

## RECENT PUBLICATIONS.

**STUART'S** map of Boundary, B. C., by A. E. Ashcroft, P. L.S., D.L.S.; Randolph Stuart, Greenwood, 1901.  
This is certainly the most accurate and complete map yet issued of the surveyed mineral claims of what is known as the Boundary district, including Deadwood, Smith's, Providence, Skylink, Central, Greenwood or Phoenix, Wellington and Summit camps. The location of the C. & W. railway, roads, trails, creeks, rivers and town and smelter sites are also given. The map is drawn to a scale of two and a half inches to the mile.

"General Index to the Reports of Progress of the Geological Survey of Canada," compiled by D. B. Dowling, B. Ass. Sc.; Queen's Printer, Ottawa, 1900.

The early reports of the Geological Survey were published under the title of "Reports of Progress," the first appearing in 1845. In 1863 the reports up to that date were brought out in a condensed and summarized form as one volume. The present general index embraces the succeeding reports from 1863 to 1884 inclusive, thus covering sixteen volumes and two short summaries, or 6,585 pages of text, to which more than 41,000 entries are given. The index will be extremely valuable as affording a ready means of reference to practically the entire body of observations published by the Geological Survey up to the year 1884.

While the past year showed a total output of coal from all countries of probably not less than 775,000,000 net tons, the largest amount ever produced in a period of twelve months, the price of the commodity increased nearly all over the world. In Great Britain the rise in prices is attributed largely to the Transvaal war, the government being forced to use a considerable part of the merchant marine for purposes of military transportation, so that the big liners had to draw for their coal exclusively on the domestic supply, and the activity in the British arsenals, gun factories, and other establishments engaged in the manufacture of war supplies tended to enhance prices of coal in the British market, while a decrease in the number of vessels formerly engaged in the coal carrying trade acted indirectly in the same direction, so far as importing countries were concerned, by raising freight rates. Labor troubles in France and strikes in Moravia, Liberia and Bohemia also helped to raise the price of coal in Europe. In the report before us it is pointed out that while the United Kingdom was until last year the largest coal producing country in the world, its exports have always amounted to a considerable proportion of this production, and the amount consumed in this country has not been as great since 1891 as that in the United States. Since 1891 the United States has maintained an increasing lead in the amount of coal consumed, and its total consumption has, in the absence of either a large export or import, kept pace with its production, its consumption increasing far more rapidly than that of the United Kingdom. Thus, from 1883 to 1897 the consumption of coal in the United States increased from 102,000,000 gross tons to 175,400,000, an increase of 72 per cent., while the increase in the United Kingdom was only from 134,500,000 gross tons to 154,000,000 gross tons, an increase of less than 12 per cent. The United Kingdom, however, maintains its second place as a coal-consuming country, and it seems probable that it will maintain this position for a long time.

The third country in the rank of coal-consuming countries is Germany, with a total consumption of 84,700,000 metric tons. The consumption of this country has increased very rapidly, and has promoted the immense industrial extension which has marked the last twenty-five years of German progress. The increase in production in Germany during the fourteen years from 1883 to 1897 was from 48,400,000 to 81,700,000 tons, an increase of about 75 per cent., while in France during the same period the increase has only been from 30,800,000 to 32,600,000 metric tons, or an increase of about 29 per cent. The countries next in order of coal consumption are: Austria-Hungary, with 16,400,000 metric tons, marking a very rapid increase since 1883; Belgium, with 17,807,000, and Russia, with 11,561,000, in 1896. The growth of the consumption of coal in Belgium, like the growth of its production, has been considerably retarded, and during the fifteen years under consideration the amount of coal consumed increased only from 14,000,000 to 17,800,000 tons, an increase of only 27 per cent. The increase in the output of Russian coal has been more remarkable, the consumption being about twice as great in 1896 as it was in 1884.

Other countries with a large consumption of coal are: Canada, with 6,035,000 tons, or almost double the consumption of 1883; British India, with 4,127,000, or more than double the consumption of 1883; Italy, with 4,237,000 tons, which is five-sixths more than the consumption of 1883; Spain, with 3,839,000 tons, or about two-thirds more than the consumption of 1883; Sweden, with 2,524,000 tons; and Japan, with 2,036,000 tons, in 1896. The consumption of coal in Japan has been remarkably rapid, its consumption in 1895 amounting to 3,044,000 tons, or almost three times the consumption of 1888, and almost five times the consumption in the early eighties.

The report contains besides voluminous information on the coal trade of the world, very complete comparative and statistical tables of coal production of the different countries from 1848 to last year.

## TECHNICAL PERIODICALS.

## THE ENGINEERING MAGAZINE.

**I**n the Engineering Magazine for March, first place is given to an article entitled "The Coming Industrial Empire of Puget Sound," by Mr. D. B. Bogle, who, by the way, has been for several months one of the principal contributors to our editorial columns, and acted as editor for the past three months. In the article under review, Mr. Bogle discusses the future industrial and commercial development of that portion of the Pacific Northwest, having for its centre the nearest economic shipping point to the Orient and the watershed of the Rocky Mountains, forming an Eastern radius, while he leaves undetermined the northern and southern boundaries, with the addenda that "the completest development, industrial and social, is only to be expected within the limits of the temperate zone." After showing that the developments of a new country follows a well-defined course, marked by regular and clearly differentiated stages of progress, certain facts are adduced as affecting the future of the Pacific Coast. "The first of these is, that however rich it may be in natural resources, the exploitation of these will never support a very large population, or build up great cities, so long as all the raw wealth produced is exported and all the finished products required are imported. The second of these facts is, that while a great trade may be built up by way of the Pacific Coast with foreign countries, that of itself will not build up great cities on the Coast, because modern commercial methods will prevent these cities being sellers, purchasers, and changers of this commerce, and leave them in the condition of onlookers merely. Consequently, the future of the Pacific Coast, if it is to have any worthy of the name, is dependent on the manufacture of the raw materials produced within its limits and drawn from outside, to supply the wants of its own population and those of the available foreign territory." This is obvious economic truth, tersely put, and it is matter for congratulation that the people of British Columbia in the present agitation for redress have already begun to recognize its force and applicability. Granted great natural wealth, Mr. Bogle considers the possibilities of manufacturing finished products out of raw material at a maximum of economy compared with other manufacturing countries, which depend on the questions of transportation of raw material to an economic centre, the proximity of iron, ore and coal, the availability of power, and the efficiency and cost of labor. He states that as regards the products of the "territory under consideration already produces an inconsiderable proportion of the world's annual supply of gold, silver, copper and lead, and is besides, infinitely rich in iron, coal and petroleum, of which its stores are hardly yet comprehended, much less utilized. \* \* \* while as to power, the same excessive humidity which has clothed the Pacific Slope in the temperate zone with inexhaustible forests, makes those mountain ranges vast reservoirs of water, of which the overplus plunges down in a thousand cataracts to the sea, forming an available source of power unexcelled, and probably not even approached, in any portion of the world. In all this territory it would not only be unnecessary—it would be almost impossible to establish any manufacturing industry beyond the radial limit of electrical energy generated by water." On the subject of labor the question whether or not its rate of remuneration will permanently remain higher in the West than it is in the East, is not answered, though it is confidently asserted that the industrial and commercial development of the Pacific Coast must be postponed until the labor cost of the articles produced is as low as, or lower than, it is in other parts of the world. The commercial territory available to the Pacific Coast is, the writer goes on to state, of vast extent, "wide as the periphery of the Pacific Ocean," though there are certain peculiarities about the character of this tributary territory, which make the conditions of development entirely different from those which have contributed to the manufacturing supremacy of the Atlantic sea-board. Mr. Bogle classifies this territory under three heads: 1, Alaska, Northern British Columbia, the Canadian Northwest and Siberia; 2, Southern American Pacific States, the Dutch Indies, Burmah, British India, China and Japan; 3, Australia and New Zealand; with all of which important and profitable trade relations are being and may be established; but the greatest part of the markets for exports and import foreign trade, it is pointed out, open or valuable to North America must be reached through the ports on the Pacific, for "surely North America's trade opportunities lie where East and West are merged, where there is a market for manufactures, and whence may be drawn commodities differing in utility as one hemisphere differs from another. Mr. Bogle brings his admirably clever paper to a close in a regular burst of eloquence; he says, "I have tried to show that the Pacific Coast possesses the necessary resources in a pre-eminent degree, but that their development is yet postponed awhile by a number of present day disabilities. These, how-