

Some have suggested that the purpose of the Commission was to devise a proper system of utility schools. "Utility Schools," like "adequate protection," may have a very broad interpretation, and it might be as well to class them at once as Artisan Schools. It is very true that the trade unions do not appear to favor schools where boys and girls may learn trades, but it does appear that we have growing up a large number of young men and women who have failed to secure a book education, and to whom a book education would be of little profit. Why, then, not have artisan schools, the principal aim of which might be to make good workmen and better citizens and broader men?

It is not so much evidence that the Commission have to meet as a situation, and it is not so much information and recommendations that Canada requires as a reasonable solution—not printed and circulated broadcast—but presented to young Canada by a man who possesses leadership and personal magnetism such as will develop the individuality of the young worker and train him to take that interest in the conditions which he faces as will retain for him his individuality.

ONTARIO'S MINES AND MINERAL OUTPUT.

The output of the mines and minerals of Ontario for the year 1909, is summarized by Mr. Thomas W. Gibson, Deputy Minister of Mines for Ontario, in his statistical review in the report of the Bureau of Mines for 1910.

The value of the mines output for the year 1909 was almost \$33,000,000, but, had the refined value been taken, the entire output would have been valued at something like \$37,000,000.

One very noticeable statement is that the value of the metallic output exceeds by 70 per cent. the non-metallic products. In the year 1905, for the first time, the metalliferous substances took the lead until it has reached the present large proportion. Over the 1908 output the metals have increased 37 per cent. and the non-metals 13 per cent.

Silver is the chief item of increase, the value being \$3,327,892, or 36 per cent.; next comes pig iron, increase \$1,910,689, or 43 per cent.; then nickel, \$924,739, or 49 per cent. Iron ore is greater by \$70,783, copper by \$55,875, and zinc ore by \$8,950. Gold is less by \$27,892, and cobalt by \$16,153. Of the non-metallic products, Portland cement shows an increase of \$479,579, or 20 per cent., and natural gas \$199,563, or 20 per cent. Bricks of all kinds are greater in value by \$357,170, or 17 per cent., drain tile by \$24,892, and lime by \$22,262. On the other hand, petroleum shows a decrease of \$144,295, or 26 per cent., salt of \$98,757, stone of \$70,311, and sewer pipe of \$32,430. Further comment upon these and other fluctuations in production will be made when dealing with the several products in detail.

The nickel copper industry did not show the increase that the industrial development would apparently warrant. The output of nickel at the most is valued at 10.6 per pound. This valuation seems low when the minimum quotations for refined nickel at New York during the year was 40 cents per pound.

The outputs of pig iron and steel, however, show very gratifying increases, and indicate activity in construction work.

The seven blast furnaces in Ontario were all operated last year, most of them continuously. The Algoma Steel Company, Sault Ste. Marie, and the Hamilton Steel and Iron Company, Hamilton, have two furnaces each; the

Canada Iron Corporation, Midland, the Standard Chemical Works, Deseronto (formerly Deseronto Iron Company), and the Atikokan Iron Company, Port Arthur, one each. The output of pig iron was 407,013 tons, valued at \$6,301,528, as compared with 271,656 tons, valued at \$4,390,839, in 1908. Of steel, which is made by the Sault Ste. Marie and Hamilton plants, the output was 296,031 tons, valued at \$6,759,960. At Sault Ste. Marie the product was confined to standard T rails, the whole output of the blast furnaces and a large quantity of purchased pig being converted into this article. At Hamilton the product was basic open-hearth steel, 76,085 tons being in the shape of ingots and 700 tons steel castings. In the other departments of the Hamilton Company's extensive plant the products of the furnace were further developed into 3,359 tons billets, 289 tons miscellaneous forgings, 3,788 tons spikes, 626 tons axles, and 73,071 tons bar iron and steel.

The Ontario Iron and Steel Company, in its works at Welland, produced a quantity of open-hearth basic steel from scrap material, along with about 100 tons of imported iron ore. The Electro-Metals Company, of the same place, are carrying on a large business in the manufacture of ferro-silicon, the raw materials being iron ore imported from the United States, and silica in the form of rock or flint, brought from Frontenac county or Parry Sound district. The company makes use of about 7,000 electric horse-power in its furnaces and works.

As compared with 1908, the output of common brick rose from 222,361 thousand to 246,308 thousand last year, and the value from \$1,575,875 to \$1,916,147. There was a decided increase also in the value per thousand, the average being \$7.78, as compared with \$7.09 in 1908. The demand for brick was active during the year, especially in the larger cities, building operations in Toronto, for instance, which is essentially a city of brick, being decidedly brisk. A large quantity of brick is manufactured in and around Toronto, many of the brickyards being extensive and well equipped. Reference to the figures published by the Bureau as to the production of brick shows that the average value at the yard has risen from \$5.73 per thousand in 1901 to \$7.78 per thousand in 1909, an increase of over 35 per cent. The cost of brick constructions has been heavily affected during the same time, since the cost of labor has experienced an advance probably quite as great.

There has of late years been a marked improvement in the quality of brick made in first-class yards. Kilns of modern construction burn harder and more evenly, and there is a smaller proportion of soft brick. The present taste in brick houses, too, does not demand the same uniformity of color that was formerly insisted upon; in fact, a variety of shade, instead of being objected to, is rather desired. There is also a much greater range of products than was made years ago. From white and buff to cherry red and up to a dark, even purplish, hue, bricks of all tints and shades are freely used, and pleasing effects are sometimes obtained by employing clinker or over-burned bricks, greenish or yellowish in color. The hard-burned bricks of the present day bid fair to give us durable towns and cities, not perhaps so handsome as those built of stone, but less subject to disastrous conflagrations than those made of wood, so much employed south of the line.

Of all varieties of brick there were made last year \$2,480,418 worth, comprising common \$1,916,147, pressed \$490,571, and paving \$73,700. In the brick and tile yards there were 3,166 men employed, earning \$961,881 in wages. The brick-making season is for the