

noteworthy that the Ymir and Velvet developed by English capital were not discovered prior to 1892. The City of Paris and Knob Hill were indeed developed by Canadian capital, but under American initiative, and in any case, like some others not included in our list, became visible on the mining horizon at a later day and really exemplify a process which will be referred to later. From this point of view the B. C. is a freak, having been developed by English capital, and then transferred to Canadian capital. The only typical instance left of the Canadian development of a mine from the grass roots down is the North Star.

The third class of capital is the mine owning and operating capital. This is the easiest kind of capital to secure, and is to some extent cosmopolitan in its nature. Once a mine has arrived at a productive and dividend paying stage there are far more men willing to buy it, than there are men willing to sell such a property if they own it. It is very unimportant what particular group of people own a dividend paying mine. What difference does it make to British Columbia whether George Gooderham, of Toronto, or Whitaker Wright, of London, or Patsy Clark, of Spokane, and their respective friends, own and draw dividends from the War Eagle mine. The only direct interest to British Columbia is that the mine shall be effectively worked. But from another point of view the importance of where the mines are held is very great. Because, as we have seen mine owning and operating capital is the basis and source of development capital, either through the devotion of a portion of the profits to this purpose, or through the emulation of those familiar with these profits to secure a like prize for themselves. The enormous amount of development capital introduced into British Columbia from Eastern Canada, after the War Eagle had its headquarters transferred from Spokane to Toronto, is a well remembered example. It was this influx of development capital following upon the influx of owning and operating capital which led to the Canadian development of the City of Paris, Knob Hill and many other properties not given in our list. It is true that zeal to rival the profits of the War Eagle in this case outran discretion; but that was due to ignorance which experience, sad experience, has remedied. If we now look back at our list in reference to the locality in which the owning and operating capital is held, we find that the North Star, San Eugene, War Eagle, Centre Star, City of Paris, Knob Hill, B. C. and Cariboo are all controlled by Canadian capital; that the Enterprise, Hall Mines, Ymir, Le Roi and Velvet are controlled by English capital, and that only the Slocan Star and Mother Lode remain in the hands of American capitalists. Of course this list is not a complete one, but if it were added to sufficiently to make it complete, the proportions would not greatly differ. This points to a great change in the mining centre of gravity. The greater number of British Columbia's mines are now in the hands of Canadian capital; English capital runs Canadian very close, and American capital is nowhere. The importance of this to British Columbia (we are not dealing with the national or imperial aspect of the question at all) is that there is a body of capital growing up in Canada, with substantial reinforcements in London, on which we may look in the future as an active competing source for development capital with the United States. There is a difference in kind, however, exist-

ing between Canadian and English capital and American capital in their devotion to development. The former are very thorough, but they are undoubtedly slower. The American goes at a new district like a hungry dog at a bone. He exults, he triumphs in the idea of resisting and overcoming obstacles. The Canadian and the Englishman are like timid bathers; they try the water gingerly at first. Once in, they swim manfully, but they do not take the plunge so rapidly as the American. This is particularly true of the English capitalist. In the case of Canadian capitalists the hesitancy in branching out is more from lack of knowing how in this particular industry than from any lack of initiative. And experience in mining is increasing every day. In time an equal body of enterprise resource and experience in mining will exist in Canada to what is markedly characteristic of the United States. It is fortunate that this is so, and fortunate that being so the bulk of our British Columbia mines are in the hands of our fellow countrymen.

An article appearing in the Engineering Magazine for September on the four stages of mining in Leadville has much more than merely a local interest. It is applicable to the progress of mining in general during the last quarter of a century. The first stage was placer mining. That has long gone by in Leadville, so long that it is almost forgotten. The next stage was the exploitation of the rich carbonate lead ores characteristic of what are erroneously called the palmy days of Leadville. The third stage was the opening up of the gold belt after the fall in silver in 1893 had made the deep wet silver mines of Leadville apparently hopeless as profit earning concerns. The last stage on which Leadville is now entering is that dealing with the mining of composite ores, in which gold, silver, lead, copper, iron, zinc and bismuth may all occur; and in which the base elements, from being detrimental, have actually become profitable factors. Two characteristics of mining progress are here exemplified, first, the utilization of a number of elements not previously profitable, and second, the cheapening of reduction processes, so that ores of a much less gross content of valuable material of all sorts may be profitably handled. By these two causes, which have operated concurrently the available supplies of workable ore in Leadville have increase in a far greater ratio than the development of the camp would have justified had the grade of ore, and character of ore, that would pay, remained constant. As a result the last stage in the development of Leadville is by far the greatest, both as regards the number of men employed and as regards the gross quantity of wealth produced.

Geologists tells us that mineral belts or zones are derived from globules of mineral solution held in a liquid form in the earth's crust by the tremendous pressure of the surrounding material; that from time to time alterations in the pressure have occurred, liberating these mineral solutions, which have immediately burst through all the available vents, fissures and channels possible, in a gaseous form, and by various processes of infiltration and deposition have made what are known as veins and deposits of ore. Not so long ago men were practically confined to those parts of such mineral belts as had been subjected to the action of the air, in mining for the precious metals. It was not dreamed that mining beneath the