources for water power, already developed or available. With the exception of some of the coal fields of the central plain there is no area for which ample water power can not be supplied.

The department's latest table of available and developed water power in Canada, dated February 1, shows there is a total available twenty-four-hour power, at 80 per cent. efficiency, of 18,225,316 horsepower at ordinary minimum flow and 32,075,998 horsepower at ordinary six months flow, and a total turbine installation in Canada of 3,227,414 horsepower. The table shows the fortunate distribution of water power throughout the Dominion. The two provinces without native coal, Ontario and Quebec, lead in the possession and utilization of water power, followed closely by Manitoba, where only lignite coal is found.

## LOWELL INSTITUTE LECTURES FOR 1924-25

NINE courses of free public lectures treating upon diverse subjects, including politics, history, meteorology, geology and science, are announced by the Lowell Institute of Boston, for the season which will begin about the middle of October and continue through March.

Of the lecturers four are from Harvard, one from Princeton and four from England. The British visitors are to be Rt. Hon. Herbert Fisher, M.P., former minister of education and British delegate to the first three assemblies of the League of Nations, who will speak on "The aftermath of war"; Dr. A. J. Carlysle, of Oxford, on "The medieval political theory and the principles of modern political organization"; General Sir Frederick Maurice on "Robert Lee, the soldier," and Professor William George Stewart Adams, of Oxford University, on "Idealism and realism in politics." Dr. Dana Carleton Munro, pro-