

Mexico. The prize they hope to win is a valuable one, as the amount of tin the United States buys from England is said to be worth twenty-four millions of dollars a year.

DAKOTA TERRITORY, U. S.—There are some big mining schemes proposed now-a-days, and among the latest is, that a French syndicate will purchase a group of mines west of the Homestake mines, build 25 miles of railway to carry the ore to the Redwater River, and set up and run a thousand stamps by water power.

SUMMARY.—There seems to be so little generally known about mining and the value of mines, that I think an occasional article on that subject would not be out of place.

The great lumber trade, which has for a great number of years been the main production of our fair Dominion, is destined in the course of a few years to fail the districts which it formerly supported. This is an undeniable fact, for the lumbermen are not going to float logs hundreds of miles when they can easily, and with much less expense, erect mills on their limits. Therefore, it is but natural to suppose, that these places which are deprived of their industrial pursuits, will look for something else as a substitute. That mining will be the substitute can no longer be doubted. Hence the necessity of those who formerly derived a livelihood from the former to gain all the information they can concerning the latter.

Now, in this article, I will speak of the value of mine, and what is and what is not a valuable mine. Any mine which pays from ten to twenty dollars per ton of 2,000 lbs., is a valuable mine. By "paying" I do not mean a profit, but the total value. To pay ten dollars to the ton it would require in a gold mine, half an ounce of gold; in a silver mine about ten ounces of silver, and in a copper mine about sixty-six pounds of copper to the ton of quartz. This pays. I do not say that it is what would be called a very rich mine, but it is at least a paying one, and that is sufficient to induce capitalists to put their money into it. Indeed, much lower figures have paid in other places, but taking the average location of Canadian mines, I do not think that anything less would pay in this country.

Now, the question arises, what is a mine paying ten or twenty dollars a ton worth? This depends on certain other conditions. In the first place the width of the vein must be taken into consideration. If the vein is only an inch or two in width the mine is valueless, unless it widens very rapidly. But if, on the other hand, the vein is from eighteen to twenty-four inches wide, and does not show any indications of "pinching," then the mine is very valuable; indeed it may be worth millions to the man who works it.

Of course copper, phosphate, and such like minerals, would require to be found in much larger veins to be really valuable, but for gold and silver a vein of this width is, perhaps, the most valuable that can be had. Luger veins do not generally carry a steady percentage, and are very apt to "pinch" before they have been worked to any great depth.

There are two classes of mines, the "prospect" and the mine proper. The former is merely the vein as it is found, with whatever surface showing there may be, and its value is usually in proportion to the indications which it has of an increase on sinking. This sort of a claim never commands a very high price, for there is always a certain risk coupled with the purchase of it. No man should ever sell a claim of this kind, if he can by any means sink a "test hole" on it. But many poor prospectors, after they have paid the Government for the land, have nothing left to develop it.

In a previous article I spoke of the mining laws, and changes which should be made in them. One of these changes was in regard to the purchase of land from the Government. I suggested that the American plan ought to be followed, and the land be given to the prospector free, the Government charging a royalty on the mineral taken out as its tariff. If this were done, the prospector would be able to develop his claim, and "prospect" claims would become a thing of the past, while the prospector would receive the full value of his property.

The mine proper is simply a vein upon which a shaft has been sunk and the direction, increase and value of it shown. This sort of a claim always commands a high price, if it is at all valuable, for the risk of which the capitalists talks in the former, is no longer apparent in the latter, and he is forced to pay full value for it.

WHAT COAL CONTAINS.—A careful estimate made by an English chemist, of the contents or constituents of a ton of coal, presents some interesting facts not familiar certainly to unscientific minds. It is found that besides a ton of coal will yield 1500 pounds of coke, twenty gallons ammonia water, and 140 pounds of ordinary gas coal tar. Now, destructive distillation of this amount of coal tar gives about 70 pounds of pitch, 17 pounds of creosote, 14 pounds of heavy oils, about 9½ pounds of naphtha yellow, 63 pounds of naphthaline, 4½ pounds of naphthol, 2½ pounds of alizarine, 24 pounds of solvent naphtha, 1.5 pounds of phenol, 1.2 pounds of aurine, 11 pounds of aniline, 0.79 pound of tulolide, 0.40 pound of anthracene, and 19 pound of toluene—from the last-named substance being obtained the product, saccharine, said to be 230 times as sweet as the best cane sugar.

In 1873 the total quantity of Nova Scotia coal received into the Province of Quebec amounted to only 187,050 tons, while in 1886 it reached 538,762 tons. Last year Montreal alone received by water from Pictou and the Cape Breton coal ports 448,737 tons, while \$5,000 tons came over the I. C. and Grand Trunk railways from Spring Hill and other mines in the Cumberland district, other parts of the Province received about 120,000 tons from these mining centres. Last year's importations exceeding that of 1886 by over a hundred thousand tons, it would not be surprising if the figures, when made up for the summer of 1888, show that over 700,000 tons of Nova Scotia coal have been brought into the Province of Quebec.

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