

metal. A great many of the smelting dry ores of the United States are valueless except for the silver they contain. The check given to silver mining by the heavy decline in value has been sufficient to occasion a deficiency in the supply of this kind of ore. The inference, however, that "the lead miners of the Kootenay must begin to smelt their lead ores irrespective of a dry ore supply," is fortunately invalid; and if that is Mr. J. N. Hill's solution of the problem Mr. Hill ought to know more about this country's resources than he does. If the premium on British Columbia wet ores were to disappear, as it is disappearing, in the United States; if at the same time the lead miners were compelled to pay the same duty as they do now to market their product; and if the cost of smelting were proportionately increased by the disappearance of this premium: the outlook for the silver-lead mining industry would be rather blue. Because although silver is improving in price from the very cause bringing to an end this premium, lead for the same reason is not likely to be very long a progressive market; and lead is the predominating partner in the case of the largest mines such as the North Star and San Eugene. No one, however, should know better than Mr. Hill that there is a silicious ore dump at the Le Roi mine which contains no copper worth saving, but from \$6 to \$8 in gold contained partly in a free state and partly in iron sulphurets finely distributed through the rock. This dump contains 120,000 tons now and any quantity of similar rock can be mined any time there is a demand for it. As fluxing material it will keep pace with the silver lead output of British Columbia for some time to come. A considerable quantity of it has already been used at the Trail smelter for the very purpose of smelting with lead ores which is now under consideration. So that out of apparent evil good will come. The loss to the silver-lead miner will be lessened to himself and more than made up as regards the country by the gain on the low-grade silicious gold ores. And a great net gain will be made in this way, that a great industry will be built up in Canada, built up in the best and strongest way by the operation of the natural laws of commercial advantage. It may be a compliment to British Columbia that lead ores are being shipped to Chile to be treated. It would be a more solid advantage if they were shipped to Nelson or Trail. Until the MINING RECORD is much better informed on the special conditions existing than it is, it will always seem to it that a great commercial opportunity is being lost when the owners of such a silver-lead property as the San Eugene, who also control such large bodies of low-grade silicious ore as exist in the War Eagle and Centre Star, do not combine their treatment at a common point instead of working at second-hand in such widely separated localities as the banks of the Columbia River and Antafugasta in South America.

A number of the financial and industrial newspapers devoted to mining have lately been discussing the relative professional abilities of American and English mining engineers, in view of the fact that the former apparently secure the plums of the profession in all parts of the world. It seems to be a fact that American mining engineers are practically more capable than their English confreres. The reason is not far to seek, indeed it would be most remarkable if it were otherwise. It is certainly not due to an

inherent superiority of mental calibre, but entirely to the conditions under which mining science has been developed in the United States. New problems have confronted the American engineer at every turn both in mining, metallurgy and the handling of ore and rock in far greater numbers and possessed of infinitely greater complexity, than those presented in any other country. Consequently the premium has not been upon thorough knowledge of and careful adherence to the best precedents, but in the initiation and invention of new methods and processes. This difference in environment was once exceedingly well illustrated by an anecdote. At a certain race meeting a young boy had a trotting horse which could run away from anything in the field. An old stager who was to race against him asked him how he drove so well. "Oh!" said the youth; "I read Brown's book on trotting and I always do just what he says I should do." When the next heat came off the old stager whipped up his horse, locked wheels with the boy and tipped him into the ditch. As he passed by he yelled out: "What does Brown tell you to do now?" The objection that this was an infringement of the rules may be passed over as irrelevant. As a matter of fact in mining, nature infringes all rules and does so very frequently, and it is well to have some other resource than Brown's book when the cart is in the ditch. The American mining engineer has to be more than a man who knows theoretically and practically the science of mining as it exists; he must be prepared to add original data to that science to meet new problems. In a country whose mineral resources were hardly touched, and where much of the mineral wealth was not amenable to mining science as it existed the prizes upon successful invention and originality were naturally huge. That is why a body of mining science and practice has been developed in the States with which no other country can hope to compete except one. That country is Canada. But before Canadian science can compete with the States it must go to school there and learn all that is to be known now, just as the engineers of the States went to school in Germany. There are two ways of doing this: the first is by importing the engineers of our big mines who will establish an up-to-date standard of practice, just as the United States imported its first engineers from Freiburg; the second is by sending our budding engineers to the States to learn all that the best science and practice, particularly the latter, has to teach. In connection with this would it not be a patriotic act if some of our Eastern millionaires, who have made large sums of money out of mining, were to establish a travelling scholarship in connection with some one or other of our Canadian mining schools? The hope of winning such a scholarship which would be a passport to the most remunerative occupation our mining industry had to offer would induce more to enter the profession of engineering; and the scholarship would also give young Canadian engineers the opportunity of establishing a mining practice in Canada equal to the best developments in the United States.

For the eight months ending 31st August the United States exported 5,550,960 tons of coal and coke compared with 3,717,004 tons in the corresponding period of last year. Of this amount Canada purchased 3,710,982 tons in comparison with 2,589,039 tons during the corres-